

Biological Assessment of

PCS Phosphate – White Springs

Hamilton County

NPDES # FL0000655

Sampled February 3 and 4, 2014

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Biology Section

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Facility Overview

PCS Phosphate – White Springs is an Industrial Wastewater Treatment Facility. The effluent is discharged from the internal outfalls in multiple locations and forms the headwaters of Swift Creek (where D-001 is located), Hunter Creek (D-002), Roaring Creek (D-003), and Camp Branch (D-004), all Class III Fresh Waters (see map Appendix A). There is no current permitted design flow for PCS phosphate, but they are in the process of revising the permit to include one (Herndon Sims, Northeast District). The annual average daily effluent flow for February 2013 to January 2014 was 68.2 MGD for D-001, 3.2 MGD for D-002, 0 MGD for D-003, and 5.7 MGD for D-004. The plant discharges continuously, and the flow measured during this survey was 80.44 MGD for D-001, 4.49 MGD for D-002, and 6.38 for D-004 (Northeast District sampling staff). D-003 was not discharging at the time and thus no samples were collected. The flow for D-004 was recorded on February 4, 2014, because the facility did not have flow data for February 3rd, 2014, the day the samples were collected.

Biological assessments are prepared by FDEP 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.

See the Facility Summary (Appendix B) for a description of the facility, summary of permit limits, Consent Order (CO), and Discharge Monitoring Report (DMR) information. The facility is operating under Consent Order 10-1878 for an unauthorized discharge of 82 million gallons of acidic process wastewater to the Floridan Aquifer.

Methods

The purpose of this investigation was to determine the discharge's effects on the biota of the receiving waters. Chemical and biological comparisons were made between a Control Site (located in Little Creek approximately 14 km east of the facility) and the corresponding Test Sites of three outfall monitoring locations. The D-001 Test Site is located approximately 800 m upstream of the D-001 effluent monitoring location in Swift Creek. The D-002 Test Site is located approximately 245 m downstream of the D-002 effluent monitoring location in Hunter Creek and the D-004 Test Site is located approximately 1,850 m downstream of the D-004 effluent monitoring location in Camp Branch. The monitoring locations for D-001 and D-004, where effluent samples were taken as grab and composite samples, and D-002, where effluent samples were taken as grab samples, are each located at the PCS Phosphate property boundaries downstream of their respective stream headwaters. For simplicity in the writing of this report, references to effluent samples taken at the monitoring location for each outfall are hereafter referred to as the effluent sample for each outfall, e.g. a "D-001 effluent monitoring location sample" is discussed as a "D-001 effluent sample". Qualitative macroinvertebrate dipnet sampling to determine Stream Condition Index (SCI) scores for the in-stream sites was not conducted as a portion of this survey because stream conditions had been previously determined by FDEP Northeast District and facility sampling events.

All field and laboratory biological methods followed Bureau of Laboratories and Biology Section Standard Operating Procedures (see http://www.dep.state.fl.us/labs/library/lab_sops.htm and http://www.dep.state.fl.us/water/sas/sop/sops.htm 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: Jann Gruentzel, Sharon Piltz, Jacob Mast, and Jeremy Parrish (FDEP Northeast District Office, Jacksonville), and FDEP Central Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Mike Tanski, Andrew Tintle, and Jennifer Weger).

Results

Organic Constituents (See Appendix F)

- No organic constituents were detected in the effluent grab samples.
- No organic constituents were detected in the field blank.

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

- The Habitat Assessment score was highest at the D-004 Test Site (133), placing it in the Optimal Category, followed by similar scores at the D-001 Test Site (113) and D-002 Test Site (118) and a slightly lower score at the Control Site (103), which places these three in-stream sites in the Suboptimal category. The D-002 Test and D-004 Test Sites had better substrate diversity than the Control and D-001 Test Sites, and the D-004 Test Site had more substrate availability than the other in-stream sites. The Control Site had the most

habitat smothering, while the D-004 Test Site had the least. The bank stability was better at the D-002 Test and D-004 Test Sites.

- The pH (Standard Units), specific conductance (µmhos/cm), and dissolved oxygen (% saturation and mg/L) of the D-001, D-002, and D-004 effluents and D-001, D-002, and D-004 Test Sites complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or effluent permit limits. The pH of the Control Site was low and similar to other naturally low pH observations reported for the stream in past sampling events. Dissolved oxygen and specific conductance of the Control Site complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.).

Nutrients (See Table 2 and Appendix F)

- Ortho-phosphate, total phosphorus, total ammonia, and nitrate+nitrite levels were much lower in the Control Site samples than the levels found in any of the other in-stream or effluent grab/composite samples.
- Total Kjeldahl nitrogen, organic nitrogen, and total nitrogen amounts in the D-001 effluent grab/composite samples and D-001 Test Site samples were higher than the amounts found in the Control Site samples, while the amounts found in the D-004 effluent grab/composite samples and D-004 Test Site samples were lower than the amounts found in the Control Site samples.
- The total Kjeldahl nitrogen amount in the D-002 effluent grab sample was higher than in the D-002 Test Site sample and the Control Site sample. Organic nitrogen levels in the D-002 effluent grab and D-002 Test Site samples are similar to the level found in the Control Site sample. Total nitrogen levels in the D-002 effluent grab and D-002 Test Site samples were higher than in the Control Site sample.
- Total organic carbon levels were much higher in the Control Site sample than the levels found in any of the other in-stream or effluent grab/composite samples.
- No nutrients were detected in the field blank.

Analytical Water Chemistry (See Table 2 and Appendix F)

- Chlorophyll *a* (corrected) was detected at high levels in the D-001 and D-002 effluent grab and D-001 and D-002 Test Site samples. The chlorophyll *a* (corrected) result for the D-001 Test Site sample is considered to be estimated due to a laboratory duplicate being outside the control limits (J-qualified). Chlorophyll *a* (corrected) was not detected in the D-004 effluent grab, D-004 Test Site, or Control Site samples.
- Total Suspended Solids (TSS; mg/L) were detected in the D-001 effluent composite and D-001 Test Site samples. TSS were detected between the method detection limit (MDL) and practical quantitation limit (PQL) in the D-002 Test Site sample, D-004 effluent composite and Test Site samples, and the Control Site sample (I-qualified).
- Turbidity (NTU) of the D-001, D-002, and D-004 effluent grab samples and the D-001, D-002, and D-004 Test Site samples was higher than the Control Site sample, and all samples complied with the Class III Freshwater Quality Criterion (62-302.530, F.A.C.) and/or permit limits.
- Fluoride (mg F/L) of the D-001 and D-004 effluent composite samples, the D-001, D-002, and D-004 Test Site samples, and the Control Site sample all complied with Class III Freshwater Quality Criterion (62-302.530, F.A.C.) and/or permit limits.
- Total Alpha (pCi/L) and Radium 226 + 228 (pCi/L) of the D-001 effluent composite and D-002 effluent grab samples complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or permit limits. The D-002 effluent was collected as a grab sample while the permit limit for determination of compliance requires a composite sample.

Toxicity Whole Effluent Test (See Table 2 and Appendix F)

- Tests were performed February 4 through 11, 2014 using effluent composite samples collected from D-001. Permit limits for toxicity only pertain to the D-001 and D-002 effluents.
- During the chronic definitive bioassay, the effluent sample IC25 for the fish, *Pimephales promelas*, was less than 100%, but should not be used for compliance purposes as the test did exhibit likely pathogen interference. This facility has had problems with pathogen interference in the past and the district requested that the pathogen interference protocol chronic bioassay (EPA, 2002) be run in addition to the chronic definitive bioassay. The effluent sample was not toxic to the fish, *Pimephales promelas,* during the pathogen interference protocol chronic bioassay.

- The effluent sample IC25 for the water flea, *Ceriodaphnia dubia,* during the chronic definitive bioassay was greater than 100%.
- For more information or to obtain copies of the toxicity bench sheets, please contact the Biology Laboratory at 850-245-8177.

Metals (See Table 3 and Appendix F)

- All metals detected in the D-001, D-002, and D-004 effluent grab samples were present in amounts that complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.).
- All metals in the D-001, D-002, and D-004 Test Site samples and in the Control Site samples were either undetected or detected in amounts that complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.).
- No metals were detected in the field blank.

Bioassessment

Periphyton (See Table 4)

- Periphyton communities at the D-001 and D-002 Test Sites contained approximately 50% blue-green and green algae, while the communities at the D-004 Test Site and the Control Site consisted of diatoms in high percentages (84.4% and 93.0%, respectively). The dominant diatom at the Control Site, *Eunotia* sp., typically prefers lower pH. This result is consistent with the site pH values measured in this survey.

Macroinvertebrates (See Table 5)

- Quantitative macroinvertebrate data were collected from Hester-Dendy samplers at the D-001, D-002 and D-004 Test Sites, as well as the Control Site. The permit contains a Shannon-Weaver diversity score limit for each Test Site which is at least 75% of a previously determined background value. Shannon-Weaver diversity was not calculated for the D-001 Test Site because of replicate loss during the 28-day deployment and thus, without the minimum 3 replicates, compliance cannot be assessed for that site. Three replicate condos were used to calculate Shannon-Weaver diversity for the D-002 and D-004 Test Sites and Control Site. The Shannon-Weaver diversity score for the D-002 Test Site (3.27) complied with its permit limit. The Shannon-Weaver diversity score for the D-004 Test Site (2.84) did not comply with its permit limit. The Shannon-Weaver diversity score was lowest at the Control Site, but it has the potential for a negative bias as it was calculated from a sample with less than 300 individuals (Lande, 1996). The low number of individuals captured on the Control Site samplers is in contrast with and much lower than the numbers captured at each of the Test Sites. In regards to community composition, ephemeropterans and trichopterans are known to be more sensitive to pollution than dipterans. The D-001 and D-004 Test Sites were dominated by dipterans at a high percent dominance (~80%). The D-002 Test Site and Control Site had similar but reversed dominance of two groups, dipterans (47.9%) followed by ephemeropterans (36.7%) at the D-002 Test Site and ephemeropterans (52.7%) followed by Dipterans (40.9%) at the Control Site. *Acerpenna pygmaea* was the most numerous taxon at the D-002 Test Site, comprising almost all of the 36.7% ephemeropterans. A small percentage of trichopterans were present at each site.
- For more information or to obtain a copy of the taxa lists, please contact the Biology Laboratory at 850-245-8177.

Conclusion

The D-001, D-002, and D-004 effluents have the potential to contribute phosphorus to their respective streams (Swift Creek, Hunter Creek, and Camp Branch Creek) in amounts greater than present at the Control Site. D-001 and D-002 also have the potential to contribute nitrogen. Chlorophyll *a* was present in high amounts in the D-001 and D-002 effluent grab and Test Site samples. There were no adverse effects apparent on the periphyton community in Swift Creek, Hunter Creek, or Camp Branch from the effluents. The Shannon-Weaver macroinvertebrate diversity score for the D-004 Test Site did not comply with its permit limit, at least 75% of a previously determined background value. Hester-Dendy replicate loss at the D-001 Test Site and the low numbers of individuals on the Control Site Hester-Dendy samplers hinders direct comparison of all four sites. Therefore, despite a greater presence of the more sensitive ephemeropterans at the D-002 Test Site and Control Site compared with the D-001 and D-004 Test Sites, where the more pollution tolerant Dipterans were present at very high percentages, it cannot be conclusively determined from the data collected in this survey if there is a negative effect of the effluent on the macroinvertebrate communities of the receiving waters.

Literature Cited

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

PCS Phosphate - White Springs	Units	Class III Criteria	D-001 Permit Limits	D-001 (24-hour composite)	D-001 (grab)	Swift Creek D-001 Test Site	D-002 Permit Limits	D-002 (grab)	Hunter Cr D-002 Test Site	D-004 Permit Limits	D-004 (grab)	Camp Branch D-004 Test Site	Control Site
Habitat Assessment	-	-	-	-	-	113	-	-	118	-	-	133	103
Sample Depth	m	-	-	-	0.3	0.2	-	0.5	0.3	-	0.1	0.15	0.5
Temperature	C	-	Report	0.9	12.8	14.3	Report	12.2	17.6	-	15.7	17.1	17.5
pH	SU	6.0 - 8.5	6.0 - 8.5	-	7.3	7.7	6.0 - 8.5	7.3	7.8	6.0 - 8.5	7.1	7.6	4.05 e
Specific Conductance	µmhos/cm	≤ 1,275	≤ 1,275 p	-	438	458	≤ 1,275	143	315	≤ 1,275	231	229	85
Salinity	ppth	-	-	-	0.3 c	0.3 c	-	0.1 c	0.2 c	-	0.1 c	0.1 c	0.05 c
Dissolved Oxygen	% saturation	≥ 34	-	-	72.3 Jc	89.8 c	-	94.5 Jc	97.9 c	-	94.2 Jc	100 c	95.3 c
Dissolved Oxygen	mg/L	-	≥ 5.0	-	7.6 J	9.2	≥ 5.0	10.1 J	9.3	≥ 5.0	9.4 J	11.0	9.1
Flow	MGD	-	Report	-	80.4	-	Report	4.5	-	Report	6.4 [1]	-	-

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

e - Value exceeds the Class III Water Quality Criteria or permit limits
c - Value is calculated
p - 24-hour flow proportioned composite
J - Estimated value
1 - Flow collected from D-004 on 2/4/2014. Flow data was not collected on the day the samples were collected (2/3/2014).

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

PCS Phosphate - White Springs	Units	Class III Criteria	D-001 Permit Limits	D-001 (24-hour composite)	D-001 (grab)	Swift Creek D-001 Test Site	D-002 Permit Limits	D-002 (grab)	Hunter Cr D-002 Test Site	D-004 Permit Limits	D-004 (24-hour composite)	D-004 (grab)	Camp Branch D-004 Test Site	Control Site
Ortho-phosphate	mg P/L	-	-	-	-	2.0	-	-	1.0	-	-	-	1.1	0.062
Total Phosphorus	mg P/L	-	Report p	2.5	-	2.5	≤ 5.0 p	-	1.3	Report p	1.6	-	1.3	0.074
Total Ammonia	mg N/L	-	Report p	0.51	0.55	0.52	Report	0.59	0.25	-	0.038	0.030	0.020	0.007
Un-ionized Ammonia (calculated salinity)	mg NH_3/L	≤ 0.02 s	≤ 0.02	-	< 0.02 c	< 0.02 c	≤ 0.02	< 0.02 c	< 0.02 c	-		< 0.02 c	< 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	1.0	1.1	0.99	-	0.47	0.60	-	0.20	0.16	0.16	0.004 U
Total Kjeldahl Nitrogen	mg N/L	-	Report p	3.4	2.8	2.5	Report p	2.2	1.5	-	0.83	0.72	0.58	1.3
Organic Nitrogen	mg N/L	-	-	2.9 c	2.3 c	2 c	-	1.6 c	1.3 c	-	0.79 c	0.69 c	0.56 c	1.3 c
Total Nitrogen	mg N/L	-	Report p	4.4 c	3.9 c	3.5 c	Report p	2.7 c	2.1 c	Report p	1.0 c	0.88 c	0.74 c	1.3 c[2]
Total Organic Carbon	mg C/L	-	-	-	12	12	-	18	19	-	-	14	13	56
Chlorophyll *a* - Corrected	ug/L	-	-	-	210	130 AJ	-	41	36	-	-	0.55 U	0.55 U	0.55 U
Phaeophytin	ug/L	-	-	-	30	31 A	-	6.6	13	-	-	0.53 I	0.40 U	0.62 I
CBOD, 5 day, N - inhibited	mg/L	-	-	-	-	7.7 L	-	-	3.4	-	-		0.99 I	0.86 I
Hardness	mg/L as $CaCO_3$	-	-	-	170 c	173 c	-	123 c	118 c	-	-	97.7 c	95.1 c	12.3 c
Total Suspended Solids	mg/L	-	Report p	13	-	15 A	≤ 60 p	-	6 I	Report p	4 I	-	4 I	5 I
Turbidity	NTU	< 29 t	≤ 31.0	-	6.8	6.7 A	≤ 31.0	5.9	4.9	≤ 31.0	-	2.1	2.6	1.3
Color (true)	PCU	-	-	-	36	-	-	56	-	-	-	100	-	-
Alkalinity	mg CaCO3/L	≥ 20	-	-	90	93	-	127	111	-	-	69 A	67	0.65 U
Chloride	mg Cl/L	-	-	-	9.5	9.1	-	8.1	8.3	-	-	7.7 A	7.9	8.8
Fluoride	mg F/L	≤ 10.0	≤ 10.0 p	2.3	-	2.2	≤ 10.0 p	-	0.79	≤ 10.0 p	1.3	-	0.98	0.13
Sulfate	mg SO4/L	-	-	-	110	-	-	25	-	-	-	33 A	-	-
Alpha, Total [3]	pCi/L	≤ 15	≤ 15.0 p	2.1 U	-	-	≤ 15.0 p	1.9	-	-	-	-	-	-
Alpha-Counting Error [3]	pCi/L	-	-	1.4	-	-	-	1.3	-	-	-	-	-	-
Radium 226 [3]	pCi/L	-	-	0.7	-	-	-	0.6	-	-	-	-	-	-
Radium 226-Counting Error [3]	pCi/L	-	-	0.1	-	-	-	0.2	-	-	-	-	-	-
Radium 228 [3]	pCi/L	-	-	0.8 U	-	-	-	0.8 U	-	-	-	-	-	-
Radium 228-Counting Error [3]	pCi/L	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-
Radium 226 + 228 [3]	pCi/L	≤ 5	≤ 5.0 p	0.7 c	-	-	≤ 5.0 p	0.6 c	-	-	-	-	-	-
Toxicity														
Bioassay - Water flea *(Ceriodaphnia dubia)*	% effluent	-	≥ 100 p [4]	> 100 [4]	-	-	≥ 100 [5]	-	-	-	-	-	-	-
Bioassay - Fish *(Pimephales promelas)*	% effluent	-	≥ 100 p [4]	> 100 [6]	-	-	-	-	-	-	-	-	-	-
Bioassay - Fish *(Cyprinella leedsi)*	% effluent	-	-	-	-	-	≥ 100 [5]	-	-	-	-	-	-	-

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

Table 2 qualifiers

c - Value is calculated
p - 24-hour flow proportioned composite
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J - Estimated value
K - Actual value is known to be less than value given (appears in Appendix F)
L - Actual value is known to be greater than value given
U - Material analyzed for but not detected; value reported is the method detection limit
IC25 - 25 percent inhibition concentration
LC50 - concentration that is lethal to 50 percent of exposed organisms at a specific time of observation
2 - Value is calculated using half the MDL value of the analyte(s) that were not detected
3 - Analyses performed by Florida Radiochemistry Services using EPA methods 900, 903.1 and Ra-05 for alpha, radium-226, and radium-228, respectively
4 - Chronic whole effluent toxicity, 7 day IC25
5 - Acute whole effluent toxicity, LC50
6 - Pathogen interference protocol screening test, IC25. The chronic definitive toxicity test results (IC25 of 3.03 % effluent) should not be used for compliance purposes as the test exhibited likely pathogen interference. See tox discussion on page 4 of the report for more information.

