FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

June 2016

Data Qualified? Yes / No

STORET Station Name: Merritt's Mill Pond 500 meters upstream of dam **Date:** 06/15/2016 (mm/dd/yyyy)

STORET Station ID: G2WA0009 **WBID:** 180A **Latitude:** 30.755 (Decimal Degrees)

County: Jackson **RQ -** RQ-2016-06-13-47 **ORG ID:** 21FLWQA **Longitude:** -85.1881 (Decimal Degrees)

Receiving Body of Water: Chipola River **Field ID:** G2WA0009

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Curtis Musson	X		X				
Ben Ralys							
Blake Spencer		X		X	X		

Sampling Equipment

- [x] Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☐ Syringe
- ☐ Dipper ☐ Other
- Equipment ID

Collection Method

- ☐ Wading
- ☐ From Shore
- ☐ Other (note below)

Via Boat
- ☐ Canoe/Kayak
- ☐ Electric Motor
- [x] Gasoline Motor

Water Level: Dry / Low / (Normal) / High / Flooded

Matrix: (Fresh) / Marine / DI

Meter ID# Biology 2 **Photos:** Yes / (No)

Tide Falling: Yes / No / (NA)

Field Sample

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
(EST)	10:25	0.3	2.3	10.12	127.0	7.92	0.13	VOB	271	26.94
CEN	10:31	1.8		10.86	135.9	7.99	0.13		272	26.71

Biological Samples Collected: (None) CM HA SCI LVS RPS (LVI) Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	[x] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[x] Ice [x] H_2SO_4	SA-5259020	09/16/2016	[x] <2
Metals	[x] W-ICPMS [x] W-ICP	[x] Ice [x] HNO_3	NA-5259030	09/16/2016	[x] <2
Filtered Nutrients	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter	[x] Ice			
Chlorophyll	[x] CHLSUITE-W	[x] Ice			
Physical/Aggregate (Fresh)	[x] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[x] Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Contains 1:1 Sulfuric Acid SA-5259020 EXP: 09/16/16 Warning! See MSDS

Contains 1:1 Nitric Acid NA-5259030 EXP: 09/16/16 Warning! See MSDS

QA/QC Sample Information

Duplicate

Time Zone: EST CEN **Sample Depth (m):** _____ **Field ID:** _____

Time: _____ **Total Depth (m):** _____

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☐ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☐ Ice ☐ H_2SO_4	SA-5259020	09/16/2016	☐ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO_3	NA-5259030	09/16/2016	☐ < 2
Filtered Nutrients	☐ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
Physical/Aggregate (Fresh)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	☐ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Blank

Time Zone: EST CEN **Time:** 15:47 **Field ID:** G2WA0008B **Location:** BMC

☒ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank **Equipment ID** NA

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☑ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☑ Ice ☑ H_2SO_4	SA-5259020	09/16/2016	☑ < 2
Metals	☑ W-ICPMS ☑ W-ICP	☑ Ice	NA-5259030	09/16/2016	☑ < 2
Filtered Nutrients	☑ W-PO4-F ☑ Field Filtered 0.45 µm Filter	☑ Ice	Place Preservative Sticker(s) Here (If Available)		
Chlorophyll	☑ CHLSUITE-W	☑ Ice			
Physical/Aggregate (Fresh)	☑ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	☑ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Notes:

Cloud cover 35%

G2WA0009 15 June 2016

Merritt's Mill Pond 500 meters upstream of dam

Signature: _____ **Date:** 6-15-2016

Field Parameters Entered into LIMS: CM 6-17-216 (Initials/Date) **Field Parameters QC in LIMS:** CM 6-20-216 (Initials/Date)

Date Migrated to STORET: _____ (Initials/Date) **Field Sheets Scanned/Saved:** _____ (Initials/Date)

Macro : 982

BR 6/20/16 SBIO: 76242

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: Merritt's Mill Pond mid under powerlines	County: Jackson	Date: 06/15/2016
Analyst: Curtis Musson, Blake Spencer	Signature: Curtis Musson	STORET: G2WA0008

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~~ ~~2, 5, 8, 11~~
3, 6, 9, 12

