

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date: 9/13/2021
Customer: WAS
RQ: RQ-2021-09-13-06

Collected By: Evelyn Becerra, Blake Spencer
Sampling Agency: FDEP
Project ID: SMP

PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL
FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

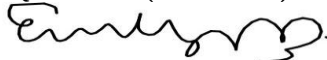
Number of Coolers Shipped: 2

Delivery Method: HandDelivered

FIELD ID (Labels) submitted under this RQ for this collection date.

Site Location	Field ID/WIN ID
Merritt's Mill Pond 500 meters upstream of dam	 G2WA0009
SHANGRI LA SPRING Vent	 G2WA0022
Merritt's Mill Pond 600 meters downstream of Jackson Blue Sp	 G2WA0007
Merritt's Mill Pond mid under powerlines	 G2WA0008

RELINQUISHED BY(SIGNATURE):



DATE/TIME: 9/13/2021 EST

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By:

Rec'd/Inspected Date:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Merritt's Mill Pond mid under powerlines **Date:** 9/13/2021
WIN/Field ID: G2WA0008 **WBID:** 180A **ENR:** **Latitude:** 30.7698
County: JACKSON **Org ID:** 21FLWQA **Longitude:** -85.1731
Receiving Body of Water: - **RQ:** 2021-09-13-06

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Evelyn Becerra	x		x		
☒	Blake Spencer		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# EXO #1					
Photos: NO		Flow: NA		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☒ Algae ID ☐ LVS ☒ LVI Other:											
SBIO ID Numbers: LIMS: 2275593 SBIO: 83048 HA:17014 RPS:9778 Macrophyte:11953											
Notes:											

Duplicate Sample

Time Zone: EST	Time:	Field ID:	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDDMMYYY)
DI Source:		Location:	
DI Type:		Equipment ID:	
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: WAS-SECT-2021-09-13-01 **WIN Import ID:** 21FLWQA_WAS-SECT-2021-09-13-01_10-13-2021.TXT
Enter Field Parameters, Verify Station ID In LIMS DMT: ESB 9/16/21 **QC Station ID, Field Parameters In LIMS DMT:** CC 10/06/2021
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets ESB 9/16/21 **Migrate Data to WIN:** DT 10/13/2021 **Verify Data In WIN:**
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-09-13-06
Customer: WQAP
Project ID: SMP