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

PCS Phosphate - White Springs	Units	D-001 Class III Criteria	D-001	D-001 Test Site Class III Criteria	Swift Creek D-001 Test Site	D-002 Class III Criteria	D-002	Hunter Cr D-002 Test Site Class III Criteria	Hunter Cr D-002 Test Site	D-004 Class III Criteria	D-004	Camp Branch D-004 Test Site Class III Criteria	Camp Branch D-004 Test Site	Control Site Class III Criteria	Control Site
Hardness	mg/L as $CaCO_3$	-	170 c	-	173 c	-	123 c	-	118 c	-	97.7 c	-	95.1 c	-	12.3 c
Aluminum	µg/L	-	208	-	273	-	190	-	246	-	181	-	220	-	636
Arsenic	µg/L	≤ 50	1.35	≤ 50	1.30	≤ 50	0.99 I	≤ 50	1.05	≤ 50	0.94 I	≤ 50	1.01	≤ 50	0.59 I
Cadmium	µg/L	≤ 0.401 b	0.050 U	≤ 0.406 b	0.050 U	≤ 0.315 b	0.050 U	≤ 0.305 b	0.050 U	≤ 0.266 b	0.051 I	≤ 0.261 b	0.050 U	≤ 0.097 b	0.050 U
Calcium	µg/L	-	40.3	-	41.0	-	26.0	-	25.0	-	22.7	-	22.1	-	2.41
Chromium, Total [n]	µg/L	≤ 133 b	0.46 I	≤ 135 b	0.56 I	≤ 102 b	0.42 I	≤ 98.4 b	0.48 I	≤ 84.6 b	0.55 I	≤ 82.7 b	0.62 I	≤ 27.7 b	0.89 I
Copper	µg/L	≤ 14.7 b	0.50 U	≤ 14.9 b	0.50 U	≤ 11.1 b	0.50 U	≤ 10.7 b	0.50 U	≤ 9.15 b	0.50 U	≤ 8.94 b	0.50 U	≤ 2.85 b	0.53 I
Iron	µg/L	≤ 1,000	110 I	≤ 1,000	120 I	≤ 1,000	96 I	≤ 1,000	260	≤ 1,000	320	≤ 1,000	310	≤ 1,000	590
Lead	µg/L	≤ 6.24 b	0.22 I	≤ 6.38 b	0.27 I	≤ 4.14 b	0.20 U	≤ 3.91 b	0.31 I	≤ 3.09 b	0.20 U	≤ 2.99 b	0.21 I	≤ 0.545 b	0.55 I
Magnesium	mg/L	-	16.8	-	17.1	-	14.1	-	13.4	-	9.96	-	9.70	-	1.52
Nickel	µg/L	≤ 81.6 b	1.41	≤ 82.9 b	1.43	≤ 62.1 b	0.29 I	≤ 59.8 b	0.46 I	≤ 51.1 b	0.47 I	≤ 50.0 b	0.46 I	≤ 16.1 b	0.74 I
Potassium	mg/L	-	2.4	-	2.4	-	2.3	-	2.2	-	1.5	-	1.4	-	0.30 U
Selenium	µg/L	≤ 5.0	0.27 I	≤ 5.0	0.30 I	≤ 5.0	0.24 I	≤ 5.0	0.37 I	≤ 5.0	0.37 I	≤ 5.0	0.31 I	≤ 5.0	0.30 I
Silver	µg/L	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U
Sodium	µg/L	-	29.3	-	30.1	-	20.8	-	23.4	-	12.3	-	11.8	-	4.9
Zinc	µg/L	≤ 188 b	5.0 U	≤ 190 b	5.0 U	≤ 143 b	5.0 U	≤ 137 b	5.0 U	≤ 117 b	5.0 U	≤ 115 b	5.0 U	≤ 37 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))
n - Class III Freshwater Quality Criterion (62-302.530(19)(a), F.A.C.) is for chromium-III
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. Periphyton samples - qualitative

PCS Phosphate - White Springs	Swift Creek D-001 Test Site	Hunter Cr D-002 Test Site	Camp Branch D-004 Test Site	Control Site
Wet Algae Analysis				
Number of Wet Taxa	28	25	11	8
Number of Wet Algal Units Identified	301	301	302	300
Percent Dominant Wet Taxon	24.5	19.3	25.5	33.3
Dominant Wet Taxon Name	*Chlorella vulgaris* (Chlorophyceae)	*Synechocystis sp.* (Cyanophyceae)	*Schizothrix calcicola* (Cyanophyceae)	*Jaaginema gracile* (Cyanophyceae)
% Blue-green	16.6	17.3	11.6	3.7
% Green	43.5	27.9	4.0	3.3
% Cryptophytes	1.3	1.0	0.0	0.0
% Euglenophytes	0.3	0.0	0.0	0.0
% Pyrrophytes	3.3	0.0	0.0	0.0
% Diatoms	34.9	53.5	84.4	93.0
Diatom Analysis				
Number of Diatom Taxa	31	42	38	47
Number of Diatom Valves Identified	500	497	489	500
Percent Dominant Diatom Taxon	24.8	36.0	38.9	24.8
Dominant Diatom Taxon Name	*Cyclotella atomus* (Coscinodiscophyceae)	*Geissleria acceptata* (Bacillariophyceae)	*Navicula ingenua* (Bacillariophyceae)	*Eunotia sp.* (Bacillariophyceae)

Table 5. Macroinvertebrate Hester-Dendy samples - quantitative

PCS Phosphate - White Springs	Swift Creek D-001 Test Site	Hunter Cr D-002 Test Site	Camp Branch D-004 Test Site	Control Site
Summary Statistics				
Shannon-Weaver Diversity Effluent Permit Limits	≥ 2.72	≥ 3.08	≥ 3.00	-
Shannon-Weaver Diversity	- [7]	3.27	2.84 [e]	2.72 [8]
Hester-Dendy Replicates	2	3	3	3
Number of Taxa	16	27	31	22
Number of EPT Taxa	3	4	10	8
Percent Dominant Taxon	36.8	35.75	35.55	45.62
Dominant Taxon Name	*Polypedilum flavum* (Diptera)	*Acerpenna pygmaea* (Ephemeroptera)	*Simulium sp.* (Diptera)	*Maccaffertium smithae* (Ephemeroptera)
Total Number of Individuals (counted)	1086	631	846	142 *
Total Number of Individuals (#/m2)	4311	1671	2240	377
Community Composition: Percent of total				
Acariformes	0.3	0.0	0.5	0.0
Amphipoda	4.4	1.9	0.1	0.0
Coleoptera	0.0	1.9	0.5	1.4
Diptera	81.7	47.9	82.0	40.9
Ephemeroptera	5.3	36.7	12.3	52.7
Gastropoda	0.0	0.5	0.0	0.7
Isopoda	0.0	1.0	0.0	0.0
Oligochaeta	0.4	0.0	0.0	0.0
Plecoptera	0.0	0.0	0.0	0.0
Trichoptera	8.0	10.0	4.5	3.5
Other	0.0	0.2	0.1	0.8
Functional Feeding Groups: Percent of total				
Burrowing Deposit Feeders	0.4	0.0	0.0	0.0
Piercers	0.0	0.0	0.0	0.4
Predators	4.2	0.9	0.7	7.1
Scavengers	0.0	0.5	0.0	0.0
Scrapers	2.6	19.8	6.0	27.1
Shredders	20.8	6.1	19.9	0.4
Surface Deposit Feeders	45.2	38.7	28.8	33.4
Suspension Feeders	26.8	33.9	43.5	31.7
Unknown	0.0	0.0	1.2	0.0

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

Table 5 qualifiers

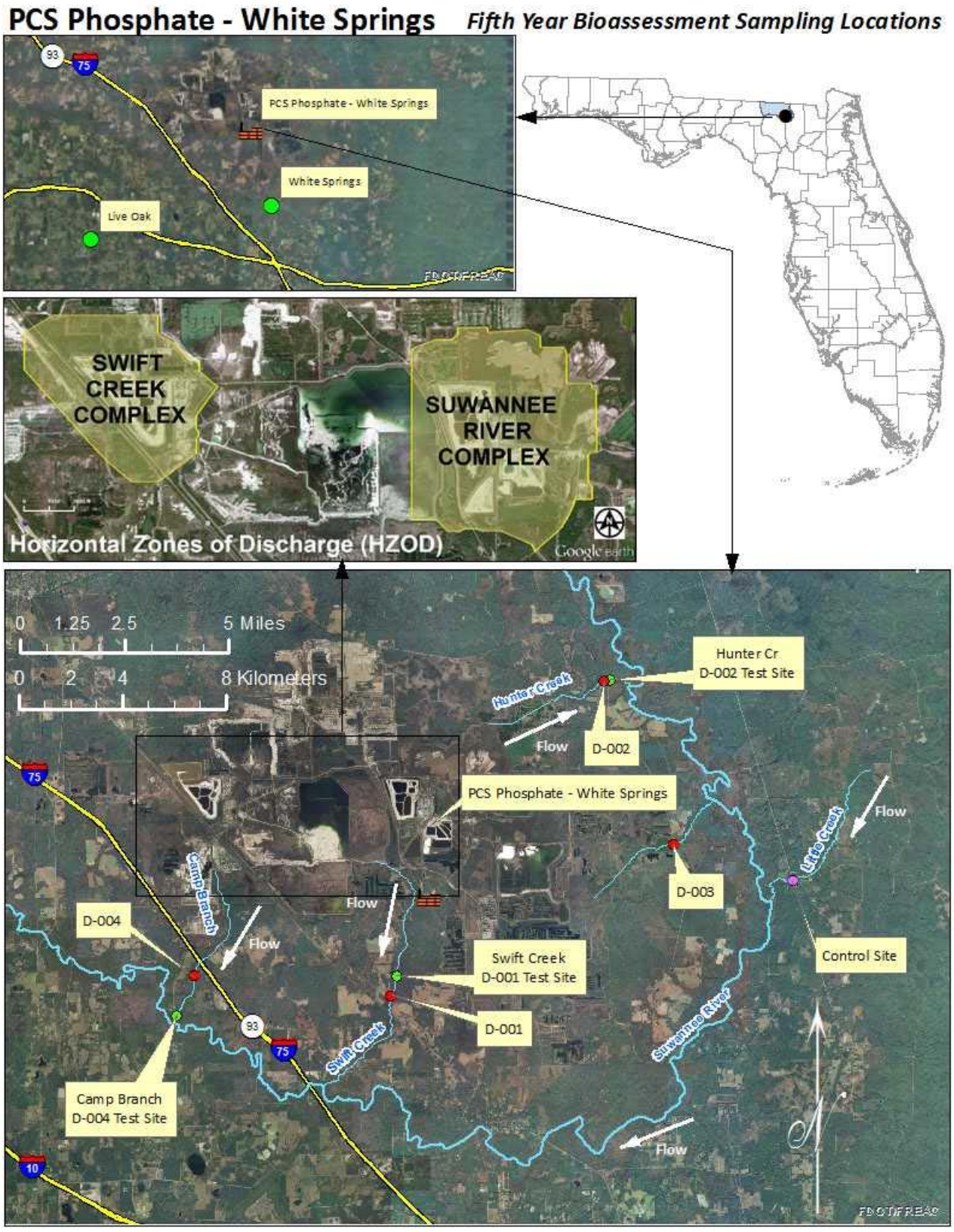
e - Value exceeds the Class III Water Quality Criteria or permit limits

7 – Shannon-Weaver scores are only calculated at sites with more than 2 replicates.

8 - Shannon Weaver Diversity scores calculated on samples with < 300 individuals have the potential for negative bias (lower diversity scores compared to sites with more individuals) (Lande 1996).

Appendix A

Map of Facility



Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

Facility Name (as it appears on permit): PCS Phosphate - White Springs		**Former Names:** Suwannee River Chemical Complex
Physical Address: County Road 137 North of White Springs White Springs, Fl 32096	**NPDES Permit No.:** FL0000655 **Expiration Date:** January 7, 2015	**Prepared By:** Herndon Sims
County: Hamilton	**District:** Northeast	**Facility Type:** Industrial Wastewater
Function of Facility: Production of fertilizer components and feed supplements		

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

EFF-1: Swift Creek Surface Water Location
OUI-02 Altman Bay Canal to Swift Creek
OUI-03: Discharge from the pumps to the Swift Creek mine clay settling areas and Altman Bay retention pond
OUI-04: Sampling location downstream of various Lake discharge but prior to mixing with OUI-18 (Eagle Lake Outfall)
OUI-06: Discharge from Altman Bay Lake Retention Pond
OUI-07: Discharge from South Altman Bay Lake
OUI-09: Discharge from Purvis Lake that does not go through South Altman Bay Lake and discharge from Clay Settling Areas
OUI-8: Discharges associated with the spray irrigation and wetlands land application project, clay settling areas, mining and reclamation areas; treated process wastewater sent to storage areas
OUI-11: Discharges associated with outflow from the spray irrigation and wetlands land application project, clay settling areas, mining and reclamation areas; water delivered to the spray irrigation system
OUI-12: Discharges associated with outflow from the spray irrigation and wetlands land application project, clay settling areas, mining and reclamation areas; flow from the spray irrigation system at the connection between CSA 4 and CSA 8
OUI-13: Discharges associated with outflow from the spray irrigation and wetlands land application project, clay settling areas, mining and reclamation areas; flow from the spray irrigation system at the connection between CSA 8 and CSA 11
OUI-18: Eagle Lake Outfall
OUI-22: Discharge from Retention pond
OUI-28: After Liming Pond on Swift Creek Chemical Complex
EFF-2: Canal to Hunter Creek
SWD-2: Hunter's Creek at CR 135
EFF-3: Roaring Creek at CR 135
SWD-3: Downstream from D-003 within Roaring Creek prior to Suwannee River
EFF-4: Camp Branch
SWD-4: Downstream of D-004 within Camp Branch prior to discharge
OUI-41: Lang Lake Outfall
OTH-SUM: Combined numbers from D-001, D-002, D-003 and OUI-41

Description of permitted outfall:

EFFLUENT DISPOSAL (Surface Water Discharge):

An existing 20.6 MGD average daily flow (ADF) discharge to Swift Creek (Class III Fresh waters – WBID 3375 Upper Suwannee Swift Creek), D-001. The point of discharge is located approximately at latitude 30° 22' 35" N, longitude 82° 47' 57" W.

An existing 7.2 MGD average flow to Hunter Creek (Class III Fresh waters – WBID 3364 Upper Suwannee Hunter Creek), D-002. The point of discharge is located approximately at latitude 30° 29' 08" N, longitude 82° 42' 43" W.

A new discharge to Roaring Creek (Class III Fresh waters – WBID 3392 Upper Suwannee Roaring Creek), D-003. The point of discharge is located approximately at latitude 30° 26' 32" N, longitude 82° 40' 15" W.