SPECIES	3	6	9	12	Collected? (√)
Acer rubrum	X	X	X	X	
Alternanthera philoxeroides				X	
Andropogon sp.					
Azolla filiculoides (A. caroliniana)					
Baccharis sp.			X		
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum					
Boehmeria cylindrica	X	X	X	X	
Brasenia schreberi					
Cabomba caroliniana					
Casuarina equisitifolia					
Centella asiatica					
Cephalanthus occidentalis	X	X	X	X	
Ceratophyllum demersum 12,	X	X	X	D	
Chara sp.	X	X	X	X	
Cladium jamaicense	X		X	X	
Cliftonia monophylla		[redacted]			
Colocasia esculenta	X	X	X	X	
*Commelina					
Crinum americanum					
***Cyperus alternifolius** (C. involucratus)					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus	X			X	
*Cyperus surinamensis					
Cyrilla racemiflora	X	X		X	
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Egeria densa					
Eichhornia crassipes		X	X		
*Eleocharis baldwinii					
*Eleocharis					
Eleocharis cellulosa					
Eleocharis equisetoides					
Eleocharis interstincta					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium				X	
*Fuirena					
Fuirena scirpoidea					
Gordonia lasianthus					

SPECIES	3	6	9	12	Collected? (√)
Habenaria repens					
Hydrilla verticillata					
Hydrocotyle sp.		X	X	X	
Hygrophila polysperma					
*Hypericum fasciculatum					
*Hypericum hypericoides					
*Hypericum myrtifolium					
Ilex cassine					
Ipomoea aquatica					
Ipomoea sagittata					
Itea virginica					
Juncus effusus					
*Juncus marginatus					
*Juncus megacephalus					
Juncus repens					
*Juncus scirpoides					
Lachnanthes caroliniana					
Leersia hexandra	~~X~~	~~X~~	~~X~~	~~X~~	BR
Landoltia punctata (Spirodela punctata)					
Lemna sp.	X	X	X	X	
Leucothoe racemosa (Eubotrys racemosa)					
Limnobium spongia					
Limnophila sessiliflora					
Liquidamber styraciflua	X	X		X	
*Ludwigia arcuata					
*Ludwigia leptocarpa					
*Ludwigia linearis					
*Ludwigia octovalvis					
***Ludwigia peruviana**					
*Ludwigia repens					
*Ludwigia					
Luziola fluitans (Hydrochloa carolinensis)					
Lyonia lucida					
Magnolia virginiana	X	X	X		
Mayaca fluviatilis					
Melaleuca quinquenervia					
Micranthemum glomeratum					
Micranthemum umbrosum					
Mikania scandens					
Mimosa pigra					
Myrica cerifera		X	X	X	
Magnolia Grandiflora	X	X			
Lycopus Virginicus		X			
~~Fagus~~ (Ash) Fraxinus caroliniana	X	X	X	X	
Yellow Flag Iris Pseudacorus		X	X		
Rosea Palustris		X	X	X	
Privet Ligustrum ~~tuxedo~~ sinense		X			
Alder Alnus Serrulata	X	X			

62-160.800, F.A.C.

Revision Date: March 1, 2014

BR 6/20/16

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:

Date:

SPECIES	3	6	9	12	Collected? (√)
Myriophyllum aquaticum		X			
*Myriophyllum heterophyllum					
*Myriophyllum laxum					
*Myriophyllum pinnatum					
Myriophyllum spicatum					
*Najas filifolia					
*Najas guadalupensis					
*Najas minor					
Nelumbo lutea					
Nitella spp.					
Nuphar sp.					
Nymphaea odorata					
Nymphoides aquatica					
Nyssa sylvatica var. biflora	X	X	X	X	
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon					
Panicum repens		X			
Paspalidium geminatum					
*Paspalum repens					
Paspalum urvillei					
Peltandra sp.					
Persea sp.					
Pennisetum purpureum					
Phragmites australis					
Pinus elliottii					
Pistia stratioides					
Pluchea sp.					
*Polygonum glabrum (densiflorum)				X	
*Polygonum hydropiperoides					
*Polygonum punctatum					
*Polygonum ______________					
Pontederia cordata					
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia ______________					
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora tracyi					
Ricciocarpus natans					
~~Sabal palmetto~~ Serenoa ~~Hrub~~ repens		X		X	
Sacciolepis striata					
*Sagittaria filiformis					
*Sagittaria graminea					
*Sagittaria isoetiformis					
Sagittaria lancifolia					
Sagittaria latifolia					
Sagittaria kurziana				X	