Collected By: Evelyn Becerra, Blake Spencer
Field Report Prepared By: Evelyn Becerra
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G2WA0008 Location: Merritt's Mill Pond mid under powerlines						Comments:				
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE				
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT)
	1236 EST	12	140.8	23.326	8.5 J	0.3	1.9 ☒ VOB (S)	1.9	281.3	0.13
9/13/2021										
	1236 EST	12.3	143.2	23.121	8.86 J	1.4			280.5	0.13
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	C
		Lot #	SA0293040		Exp:	10/19/21				
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	C
		Lot #	NA0344060		Exp:	01/04/22				
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	C
		Filter Lot #	17347262							
		Syringe Lot #	1091364							
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	C
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	C
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice				
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC		Formalin Lot #	☐ Formalin					
Periphyton (PT-50ML)		☒ ALGAE-ID				☒ Ice			1	B
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☐ Ice				
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐				☐ Ice				
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice				
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ	☒ W-CT-CL-R	☒ Ice		10	C	
Phytoplankton/Periphyton		☒ W-PCL-TQ-R	☒ W-CARB-AA (5 ml of MCAA** Buffer Solution)	☐ DTY-QN-C	☐ PKD-QN-BV	☐ Ice				
Name: Evelyn Becerra Blake Spencer						Signature: <i>Blake Spencer</i>			Date: 9/13/21	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Merritt's Mill Pond</u>		County: <u>Jackson</u>		Date: <u>9/13/21</u>							
Analyst: <u>Blake Spencer</u>		Signature: <u>[Signature]</u>		STORET: <u>62WA0002</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic. It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa.				Lake units sampled (circle one group): 1, 4, 7, 10 <u>2, 5, 8, 11</u> 3, 6, 9, 12							
SPECIES	2	5	8	11	Collected? (v)	SPECIES	2	5	8	11	Collected? (v)
Acer rubrum						Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.					
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis						*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense						Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (Eubotrys racemosa)					
*Commelina						Limnium spongia					
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrilla racemiflora						*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens					
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis						Myrica cerifera					
Eleocharis cellulosa						Bidens alba					
Eleocharis equisetoides						Panicum radiatum					
Eleocharis interstincta						Fraxinus americana					
*Eriocaulon compressum						Lycopus virginicus					
*Eriocaulon decangulare						Iris sp					
Eupatorium capillifolium						Vitis rotundifolia					
*Fuirena						Panicum rigidulum					
Fuirena scirpoidea						Sagittaria furzianna					
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <i>Merritt's Mill Pond</i>						Date: <i>9/13/21</i>					
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima		X	X	X	
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis						*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora			X			Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.	X	X	X	X	
Panicum hemitomon						Thalia geniculata					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	X	X	X	X	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)		X				Vallisneria americana	D	X	X	A	
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto		X									
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <i>Merritt's Mill Pond Mid Under Powerlines</i>					County: <i>Jackson</i>		Date: <i>9/13/21</i>		Investigators: <i>Nate Spencer & Evelyn Bererra</i>	
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1				60	1				
	2					2				
	3					3				
	4	2				4	4			
	5	2		0		5	2			0
	6	4				6	2			
	7	2				7	3			
	8	2				8	2			
	9	4				9	2			
10	1				70	1				
	2	4				2				
	3	2				3				
	4	4				4	4			
	5	2		0		5	2			0
	6	2				6	2			
	7	4				7	2			
	8	2				8				
	9	6				9	6			
20	1	2			80	1				
	2					2				
	3					3	3			
	4	4				4	2			
	5	2		0		5	2			0
	6	2				6	2			
	7	6				7	4			
	8	2				8	3			
	9	6				9	6			
30	1	2			90	1				
	2					2				
	3	4				3	2			
	4					4	4			
	5	3		0		5	4			0
	6	2				6	2			
	7	4				7	2			
	8	2				8	2			
	9	6				9	6			
40	1				100	1	2			
	2					2	2			
	3	2				3	2			
	4	2				4	2			
	5	4		0		5	4			0
	6	4				6	4			
	7	4				7	2			
	8	6				8	2			
	9	6				9	2			
50	1					1				
	2					2				
	3	4				3				
	4	2				4	2			
	5	2		0		5	4			0
	6	4				6	4			
	7	2				7	2			
	8	4				8	2			
	9	6				9	2			

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

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

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

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

STORET Station Number:

G2WA0008

Secchi depth	<i>1.9</i>
Estimated?	<i>N</i>

# points ranked 4-6	<i>54</i>
total points assessed	<i>99</i>
% points ranked 4-6	<i>55%</i>

Check accompanying data collected at same site/date.	
Algal mat sample	☒
Linear Veg Survey LVT	☒
Habitat Assessment	☒
SCI/Biorecon	
Water sample	☒
RQ- <i>2021-09-13-06</i>	

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

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 83048 MACROPHYTE ID: _____ LATITUDE: 30.7698
COUNTY: Jackson STORET #: 62WA0008 LONGITUDE: -85.1731
DATE: 9/13/21 TIME: 12:36pm SAMPLING AGENCY: FAEP
SITE NAME: Merritt's Mill Pond Mid Under Powerlines WBID: 180A
FIELD ID/NAME: 62WA0008 LAKE SIZE: _____ RQ: 2021-09-13-06

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category -- from GIS) : Forest/Natural <u>35%</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>65%</u> Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>2.94</u> Land Use Source & Year: _____					
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy				Artificially Impounded ☒ Yes ☐ No					
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy									
STORMWATER INPUTS <u>685</u> <u>10/12/1</u> <u>13</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 16		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
LAKESIDE ALTERATIONS <u>12</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 18 17 16		Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected) 15 14 13 12 11		Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 7 6		Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
BUFFER ZONE <u>13</u>		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 19 18 17 16		89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 6		< 29% of shoreline with >18m buffer 5 4 3 2 1	