An existing discharge to Camp Branch (Class III Fresh waters - WBID 3423 Upper Suwannee Camp Branch), D-004. The point of discharge is located approximately at latitude 30° 23' 11" N, longitude 82° 52' 08" W.

Internal Outfalls (see Schematic Diagram: Water Circulation System):

a. I-S02 to Swift Creek through I-S04 via D-001,
b. I-S03 to clay settling areas and the Altman Bay retention pond,
c. I-S04 to Swift Creek via D-001,
d. I-S06 to Swift Creek through I-S04 via D-001,
e. I-S07 to Swift Creek through I-S04 via D-001,
f. I-S22 to Eagle Lake,
g. I-S28 to retention pond at Swift Creek Chemical Complex,
h. OUI-41 (aka I-C41) to Camp Branch through D-004,
i. I-S08 to spray field irrigation system, flow of treated process water from large pond normally to SRM SA 9 or to SCM SA 11 (if dredging/pumping)
j. I-S09 to Swift Creek through I-S04 via D-001, and
k. I-S18 to Swift Creek via D-001.

Description of treatment process (if multiple discharge points, include a map or diagram of facility):
Operation renewal is authorized for an existing 27.8 million gallons per day (MGD) (Suwannee River Facility) and 26.9 MGD (Swift Creek Facility) discharge consisting of treated process wastewater, contaminated non-process wastewater (CNPW), sanitary wastewater, storm water, clay settling areas, and the phosphogypsum stack systems. These permits (FL0000655 and FL0036226) are being combined.

Wastewater is generated from open-pit mining of phosphate rock, beneficiation of the rock in the mining areas, manufacture of sulfuric acid and phosphoric acid, production of fertilizer components and animal-feed supplements, storm water runoff, clay settling areas, and the phosphogypsum stack systems.

Treatment consists of pH adjustment and chemical precipitation when required using lime and other water treatment aids such as flocculants and shading agents (as approved by DEP), settling/sedimentation, and adsorption/absorption on mining waste clay particles in clay settling areas.

Final discharge to surface waters of the state occurs at outfalls D-001 (Swift Creek), D-002 (Hunter Creek), D-003 (Roaring Creek) and D-004(Camp Branch) class III fresh surface waters of the state.

Discharge of the above described wastewater to ground waters of the state occurs within clay settling areas and on-site retention/treatment ponds.

Approximately 8 MGD of contaminated non-process wastewater (CNPW) from Suwannee River Chemical is diverted via internal outfall I-S03 to the Swift Creek Mine clay settling areas and the Altman Bay retention pond as part of the Nutrient Removal System (NRS), which then ultimately discharges via outfall D-001.

Hamilton County landfill leachate is sent to the Town of White Springs WWTF. The Town of White Springs WWTF effluent is discharged to the clay settling area. This permit combines the previous NPDES permits FL000655 (PCS Suwannee) and FL0036226 (PCS Swift Creek).

PERMIT REVISION HISTORY

1st Revision (005/MM)
The revision is to revise Table I.A.12 of the permit to correct a typographical error for pH. Internal outfalls OUI-8, OUI-11, OUI-12, and OUI-13 are corrected to reflect only grab samples and to be report only.

2nd Revision (006/RM)
Groundwater section III.B.2.(b) and III.B.5 has been revised and added to the permit in accordance with requirements of Consent Order 10-1878. This section describes new monitoring well locations that the facility will begin monitoring in the third quarter of 2013. The zone of discharge for the facility has also been more clearly defined.

3rd Revision (007/RM)
The revision is to include schedules on Part VI.2 and specific conditions on Part VII.B of the permit for the closure of the Dorr Oliver Cooling Pond, and to reduce the toxicity monitoring frequency of D-001, D-002, D-003, and OUI-41 (aka I-C41) to semi-annually.

Receiving Waters:	**Classification (indicate whether fresh or marine):**
-Swift Creek – WBID 3375 Upper Suwannee Swift Creek), D-001, located approximately at latitude 30° 22' 35" N, longitude 82° 47' 57" W	Class III Fresh waters
-Hunter Creek – WBID 3364 Upper Suwannee Hunter Creek), D-002, located approximately at latitude 30° 29' 08" N, longitude 82° 42' 43" W	Class III Fresh waters
-Roaring Creek – WBID 3392 Upper Suwannee Roaring Creek), D-003.located approximately at latitude 30° 26' 32" N, longitude 82° 40' 15" W.	Class III Fresh waters
-Camp Branch - WBID 3423 Upper Suwannee Camp Branch), D-004. located approximately at latitude 30° 23' 11" N, longitude 82° 52' 08" W.	Class III Fresh waters
Temperature (C): Based on October 2013 DMR Swift Creek-23.2 (°C); Hunter Creek-NOD; Roaring Creek-NOD; Camp Branch-NOD	**Design Flow:** -27.8 million gallons per day (MGD) (Suwannee River Facility) -26.9 MGD (Swift Creek Facility)
pH (SU): Based on October 2013 DMR Swift Creek-7.4; Hunter Creek-NOD; Roaring Creek-NOD; Camp Branch-7.4	**Mean Flow (MGD) (for previous 12 months):** Swift Creek-59.9; Hunter Creek-3.2; Roaring Creek-0; Camp Branch-4.3

Conductivity (umhos/cm): Based on October 2013 DMR Swift Creek-527; Hunter Creek-NOD; Roaring Creek-NOD; Camp Branch-168	**Flow During Survey: S**urvey not yet completed
Method of Chlorination: Disinfection	**Method of Dechlorination:** NA
Dissolved Oxygen (mg/L): Based on October 2013 DMR Swift Creek-5.2; Hunter Creek-NOD; Roaring Creek-NOD; Camp Branch-7.2	**Total Residual Chlorine (mg/L) (after disinfection):** NA

Discharge is: **Continuous** **Intermittent** **Seasonal** **Rainfall Dependent** **Other**

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

The permittee shall evaluate chronic whole effluent toxicity of the discharge from outfall D-001. Routine toxicity tests shall be conducted once every six months. In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC_{25}) shall not be less than 100% effluent. For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test. For each routine test or additional follow-up test conducted, a total of three 24-hour composite or grab samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8. The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test. Samples for routine and additional follow-up tests shall not be collected on the same day. All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: 100%, 50%, 25%, 12.5%, and 6.25% final effluent. The permittee shall conduct a daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test and a fathead minnow, *Pimephales promelas*, Larval Survival and Growth Test, concurrently. If the mortality in the control (0% effluent) exceeds 20% for either species in any test or any other test acceptability criteria are not met, the test for that species (including the control) shall be invalidated and the test repeated. Test acceptability criteria for each species are defined in EPA-821-R-02-013, Section 13.12 (*Ceriodaphnia dubia*) and Section 11.11 (*Pimephales promelas*). The repeat test shall begin within 21 days after the last day of the invalid test. If 100% mortality occurs in all effluent concentrations prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) shall be terminated with the conclusion that the test fails and constitutes non-compliance. Routine and additional follow-up tests shall be evaluated for acceptability based on the observed dose-response relationship as required by EPA-821-R-02-013, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

Administrative or Consent Orders:

Consent Order 10-1878 issued December 21, 2010 for an unauthorized discharge of 82 million gallons of acidic process wastewater to the Florida Aquifer.

Facility Mixing Zone Details:
NA

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	Statistical Base	Units
6/30/2012	P 00400	PH	3.4	6	DAILY MN	SU
6/30/2012	P 00400	PH	7.7	8.5	DAILY MX	SU
6/30/2012	P 00951	FLUORIDE, TOTAL (AS F)	11.6	Report	MO AVG	mg/L
6/30/2012	P 00951	FLUORIDE, TOTAL (AS F)	39.5	10	DAILY MX	mg/L
6/30/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	12.4	12	MO AVG	mg/L
6/30/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	12.4	25	DAILY MX	mg/L
6/30/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	14	12	MO AVG	mg/L
6/30/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	14	25	DAILY MX	mg/L
6/30/2012	P 00400	PH	2.5	6	DAILY MN	SU
6/30/2012	P 00400	PH	2.5	9.5	DAILY MX	SU
6/30/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	537	35	MO AVG	mg/L
6/30/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	537	105	DAILY MX	mg/L
6/30/2012	P 00951	FLUORIDE, TOTAL (AS F)	375	25	MO AVG	mg/L
6/30/2012	P 00951	FLUORIDE, TOTAL (AS F)	375	75	DAILY MX	mg/L
6/30/2012	P 00400	PH	2.5	6	DAILY MN	SU
6/30/2012	P 00400	PH	7.4	8.5	DAILY MX	SU
6/30/2012	P 00610	NITROGEN, AMMONIA, TOTAL (AS N)	11.3	4	MO AVG	mg/L
7/31/2012	P 00400	PH	5.8	6	DAILY MN	SU
7/31/2012	P 00400	PH	7.3	8.5	DAILY MX	SU
7/31/2012	P 00400	PH	4.1	6	DAILY MN	SU
7/31/2012	P 00400	PH	4.4	9.5	DAILY MX	SU
7/31/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	68.7	35	MO AVG	mg/L
7/31/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	71.5	105	DAILY MX	mg/L
7/31/2012	P 00951	FLUORIDE, TOTAL (AS F)	32	25	MO AVG	mg/L
7/31/2012	P 00951	FLUORIDE, TOTAL (AS F)	34.2	75	DAILY MX	mg/L
7/31/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	19.6	12	MO AVG	mg/L
7/31/2012	P 82287	SOLIDS, TOTAL NON-VOLATILE, NON-FIXED	19.6	25	DAILY MX	mg/L
7/31/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	2.8	3	MO AVG	mg/L
7/31/2012	P 00665	PHOSPHORUS, TOTAL (AS P)	5.7	5	DAILY MX	mg/L

Describe previous impact bioassessments, WQBEL's, and previous or current enforcement actions:
Based on the perphyton/mircroinvertebrate analysis report during 4th Quarter 2012, the streams have been within the permit limits. The biological integrity analysis reports indicated some of the streams have been below the diversity score of 2.72, but this was due to other water quality issues. The SCI score has been above 40. Facility is passing toxicity tests.
The facility was under CO enforcement for collapsed sinkhole as noted above.

Discuss MOR trends to prior data; is trend improving or declining:
Within the past five years, the facility has exceeded the permit limit for pH, TP, nitrogen ammonia, total fluoride and total solids. Most of these exceedances occurred in 2012 and were a one-time occurrence. In 2013 to this date, the facility is meeting the permit limits as required.

List Effluent Limits (include additional sheets as necessary):

A. Surface Water Discharges:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Daily	Calculated	EFF-1
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	In-situ, mid-stream and mid-depth	EFF-1
Solids, Total Suspended (MG/L)	Report	Report	--	Weekly	24-hr. time proportional composite	EFF-1
Fluoride, Total (as F) (MG/L)	Report	10.0	--	Weekly	24-hr. time proportional composite	EFF-1
Specific Conductance (UMHO/CM)	Report	1275	--	Weekly	24-hr. time proportional composite	EFF-1
Temperature (ºC), Water	Report	Report	--	Weekly	Grab or In-situ	EFF-1
pH (SU)	--	8.5	6.0	Weekly	Grab or In-situ	EFF-1
Turbidity (NTU)	Report	31.0 See Permit Condition I.A.32	--	Weekly	Grab	EFF-1
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	Report	--	Weekly	24-hr. time proportional composite	EFF-1
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	Weekly	Calculated	EFF-1
Nitrogen, Kjeldahl, Total (as N) (MG/L)	Report	Report	--	Weekly	24-hr. time proportional composite	EFF-1
Nitrogen, Total (MG/L)	Report	Report	--	Weekly	24-hr. time proportional composite	EFF-1
Nitrogen, Total (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-1
Phosphorus, Total (as P) (MG/L)	Report	Report	--	Weekly	24-hr. time proportional composite	EFF-1
Phosphorus, Total (as P) (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-1
Radium 226 + Radium 228, Total (PCI/L)	--	5.0	--	Quarterly	24-hr. time proportional composite	EFF-1

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Alpha, Gross Particle Activity (PCI/L)[1]	--	15.0	--	Quarterly	24-hr. time proportional composite	EFF-1
Chronic Whole Effluent Toxicity, 7-Day IC25 *(Ceriodaphnia dubia)*			100 See Permit Condition I.A.3	Semi-Annually	24-hr. time proportional composite	EFF-1
Chronic Whole Effluent Toxicity, 7-Day IC25 *(Pimephales promelas)*			100 See Permit Condition I.A.3	Semi-Annually	24-hr. time proportional composite	EFF-1
Biological Integrity	See Permit Condition I.A.31			Quarterly	--	EFF-1

B. Internal Outfall I-S02 (previously known as 001-2) to Swift Creek through I-S04 via D-001and from Internal Outfall I-S03 (previously known as 001-2a) to clay settling areas and the Altman Bay retention pond:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous	Meter	OUI-02, OUI-03
Fluoride, Total (as F) (MG/L)	25.0	75.0	--	2 days/week	24-hour time proportioned composite	OUI-02, OUI-03
Phosphorus, Total (as P) (MG/L)	35.0	105.0	--	2 days/week	24-hour time proportioned composite	OUI-02, OUI-03
pH (SU)	--	9.5	6.0	2 days/week	Grab	OUI-02, OUI-03
Nitrogen, Total (MG/L)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-02, OUI-03
Nitrogen, Total (LBS/DAY)	Report		--	2 days/week	Calculated	OUI-02, OUI-03

C. Internal Outfall I-S04 (previously known as 001-4) to Swift Creek via D-001:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Weekly	Calculate	OUI-04
Nitrogen, Ammonia, Total (as N) (MG/L)	4.0	--	--	Weekly	Grab	OUI-04
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	Weekly	Calculated	OUI-04
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	Grab or In-situ	OUI-04
Temperature (°C), Water (DEG.C)	Report	Report	--	Weekly	Grab or In-situ	OUI-04
pH (SU)	--	8.5	6.0	Weekly	Grab or In-situ	OUI-04

D. Internal Outfall I-S06 (previously known as 001-6) to Swift Creek through I-S04 to D-001:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous	Meter	OUI-06
Solids, Total Suspended (MG/L)	50.0	150.0	--	2 days/week	24-hour time proportioned composite	OUI-06
Phosphorus, Total (as P) (MG/L)	35.0	105.0	--	2 days/week	24-hour time proportioned composite	OUI-06
pH (SU)	--	9.5	6.0	2 days/week	Grab or In-situ	OUI-06
Turbidity (NTU)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-06
Fluoride, Total (as F) (MG/L)	25.0	75.0	--	2 days/week	24-hour time proportioned composite	OUI-06

E. Internal Outfall I-S07 and I-S09 (previously known as 001-7 and 001-9 respectively) to Swift Creek through I-S04 via D-001:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	4 days/week	Calculated	OUI-07, OUI-09
Total Non-Volatile Non-Filterable Residue (MG/L)	12	25	--	2 days/week	24-hour time proportioned composite	OUI-07, OUI-09
Solids, Total Suspended (MG/L)	30.0	60.0	--	2 days/week	24-hour time proportioned composite	OUI-07, OUI-09
Phosphorus, Total (as P) (MG/L)	3.0	5.0	--	2 days/week	24-hour time proportioned composite	OUI-07, OUI-09
Turbidity (NTU)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-07, OUI-09
pH (SU)	--	9.0	6.0	2 days/week	Grab or In-situ	OUI-07, OUI-09

F. Internal Outfall I-S08 (previously known as 001-8F) to the spray irrigation and wetlands land application project, clay settling areas, mining and reclamation areas:

	Discharge Limitations			Monitoring Requirements See Note a below		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous or Calculated	Meter	OUI-8, OUI-11, OUI-12*, OUI-13*
Solids, Total Suspended (MG/L)	Report	Report	--	2 days/week	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Turbidity (NTU)	Report	Report	--	2 days/week	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Phosphorus, Total (as P) (MG/L)	Report	Report	--	2 days/week	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Phosphorus, Total (as P) (LBS/DAY)	Report (Annual Average)	--	--	2 days/week	Calculated	OUI-8, OUI-11, OUI-12, OUI-13
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	Report	--	Weekly	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Nitrogen, Total (MG/L)	Report	Report	--	Weekly	Grab	OUI-8, OUI-11, OUI-12, OUI-13

	Discharge Limitations			Monitoring Requirements See Note a below		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Nitrogen, Total (LBS/DAY)	Report (Annual Average)	--	--	Weekly	Calculated	OUI-8, OUI-11, OUI-12, OUI-13
pH (SU)	--	Report	Report	Weekly	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Fluoride, Total (as F) (MG/L)	Report	Report	--	Weekly	Grab	OUI-8, OUI-11, OUI-12, OUI-13
Specific Conductance (UMHO/CM)	Report	Report	--	Weekly	Grab	OUI-8, OUI-11, OUI-12, OUI-13

G. Internal Outfall I-S18 (previously known as 001-18) to Swift Creek via D-001:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous	Meter	OUI-18
Total Non-Volatile Non-Filterable Residue (MG/L)	12	25	--	2 days/week	Grab	OUI-18
Solids, Total Suspended (MG/L)	30	60	--	2 days/week	Grab	OUI-18
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	4.0	--	2 days/week	Grab	OUI-18
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	2 days/week	Calculated	OUI-18
Oxygen, Dissolved (DO) (MG/L)	--	--	5.0	2 days/week	Grab or In-situ	OUI-18
Temperature (ºC), Water (DEG.C)	Report	Report	--	2 days/week	Grab or In-situ	OUI-18
Phosphorus, Total (as P) (MG/L)	3.0	5.0	--	2 days/week	Grab	OUI-18
Nitrogen, Total (MG/L)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-18
Nitrogen, Total (LBS/DAY)	Report	--	--	2 days/week	Calculated	OUI-18
pH (SU)	--	9.0	6.0	2 days/week	Grab or In-situ	OUI-18
Radium 226 + Radium 228, Total (PCI/L)	--	5.0	--	Quarterly	24-hour time proportioned composite	OUI-18
Alpha, Gross Particle Activity (PCI/L)[2]	--	15.0	--	Quarterly	24-hour time proportioned composite	OUI-18

H. Internal Outfall I-S22 (previously known as 001-22) to Eagle Lake:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous	Meter	OUI-22
Phosphorus, Total (as P) (MG/L)	35.0	105.0	--	2 days/week	24-hour time proportioned composite	OUI-22
pH (SU)	--	9.5	6.0	2 days/week	Grab or In-situ	OUI-22
Nitrogen, Total (MG/L)	Report	Report	--	2 days/week	Grab	OUI-22
Fluoride, Total (as F) (MG/L)	25.0	75.0	--	2 days/week	24-hour time proportioned composite	OUI-22

I. Calcium sulfate storage pile runoff facility operated separately or in combination with a water recirculation system designed, constructed and operated to maintain a surge capacity equal to the runoff from the 25-year, 24-hour rainfall event may be discharged from Internal Outfall I-S28 (previously known as 001-28) to retention pond at Swift Creek Chemical Complex.