SPECIES	3	6	9	12	Collected? (√)
Salix caroliniana			X	X	
Salvinia minima		X	X		
Sambucus canadensis			X	X	
Sapium sebiferum					
Saururus cernuus					
Schinus terebinthifolius					
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)					
Scirpus cyperinus					
*Sesbania ______________					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza					
Taxodium sp. D (6) 9, 3	D	D	D	X	
Thalia geniculata					
Thelypteris palustris					
Triadenum virginicum					
Typha sp.			X		
Urochloa mutica (Brachiaria mutica)					
*Utricularia gibba (U. biflora)					
*Utricularia floridana					
*Utricularia foliosa					
*Utricularia inflata					
*Utricularia purpurea					
*Utricularia cornuta					
*Utricularia radiata					
Vallisneria americana	X	X		X	
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)					
Wolffiella spp.	X	X	X	X	
Woodwardia virginica					
Xyris sp.					
Zizania aquatica					
Zizaniopsis milacea					
Carex albolutescens	X	X		X	
~~Red Bud~~ CM				~~X~~	CM
Cercis Candensis CM					

Search Existing Stations by:

- (•) Visit ID (SBIO Sample ID)
- ( ) STORET Station ID

Search: 76242

STORET Station:

Visit ID (SBIO Sample ID): 76242

Lake Segments Sampled

- ( ) 1,4,7,10
- ( ) 2,5,8,11
- (•) 3,6,9,12

New Information:

New Macrophyte ID: 9821

Sampling Agency: FDEP - Biology

Identifier: Spencer, Blake

LIMS ID:

Comments:

Over 100 Grass Carp. Grass Carp were not seen during previous sampling events. Vallisneria a. population in decline.

population in decline.