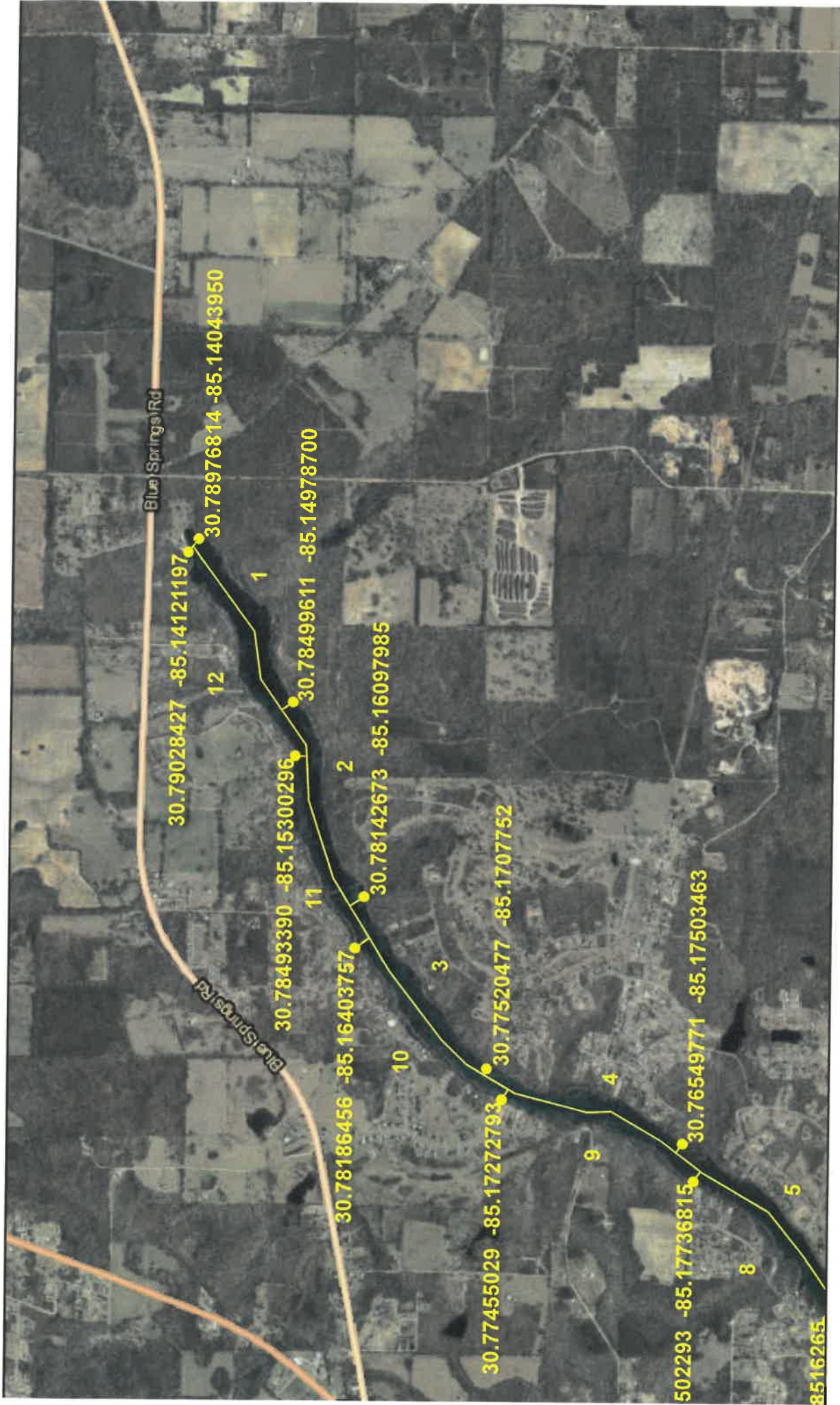
WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>See Field</u> Exp. Date: <u>Sheet</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____					
Meter Readings: Top: <u>0.3</u> <u>23.326</u> <u>8.5 J</u> <u>12.0</u> <u>140.8</u> <u>281.3</u> <u>0.13</u> Mid-Depth: _____ Bottom: <u>1.4</u> <u>23.121</u> <u>8.86 J</u> <u>12.3</u> <u>143.2</u> <u>280.5</u> <u>0.13</u> Meter ID: _____						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____						Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green SECCHI (M) <u>1.9</u> Total Station Depth (M) _____ VOB ☒ <u>1.9</u>					
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot #: _____ Exp Date: _____ Algal Bloom/Algal ID Sample Taken? ☒ Yes ☐ No Active Vegetation Mgmt? ☒ Yes ☐ No ☐ Don't Know						Sediment Odors: ☒ Normal ☐ Other (Specify): _____ ☐ Anaerobic					
Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☐ ☒ Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☐ ☐ ☒ ☐						Additional Notes:					
Weather Conditions :											
SAMPLING TEAM: <u>Blake Spencer, Evelyn Becerra, Mike Eckles</u>						SIGNATURE: <u>[Signature]</u>			DATE: <u>9/13/21</u>		