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	2 days/week	Calculated	OUI-28
Solids, Total Suspended (MG/L)	50.0	150.0	--	2 days/week	24-hour time proportioned composite	OUI-28
Phosphorus, Total (as P) (MG/L)	35.0	105.0	--	2 days/week	24-hour time proportioned composite	OUI-28
Turbidity (NTU)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-28
Fluoride, Total (as F) (MG/L)	25.0	75.0	--	2 days/week	24-hour time proportioned composite	OUI-28
Specific Conductance (UMHO/CM)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-28
Nitrogen, Total (MG/L)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-28
Radium 226 + Radium 228, Total (PCI/L)	--	5.0	--	Quarterly	24-hour time proportioned composite	OUI-28
Alpha, Gross Particle Activity (PCI/L)[3]	--	15.0	--	Quarterly	24-hour time proportioned composite	OUI-28

J. Outfall D-002:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	4 days/week	Calculated	EFF-2
Total Non-Volatile Non-Filterable Residue (MG/L)	12	25	--	2 days/week	24-hour time proportioned composite	EFF-2

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Solids, Total Suspended (MG/L)	30	60	--	2 days/week	24-hour time proportioned composite	EFF-2
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	In-situ	EFF-2
Specific Conductance (UMHO/CM)		1275		Weekly	Grab	EFF-2
Fluoride, Total (as F) (MG/L)	Report	10.0	--	Weekly	24-hour time proportioned composite	EFF-2
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	Weekly	Calculated	EFF-2
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	Report	--	Weekly	Grab	EFF-2
Temperature (ºC), Water (DEG.C)	Report	Report	--	Weekly	Grab or In-situ	EFF-2
Turbidity (NTU)	Report	31.0 See Permit Condition I.A.32	--	Weekly	Grab	EFF-2
pH (SU)	--	8.5	6.0	Weekly	Grab or In-situ	EFF-2
Phosphorus, Total (as P) (MG/L)	3.0	5.0	--	Weekly	24-hour time proportioned composite	EFF-2
Phosphorus, Total (as P) (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-2
Nitrogen, Kjeldahl, Total (as N) (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-2
Nitrogen, Total (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-2
Nitrogen, Total (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-2
Radium 226 + Radium 228, Total (PCI/L)	--	5.0	--	Quarterly	24-hour time proportioned composite	EFF-2
Alpha, Gross Particle Activity (PCI/L)[4]	--	15.0	--	Quarterly	24-hour time proportioned composite	EFF-2
Acute Whole Effluent Toxicity *(Ceriodaphnia dubia)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	EFF-2
Acute Whole Effluent Toxicity *(Cyprinella leedsi)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	EFF-2
Biological Integrity	See Permit Condition I.A.31			Quarterly	--	SWD-2

K. Outfall D-003:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	4 days/week	Calculated	EFF-3
Total Non-Volatile Non-Filterable Residue (MG/L)	12	25	--	2 days/week	24-hour time proportioned composite	EFF-3
Solids, Total Suspended (MG/L)	30	60	--	2 days/week	24-hour time proportioned composite	EFF-3
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	In-situ	EFF-3
Specific Conductance (UMHO/CM)		1275		Weekly	Grab	EFF-3
Fluoride, Total (as F) (MG/L)	Report	10.0	--	Weekly	24-hour time proportioned composite	EFF-3
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	Weekly	Calculated	EFF-3
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	Report	--	Weekly	Grab	EFF-3
Temperature (ºC), Water (DEG.C)	Report	Report	--	Weekly	Grab or In-situ	EFF-3
Turbidity (NTU)	Report	31.0 See Permit Condition I.A.32	--	Weekly	Grab	EFF-3
pH (SU)	--	8.5	6.0	Weekly	Grab or In-situ	EFF-3
Phosphorus, Total (as P) (MG/L)	3.0	5.0	--	Weekly	24-hour time proportioned composite	EFF-3
Phosphorus, Total (as P) (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-3
Nitrogen, Kjeldahl, Total (as N) (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-3
Nitrogen, Total (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-3
Nitrogen, Total (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-3
Radium 226 + Radium 228, Total (pCi/L)	--	5.0	--	Quarterly	24-hour time proportioned composite	EFF-3
Alpha, Gross Particle Activity (pCi/L)[5]	--	15.0	--	Quarterly	24-hour time proportioned composite	EFF-3
Acute Whole Effluent Toxicity *(Ceriodaphnia dubia)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	EFF-3
Acute Whole Effluent Toxicity *(Cyprinella leedsi)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	EFF-3

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Biological Integrity	See Permit Condition I.A.31			Quarterly	--	SWD-3

L. Outfall D-004:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	2 days/week	Calculated	EFF-4
pH (SU)	--	8.5	6.0	2 days/week	Grab or In-situ	EFF-4
Solids, Total Suspended (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-4
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	In-situ	EFF-4
Fluoride, Total (as F) (MG/L)	Report	10.0	--	Weekly	24-hour time proportioned composite	EFF-4
Specific Conductance (UMHO/CM)	--	1275	--	Weekly	Grab	EFF-4
Turbidity (NTU)	Report	31.0 See Permit Condition I.A.32	--	Weekly	Grab	EFF-4
Phosphorus, Total (as P) (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-4
Phosphorus, Total (as P) (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-4
Nitrogen, Total (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	EFF-4
Nitrogen, Total (LBS/DAY)	Report	--	--	Weekly	Calculated	EFF-4
Biological Integrity	See Permit Condition I.A.31			Quarterly	--	SWD-4

M. Outfall OUI-41 (aka I-C41) to Camp Branch through D-004:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	Report	Report	--	Continuous	Meter	OUI-41
Total Non-Volatile Non-Filterable Residue (MG/L)	12	25	--	2 days/week	24-hour time proportioned composite	OUI-41
Solids, Total Suspended (MG/L)	30.0	60.0	--	2 days/week	24-hour time proportioned composite	OUI-41
Phosphorus, Total (as P) (MG/L)	3.0	5.0	--	2 days/week	24-hour time proportioned composite	OUI-41
Phosphorus, Total (as P) (LBS/DAY)	Report	--	--	2 days/week	Calculated	OUI-41
pH (SU)	--	8.5	6.0	2 days/week	Grab	OUI-41

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Nitrogen, Total (MG/L)	Report	Report	--	2 days/week	24-hour time proportioned composite	OUI-41
Nitrogen, Total (LBS/DAY)	Report	--	--	2 days/week	Calculated	OUI-41
Turbidity (NTU)	--	Report	--	Weekly	24-hour time proportioned composite	OUI-41
Temperature (C), Water (DEG.C)	Report	Report	--	Weekly	Grab or In-situ	OUI-41
Oxygen, Dissolved (DO) (MG/L)	Report	--	5.0	Weekly	In-situ	OUI-41
Ammonia, Unionized (as NH3) (MG/L)	Report	0.02	--	Weekly	Calculated	OUI-41
Nitrogen, Ammonia, Total (as N) (MG/L)	Report	Report	--	Weekly	24-hour time proportioned composite	OUI-41
Radium 226 + Radium 228, Total (PCI/L)	--	5.0	--	Quarterly	24-hour time proportioned composite	OUI-41
Alpha, Gross Particle Activity (PCI/L)[6]	--	15.0	--	Quarterly	24-hour time proportioned composite	OUI-41
Acute Whole Effluent Toxicity *(Ceriodaphnia dubia)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	OUI-41
Acute Whole Effluent Toxicity *(Cyprinella leedsi)*			100 See Permit Condition I.A.28	Semi-Annually	Grab	OUI-41

N. D-001, D-002, and D-003 and D-004 (OUI-41) from Outfall D-SUM:

	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Average	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Phosphorus, Total (as P) (LBS/DAY)	5901	--	--	Weekly	Calculated	OTH-SUM
Nitrogen, Total (LBS/DAY)	4013	--	--	Weekly	Calculated	OTH-SUM

Appendix C

Explanation of Measurements

(1) Quality Assurance and Quality Control

FDEP'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 (FDEP SOPs). Methods for all analyses are on file at the FDEP 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 FDEP SOPs. The results from these analyses were compared with Water Quality Criteria (62-302, F.A.C.) and facility permit limits.

(3) Toxicity Bioassays

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

(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 Phytoplankton and Periphyton Assemblages

Qualitative periphyton are sampled by taking subsamples of algae from natural substrates throughout the sample reach. Periphyton were subsampled and identified to the lowest practical level, usually species. Wet taxa and diatoms are identified separately. In the wet taxa analysis, soft algae are identified to the lowest practical level, and diatoms are identified only to order level (diatom). In the diatom analysis, diatoms are identified to the lowest practical level.

Chlorophyll *a* Content: Chlorophyll *a* content is an estimate of algal biomass . High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may be constitute exceedances of 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..

Algal Density: Algal density is estimated as number of natural units/ml for phytoplankton samples. Although algal density of a single site is highly variable and depends on a number of factors, comparison of algal density at a control site to algal density at a related test site gives a partial comparison of algal biomass at the two sites (Stevenson and Smol 2003).

Taxa richness: Taxa richness is the number of distinct algal taxa present in a sample. Extreme nutrient enrichment tends to reduce the number of different types of algae present in a sample because a few tolerant taxa tend to reproduce rapidly and constitute the majority of the cells present. However, moderate nutrient enrichment of nutrient poor waters may sometimes be correlated with increased algal taxa richness (Stevenson and Bahls 1999) as the algal community begins to respond to the increased input of nutrients.

Community Composition: Shifts in relative proportions of major groups of algae downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Stevenson and Bahls 1999) and 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.

(6) Benthic Macroinvertebrate Assemblages

Benthic macroinvertebrates quantitative samples were collected from Hester-Dendy multi-plate samplers incubated for 28 days. 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..

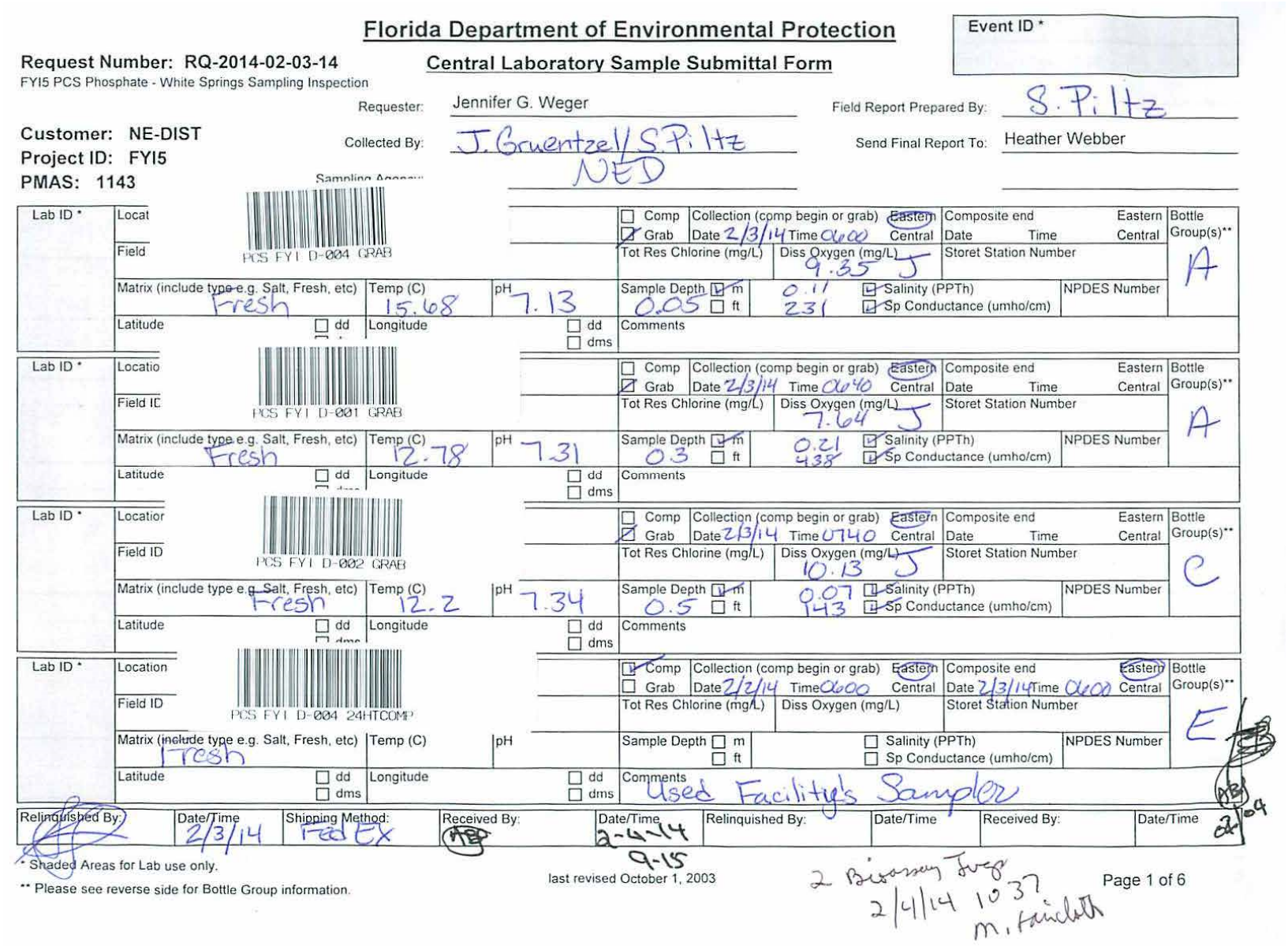
Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present in equitable abundance 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..