Existing Station Visit Information

Station: G2WA0008

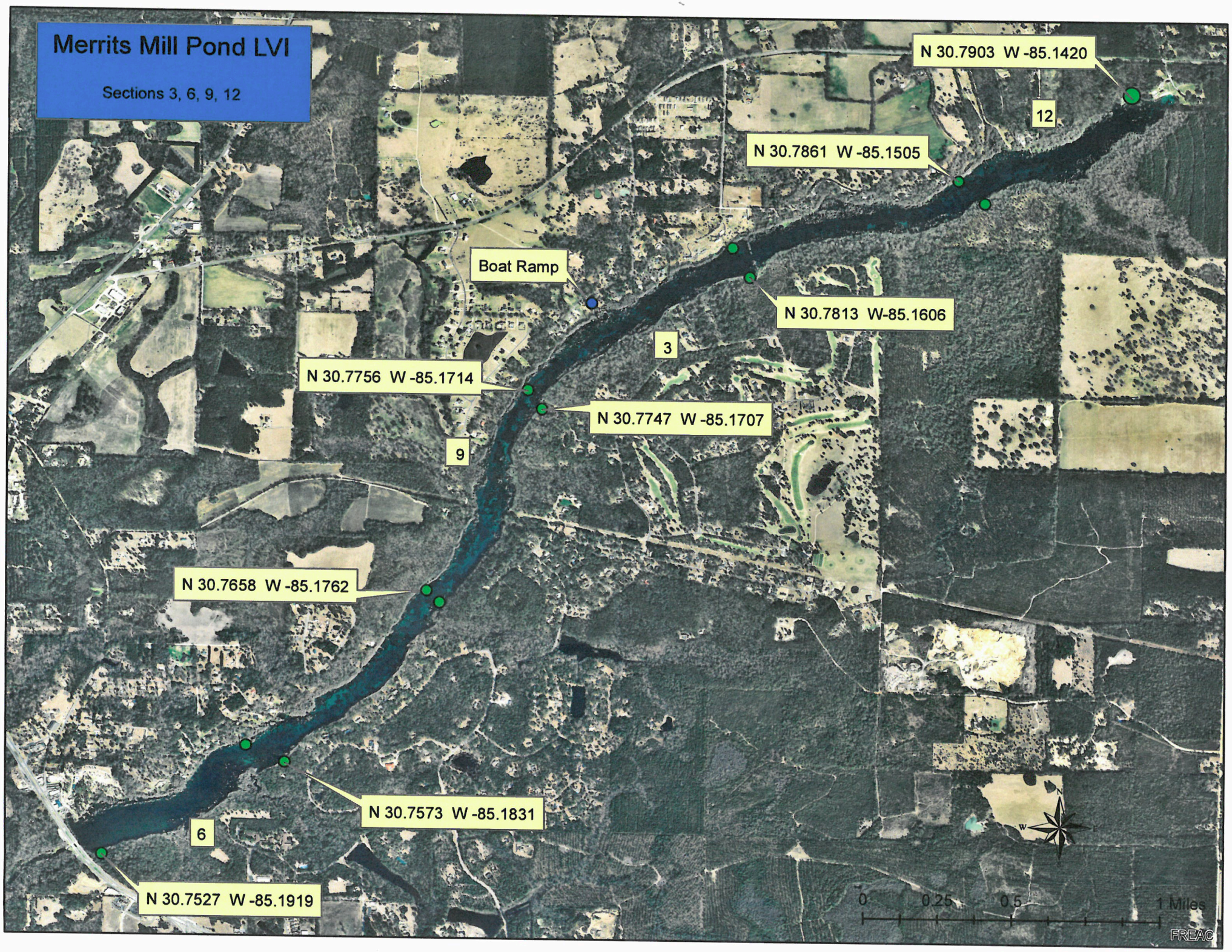
Sample Date: 6/15/2016

Waterbody: MERRITTS MILL POND

	Herbaceous Species	3	6	9	12
X	Acer rubrum	P	P	P	P
X	Alternanthera philoxeroides				P
X	Baccharis			P	
X	Boehmeria cylindrica	P	P	P	P
X	Cephalanthus occidentalis	P	P	P	P
X	Ceratophyllum demersum	P	P	P	D
X	Chara	P	P	P	P
X	Cladium jamaicense	P	P	P	P
X	Colocasia esculenta	P	P	P	P
X	Cyperus odoratus	P			P
X	Cyrilla racemiflora	P	P		P
X	Eichhornia crassipes		P	P	
X	Eupatorium capillifolium				P
X	Hydrocotyle		P	P	P
X	Lemna	P	P	P	P
X	Liquidambar styraciflua	P	P		P
X	Magnolia virginiana	P	P	P	
X	Myrica cerifera		P	P	P
X	Myriophyllum aquaticum		P		
X	Nyssa sylvatica biflora	P	P	P	P
X	Panicum repens		P		
X	Polygonum glabrum				P
X	Salix caroliniana			P	P
X	Salvinia minima		P	P	
X	Sambucus canadensis			P	P
X	Taxodium	D	D	D	P
X	Typha			P	
X	Vallisneria americana	P	P		P
X	Wolffiella	P	P	P	P
X	Serenoa repens		P		P
X	Sagittaria kurziana				P
X	Carex albolutescens	P	P		P
X	Magnolia grandiflora	P	P		
X	Lycopus virginicus		P		
X	Fraxinus caroliniana	P	P	P	P
X	Iris pseudacorus		P	P	
X	Rosa palustris		P	P	P
X	Ligustrum sinense		P		
X	Alnus serrulata	P	P		

Double click plant name to add to the list:

CM 6-20-2016 ✓


Merrits Mill Pond LVI
Sections 3, 6, 9, 12
N 30.7903 W -85.1420
12
N 30.7861 W -85.1505
Boat Ramp
N 30.7813 W-85.1606
3
N 30.7756 W -85.1714
N 30.7747 W -85.1707
9
N 30.7658 W -85.1762
N 30.7573 W -85.1831
6
N 30.7527 W -85.1919
0 0.25 0.5 1 Miles
FREAC

DEP-SOP-001/01: Form FD 9000-31 (9/19/12)

LAKE OBSERVATION FIELD SHEET

SAMPLE ID: G2WA0008 | MACROPHYE ID: | LATITUDE: 30.7698
COUNTY: Jackson | STORET #: G2WA0008 | LONGITUDE: -85.1731
DATE: 6-15-2016 | TIME: 11:12 | SAMPLING AGENCY: FDEP
SITE NAME: Merris Mill Pond | WBID: 16°A
FIELD ID/NAME: G2WA0008 | LAKE SIZE: | RQ: 2016-06-13-47

