



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

June 2016

PAGE 1 OF 16

Data Qualified?
Yes / No

STORET Station Name: Merritt's Mill Pond 600 meters downstream of Jackson Blue Spring Date: 06/15/2016

(mm/dd/yyyy)

STORET Station ID: G2WA0007 WBID: 180A Latitude: 30.787

(Decimal Degrees)

County: Jackson RQ - RQ-2016-06-13-47 ORG ID: 21FLWQA Longitude: -85.1459

(Decimal Degrees)

Receiving Body of Water: Chipola River Field ID: G2WA0007

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

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Equipment ID		

Collection Method	
☐ Wading	☐ Via Boat
☐ From Shore	☐ Canoe/Kayak
☐ Other (note below)	☐ Electric Motor
	☒ Gasoline Motor

Water Level: Dry / Low / <u>Normal</u> / High / Flooded	Matrix: <u>Fresh</u> / Marine / DI
Meter ID# Biology 2	Photos: <u>Yes</u> / 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	0945	0.3	1.7	8.25	91.8	7.42	0.13	VOB	275	20.66
CEN	0949	1.2		8.21	91.5	7.51	0.13		278	20.65

Biological Samples Collected:	None	HA	SCI	LVS	RPS	<u>LVI</u>	Other <u>Algae & D</u>	
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 ☒ H2SO4	SA-5259020	09/16/2016	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO3	NA-5259030	09/16/2016	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice			
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			
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 ₂ SO 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 ☐ Enterococcus ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____			

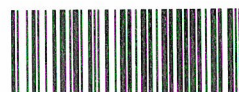
Blank

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 ₂ SO 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 ☐ Enterococcus ☐ 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 40%

Algal Sample collected



G2WA0007 15 June 2016
Merritt's Mill Pond 600 meters downstream of Jackson Bl

Signature: *[Signature]*

Date: 6-15-2016

Field Parameters Entered into LIMS: *CN 6-17-16*

(Initials/Date)

Field Parameters QC in LIMS: *CN 6-20-16*

(Initials/Date)

Date Migrated to STORET: _____

(Initials/Date)

Field Sheets Scanned/Saved: _____

(Initials/Date)

Macro: 9821

BR 6/20/16 SPTD: 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: <i>Curtis Musson</i>	STORET: G2WA0008
Except where noted as "sp." species level identification required. *Genera that may require lab verification*		Lake units sampled (circle one group):
Plants in bold= FLEPPC invasive exotic.		1, 4, 7, 10 2, 5, 8, 11
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.		3, 6, 9, 12

SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Acer rubrum	X	X	X	X		Habenaria repens					
Alternanthera philoxeroides				X		Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.	X	X	X		
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.			X			*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica	X	X	X	X		Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis	X	X	X	X		*Juncus scirpoides					
Ceratophyllum demersum 12,	X	X	X	X		Lachnanthes caroliniana					
Chara sp.	X	X	X	X		Leersia hexandra	X	X	X	X	BR
Cladium jamaicense	X	X	X	X		Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla	X	X	X	X		Lemna sp.	X	X	X	X	
Colocasia esculenta	X	X	X	X		Leucothoe racemosa (Eubotrys racemosa)					
*Commelina						Limnium spongia					
Crinum americanum						Limnophila sessiliflora					
* Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua	X	X	X		
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus	X			X		* Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrtia racemiflora	X	X		X		*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana	X	X	X		
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes	X	X				Mikania scandens					
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis						Myrica cerifera	X	X	X	X	
Eleocharis cellulosa						<i>Magnolia grandiflora</i>	X	X	X	X	
Eleocharis equisetoides						<i>Lycopus virginicus</i>	X	X	X	X	
Eleocharis interstincta						<i>Fragaria (Ash) Fragaria</i>	X	X	X	X	
*Eriocaulon compressum						<i>Caroliniana</i>					
*Eriocaulon decangulare						Yellow Flag Iris pseudacris	X	X			
Eupatorium capillifolium						<i>Rosa palustris</i>	X	X	X		
*Fuirena						<i>Prunella</i>	X	X	X		
Fuirena scirpoidea						<i>Alnus serrulata</i>	X	X			
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