(7) Definition of Qualifiers

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

Appendix D

Chain of Custody



Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-02-03-14

FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger

Field Report Prepared By: S. Piltz

Customer: NE-DIST

Project ID: FYI5

PMAS: 1143

Collected By: J. Gruentzel / S. Piltz NED

Send Final Report To: Heather Webber

Sampling Agency:

Lab ID *	Location / Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Latitude	Longitude	Comp / Grab	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Sample Depth m / ft	Salinity (PPTh)	Sp Conductance (umho/cm)	NPDES Number	Storet Station Number	Comments	Bottle Group(s)**
	PCS FYI D-004 GRAB	Fresh	15.68	7.13	dd / dms	dd / dms	Grab	Date 2/3/14 Time 0600	Date Time		9.35 J	0.05	0.11	231				A
	PCS FYI D-001 GRAB	Fresh	12.78	7.31	dd / dms	dd / dms	Grab	Date 2/3/14 Time 0640	Date Time		7.64 J	0.3	0.21	438				A
	PCS FYI D-002 GRAB	Fresh	12.2	7.34	dd / dms	dd / dms	Grab	Date 2/3/14 Time 0740	Date Time		10.13 J	0.5	0.07	143				C
	PCS FYI D-004 24HTCOMP	Fresh			dd / dms	dd / dms	Comp	Date 2/2/14 Time 0600	Date 2/3/14 Time 0600								Used Facility's Sampler	E

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/3/14	FedEx		2-4-14 9-15				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

2 Biosassay Trays 2/4/14 1037 M. Faircloth

Page 1 of 6

Florida Department of Environmental Protection

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S. Piltz

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Collected By: S. Piltz / J. Gruentzel
Sampling Agency: NED
Send Final Report To: Heather Webber

Lab ID *	Location / Field ID	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Latitude	Longitude	Collection (comp begin or grab)	Composite end	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	Sample Depth	Salinity (PPTh) / Sp Conductance (umho/cm)	NPDES Number	Comments	Bottle Group(s)**
	PCS FYI D-001 24HTCOMP		0.9 *				☒ Comp ☐ Grab; Eastern Central	Date 2/3/14 Time 0600 Eastern Central							* Fridge Temp	B
	Field Blank						☐ Comp ☒ Grab; Date 2/3/14 Time 1145 Eastern Central	Date Time Eastern Central								I
							☐ Comp ☐ Grab; Date Time Eastern Central	Date Time Eastern Central								
							☐ Comp ☐ Grab; Date Time Eastern Central	Date Time Eastern Central								

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/3/14	FedEx	FBP	2-4-14 09-15				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S. Piltz

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Collected By: J. Bruentzel / S. Piltz / J. Mast
Send Final Report To: Heather Webber

Sampling Agency: NED

Lab ID *: Li / F
Camp Branch DnSt of D004 TEST

☐ Comp ☑ Grab | Collection (comp begin or grab) Eastern ☑ Central: Date 2/4/14 Time 1002 | Composite end Date Time Eastern ☐ Central | Bottle Group(s)**
Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L): 11.00 | Storet Station Number
Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C): 17.05 | pH: 7.57
Sample Depth: 0.15 ☑ m ☐ ft | 0.11 / 229 ☑ Salinity (PPTh) ☑ Sp Conductance (umho/cm) | NPDES Number
Latitude: N 30° 22' 13.0" ☐ dd ☑ dms | Longitude: W-082° 53' 7.8" ☐ dd ☑ dms | Comments

---

Lab ID *
Location: Camp Branch DnSt of D004 HD1
Field ID
☑ Comp ☐ Grab | Collection (comp begin or grab) Eastern ☐ Central: Date 1/7/14 Time | Composite end Date 2/4/14 Time 940 Eastern ☐ Central | Bottle Group(s)**
Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number
Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH
Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number
Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same Location as Readings

---

Lab ID *
Location: Camp Branch DnSt of D004 HD2
Field ID
☑ Comp ☐ Grab | Collection (comp begin or grab) Eastern ☐ Central: Date 1/7/14 Time | Composite end Date 2/4/14 Time 945 Eastern ☐ Central | Bottle Group(s)**
Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number
Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH
Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number
Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same Location as Readings

---

Lab ID *
Location: Camp Br DnSt of D004 HD3
Field ID
☑ Comp ☐ Grab | Collection (comp begin or grab) Eastern ☐ Central: Date 1/7/14 Time | Composite end Date 2/4/13 Time 950 Eastern ☐ Central | Bottle Group(s)**
Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number
Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH
Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number
Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same Location as Readings

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Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/4/14	FedEX						2/5/14 1015

Shaded Areas for Lab use only.
** Please see reverse side for Bottle Group information.

last revised October 1, 2003

No collection time was recorded for the sites that are missing collection times per Sharon Piltz.

Florida Department of Environmental Protection

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S. Piltz
Collected By: J. Mast / S. Piltz / J. Bruentrel
Send Final Report To: Heather Webber
Sampling Agency: NED

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Lab ID *: Location: Camp Br Dn St of D004 HD4
Field ID:
Matrix (Include type e.g. Salt, Fresh, etc): Fresh
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☑ Comp ☐ Grab
Collection (comp begin or grab) Eastern Central: Date 1/7/14 Time
Composite end Eastern Central: Date 2/4/15 Time 0935
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Bottle Group(s)**:
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm):
NPDES Number:
Comments: Same location as Readings

Lab ID *: /
Location:
Field ID: Swift Creek UpSt Dirt Rd Test
Matrix (Include type e.g. Salt, Fresh, etc): Fresh
Temp (C): 14.28
pH: 7.96 7.69
Latitude: N 30° 23' 01.0" ☐ dd ☑ dms
Longitude: W-082° 47' 48.4" ☐ dd ☑ dms
☐ Comp ☑ Grab
Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time 1140
Composite end Eastern Central: Date Time
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L): 9.18
Storet Station Number:
Bottle Group(s)**:
Sample Depth ☑ m ☐ ft: 0.2
☑ Salinity (PPTh): 0.22
☑ Sp Conductance (umho/cm): 458
NPDES Number:
Comments:

Lab ID *:
Location: Swift Cr UpSt Dirt Rd HD1
Field ID:
Matrix (Include type e.g. Salt, Fresh, etc): Fresh
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☑ Comp ☐ Grab
Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time
Composite end Eastern Central: Date 2/4/14 Time 1130
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Bottle Group(s)**:
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm):
NPDES Number:
Comments: Same location as Readings

Lab ID *:
Location: Swift Cr UpSt Dirt Rd HD2
Field ID:
Matrix (Include type e.g. Salt, Fresh, etc): Fresh
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☑ Comp ☐ Grab
Collection (comp begin or grab) Eastern Central: Date Time
Composite end Eastern Central: Date Time 1135
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Bottle Group(s)**:
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm):
NPDES Number:
Comments: Same location as Readings only 2 HD's retrieved due to other 2 missing.

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/4/14	FedEx						2/5/14 10:15

* Shaded Areas for Lab use only.
** Please see reverse side for Bottle Group information.

last revised October 1, 2003

No collection time was recorded for the sites that are missing collection time per Sharon Piltz.

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger

Field Report Prepared By: S. Piltz

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Collected By: J. Mast/J. Gruentzel/S. Piltz

Sampling Agency: NBD

Send Final Report To: Heather Webber

Lab ID *: Locati
Field I
Hunter Cr DnSt of CR 135 Test

Comp ☐ Grab ☑ | Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time 1358 | Composite end Eastern Central: Date Time | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L): 9.34 | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C): 17.59 | pH: 7.78

Sample Depth ☑ m ☐ ft: 0.25 | 0.16 / 3.15 | ☑ Salinity (PPTh) ☑ Sp Conductance (umho/cm) | NPDES Number

Latitude: N30 29' 09" ☐ dd ☑ dms | Longitude: 82 42' 34.2" ☐ dd ☑ dms | Comments

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Lab ID *: Location: Hunter Cr DnSt of Cr 135 HD 1
Field ID

Comp ☐ Grab ☐ | Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time | Composite end Eastern Central: Date 2/4/14 Time 1345 | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same location as Readings

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Lab ID *: Location: Hunter Cr DnSt of CR 135 HD 2
Field ID

Comp ☑ Grab ☐ | Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time | Composite end Eastern Central: Date 2/4/14 Time 1350 | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same location as Readings

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Lab ID *: Location: Hunter Cr DnSt of CR 135 HD 3
Field ID

Comp ☑ Grab ☐ | Collection (comp begin or grab) Eastern Central: Date 2/4/14 Time | Composite end Eastern Central: Date 2/4/14 Time 1352 | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C) | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Same location as Readings

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	2/4/14	Fed Ex						2/5/14 1045

Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group Information.

last revised October 1, 2003

Page 1 of 6

1355

No collection time was recorded for the sites that are missing collection time per Sharon Piltz.

Florida Department of Environmental Protection

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S.P. Pitz
Collected By: S.P. Pitz / J. Mast / J. Gruentzel
Send Final Report To: Heather Webber
Sampling Agency: NED

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Lab ID *
Location: Hunter Cr. Dn St of CR 135 HD4
Field ID
Matrix (include type e.g. Salt, Fresh, etc): Fresh
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☐ Comp ☑ Grab
Collection (comp begin or grab) Eastern Date 1/7/14 Time Central
Composite end Eastern Date 2/4/14 Time 1355 Central
Bottle Group(s)**
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Sample Depth ☐ m ☐ ft
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments: Same location as Readings

Lab ID *
Location: Little Cr @ 441 Control
Field ID:
Matrix (include type e.g. Salt, Fresh, etc): Fresh
Temp (C): 17.5
pH: 4.05
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☐ Comp ☑ Grab
Collection (comp begin or grab) Eastern Date 2/4/14 Time 1515 Central
Composite end Eastern Date Time Central
Bottle Group(s)**
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L): 9.12
Storet Station Number:
Sample Depth ☑ m 0.45 ☐ ft
☑ Salinity (PPTh) 0.04 ppt ☑ Sp Conductance (umho/cm)
NPDES Number:
Comments:

Lab ID *
Location: Little Cr @ 441 HD1
Field ID:
Matrix (include type e.g. Salt, Fresh, etc):
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☑ Comp ☐ Grab
Collection (comp begin or grab) Eastern Date 1/7/14 Time Central
Composite end Eastern Date 2/4/14 Time Central
Bottle Group(s)**
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Sample Depth ☐ m ☐ ft
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments:

Lab ID *
Location: Little Cr @ 441 HD2
Field ID:
Matrix (include type e.g. Salt, Fresh, etc):
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms
☑ Comp ☐ Grab
Collection (comp begin or grab) Eastern Date 1/7/14 Time Central
Composite end Eastern Date 2/4/14 Time Central
Bottle Group(s)**
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Sample Depth ☐ m ☐ ft
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments: Collection time was not recorded for the sites that were missing collection time per Shawn Pitz

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Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/4/14	FedEx						2/5/14 10:35

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** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2014-02-03-14
FY15 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S.P. 1/7
Collected By: JG/JM/SP
Send Final Report To: Heather Webber
Sampling Agency: NED

Customer: NE-DIST
Project ID: FY15
PMAS: 1143

Lab ID *	Location			Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Eastern Central	Bottle Group(s)**
	Little Cr. @ 441 HD2			Grab	1/7/14			2/4/14			
	Field ID			Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number			
	Latitude ☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Comments							

Lab ID *	Location			Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Eastern Central	Bottle Group(s)**
	Little Cr. @ 441 HD3			Grab	1/7/14			2/4/14			
	Field ID			Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number			
	Latitude ☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Comments							

Lab ID *	Location			Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Eastern Central	Bottle Group(s)**
	Field ID			Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number			
	Latitude ☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Comments							

Lab ID *	Location			Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Eastern Central	Bottle Group(s)**
	Field ID			Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number			
	Latitude ☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Comments	No collection time was recorded for the sites that are missing collection time. Per Shawn 1/17						

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/4/14	Fed Ex						2/5/14 1035

* Shaded Areas for Lab use only.
** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Collected By: J. Parrish / S. Piltz
Sampling Agency: NED
Field Report Prepared By: S. Piltz
Send Final Report To: Heather Webber

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Lab ID * | Locati | Field I

PCS FYI D-~~004~~ 001 24H-TCOMP

☑ Comp ☐ Grab | Collection (comp begin or grab) Eastern Date 2/4/14 Time 0900 Central | Composite end Eastern Date 2/5/14 Time 0900 Central | Bottle Group(s)**: B

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc) | Temp (C) | pH | Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Tot Only 2.9°C Fridge Temp

---

Lab ID * | Loca | Field

PCS FYI D-001 GRAB

☐ Comp ☐ Grab | Collection (comp begin or grab) Eastern Date 2/5/14 Time 1005 Central | Composite end Eastern Date Time Central | Bottle Group(s)**: 9

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L): 6.78 | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C): 15.8 | pH: 7.45 | Sample Depth ☑ m: 0.35 ☐ ft | ☑ Salinity (PPTh): 0.22 ☑ Sp Conductance (umho/cm): 454 | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: Meter Readings

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Lab ID * | Location | Field ID

☐ Comp ☐ Grab | Collection (comp begin or grab) Eastern Date Time Central | Composite end Eastern Date Time Central | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc) | Temp (C) | pH | Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments

Lab ID * | Location | Field ID

☐ Comp ☐ Grab | Collection (comp begin or grab) Eastern Date Time Central | Composite end Eastern Date Time Central | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc) | Temp (C) | pH | Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments

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	2/5/14	FedEx						2/6/14 9:30 am

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2014-02-03-14
FYI5 PCS Phosphate - White Springs Sampling Inspection

Requester: Jennifer G. Weger
Field Report Prepared By: S. Piltz

Customer: NE-DIST
Project ID: FYI5
PMAS: 1143

Collected By: S. Piltz / J. Parrish
Sampling Agency: NED
Send Final Report To: Heather Webber

Lab ID * | Location: PCS FYI D-001 24HTCOMP | Field ID

☒ Comp ☐ Grab | Collection (comp begin or grab) Eastern: Date 2/6/14 Time 0900 Central | Composite end Eastern: Date 2/7/14 Time 0900 Central | Bottle Group(s)**: B

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C): * 1.1 | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: * Fridge Temp

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Lab ID * | Location: PCS FYI D-001 GRAB | Field ID

☐ Comp ☒ Grab | Collection (comp begin or grab) Eastern: Date 2/7/14 Time 0950 Central | Composite end Eastern: Date Time Central | Bottle Group(s)**: —

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L): 6.71 | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): Fresh | Temp (C): 13.6 | pH: 8.22

Sample Depth ☑ m: 0.9 ☐ ft | ☑ Salinity (PPTh): 0.21 | ☑ Sp Conductance (umho/cm): 438 | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments: No bottles taken only meter Readings

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Lab ID * | Location: Equip Blank | Field ID

☐ Comp ☒ Grab | Collection (comp begin or grab) Eastern: Date 2/7/14 Time 1230 Central | Composite end Eastern: Date Time Central | Bottle Group(s)**: H

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc): DI | Temp (C) | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments

Lab ID * | Location | Field ID

☐ Comp ☐ Grab | Collection (comp begin or grab) Eastern: Date Time Central | Composite end Eastern: Date Time Central | Bottle Group(s)**

Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number

Matrix (include type e.g. Salt, Fresh, etc) | Temp (C) | pH

Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Comments

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	2/7/14	FedEx	H. Walters	2/8/14 0950				2-10-14 / 8:25

Cooler #1 2 BioAssay +2 OVals 0.2°C
#2 1 bioassay + 1 radium 0.7°C

* Shaded Areas for Lab use only.
** Please see reverse side for Bottle Group Information.

last revised October 1, 2003

Appendix E

Habitat Assessment field sheets

DEP-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MM/DD/YY): 2/4/14	RECEIVING BODY OF WATER: Suwannee River
REMARKS:	COUNTY: Hamilton	LOCATION: Swift Creek	FIELD ID/NAME:

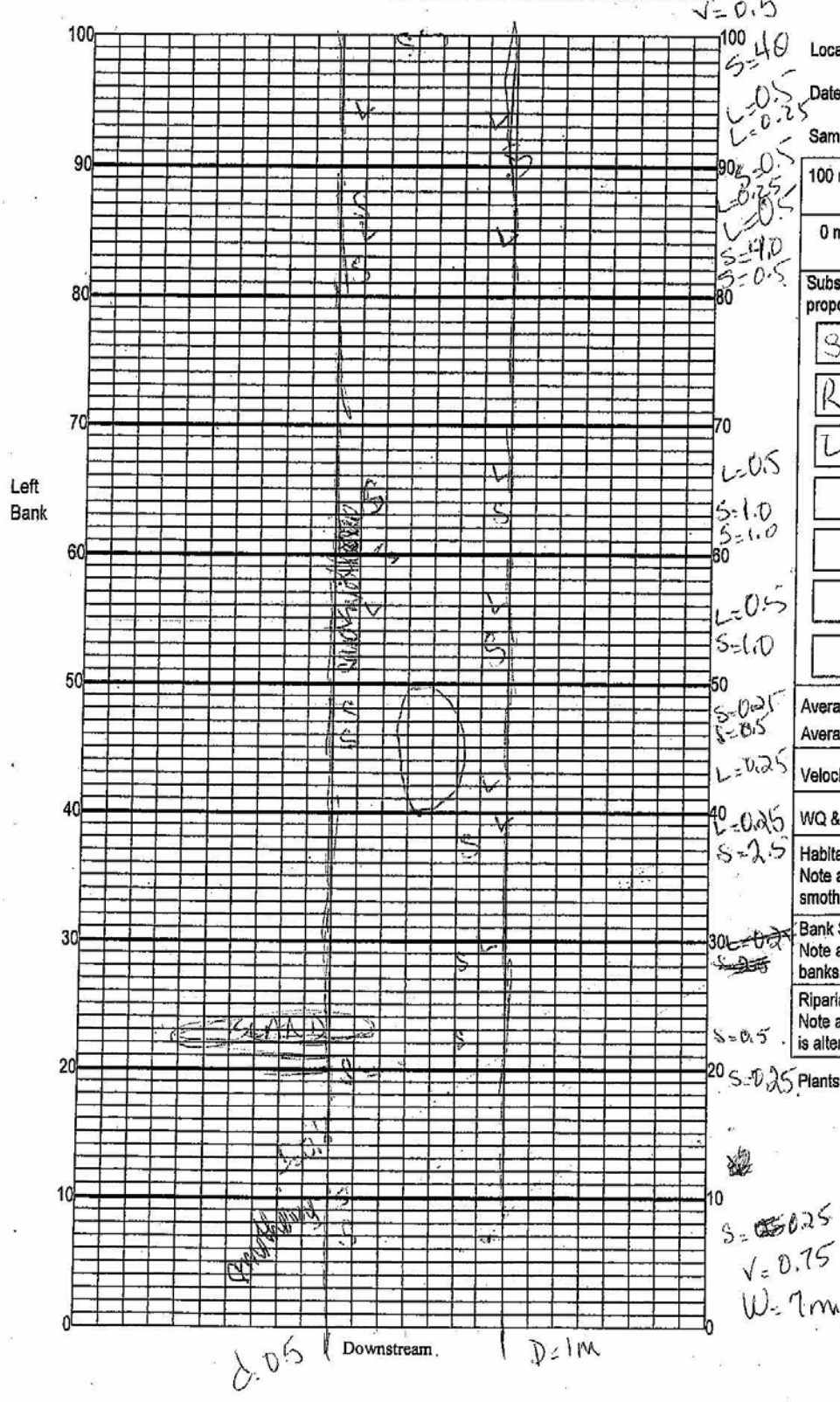
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 9	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 (9) 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 3	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 20	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 13 Primary Score 45	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 (13) 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging 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 10 Left Bank 10	Width of vegetation greater than 18 m (10) 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 9 Left Bank 9 Secondary Score 68	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. 10 (9)	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

113 **TOTAL SCORE**

Date:	Analyst:	Signature:

Form FD 9000-5 Revision Date: December 19, 2011

DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Stroyt Creek BI
Date: 2/4/14
Sampler: J Cervantes/J West

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	0.8
R	Roots/undercut banks	
L	Leaf Packs (or mats)	0.2
	Aquatic Macrophytes	
	Pools	total # observed = ____ # range expected = ____

Average width 13 m
Average depth 0.8 m

Velocity measured at 100 meter mark.