WATERSHED / LAKESIDE FEATURES

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

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)
28.6	19.9	36.2	3.0	11.2	0.4	0.6	Resivours 0.2

LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: 3.00

Land Use Source & Year:

Local Watershed Erosion (select one) : [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution : [ ] No evidence [X] Slight [ ] Moderate [ ] Heavy

Artificially Impounded [X] Yes [ ] No

STORMWATER INPUTS 10	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					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place				
	20	19	18	17	16	15	14	13	12	11	(10)	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS 13	Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)					Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)					Many structures, roads or other human disturbance visible (50%-70% lakeside affected)					Highly developed or disturbed (>70% of lakeside affected)				
	20	19	18	17	16	15	14	(13)	12	11	10	9	8	7	6	5	4	3	2	1
BUFFER ZONE 15	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					< 29% of shoreline with >18m buffer				
	20	19	18	17	16	(15)	14	13	12	11	10	9	8	7	6	5	4	3	2	1

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water:
Nutrient Sample Taken? [X] Yes [ ] No Preserved? [X] Yes [X] pH<2 [ ] No
Color Sample Taken? [X] Yes [ ] No Lot # 52890 20 Exp. Date: 9/16/16
Alkalinity Sample Taken? [X] Yes [ ] No
Water Level [ ] Low [X] Normal [ ] High

Water Odors: [X] Normal [ ] Sewage [ ] Petroleum [ ] Other
Water Surface Oils: [X] None [ ] Sheen/Slick [ ] Glob [ ] Other

Meter Readings:	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top:	0.3	24.97	7.76	9.02	109.1	279	0.13
Mid-Depth:	—	—	—	—	—	—	—
Bottom :	1.5	24.18	7.78	9.02	114.7	278	0.13

Meter ID:

Clarity: [X] Clear [ ] Opaque [ ] Turbid [ ] Slightly Turbid
Color: [X] Clear [ ] Tannic [ ] Green

SECCHI (M):
VOB [X]
Total Station Depth (M): ~~3.0~~ Ch 2.0

Sediment Type: (may check more than one)
[ ] Sandy [ ] Organic fibrous (peaty, CPOM) [X] Vegetated
[X] Sand/Silt [ ] Organic smooth (muck) [ ] Other (Specify):

Sample Taken? [ ] Yes [X] No

Sediment Odors:
[ ] Normal [ ] Other (Specify): NA
[ ] Anaerobic

Biological Communities:
LVI Conducted? [X] Yes [ ] No
Phytoplankton Sample Taken? [ ] Yes [X] No
Sample Preserved? [ ] Yes [ ] No
Lot #: Exp Date:
Algal Bloom/Algal ID Sample Taken? Yes No
Active Vegetation Mgmt? [X] Yes [ ] No [ ] Don't Know

Abundance:

	Absent	Rare	Common	Abundant
Periphyton	[ ]	[ ]	[ ]	[X]
Nuisance Plants	[ ]	[X]	[ ]	[ ]
Submersed Plants	[ ]	[ ]	[ ]	[X]
Exotic Apple Snails	[ ]	[ ]	[ ]	[X]

Additional Notes:
Grass carp >100. Not present 3 Months Ago, 3-2016

Weather Conditions : Warm, 80's, Clear Sky No Rain

SAMPLING TEAM: Curtis Musson, Ben Nalvs, Blake Spencer | **SIGNATURE:** | **DATE:** 6/15/16

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

STORET STATION NUMBER:	DATE 06/15/2016	LAKE NAME: MERRITT'S MILL POND		FIELD ID / NAME: G2WA0008
ECO-REGION:	COUNTY: JACKSON	SAMPLING LOCATION/DESCRIPTION:		LAKE SIZE:

PARAMETER				
HYDROLOGY	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 ☐	Impounded, hydrology of system artificially controlled ☒
Color	Very clear, uncolored water (benthic sampling appropriate) ☒	Water somewhat tannin stained (benthic sampling appropriate) ☐	Dark, discolored water (water color 20 PCU or higher) ☐	Visibility extremely reduced due to high color ☐