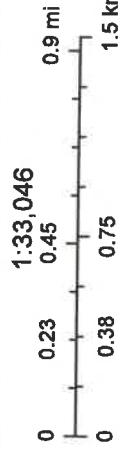
DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

STORE STATION NUMBER: <i>G2WA0008</i>	DATE (M/D/Y) <i>9/13/21</i>	LAKE NAME <i>Merritt's Mill Pond</i>		FIELD ID / NAME: <i>G2WA0008</i>	
ECO-REGION:	COUNTY: <i>Jackson</i>	SAMPLING LOCATION/DESCRIPTION: <i>Merritt's Mill Pond Mid Under Powerlines</i>		LAKE SIZE:	
PARAMETER	No surface inflow or outflow present, very long water residence time, groundwater seepage dominates	Surface water inflow present, but flow is rare, moderate to long water residence time		Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time	
HYDROLOGY	☐	☐		☐	
Color	Very clear, uncolored water (benthic sampling appropriate) ☒	Water somewhat tannin stained (benthic sampling appropriate) ☐		Dark, discolored water (water color 20 PCU or higher) ☐	
	Optimal	Suboptimal		Marginal	
Secchi	Secchi >3 m Or VOB	Secchi(m)		Poor	
<i>20</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Vegetation Quality	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants		Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats	
<i>17</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Stormwater Inputs	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation	Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place	
<i>13</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Bottom Substrate Quality	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present		Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom	
<i>7</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Lakeside Adverse Human Alterations	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)	Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected		Many structures, roads or other human disturbance visible (50%-70%) lakeside affected	
<i>12</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Upland Buffer Zone	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer	89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer		50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer	
<i>13</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
Adverse Watershed Land Use	Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial				
<i>9</i>	20 19 18 17 16	15 14 13 12 11		10 9 8 7 6	
TOTAL SCORE	<i>91</i>				
COMMENTS:					
ANALYSIS DATE: <i>9/13/21</i>	ANALYST: <i>Blake Spencer</i>		SIGNATURE: <i>[Signature]</i>		