WQ & chemistry taken at 40 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).

Revision Date: June 2, 2011

DEP-SOP-001/01: Form FD 9000-5

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
		2/4/14	Suwannee River

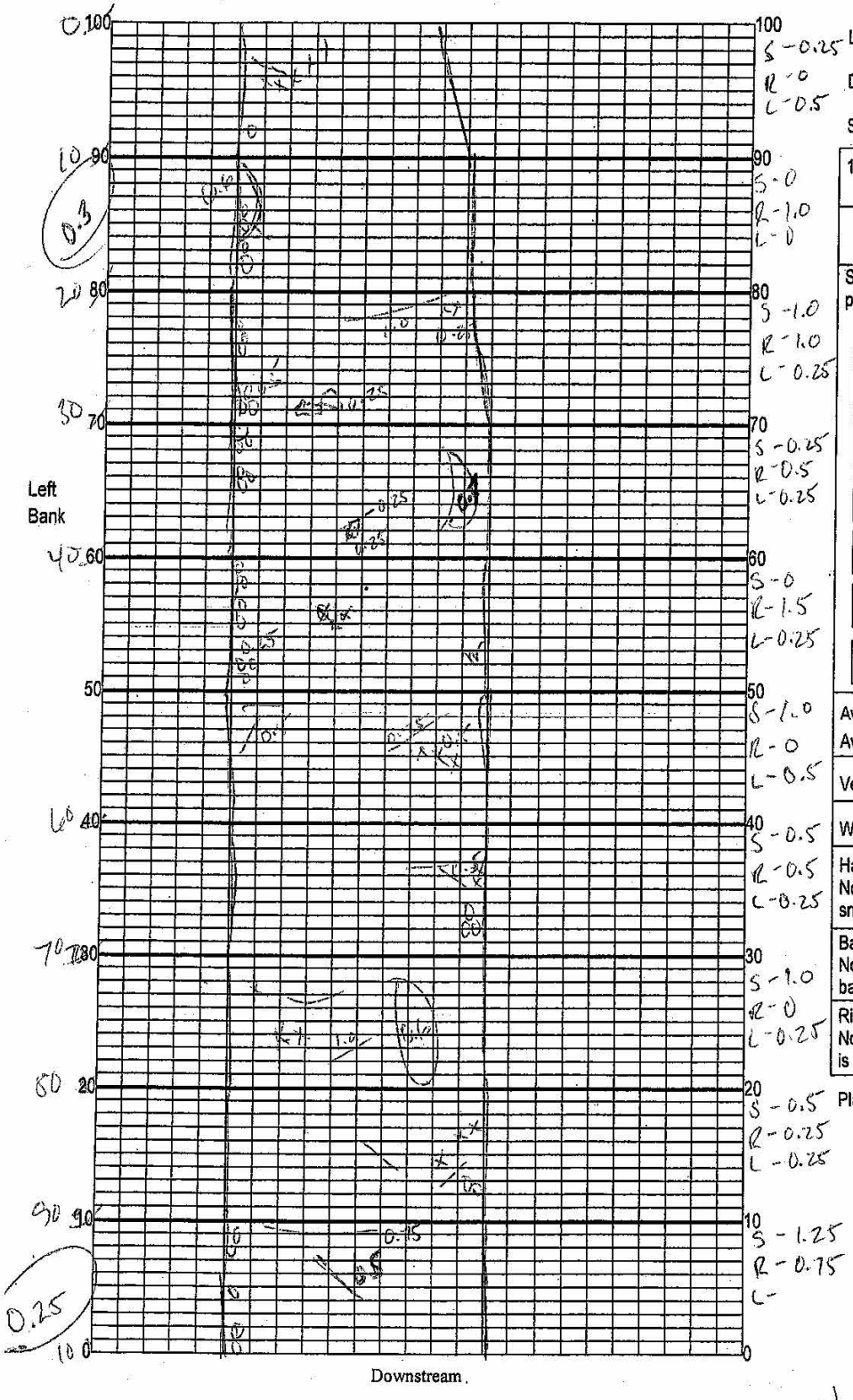
REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Hamilton	Hunter Cr	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 13	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 (13) 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 4	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 (4) 3 2 1
Water Velocity 16	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** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging 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 7 Left Bank 7	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 10 Left Bank 10	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 74	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

118 **TOTAL SCORE**

Date: 2/4/14	Analyst: Matt JGruentzel	Signature:

DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Hunter Cr @ 135
Date: 2/4/14
Sampler: Jake Mast

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

/	Snags	1.8
RB	Roots/undercut banks	1.7
LP	Leaf Packs (or mats)	0.8
W	Aquatic Macrophytes	
RK	Rock	
		4.3%
	Pools	total # observed = 3
		# range expected =

Average width _____ m
Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ meter mark.

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

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

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

Plants observed / other notes:

S - 5.75 m² - 1.77%
R - 5.5 m² 1.7
L - 2.5 m² 0.8
13.75 m²

total area = 3.25

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

Revision Date: June 2, 2011

DEP-SOP-001/01: Form FD 9000-5

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MMDDYY):	RECEIVING BODY OF WATER:
		2/4/14	Suwannee River

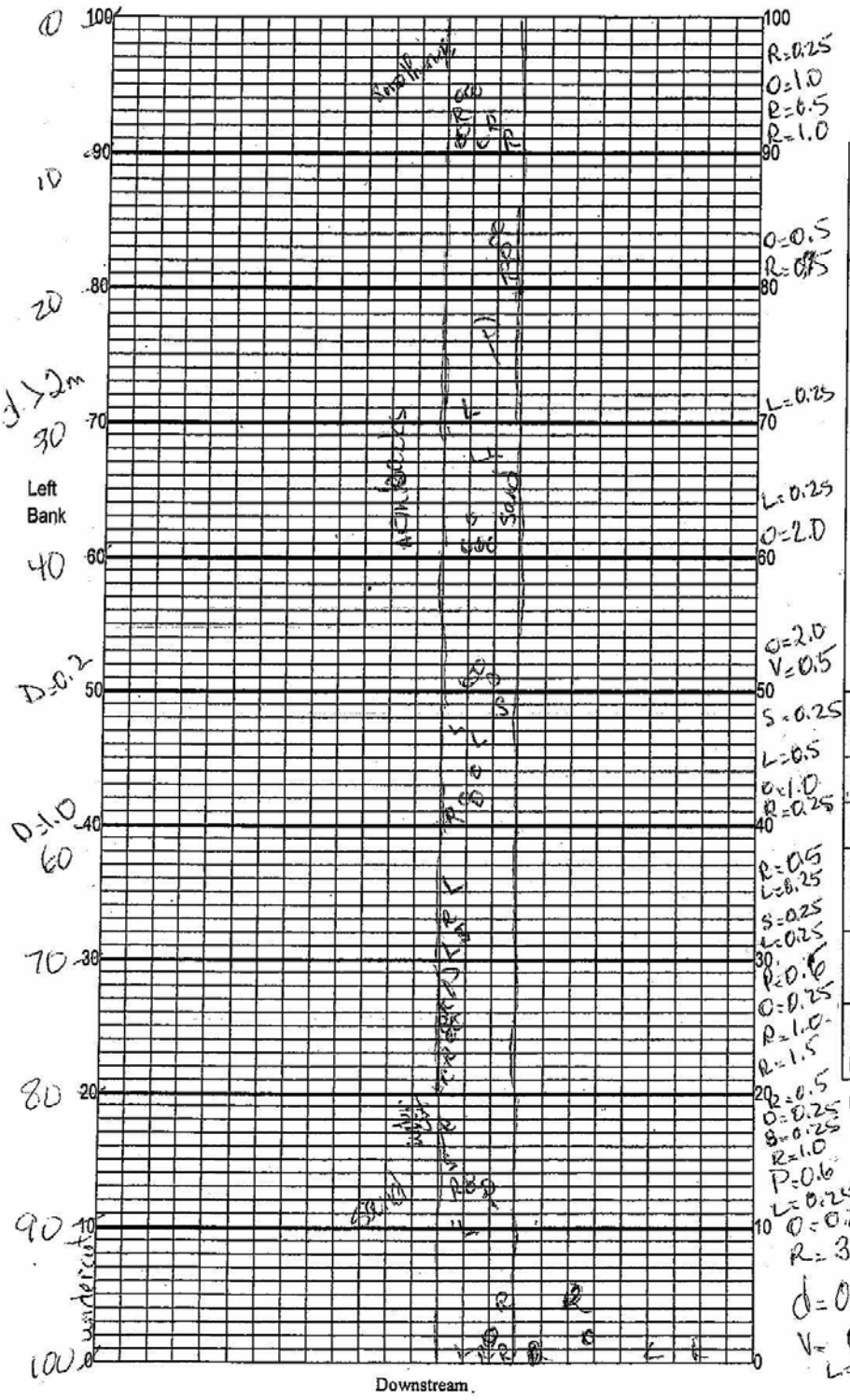
REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Hamilton	Camp Branch	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 15	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 8	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 20	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 17 Primary Score 60	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 (17) 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging 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 7 Left Bank 7	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 9 Right Bank ~~10~~ 10 Left Bank	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 73	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

133 **TOTAL SCORE**

Date:	Analyst:	Signature:
2/4/14	J. Gerentz, J. Mast, S. Piltz	

DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Camp Branch
Date: 2/4/14
Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	~~0~~
R	Roots/undercut banks	3.9
L	Leaf Packs (or mats)	0.8
	Aquatic Macrophytes	
O	Rock	3.0
	tabl	7.7
P	Pools total # observed = ~~9~~ 4	
	# range expected =	

Average width 2 1/2 m
Average depth 0 m

Velocity measured at ____ meter mark.

WQ & chemistry taken at ____ meter mark.

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

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

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

Plants observed / other notes:

R - 9.75 = 3.9
S = 0.75
L = 2.00 = 0.8
O - Rock = 7.50 = 3

7.7

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

250
Revision Date: June 2, 2011

DEP-SOP-001/01: Form FD 9000-5

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

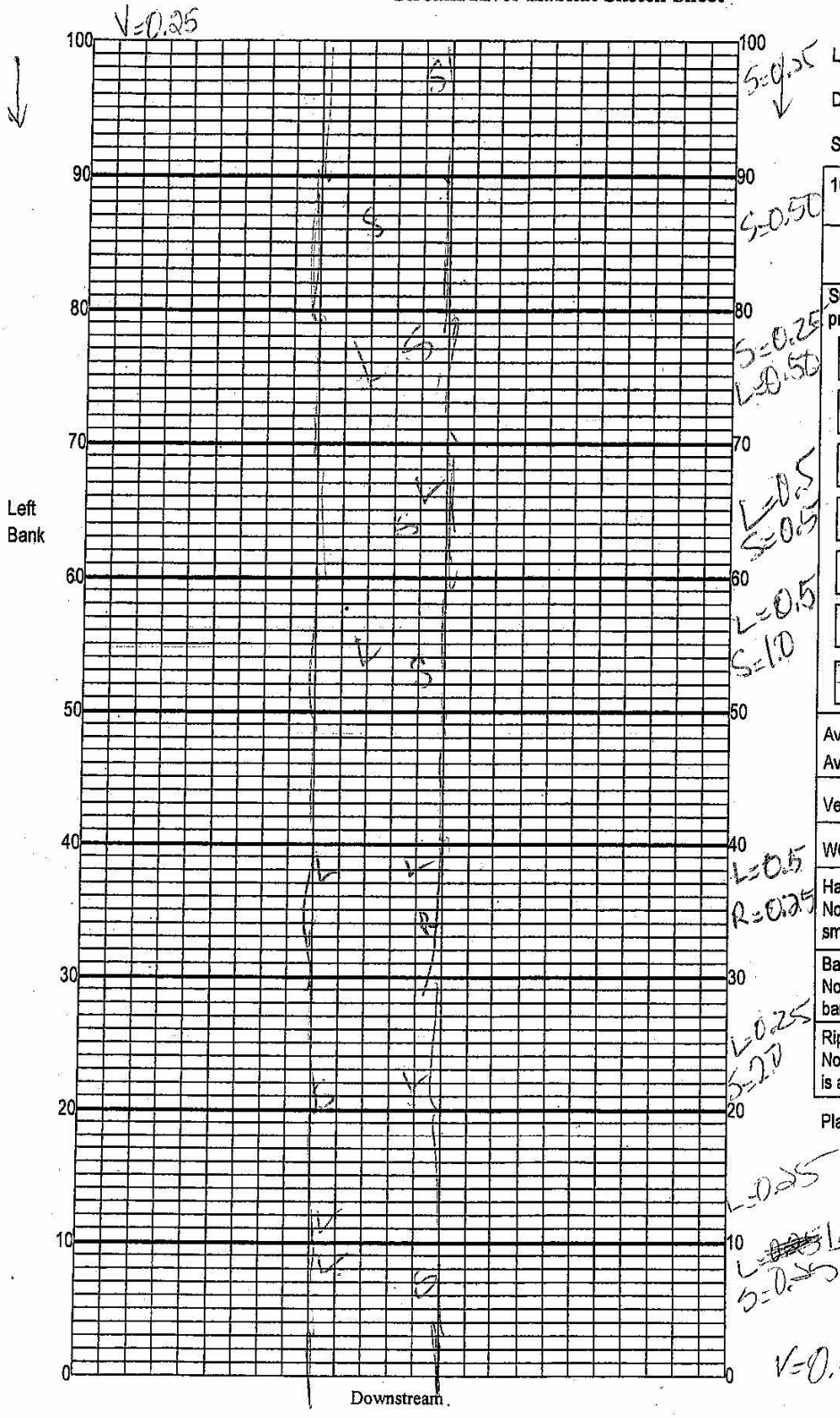
SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER: 21FLCOSW334	DATE (MM/DD/YY): 2/4/14	RECEIVING BODY OF WATER: Suwannee River
REMARKS:	COUNTY: Columbia	LOCATION: Little Creek	FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 7	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 2	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 16	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 8 Primary Score 33	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 (8) 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging 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 10 Left Bank 10	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 70	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

103 **TOTAL SCORE**

Date: 2/4/14	Analyst: J. Ceventzel / J. Nast	Signature:

DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Little Cr.

Date: 2/4/14

Sampler: J Mast, N Grantrel, SP, Itz

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	1.0
R	Roots/undercut banks	
L	Leaf Packs (or mats)	0.7
	Aquatic Macrophytes	
	Total	1.7
P	Pools — total # observed = 0	
	# range expected =	

Average width 5 m
Average depth 0.9 m

Velocity measured at 0.00 meter mark.