	Optimal					Suboptimal					Marginal					Poor				
Secchi 20	Secchi >3 m				Secchi(m)	3	2.6	2.2	1.8	1.4	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1
	(Or VOB)	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Vegetation Quality 19	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 0 1 2 3 4					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					Lake choked (>40%) with nuisance macrophytes (duck-weed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Stormwater Inputs 18	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					Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place				
	20	19	(18)	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Bottom Substrate Quality 10	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					Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom				
	20	19	18	17	16	15	14	13	12	11	(10)	9	8	7	6	5	4	3	2	1
Lakeside Adverse Human Alternations 13	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)					Highly developed or disturbed (>70% of lakeside affected)				
	20	19	18	17	16	15	14	(13)	12	11	10	9	8	7	6	5	4	3	2	1
Upland Buffer Zone 15	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					< 29% of shoreline with >18m buffer				
	20	19	18	17	16	(15)	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Adverse Watershed Land Use 9	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																			
	20	19	18	17	16	15	14	13	12	11	10	(9)	8	7	6	5	4	3	2	1

TOTAL SCORE	104	COMMENTS: Hundreds of Grass carp

ANALYSIS DATE: 6-15-2016	ANALYST: Curtis Mussch	SIGNATURE:

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

Boldly "X" this box if there is qualified data on this page.

Meter: Biology 2 | RQ-: RQ-2016-06-13-47 | Project: BMAP-Merrits Mill

Notes: (1) Numbers ≤4, are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
(2) Always wait for meter to stabilize before recording any readings.
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site _____

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 06/03/2016

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Curtis Musson	6-15-16	0713	23.0	8.58	8.57	100.0	49.2	—	P	LAB
ICV	Curtis Musson	6-15-16	0717	23.0	8.58	8.58	100.1	49.2	—	P	LAB
CCV	Curtis Musson	6-15-16	1007	26.4	7.98	7.97	94.8	57.4	—	P	LAB
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.
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; 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.	Curtis Musson	6-15-16	0721	160330D	04/2017	1,000	1000	P	LAB
ICV	Curtis Musson	6-15-16	0722	160330D	04/2017	1,000	1,000	P	LAB
CCV	Curtis Musson	6-15-16	1008	2601533	12/2017	100	105	P	LAB
CCV									

Report specific conductance as a whole number with no decimal figure. Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Curtis Musson	6/15/16	0725	160330B	10/2017	7.0	7.00	-13.8	P	L
Calibr.	Curtis Musson	6/15/16	0728	160330A	04/2017	4.0	4.00	165.1	P	L
Calibr.	Curtis Musson	6/15/16	0730	160330C	10/2017	10.0	9.98	-185.1	P	L
ICV	Curtis Musson	6/15/2016	0733	160330B	10/2017	7.00	7.05	-14.1	P	L
CCV	Curtis Musson	6-15-16	1610	160330C	10/2017	10.0	10.04	-185.4	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ±0.2 SU; mV pH7 Range 0±50; mV pH 4 Range +180±50;
mV pH 10 Range -180±50; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly) Date of Last Depth Verification _____