BR 6/20/16

Site:					Date:						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Myriophyllum aquaticum		X				Salix caroliniana			X	X	
*Myriophyllum heterophyllum						Salvinia minima		X	X	X	
*Myriophyllum laxum						Sambucus canadensis			X	X	
*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	X	X	X		Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp. D-659, 3		X	X	X	
Panicum hemitomon						Thalia geniculata					
Panicum repens		X				Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.			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		X	X	X	
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.		X	X	X	
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Carex albolutescens		X	X	X	
Proserpinaca pectinata						Rox. Bur. v. CM					
*Rhexia						Cercis canadensis					
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sagittaria Sagittaria repens	X	X									
Sagittaria striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											
Sagittaria kurziana			X								

Search Existing Stations by:

- ☒ Visit ID (SBIO Sample ID)
☐ STORET Station ID

Search:

76242

STORET Station:

Visit ID (SBIO Sample ID):

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
X Lemna	P	P	P	P
X Liquidambar styraciflua	P	P		P
X Magnolia virginiana	P	P	P	
X Myrica cerifera			P	P
X Myriophyllum aquaticum			P	
X Nyssa sylvatica biflora			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
X Typha				P
X Vallisneria americana			P	P
X Wolffia			P	P
X Serenoa repens			P	P
X Sagittaria kurziana				P
X Carex albolutescens			P	P
X Magnolia grandiflora			P	P
X Lycopodium virginicum			P	
X Fraxinus caroliniana			P	P
X Iris pseudacorus			P	P
X Rosa palustris			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



LAKE OBSERVATION FIELD SHEET

SAMPLE ID: G2WA0008 MACROPHYTE ID: _____ LATITUDE: 30.7698
 COUNTY: Jackson STORET #: G2WA0008 LONGITUDE: -85.1731
 DATE: 6-15-2016 TIME: 11:12 SAMPLING AGENCY: FDEP
 SITE NAME: Merriss Mill Pond WBID: 150A
 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):										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)				LDI: <u>3.00</u>
<u>28.6</u>	<u>19.9</u>	<u>36.2</u>	<u>3.0</u>	<u>11.2</u>	<u>0.4</u>	<u>0.6</u>	<u>0.2</u>				Land Use Source & Year:
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy							Artificially Impounded				
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy							☒ Yes ☐ No				
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		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place			
<u>10</u>		20 19 18 17 16		15 14 13 12 11		10 9 8 7 6		5 4 3 2 1			
LAKESIDE ALTERATIONS		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)			
<u>13</u>		20 19 18 17 16		15 14 <u>13</u> 12 11		10 9 8 7 6		5 4 3 2 1			
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		< 29% of shoreline with >18m buffer			
<u>15</u>		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? ☒ Yes ☐ No Preserved? ☒ Yes ☒ pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>5259020</u> Exp. Date: <u>9/16/16</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>24.97</u> <u>7.76</u> <u>9.02</u> <u>109.1</u> <u>279</u> <u>0.13</u> Mid-Depth: <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> <u>—</u> Bottom: <u>1.5</u> <u>24.18</u> <u>7.78</u> <u>9.62</u> <u>114.7</u> <u>278</u> <u>0.13</u>							Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____				
Meter ID: _____							Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid				
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☒ Vegetated ☒ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____							Color: ☒ Clear ☐ Tannic ☐ Green				
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							SECCHI (M) _____ Total Station Depth (M) <u>3.0 Cr 2.00</u> VOB ☒				
Abundance: Periphyton ☐ Absent ☐ Rare ☐ Common ☒ Abundant Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☐ ☐ ☐ ☒							Sediment Odors: ☐ Normal ☐ Other (Specify): <u>NA</u> ☐ Anaerobic				
Additional Notes: <u>Grass carp</u> <u>>100.</u> <u>Not Present 3 months</u> <u>Ago, 3-2016</u>											

Weather Conditions: Warm, 80's, clear sky No Rain

SAMPLING TEAM: Curtis Mussen, Ben Ralvs **SIGNATURE:** Blake Spencer **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	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		Secchi(m)		Secchi(m)	
	20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	
	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	
	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	
	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	
	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	
	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	
	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					
	20 19 18 17 16		15 14 13 12 11		10 9 8 7 6	

TOTAL SCORE	104	COMMENTS: Hundreds of Grass Carp
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ANALYSIS DATE: 6-15-2016	ANALYST: CURTIS MUSSON	SIGNATURE: [Signature]
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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 name.