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:

S = 4.75
L = 3.50

V=0.2 d=0.9 W=5

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

Revision Date: June 2, 2011

Appendix F

Chemical analysis of effluent and receiving water

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:00	D-001	Nutrients	Temperature	0.9	C		
2/3/2014 6:40	D-001	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	210	ug/L	2.2	6.8
2/3/2014 6:40	D-001	Chlorophyll/Grain Size/BOD	Phaeophytin-a	30	ug/L	1.6	4.8
2/3/2014 6:40	D-001	Metals	Aluminum	208	ug/L	5	20
2/3/2014 6:40	D-001	Metals	Arsenic	1.35	ug/L	0.25	1
2/3/2014 6:40	D-001	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/3/2014 6:40	D-001	Metals	Calcium	40.3	mg/L	0.075	0.3
2/3/2014 6:40	D-001	Metals	Chromium	0.46 I	ug/L	0.3	1.2
2/3/2014 6:40	D-001	Metals	Copper	0.50 U	ug/L	0.5	1
2/3/2014 6:40	D-001	Metals	Iron	110 I	ug/L	30	120
2/3/2014 6:40	D-001	Metals	Lead	0.22 I	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Metals	Magnesium	16.8	mg/L	0.04	0.16
2/3/2014 6:40	D-001	Metals	Nickel	1.41	ug/L	0.25	1
2/3/2014 6:40	D-001	Metals	Potassium	2.4	mg/L	0.3	1.2
2/3/2014 6:40	D-001	Metals	Selenium	0.27 I	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/3/2014 6:40	D-001	Metals	Sodium	29.3	mg/L	0.5	2
2/3/2014 6:40	D-001	Metals	Zinc	5.0 U	ug/L	5	20
2/3/2014 6:40	D-001	Nutrients	Alkalinity	90	mg CaCO3/L	0.65	2.5
2/3/2014 6:40	D-001	Nutrients	Ammonia-N	0.55	mg N/L	0.01	0.025
2/3/2014 6:40	D-001	Nutrients	Chloride	9.5	mg Cl/L	0.2	0.5
2/3/2014 6:40	D-001	Nutrients	Color (true)	36	PCU	2.5	6
2/3/2014 6:40	D-001	Nutrients	Dissolved Oxygen	7.64	mg/L		
2/3/2014 6:40	D-001	Nutrients	Kjeldahl Nitrogen	2.8	mg N/L	0.08	0.2
2/3/2014 6:40	D-001	Nutrients	NO2NO3-N	1.1	mg N/L	0.008	0.02
2/3/2014 6:40	D-001	Nutrients	Organic Carbon	12	mg C/L	0.5	1
2/3/2014 6:40	D-001	Nutrients	pH	7.31			
2/3/2014 6:40	D-001	Nutrients	Sample Depth	0.3	m		
2/3/2014 6:40	D-001	Nutrients	Specific Conductance	438	umhos/cm		
2/3/2014 6:40	D-001	Nutrients	Sulfate	110	mg SO4/L	2	5
2/3/2014 6:40	D-001	Nutrients	Temperature	12.78	C		
2/3/2014 6:40	D-001	Nutrients	Turbidity	6.8	NTU	0.1	0.1
2/3/2014 6:40	D-001	Pesticides	Alachlor	0.059 U	ug/L	0.059	0.23
2/3/2014 6:40	D-001	Pesticides	Ametryn	0.0098 U	ug/L	0.0098	0.039

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:40	D-001	Pesticides	Atrazine	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Atrazine Desethyl	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Atrazine Desisopropyl	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Bromacil	0.039 U	ug/L	0.039	0.16
2/3/2014 6:40	D-001	Pesticides	Butylate	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Chlorpyrifos Ethyl	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Chlorpyrifos Methyl	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Demeton	0.023 U	ug/L	0.023	0.094
2/3/2014 6:40	D-001	Pesticides	Diazinon	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Disulfoton	0.0049 U	ug/L	0.0049	0.02
2/3/2014 6:40	D-001	Pesticides	Ethion	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Ethoprop	0.0049 U	ug/L	0.0049	0.02
2/3/2014 6:40	D-001	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
2/3/2014 6:40	D-001	Pesticides	Fonofos	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
2/3/2014 6:40	D-001	Pesticides	Malathion	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Metalaxyl	0.039 U	ug/L	0.039	0.16
2/3/2014 6:40	D-001	Pesticides	Metolachlor	0.059 U	ug/L	0.059	0.23
2/3/2014 6:40	D-001	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Mevinphos	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Naled	0.039 UJ	ug/L	0.039	0.16
2/3/2014 6:40	D-001	Pesticides	Norflurazon	0.029 U	ug/L	0.029	0.12
2/3/2014 6:40	D-001	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Parathion Methyl	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Pesticides	Phorate	0.0049 U	ug/L	0.0049	0.02
2/3/2014 6:40	D-001	Pesticides	Prometon	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.078
2/3/2014 6:40	D-001	Pesticides	Simazine	0.0098 U	ug/L	0.0098	0.039
2/3/2014 6:40	D-001	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	ug/L	10	40
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,4-Dinitrophenol	15 UJ	ug/L	15	60
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	2-Chlorophenol	1.0 U	ug/L	1	4

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:40	D-001	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	2-Nitrophenol	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
2/3/2014 6:40	D-001	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8
2/3/2014 6:40	D-001	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	60
2/3/2014 6:40	D-001	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzidine	100 U	ug/L	100	400
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Diethyl phthalate	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Di-n-butyl phthalate	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8
2/3/2014 6:40	D-001	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:40	D-001	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8
2/3/2014 6:40	D-001	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Pentachlorophenol	3.0 U	ug/L	3	12
2/3/2014 6:40	D-001	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:40	D-001	Priority Organic Pollutants	Phenol	1.0 U	ug/L	1	4
2/3/2014 6:40	D-001	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.8
2/3/2014 6:00	D-001 composite	Nutrients	Ammonia-N	0.51	mg N/L	0.01	0.025
2/3/2014 6:00	D-001 composite	Nutrients	Fluoride	2.3	mg F/L	0.035	0.1
2/3/2014 6:00	D-001 composite	Nutrients	Kjeldahl Nitrogen	3.4	mg N/L	0.08	0.2
2/3/2014 6:00	D-001 composite	Nutrients	NO2NO3-N	1	mg N/L	0.008	0.02
2/3/2014 6:00	D-001 composite	Nutrients	Total-P	2.5	mg P/L	0.025	0.25
2/3/2014 6:00	D-001 composite	Nutrients	TSS	13	mg/L	2	10
2/3/2014 6:00	D-001 composite	Overflow	Alpha, Total	2.1 U	pCi/L	2.1	
2/3/2014 6:00	D-001 composite	Overflow	Alpha-Counting Error	1.4	pCi/L	2.1	
2/3/2014 6:00	D-001 composite	Overflow	Radium 226	0.7	pCi/L	0.1	
2/3/2014 6:00	D-001 composite	Overflow	Radium 226-Counting Error	0.1	pCi/L	0.1	
2/3/2014 6:00	D-001 composite	Overflow	Radium 228	0.8 U	pCi/L	0.8	
2/3/2014 6:00	D-001 composite	Overflow	Radium 228-Counting Error	0.5	pCi/L	0.8	
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100 L	IC25		
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100	NOEC		
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	3.03	IC25		
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	6.25 K	NOEC		
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chronic-Scrn-FW-Fish, IC25	100 L	IC25		
2/3/2014 6:00	D-001 composite	Toxicology	Bioassay-Chronic-Scrn-FW-Fish, NOEC	100	NOEC		
2/3/2014 7:40	D-002	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	41	ug/L	1.2	3.8
2/3/2014 7:40	D-002	Chlorophyll/Grain Size/BOD	Phaeophytin-a	6.6	ug/L	0.89	2.7
2/3/2014 7:40	D-002	Metals	Aluminum	190	ug/L	5	20
2/3/2014 7:40	D-002	Metals	Arsenic	0.99 I	ug/L	0.25	1
2/3/2014 7:40	D-002	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/3/2014 7:40	D-002	Metals	Calcium	26	mg/L	0.075	0.3
2/3/2014 7:40	D-002	Metals	Chromium	0.42 I	ug/L	0.3	1.2
2/3/2014 7:40	D-002	Metals	Copper	0.50 U	ug/L	0.5	1
2/3/2014 7:40	D-002	Metals	Iron	96 I	ug/L	30	120
2/3/2014 7:40	D-002	Metals	Lead	0.20 U	ug/L	0.2	0.8
2/3/2014 7:40	D-002	Metals	Magnesium	14.1	mg/L	0.04	0.16
2/3/2014 7:40	D-002	Metals	Nickel	0.29 I	ug/L	0.25	1
2/3/2014 7:40	D-002	Metals	Potassium	2.3	mg/L	0.3	1.2
2/3/2014 7:40	D-002	Metals	Selenium	0.24 I	ug/L	0.2	0.8

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 7:40	D-002	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/3/2014 7:40	D-002	Metals	Sodium	20.8	mg/L	0.5	2
2/3/2014 7:40	D-002	Metals	Zinc	5.0 U	ug/L	5	20
2/3/2014 7:40	D-002	Nutrients	Alkalinity	127	mg CaCO3/L	0.65	2.5
2/3/2014 7:40	D-002	Nutrients	Ammonia-N	0.59	mg N/L	0.01	0.025
2/3/2014 7:40	D-002	Nutrients	Chloride	8.1	mg Cl/L	0.2	0.5
2/3/2014 7:40	D-002	Nutrients	Color (true)	56	PCU	2.5	6
2/3/2014 7:40	D-002	Nutrients	Dissolved Oxygen	10.13	mg/L		
2/3/2014 7:40	D-002	Nutrients	Kjeldahl Nitrogen	2.2	mg N/L	0.08	0.2
2/3/2014 7:40	D-002	Nutrients	NO2NO3-N	0.47	mg N/L	0.004	0.01
2/3/2014 7:40	D-002	Nutrients	Organic Carbon	18	mg C/L	0.5	1
2/3/2014 7:40	D-002	Nutrients	pH	7.34			
2/3/2014 7:40	D-002	Nutrients	Sample Depth	0.5	m		
2/3/2014 7:40	D-002	Nutrients	Specific Conductance	143	umhos/cm		
2/3/2014 7:40	D-002	Nutrients	Sulfate	25	mg SO4/L	0.2	0.5
2/3/2014 7:40	D-002	Nutrients	Temperature	12.2	C		
2/3/2014 7:40	D-002	Nutrients	Turbidity	5.9	NTU	0.1	0.1
2/3/2014 7:40	D-002	Overflow	Alpha, Total	1.9	pCi/L	1.3	
2/3/2014 7:40	D-002	Overflow	Alpha-Counting Error	1.3	pCi/L	1.3	
2/3/2014 7:40	D-002	Overflow	Radium 226	0.6	pCi/L	0.2	
2/3/2014 7:40	D-002	Overflow	Radium 226-Counting Error	0.2	pCi/L	0.2	
2/3/2014 7:40	D-002	Overflow	Radium 228	0.8 U	pCi/L	0.8	
2/3/2014 7:40	D-002	Overflow	Radium 228-Counting Error	0.5	pCi/L	0.8	
2/3/2014 7:40	D-002	Pesticides	Alachlor	0.065 U	ug/L	0.065	0.26
2/3/2014 7:40	D-002	Pesticides	Ametryn	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Atrazine	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Atrazine Desethyl	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Atrazine Desisopropyl	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Azinphos Methyl	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Bromacil	0.043 U	ug/L	0.043	0.17
2/3/2014 7:40	D-002	Pesticides	Butylate	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Chlorpyrifos Ethyl	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Chlorpyrifos Methyl	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Demeton	0.026 U	ug/L	0.026	0.1
2/3/2014 7:40	D-002	Pesticides	Diazinon	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Disulfoton	0.0054 U	ug/L	0.0054	0.022
2/3/2014 7:40	D-002	Pesticides	Ethion	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Ethoprop	0.0054 U	ug/L	0.0054	0.022

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 7:40	D-002	Pesticides	Fenamiphos	0.032 U	ug/L	0.032	0.13
2/3/2014 7:40	D-002	Pesticides	Fonofos	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Hexazinone	0.032 UJ	ug/L	0.032	0.13
2/3/2014 7:40	D-002	Pesticides	Malathion	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Metalaxyl	0.043 U	ug/L	0.043	0.17
2/3/2014 7:40	D-002	Pesticides	Metolachlor	0.065 U	ug/L	0.065	0.26
2/3/2014 7:40	D-002	Pesticides	Metribuzin	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Mevinphos	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Naled	0.043 UJ	ug/L	0.043	0.17
2/3/2014 7:40	D-002	Pesticides	Norflurazon	0.032 U	ug/L	0.032	0.13
2/3/2014 7:40	D-002	Pesticides	Parathion Ethyl	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Parathion Methyl	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Pesticides	Phorate	0.0054 U	ug/L	0.0054	0.022
2/3/2014 7:40	D-002	Pesticides	Prometon	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Prometryn	0.022 U	ug/L	0.022	0.086
2/3/2014 7:40	D-002	Pesticides	Simazine	0.011 U	ug/L	0.011	0.043
2/3/2014 7:40	D-002	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	ug/L	10	41
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,4-Dinitrophenol	15 UJ	ug/L	15	61
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2-Chlorophenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	2-Nitrophenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	3,3'-Dichlorobenzidine	41 U	ug/L	41	160
2/3/2014 7:40	D-002	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8.2
2/3/2014 7:40	D-002	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	61
2/3/2014 7:40	D-002	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzidine	100 U	ug/L	100	410
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.82

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8.2
2/3/2014 7:40	D-002	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Diethyl phthalate	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Di-n-butyl phthalate	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Hexachlorobutadiene	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Hexachloroethane	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8.2
2/3/2014 7:40	D-002	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8.2
2/3/2014 7:40	D-002	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8.2
2/3/2014 7:40	D-002	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Pentachlorophenol	3.1 U	ug/L	3.1	12
2/3/2014 7:40	D-002	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.82
2/3/2014 7:40	D-002	Priority Organic Pollutants	Phenol	1.0 U	ug/L	1	4.1
2/3/2014 7:40	D-002	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.82
2/3/2014 6:00	D-004	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
2/3/2014 6:00	D-004	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.53 I	ug/L	0.4	1.2
2/3/2014 6:00	D-004	Metals	Aluminum	181	ug/L	5	20
2/3/2014 6:00	D-004	Metals	Arsenic	0.94 I	ug/L	0.25	1
2/3/2014 6:00	D-004	Metals	Cadmium	0.051 I	ug/L	0.05	0.2
2/3/2014 6:00	D-004	Metals	Calcium	22.7	mg/L	0.075	0.3
2/3/2014 6:00	D-004	Metals	Chromium	0.55 I	ug/L	0.3	1.2

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:00	D-004	Metals	Copper	0.50 U	ug/L	0.5	1
2/3/2014 6:00	D-004	Metals	Iron	320	ug/L	30	120
2/3/2014 6:00	D-004	Metals	Lead	0.20 U	ug/L	0.2	0.8
2/3/2014 6:00	D-004	Metals	Magnesium	9.96	mg/L	0.04	0.16
2/3/2014 6:00	D-004	Metals	Nickel	0.47 I	ug/L	0.25	1
2/3/2014 6:00	D-004	Metals	Potassium	1.5	mg/L	0.3	1.2
2/3/2014 6:00	D-004	Metals	Selenium	0.37 I	ug/L	0.2	0.8
2/3/2014 6:00	D-004	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/3/2014 6:00	D-004	Metals	Sodium	12.3	mg/L	0.5	2
2/3/2014 6:00	D-004	Metals	Zinc	5.0 U	ug/L	5	20
2/3/2014 6:00	D-004	Nutrients	Alkalinity	69 A	mg CaCO3/L	0.65	2.5
2/3/2014 6:00	D-004	Nutrients	Ammonia-N	0.03	mg N/L	0.002	0.005
2/3/2014 6:00	D-004	Nutrients	Chloride	7.7 A	mg Cl/L	0.2	0.5
2/3/2014 6:00	D-004	Nutrients	Color (true)	100	PCU	2.5	6
2/3/2014 6:00	D-004	Nutrients	Dissolved Oxygen	9.35	mg/L		
2/3/2014 6:00	D-004	Nutrients	Kjeldahl Nitrogen	0.72	mg N/L	0.08	0.2
2/3/2014 6:00	D-004	Nutrients	NO2NO3-N	0.16	mg N/L	0.004	0.01
2/3/2014 6:00	D-004	Nutrients	Organic Carbon	14	mg C/L	0.5	1
2/3/2014 6:00	D-004	Nutrients	pH	7.13			
2/3/2014 6:00	D-004	Nutrients	Sample Depth	0.05	m		
2/3/2014 6:00	D-004	Nutrients	Specific Conductance	231	umhos/cm		
2/3/2014 6:00	D-004	Nutrients	Sulfate	33 A	mg SO4/L	0.2	0.5
2/3/2014 6:00	D-004	Nutrients	Temperature	15.68	C		
2/3/2014 6:00	D-004	Nutrients	Turbidity	2.1	NTU	0.1	0.1
2/3/2014 6:00	D-004	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23
2/3/2014 6:00	D-004	Pesticides	Ametryn	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Atrazine	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Atrazine Desethyl	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Atrazine Desisopropyl	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Bromacil	0.038 U	ug/L	0.038	0.15
2/3/2014 6:00	D-004	Pesticides	Butylate	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Chlorpyrifos Ethyl	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Chlorpyrifos Methyl	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Demeton	0.023 U	ug/L	0.023	0.092
2/3/2014 6:00	D-004	Pesticides	Diazinon	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Disulfoton	0.0048 U	ug/L	0.0048	0.019
2/3/2014 6:00	D-004	Pesticides	Ethion	0.0096 U	ug/L	0.0096	0.038