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

ICV acceptance criteria ±5 % or ±0.05m, whichever is greater

Request Number: RQ-2016-06-13-47

Merritt's Mill Pond

Customer: WQAP

Project ID: BMAP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Apr 7, 2016

Requester: Benjamin Ralys

Collected By: Curtis Musson, Ben Ralys

Field Report Prepared By: Curtis Musson

Sampling Agency: FDEP

Location: Merritt's Mill Pond 600 Meters downstream of Jackson Bluespring	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 6-15-2016 Time 0945	Eastern / Central	Composite end Date	Time	Bottle Group(s) (See pg 2)									
Field ID: G2WA0007		Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen 8.25	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)									
STORET #: G2WA0007		Temp (C) 20.66	pH 7.42	Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 275									
Latitude 30.787 ☑ dd ☐ dms	Longitude -85.1459 ☑ dd ☐ dms	Salinity (ppt) 0.13	Comments: BMAP - Algae Collected												
Location: Merritt's Mill Pond 500 Meters upstream of dam	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 6-15-2016 Time 10:25	Eastern / Central	Composite end Date	Time	Bottle Group(s)									
Field ID: G2WA0009		Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen 10.12	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)									
STORET #: G2WA0009		Temp (C) 26.94	pH 7.92	Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 271									
Latitude 30.755 ☑ dd ☐ dms	Longitude -85.1881 ☑ dd ☐ dms	Salinity (ppt) 0.13	Comments												
Location: Merritt's Mill Pond mid Under Powerlines	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 6-15-2016 Time 1055	Eastern / Central	Composite end Date	Time	Bottle Group(s)									
Field ID: G2WA0008		Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen 9.02	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)									
STORET #: G2WA0008		Temp (C) 24.97	pH 7.76	Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 279									
Latitude 30.7698 ☑ dd ☐ dms	Longitude -85.1731 ☑ dd ☐ dms	Salinity (ppt) 0.13	Comments: ~~Sample and~~ CM												
Location: Merritt's Mill Pond mid Under Powerlines	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 6-15-16 Time 1055	Eastern / Central	Composite end Date	Time	Bottle Group(s)									
Field ID: CM ~~G2WA0008~~ G2WA0008D		Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen 9.02	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)									
STORET #: G2WA0008		Temp (C) 24.97	pH 7.76	Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 279									
Latitude 30.7698 ☑ dd ☐ dms	Longitude -85.1731 ☑ dd ☐ dms	Salinity (ppt) 0.13	Comments: Duplicate												

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Curtis Musson	5/15/2016	Drop Off	2	SK	6-15-16/4:16

Curtis Musson

Request Number: RQ-2016-06-13-47

Merritt's Mill Pond

Customer: WQAP

Project ID: BMAP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Page 1 of 4

last revised Apr 7, 2016

Requester: Benjamin Ralys

Collected By:

Field Report Prepared By:

Sampling Agency:

Location:
Field ID: G2WA0008 B
STORET #: BLANK
Latitude ☐ dd ☐ dms
Longitude ☐ dd ☐ dms
☐ Comp ☐ Grab
Collection (comp begin or grab) Date 6-15-16 Time 15:47 Eastern Central
Composite end Date Time
Matrix (type, e.g., Salt, Fresh, etc) DI
Diss. Oxygen ☐ mg/L ☐ % sat
Total Res. Chlorine (mg/L)
Temp (C)
pH
Sample Depth ☐ ft ☐ m
Sp. Conductance (umho/cm)
Salinity (ppt)
Comments Trip Blank - DI Water
Bottle Group(s) (See pg 2) B

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

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

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

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By: SK	Date/Time ~~5~~ 6-15-16/4:16

Cooler Packing Worksheet for Request: RQ-2016-06-13-47

Merritt's Mill Pond

Ship Cooler On: 5/31/2016 Requester: Benjamin Ralys

Customer/Project: WQAP/BMAP Priority: 3

850-245-8443
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400

Attn: Benjamin Ralys

Comments:
1 - case of Sulfuric Acid

Bottle Group A: Freshwater chemistry including metals.
Bottle Group B: 1 Field Blank (Please include enough DI water for 1 field blank (freshwater chemistry including metals)
Bottle Group C: Algal ID
Bottle Group D: 1 Duplicate

BOD-UNIN removed 5/31 jhw
BOD-UNIN added back 6/3 jhw

Requested Analyses:

Bottle Group: A # of Sites: 3

Container ID: P-1L **Qty: 3** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
ALKALINITY	Alkalinity in aqueous matrices as mg CaCO3/L
TURBIDITY	Turbidity in aqueous matrices
W-CL-IC	Chloride in aqueous matrices
W-COLOR	True Color measured at 450 nm
W-F	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-TDS	Total Dissolved Solids in aqueous matrices
W-TSS	Total Suspended Solids in aqueous matrices

Container ID: P-1L **Qty: 3** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
BOD-UNIN	BOD, NOT nitrogen-inhibited

Container ID: BP-1L **Qty: 3** **Preservation: ICE** **Lot #** 1168614

Description: Brown Plastic Bottle 1L

Analysis	Description
CHLSUITE-W	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry

---

Container ID: P-500ML **Qty: 3** **Preservation: HNO3** **Lot #** 00064947

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis	Description
W-ICP	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects
W-ICPMS	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 #** 00064947

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis	Description
W-NH3	Ammonia in aqueous matrices as mg N/L
W-NO2NO3	Nitrite/Nitrate in aqueous matrices as mg N/L
W-S-A-TP	Total Phosphorus in aqueous matrices as mg P/L
W-TKN	Total Kjeldahl Nitrogen in aqueous matrices
W-TOC	Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML **Qty: 3** **Preservation: ICE-FLTR** **Lot #** 00064310