Meter Biology 2 RQ- RQ-2016-06-13-47 Project BMAP-Merritts 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	1607	26.9	7.98	7.97	99.8	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 $\mu\text{mhos/cm}$	Meter Reading $\mu\text{mhos/cm}$	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	1608	2601533	12/24/7	100	105	P	LAB
CCV									

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

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	-188.4	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU; mV pH7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

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 $\pm 5\%$ or $\pm 0.05\text{m}$, whichever is greater

**Florida Department of Environmental Protection
Central Laboratory Submittal Form**

Customer: WQAP

Project ID: BMAP

Requester: Benjamin Ralys

Collected By:

Curtis Mussen, Ben Ralys

Field Report Prepared By:

Curtis Mussen

Sampling Agency:

FDER

Location		Matrix (type, e.g., Salt, Fresh, etc)		Collection (comp begin or grab)		Time		Composite end		Bottle Group(s)	
Field ID	STORET #	Temp (C)	pH	Salinity (ppt)	Date	Time	Diss. Oxygen	Total Res. Chlorine (mg/L)	% sat	Sp. Conductance (umho/cm)	
Merritt's Mill Pond 600 Meters downstream of Jackson Bluesprings	G2W40007	20.66	7.42	0.13	6-15-2016	0945	8.25			275	A, C
BMAP - Algae Collected											
Merritt's Mill Pond 500 Meters upstream of dam	G2W40009	26.94	7.92	0.13	6-15-2016	1012	10.12			271	A
Fresh											
Merritt's Mill Pond mid Under Powerlines	G2W40008	24.97	7.76	0.13	6-15-2016	1055	9.02			279	A, D
Sample and CN											
Merritt's Mill Pond mid Under Powerlines	G2W40008	24.97	7.76	0.13	6-15-2016	1055	9.02			279	D
Duplicate											

Relinquished By:

Curtis Mussen

Date/Time

5/15/2016

Shipping Method

Drop off

Number of Coolers Shipped:

2

Received By:

SK

Date/Time

6-15-16/416

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Customer: WQAP

Project ID: BMAP

Requester: Benjamin Ralys

Collected By:

Field Report Prepared By:

Location

Sampling Agency:

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

Relinquished By:

Date/Time

Shipping Method

Number of Coolers Shipped:

Received By:

Date/Time

S/L 96-15-16 4/16

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

Merritt's Mill Pond

Ship Cooler On: 5/31/2016

Customer/Project: WQAP/BMAP

Requester: Benjamin Ralys

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

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

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

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

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices

Container ID: P-1L

Qty: 3 Preservation: ICE

Lot # 00064935

Description: Plastic Bottle 1L

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 3 Preservation: ICE

Lot # 116864

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

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

W-ICP

W-ICPMS

Description

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 # 00064947

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: ICE-FLTR

Lot # 00064310

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: P-1L

Qty: 1 Preservation: ICE

Lot # 00064935

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

Description

Alkalinity in aqueous matrices as mg CaCO3/L

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

<u>Analysis</u>	<u>Description</u>
BOD-UNIN	BOD, NOT nitrogen-inhibited

Container ID: BP-1L Qty: 1 Preservation: ICE Lot # 1168614
Description: Brown Plastic Bottle 1L

<u>Analysis</u>	<u>Description</u>
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.

<u>Analysis</u>	<u>Description</u>
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.

<u>Analysis</u>	<u>Description</u>
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 # 80064310

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

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

ALGAL_ID

Description

Qualitative assessment of algal taxa present without counts

Bottle Group: D

of Sites: 1

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 80064935

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

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

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

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 80064935

Description: Plastic Bottle 1L

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 1 Preservation: ICE

Lot # 1168614

Description: Brown Plastic Bottle 1L

Analysis

Description

Container ID: P-500ML

Qty: 1 Preservation: HNO3

Lot # 00064947

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis

W-ICP

W-ICPMS

Description

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 # 00064947

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: ICE-FLTR

Lot # 00064310

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

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

Cooler Packed By: MCB

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