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:00	D-004	Pesticides	Ethoprop	0.0048 U	ug/L	0.0048	0.019
2/3/2014 6:00	D-004	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
2/3/2014 6:00	D-004	Pesticides	Fonofos	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
2/3/2014 6:00	D-004	Pesticides	Malathion	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
2/3/2014 6:00	D-004	Pesticides	Metolachlor	0.058 U	ug/L	0.058	0.23
2/3/2014 6:00	D-004	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Mevinphos	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Naled	0.038 UJ	ug/L	0.038	0.15
2/3/2014 6:00	D-004	Pesticides	Norflurazon	0.029 U	ug/L	0.029	0.12
2/3/2014 6:00	D-004	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Parathion Methyl	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Pesticides	Phorate	0.0048 U	ug/L	0.0048	0.019
2/3/2014 6:00	D-004	Pesticides	Prometon	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.077
2/3/2014 6:00	D-004	Pesticides	Simazine	0.0096 U	ug/L	0.0096	0.038
2/3/2014 6:00	D-004	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/3/2014 6:00	D-004	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6
2/3/2014 6:00	D-004	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
2/3/2014 6:00	D-004	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.76

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
2/3/2014 6:00	D-004	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
2/3/2014 6:00	D-004	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
2/3/2014 6:00	D-004	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
2/3/2014 6:00	D-004	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	11
2/3/2014 6:00	D-004	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
2/3/2014 6:00	D-004	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.76
2/3/2014 6:00	D-004 composite	Nutrients	Ammonia-N	0.038	mg N/L	0.002	0.005
2/3/2014 6:00	D-004 composite	Nutrients	Fluoride	1.3	mg F/L	0.035	0.1
2/3/2014 6:00	D-004 composite	Nutrients	Kjeldahl Nitrogen	0.83	mg N/L	0.08	0.2
2/3/2014 6:00	D-004 composite	Nutrients	NO2NO3-N	0.2	mg N/L	0.004	0.01
2/3/2014 6:00	D-004 composite	Nutrients	Total-P	1.6	mg P/L	0.025	0.25
2/3/2014 6:00	D-004 composite	Nutrients	TSS	4 I	mg/L	2	10

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 11:40	Swift Creek D-001 Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	7.7 L	mg/L	0.2	2
2/4/2014 11:40	Swift Creek D-001 Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	130 AJ	ug/L	1.6	4.9
2/4/2014 11:40	Swift Creek D-001 Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	31 A	ug/L	1.1	3.4
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Aluminum	273	ug/L	5	20
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Arsenic	1.3	ug/L	0.25	1
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Calcium	41	mg/L	0.075	0.3
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Chromium	0.56 I	ug/L	0.3	1.2
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Copper	0.50 U	ug/L	0.5	1
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Iron	120 I	ug/L	30	120
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Lead	0.27 I	ug/L	0.2	0.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Magnesium	17.1	mg/L	0.04	0.16
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Nickel	1.43	ug/L	0.25	1
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Potassium	2.4	mg/L	0.3	1.2
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Selenium	0.30 I	ug/L	0.2	0.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Sodium	30.1	mg/L	0.5	2
2/4/2014 11:40	Swift Creek D-001 Test Site	Metals	Zinc	5.0 U	ug/L	5	20
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Alkalinity	93	mg CaCO3/L	0.65	2.5
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Ammonia-N	0.52	mg N/L	0.01	0.025
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Chloride	9.1	mg Cl/L	0.4	1
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Dissolved Oxygen	9.18	mg/L		
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Fluoride	2.2	mg F/L	0.035	0.1
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Kjeldahl Nitrogen	2.5	mg N/L	0.08	0.2
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	NO2NO3-N	0.99	mg N/L	0.008	0.02
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	O-Phosphate-P	2	mg P/L	0.04	0.1
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Organic Carbon	12	mg C/L	0.5	1
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	pH	7.69			
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Sample Depth	0.2	m		
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Specific Conductance	458	umhos/cm		
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Temperature	14.28	C		
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Total-P	2.5	mg P/L	0.025	0.25
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	TSS	15 A	mg/L	2	10
2/4/2014 11:40	Swift Creek D-001 Test Site	Nutrients	Turbidity	6.7 A	NTU	0.1	0.1
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,4-Dichlorophenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,4-Dimethylphenol	9.6 U	ug/L	9.6	38

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	58
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2-Chloronaphthalene	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2-Chlorophenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	2-Nitrophenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.7
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	58
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzidine	96 U	ug/L	96	380
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.7
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Butyl benzyl phthalate	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Diethyl phthalate	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Dimethyl phthalate	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Di-n-butyl phthalate	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Di-n-octyl phthalate	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Hexachlorobenzene	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	12

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Isophorone	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.7
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.7
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.7
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	12
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.77
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Phenol	0.96 U	ug/L	0.96	3.8
2/4/2014 11:40	Swift Creek D-001 Test Site	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.77
2/4/2014 13:58	Hunter Cr D-002 Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	3.4	mg/L	0.2	2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	36	ug/L	0.55	1.7
2/4/2014 13:58	Hunter Cr D-002 Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	13	ug/L	0.4	1.2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Aluminum	246	ug/L	5	20
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Arsenic	1.05	ug/L	0.25	1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Calcium	25	mg/L	0.075	0.3
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Chromium	0.48 I	ug/L	0.3	1.2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Copper	0.50 U	ug/L	0.5	1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Iron	260	ug/L	30	120
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Lead	0.31 I	ug/L	0.2	0.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Magnesium	13.4	mg/L	0.04	0.16
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Nickel	0.46 I	ug/L	0.25	1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Potassium	2.2	mg/L	0.3	1.2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Selenium	0.37 I	ug/L	0.2	0.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Sodium	23.4	mg/L	0.5	2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Metals	Zinc	5.0 U	ug/L	5	20
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Alkalinity	111	mg CaCO3/L	0.65	2.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Ammonia-N	0.25	mg N/L	0.01	0.025
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Chloride	8.3	mg Cl/L	0.2	0.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Dissolved Oxygen	9.34	mg/L		
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Fluoride	0.79	mg F/L	0.035	0.1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Kjeldahl Nitrogen	1.5	mg N/L	0.08	0.2
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	NO2NO3-N	0.6	mg N/L	0.004	0.01
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	O-Phosphate-P	1	mg P/L	0.04	0.1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Organic Carbon	19	mg C/L	0.5	1

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	pH	7.78			
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Sample Depth	0.25	m		
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Specific Conductance	315	umhos/cm		
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Temperature	17.59	C		
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Total-P	1.3	mg P/L	0.025	0.25
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	TSS	6 I	mg/L	2	10
2/4/2014 13:58	Hunter Cr D-002 Test Site	Nutrients	Turbidity	4.9	NTU	0.1	0.1
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
2/4/2014 13:58	Hunter Cr D-002 Test Site	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
2/4/2014 10:02	Camp Branch D-004 Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.99 I	mg/L	0.2	2
2/4/2014 10:02	Camp Branch D-004 Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
2/4/2014 10:02	Camp Branch D-004 Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Aluminum	220	ug/L	5	20
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Arsenic	1.01	ug/L	0.25	1
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Calcium	22.1	mg/L	0.075	0.3
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Chromium	0.62 I	ug/L	0.3	1.2
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Copper	0.50 U	ug/L	0.5	1
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Iron	310	ug/L	30	120
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Lead	0.21 I	ug/L	0.2	0.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Magnesium	9.7	mg/L	0.04	0.16
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Nickel	0.46 I	ug/L	0.25	1
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Potassium	1.4	mg/L	0.3	1.2
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Selenium	0.31 I	ug/L	0.2	0.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Silver	0.025 U	ug/L	0.025	0.1

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Sodium	11.8	mg/L	0.5	2
2/4/2014 10:02	Camp Branch D-004 Test Site	Metals	Zinc	5.0 U	ug/L	5	20
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Alkalinity	67	mg CaCO3/L	0.65	2.5
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Ammonia-N	0.02	mg N/L	0.002	0.005
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Chloride	7.9	mg Cl/L	0.2	0.5
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Dissolved Oxygen	11	mg/L		
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Fluoride	0.98	mg F/L	0.035	0.1
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Kjeldahl Nitrogen	0.58	mg N/L	0.08	0.2
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	NO2NO3-N	0.16	mg N/L	0.004	0.01
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	O-Phosphate-P	1.1	mg P/L	0.04	0.1
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Organic Carbon	13	mg C/L	0.5	1
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	pH	7.57			
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Sample Depth	0.15	m		
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Specific Conductance	229	umhos/cm		
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Temperature	17.05	C		
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Total-P	1.3	mg P/L	0.025	0.25
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	TSS	4 I	mg/L	2	10
2/4/2014 10:02	Camp Branch D-004 Test Site	Nutrients	Turbidity	2.6	NTU	0.1	0.1
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	11
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.76
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
2/4/2014 10:02	Camp Branch D-004 Test Site	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.76
2/4/2014 15:15	Control Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.86 I	mg/L	0.2	2
2/4/2014 15:15	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
2/4/2014 15:15	Control Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.62 I	ug/L	0.4	1.2
2/4/2014 15:15	Control Site	Metals	Aluminum	636	ug/L	5	20
2/4/2014 15:15	Control Site	Metals	Arsenic	0.59 I	ug/L	0.25	1

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 15:15	Control Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/4/2014 15:15	Control Site	Metals	Calcium	2.41	mg/L	0.075	0.3
2/4/2014 15:15	Control Site	Metals	Chromium	0.89 I	ug/L	0.3	1.2
2/4/2014 15:15	Control Site	Metals	Copper	0.53 I	ug/L	0.5	1
2/4/2014 15:15	Control Site	Metals	Iron	590	ug/L	30	120
2/4/2014 15:15	Control Site	Metals	Lead	0.55 I	ug/L	0.2	0.8
2/4/2014 15:15	Control Site	Metals	Magnesium	1.52	mg/L	0.04	0.16
2/4/2014 15:15	Control Site	Metals	Nickel	0.74 I	ug/L	0.25	1
2/4/2014 15:15	Control Site	Metals	Potassium	0.30 U	mg/L	0.3	1.2
2/4/2014 15:15	Control Site	Metals	Selenium	0.30 I	ug/L	0.2	0.8
2/4/2014 15:15	Control Site	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/4/2014 15:15	Control Site	Metals	Sodium	4.9	mg/L	0.5	2
2/4/2014 15:15	Control Site	Metals	Zinc	5.0 U	ug/L	5	20
2/4/2014 15:15	Control Site	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
2/4/2014 15:15	Control Site	Nutrients	Ammonia-N	0.007	mg N/L	0.002	0.005
2/4/2014 15:15	Control Site	Nutrients	Chloride	8.8	mg Cl/L	0.2	0.5
2/4/2014 15:15	Control Site	Nutrients	Dissolved Oxygen	9.12	mg/L		
2/4/2014 15:15	Control Site	Nutrients	Fluoride	0.13	mg F/L	0.035	0.1
2/4/2014 15:15	Control Site	Nutrients	Kjeldahl Nitrogen	1.3	mg N/L	0.08	0.2
2/4/2014 15:15	Control Site	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/4/2014 15:15	Control Site	Nutrients	O-Phosphate-P	0.062	mg P/L	0.004	0.01
2/4/2014 15:15	Control Site	Nutrients	Organic Carbon	56	mg C/L	0.5	1
2/4/2014 15:15	Control Site	Nutrients	pH	4.05			
2/4/2014 15:15	Control Site	Nutrients	Sample Depth	0.45	m		
2/4/2014 15:15	Control Site	Nutrients	Specific Conductance	85	umhos/cm		
2/4/2014 15:15	Control Site	Nutrients	Temperature	17.5	C		
2/4/2014 15:15	Control Site	Nutrients	Total-P	0.074	mg P/L	0.005	0.05
2/4/2014 15:15	Control Site	Nutrients	TSS	5 I	mg/L	2	10
2/4/2014 15:15	Control Site	Nutrients	Turbidity	1.3	NTU	0.1	0.1
2/4/2014 15:15	Control Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/4/2014 15:15	Control Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
2/4/2014 15:15	Control Site	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
2/4/2014 15:15	Control Site	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/4/2014 15:15	Control Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
2/4/2014 15:15	Control Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
2/4/2014 15:15	Control Site	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Metals	Aluminum	5.0 U	ug/L	5	20
2/3/2014 11:45	Field Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
2/3/2014 11:45	Field Blank	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
2/3/2014 11:45	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
2/3/2014 11:45	Field Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
2/3/2014 11:45	Field Blank	Metals	Copper	0.50 U	ug/L	0.5	1
2/3/2014 11:45	Field Blank	Metals	Iron	30 U	ug/L	30	120
2/3/2014 11:45	Field Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
2/3/2014 11:45	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
2/3/2014 11:45	Field Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
2/3/2014 11:45	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
2/3/2014 11:45	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
2/3/2014 11:45	Field Blank	Metals	Silver	0.025 U	ug/L	0.025	0.1
2/3/2014 11:45	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
2/3/2014 11:45	Field Blank	Metals	Zinc	5.0 U	ug/L	5	20
2/3/2014 11:45	Field Blank	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
2/3/2014 11:45	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
2/3/2014 11:45	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
2/3/2014 11:45	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/3/2014 11:45	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
2/3/2014 11:45	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/3/2014 11:45	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
2/3/2014 11:45	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
2/3/2014 11:45	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
2/3/2014 11:45	Field Blank	Pesticides	Alachlor	0.056 U	ug/L	0.056	0.23
2/3/2014 11:45	Field Blank	Pesticides	Ametryn	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Atrazine	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Atrazine Desethyl	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Atrazine Desisopropyl	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.075
2/3/2014 11:45	Field Blank	Pesticides	Bromacil	0.038 U	ug/L	0.038	0.15
2/3/2014 11:45	Field Blank	Pesticides	Butylate	0.019 U	ug/L	0.019	0.075

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 11:45	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Chlorpyrifos Methyl	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Demeton	0.023 U	ug/L	0.023	0.09
2/3/2014 11:45	Field Blank	Pesticides	Diazinon	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Disulfoton	0.0047 U	ug/L	0.0047	0.019
2/3/2014 11:45	Field Blank	Pesticides	Ethion	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Ethoprop	0.0047 U	ug/L	0.0047	0.019
2/3/2014 11:45	Field Blank	Pesticides	Fenamiphos	0.028 U	ug/L	0.028	0.11
2/3/2014 11:45	Field Blank	Pesticides	Fonofos	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Hexazinone	0.028 UJ	ug/L	0.028	0.11
2/3/2014 11:45	Field Blank	Pesticides	Malathion	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
2/3/2014 11:45	Field Blank	Pesticides	Metolachlor	0.056 U	ug/L	0.056	0.23
2/3/2014 11:45	Field Blank	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.075
2/3/2014 11:45	Field Blank	Pesticides	Mevinphos	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Naled	0.038 UJ	ug/L	0.038	0.15
2/3/2014 11:45	Field Blank	Pesticides	Norflurazon	0.028 U	ug/L	0.028	0.11
2/3/2014 11:45	Field Blank	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.075
2/3/2014 11:45	Field Blank	Pesticides	Parathion Methyl	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Pesticides	Phorate	0.0047 U	ug/L	0.0047	0.019
2/3/2014 11:45	Field Blank	Pesticides	Prometon	0.019 U	ug/L	0.019	0.075
2/3/2014 11:45	Field Blank	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.075
2/3/2014 11:45	Field Blank	Pesticides	Simazine	0.0094 U	ug/L	0.0094	0.038
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
2/3/2014 11:45	Field Blank	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
2/7/2014 12:30	Equipment Blank	Overflow	Alpha, Total	0.6 U	pCi/L	0.6	
2/7/2014 12:30	Equipment Blank	Overflow	Alpha-Counting Error	0.5	pCi/L	0.6	
2/7/2014 12:30	Equipment Blank	Overflow	Radium 226	0.2 U	pCi/L	0.2	
2/7/2014 12:30	Equipment Blank	Overflow	Radium 226-Counting Error	0.1	pCi/L	0.2	
2/7/2014 12:30	Equipment Blank	Overflow	Radium 228	0.8 U	pCi/L	0.8	
2/7/2014 12:30	Equipment Blank	Overflow	Radium 228-Counting Error	0.5	pCi/L	0.8	

EPA End Sheet

The Bioassay of the PCS Phosphate - White Springs effluent sampled on February 3 and 4, 2014, NPDES #FL0000655

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 FL0000655 11	12 140203	# B	# S	# 2

Remarks

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The Priority Pollutants Analysis of the PCS Phosphate - White Springs effluent sampled on February 3 and 4, 2014 NPDES #FL0000655

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 FL0000655 11	12 140203	# X	# S	# 2

Remarks

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Biological Analyses of the PCS Phosphate - White Springs effluent sampled on February 3 and 4, 2014, NPDES #FL0000655

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 FL0000655 11	12 140203	# S	# S	# 2

Remarks

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