Description: Plastic Bottle 125 mL

Analysis	Description
W-PO4-F	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Bottle Group: B **# of Sites: 1**

Container ID: P-1L **Qty: 1** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
ALKALINITY	Alkalinity in aqueous matrices as mg CaCO3/L
TURBIDITY	Turbidity in aqueous matrices

W-CL-IC	Chloride in aqueous matrices
W-COLOR	True Color measured at 450 nm
W-F	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-TDS	Total Dissolved Solids in aqueous matrices
W-TSS	Total Suspended Solids in aqueous matrices

Container ID: P-1L **Qty: 1** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
BOD-UNIN	BOD, NOT nitrogen-inhibited

Container ID: BP-1L **Qty: 1** **Preservation: ICE** **Lot #** 1168614

Description: Brown Plastic Bottle 1L

Analysis	Description
CHLSUITE-W	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry

---

Container ID: P-500ML **Qty: 1** **Preservation: HNO3** **Lot #** 00064947

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis	Description
W-ICP	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects
W-ICPMS	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 #** 00064947

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis	Description
W-NH3	Ammonia in aqueous matrices as mg N/L
W-NO2NO3	Nitrite/Nitrate in aqueous matrices as mg N/L
W-S-A-TP	Total Phosphorus in aqueous matrices as mg P/L
W-TKN	Total Kjeldahl Nitrogen in aqueous matrices
W-TOC	Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML **Qty: 1** **Preservation: ICE-FLTR** **Lot #** 0001643l0

Description: Plastic Bottle 125 mL

Analysis	Description
W-PO4-F	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Bottle Group: C # of Sites: 1

Container ID: PT-50ML **Qty: 1** **Preservation: ICE** **Lot #** 430897

Description: Plastic Tube 50 mL

Analysis	Description
ALGAL_ID	Qualitative assessment of algal taxa present without counts

---

Bottle Group: D # of Sites: 1

Container ID: P-1L **Qty: 1** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
ALKALINITY	Alkalinity in aqueous matrices as mg CaCO3/L
TURBIDITY	Turbidity in aqueous matrices
W-CL-IC	Chloride in aqueous matrices
W-COLOR	True Color measured at 450 nm
W-F	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-TDS	Total Dissolved Solids in aqueous matrices
W-TSS	Total Suspended Solids in aqueous matrices

Container ID: P-1L **Qty: 1** **Preservation: ICE** **Lot #** 00064935

Description: Plastic Bottle 1L

Analysis	Description
BOD-UNIN	BOD, NOT nitrogen-inhibited

Container ID: BP-1L **Qty: 1** **Preservation: ICE** **Lot #** 1168614

Description: Brown Plastic Bottle 1L

Analysis	Description

CHLSUITE-W Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry

Container ID: P-500ML **Qty: 1** **Preservation: HNO3** **Lot #** 000164947

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

Analysis	Description
W-ICP	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects
W-ICPMS	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 #** 000164947

Description: Plastic Bottle 500 mL Affix YELLOW sulfuric acid dot to container.

Analysis	Description
W-NH3	Ammonia in aqueous matrices as mg N/L
W-NO2NO3	Nitrite/Nitrate in aqueous matrices as mg N/L
W-S-A-TP	Total Phosphorus in aqueous matrices as mg P/L
W-TKN	Total Kjeldahl Nitrogen in aqueous matrices
W-TOC	Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML **Qty: 1** **Preservation: ICE-FLTR** **Lot #** 000164310

Description: Plastic Bottle 125 mL

Analysis	Description
W-PO4-F	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Cooler Packed By: MB Date: 6/10/16

DEP Cooler ID #(s): 2 coolers

Kit must also include:
- ✓ Field Sheets
- ✓ Temperature Control Bottle (1 per cooler)
- ✓ FedEx Bills, if applicable (1 per cooler)
- ✓ Plastic Bags
- ✓ Zip Ties

If Preservation Included:
ID _____ Lot # _____
ID _____ Lot # _____
ID _____ Lot # _____
ID _____ Lot # _____
ID _____ Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2016-06-13-47