Merritt's Mill Pond

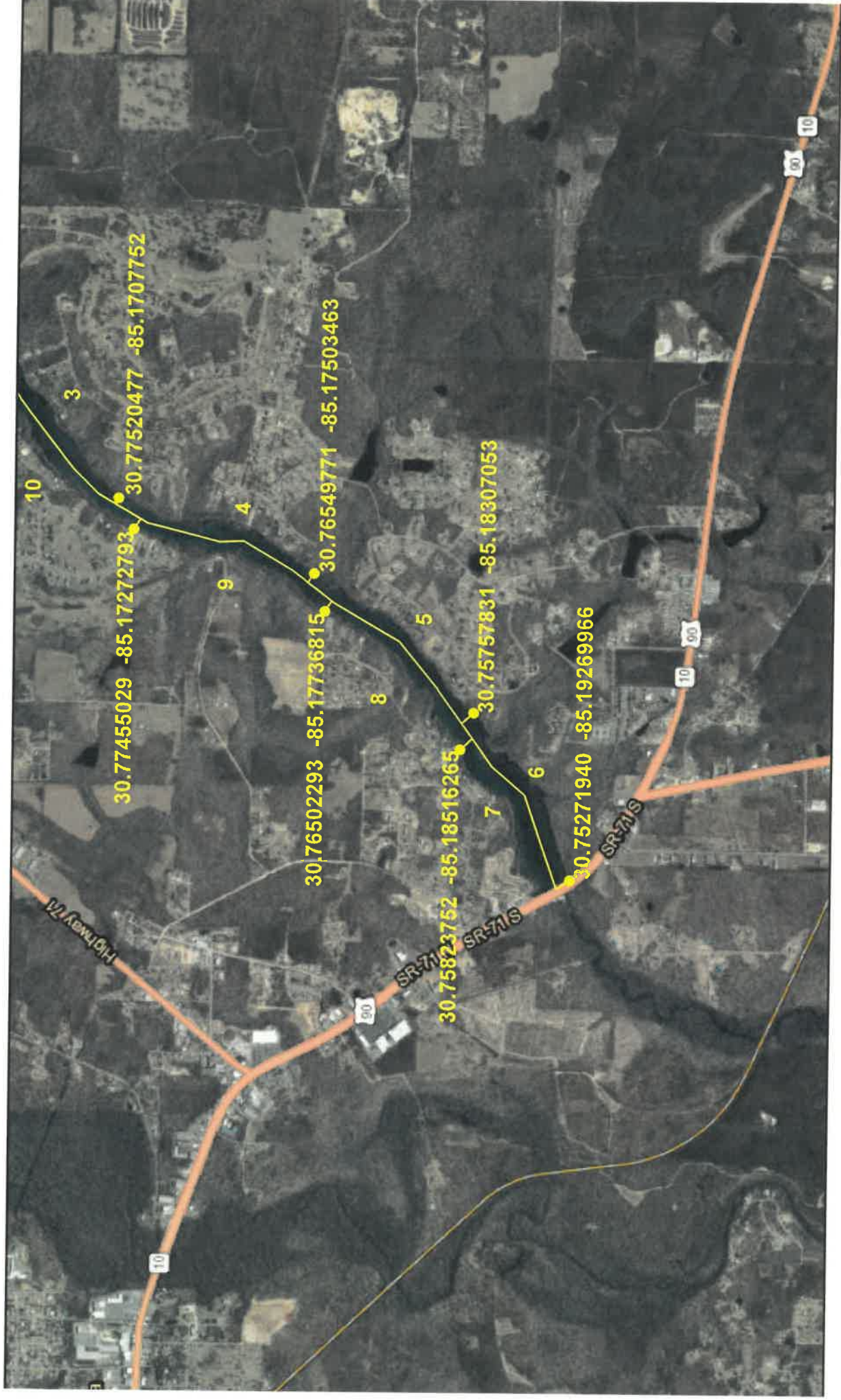


september 8, 2021



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Merritt's Mill Pond



september 8, 2021

1:33,046
0 0.23 0.45 0.9 mi
0 0.38 0.75 1.5 km
Sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USI
USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin,
OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap
contributors, and the GIS user community

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Meter ID: Exo #1

RQ: 2021-09-13-06

Project: MMP BMAP

boldly "X" this box if there are quality data on this page

- Notes:** (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification _____

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Blake Spencer	9/13/21	0739	20.7	761.5	9.0	9.01	100.2	—	1.1492	P/F	L/F
ICV	Blake Spencer	9/13/21	0740	20.9	761.4	8.9	9.09	161.7	—	—	P/F	L/F
CCV	Blake Spencer	9/13/21	1717	24.06	759.0	8.4	8.41	99.9%	—	—	P/F	L/F
CCV											P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. **Steady-state & Galvanic Sensors:** DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	Blake Spencer	9/13/21	0746	210917J	09/22	1000	1000	P/F	L/F
ICV	Blake Spencer	9/13/21	0750	4103146	07/2023	100	1099.8	P/F	L/F
CCV	Blake Spencer	9/13/21	1651	210817J	09/22	1000	1001	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Blake Spencer	09/13/21	0755	210513A	11/22	7.02	21.5	7.02	-29.3	P/F	L/F
Calibr.	Blake Spencer	09/13/21	0758	210513B	11/22	4.00	21.6	4.00	146.4	P/F	L/F
Calibr.	Blake Spencer	9/13/21	0801	201209G	06/22	10.04	21.6	10.63	-190.2	P/F	L/F
ICV	Blake Spencer	9/13/21	0904	210513B	11/22	4.00	21.5	4.00	145.5	P/F	L/F
CCV	Blake Spencer	9/13/21	1523	201209G	06/22	10.04	21.5	10.63	145.5	P/F	L/F
CCV										P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;

If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) **Secchi Disk Line** / **Sonar** Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air						P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

Cooler Packing Worksheet for Request: RQ-2021-09-13-06

Merrit's Mill Pond BMAP

Ship Cooler On: 9/9/2021

Customer/Project: WAS-SECT/BMAP

Assigned To: KLUG_K

Requester: Curtis Musson

Priority: 3

850-245-8453

2600 Blair Stone Rd

Tallahassee, FL 32399

Attn: Curtis Musson

Please return
packing list with
sample submittal
forms.

Comments:

Group A: Nutrients, Metals x3

Group B: Algal_ID x1

Group C: Nutrients, Metals, Pesticides x 1

Include carbamates preservation at 1 tube/container

Packing Notes:

No Fedex Labels

No Trash Bags

Sampling Note:

Group A: 3 sties

Group B/C: 1 site - Powerlines

Requested Analyses:

Bottle Group: A

of Sites: 3

Container ID: P-1L

Qty: 3 Preservation: ICE

Lot # 00680826

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

W-SO4-IC

W-TDS

W-TSS

Description

Alkalinity in aqueous matrices as mg CaCO3/L

Turbidity in aqueous matrices

Chloride in aqueous matrices

True Color measured at 450 nm (not valid for NPDES monitoring)

Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)

Sulfate in aqueous matrices

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Container ID: BP-1L

Qty: 3 Preservation: ICE

Lot # 1326477

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Container ID: P-500ML

Qty: 3 Preservation: HNO3

Lot # 00080369

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis

W-HARD

W-ICP

W-ICPMS

Description

Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

Container ID: P-500ML

Qty: 3 Preservation: ICE And H2SO4

Lot # 00080369

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis

W-NH3

W-NO2NO3

W-S-A-TP

W-TKN

W-TOC

Description

Ammonia in aqueous matrices as mg N/L

Nitrite/Nitrate in aqueous matrices as mg N/L

Total Phosphorus in aqueous matrices as mg P/L

Total Kjeldahl Nitrogen in aqueous matrices

Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML

Qty: 3 Preservation: FILTER-ICE

Lot # 00072954

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Bottle Group: B

of Sites: 1

Container ID: PT-50ML

Qty: 1 Preservation: ICE

Lot # 11621053

Description: Plastic Tube 50 mL

Analysis

ALGAL_ID

Description

Qualitative assessment of algal taxa present without counts

Bottle Group: C

of Sites: 1

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 00080826

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

Description

Alkalinity in aqueous matrices as mg CaCO3/L

Turbidity in aqueous matrices

Chloride in aqueous matrices

W-COLOR	True Color measured at 450 nm (not valid for NPDES monitoring)
W-F	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-SO4-IC	Sulfate in aqueous matrices
W-TDS	Total Dissolved Solids in aqueous matrices
W-TSS	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Container ID: BP-1L

Qty: 1 Preservation: ICE

Lot # 1326677

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Container ID: BG-500ML

Qty: 1 Preservation: CH2CICOOH and Ice

Lot # 00080737

Description: Brown Glass Bottle 500ML *FILL Completely* Affix BLUE dot to container.

Analysis

W-CARB-AA

Description

Carbamates in water matrices by HPLC/MS/MS

Container ID: BG-500ML FILL TO TOP Qty: 4 Preservation: ICE

Lot # 00080737

Description: Brown Glass Bottle 500ML *Fill Completely* Affix BLUE dot to container.

Analysis

W-CT-CI-R

W-PCL-TQ-R

Description

Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization

Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS

Container ID: BG-500ML

Qty: 1 Preservation: ICE

Lot # 00080737

Description: Brown Glass Bottle 500ML *FILL Completely* Affix BLUE dot to container.

Analysis

W-E8321-DI

W-E8321-MS

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Container ID: P-500ML

Qty: 1 Preservation: HNO3

Lot # 00080369

Description: Plastic Bottle 500 mL Affix RED nitric acid dot to container.

Analysis

W-HARD

W-ICP

W-ICPMS

Description

Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

Container ID: P-500ML

Qty: 1 Preservation: ICE And H2SO4

Lot # 00080369

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis

W-NH3

W-NO2NO3

W-S-A-TP

W-TKN

W-TOC

Description

Ammonia in aqueous matrices as mg N/L

Nitrite/Nitrate in aqueous matrices as mg N/L

Total Phosphorus in aqueous matrices as mg P/L

Total Kjeldahl Nitrogen in aqueous matrices

Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML

Qty: 1 Preservation: FILTER-ICE

Lot # 00072954

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Container ID: BG-1L

Qty: 4 Preservation: ICE

Lot # 00080147

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

Analysis

W-PSNP-TQ

Description

Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

Cooler Packed By: 14K

Number of Coolers: 2

Date: 9.3.21

Kit must also include:

- ☒ Field Sheets
- ☒ Temperature Control Bottle
- ☐ FedEx Bills, if applicable
- ☐ Plastic Bags/Zip Ties
- ☐ Acid Labels (sets of 24)

If Preservation Included:

ID <u>MCA Buffer soln</u>	Exp <u>2.9.22</u>	Lot # <u>118437</u>
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2021-09-13-06