



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

RQ-2016-05-09-14

5/19/2016
WBID 1938I

Lake Rachard @
Center

February 2016



*26010647
Field ID
STORET
*26010647

Date: _____
(mm/dd/yyyy)

Latitude: _____
(Decimal Degrees)

ORG ID: 21FLFTM Longitude: _____
(Decimal Degrees)

Receiving Body of Water: _____ Field ID: _____ County: Highlands

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
<u>Grey Anderson</u>						X		X	X
<u>Chase Conley</u>									
<u>Kaitlin DeAeth</u>					X	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 / Normal / High / Flooded Matrix: Fresh / Marine / DI
Meter ID# 7 Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (umhos/cm)	Temp (C°)
<u>EST</u>	<u>1235</u>	<u>0.3</u>	<u>greater than cord</u>	<u>8.8</u>	<u>113</u>	<u>8.4</u>	<u>0.1</u>	<u>2.5</u>	<u>165</u>	<u>27.9</u>
<u>CEN</u>	<u>1240</u>			<u>2.0</u>	<u>25</u>	<u>7.0</u>	<u>0.1</u>		<u>166</u>	<u>20.8</u>

Biological Samples Collected: None HA SCI LVS RPS <u>LVI</u> Other _____									
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	<u>5259020</u>	<u>9/16/16</u>	☒ <2	
Metals	☒ W-PPMS ☐ W-ICP				☐ Ice ☐ HNO2			☐ <2	
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice				
Chlorophyll	☒ CHLSUITE-W				☒ Ice				
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice				
Physical/Aggregate (Kit B/D)	☐ 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				

Place Preservative Sticker(s) Here
(If Available)

Notes: _____

Signature: [Signature] Date: 5/19/16

Field Parameters Entered into LIMS: _____ (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)

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

Place Label Here
(If Available)



ha

Date:											
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana	✓				
*Myriophyllum heterophyllum						Salvinia minima					
*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						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	✓	✓	✓	✓		Thalia geniculata					
Panicum repens					✓	Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	✓	✓	✓	✓	
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)						Vallisneria americana					
*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											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

6/19/2016
WBID 19381Lake Rachard @
Center

10-27 LAKE VEGETATION INDEX FIELD SHEET

Analyst:		County:		Date:	
Signature:		STORET:		Lake units sampled (circle one group):	
Except where noted as "sp." species level identification required. *Genera that may require lab verification*				1, 4, 7, 10 2, 5, 8, 11	
Plants in bold= FLEPPC invasive exotic.				3, 6, 9, 12	
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.					
SPECIES	3	6	9	12	Collected? (Y)
Acer rubrum					
Alternanthera philoxeroides					
Andropogon sp.					
Azolla filiculoides (A. caroliniana)		✓			
Baccharis sp.		✓			
Bacopa caroliniana					
Bacopa monnieri					
Bidens laevis					
Bidens mitis					
Blechnum serrulatum	✓		✓	✓	
Boehmeria cylindrica					
Brasenia schreberi					
Cabomba caroliniana					
Casuarina equisetifolia					
Centella asiatica					
Cephalanthus occidentalis	✓	✓	✓	✓	
Ceratophyllum demersum					
Chara sp.					
Cladium jamaicense					
Cliftonia monophylla					
Colocasia esculenta					
*Commelina					
Crinum americanum					
*Cyperus alternifolius (C. involucratus)					
Cyperus articulatus					
Cyperus haspan					
*Cyperus lecontei					
*Cyperus polystachyos					
*Cyperus odoratus					
*Cyperus surinamensis					
Cyrilla racemiflora					
Decodon verticillatus					
Diodia virginiana					
*Echinochloa crus-galli					
*Echinochloa muricatum					
Echinochloa walteri					
Eclipta prostrata (E. alba)					
Egeria densa					
Eichhornia crassipes					
*Eleocharis baldwinii					
*Eleocharis					
Eleocharis cellulosa					
Eleocharis equisetoides					
Eleocharis interstincta					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium					
*Fuirena					
Fuirena scirpoidea					
Gordonia lasianthus					
Habenaria repens					
Hydrilla verticillata					
Hydrocotyle sp.		✓			
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					
Landoltia punctata (Spirodela punctata)					
Lemna sp.					
Leucothoe racemosa (Eubotrys racemosa)					
Limnobia spongia					
Limnophila sessiliflora					
Liquidambar styraciflua					
*Ludwigia arcuata					
*Ludwigia leptocarpa					
*Ludwigia linearis					
*Ludwigia octovalvis					
*Ludwigia peruviana		✓			
*Ludwigia repens					
*Ludwigia					
Luziola fluitans (Hydrochloa carolinensis)					
Lyonia lucida					
Magnolia virginiana					
Mayaca fluviatilis					
Melaleuca quinquenervia					
Micranthemum glomeratum					
Micranthemum umbrosum					
Mikania scandens					
Mimosa pigra					
Myrica cerifera					
vitis spp	✓		✓	✓	

5/19/2016
WBID 19381Lake Rachard @
Center

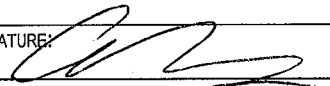
*26010647

STORET
*26010647

DEP Form FD 9000-6: Lake Habitat Assessment F

STORET STATION NUMBER:	DATE (M/D/Y)	LAKE NAME		FIELD ID / NAME:
ECO-REGION:	COUNTY:	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	Impounded, hydrology of system artificially controlled
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) <u>green</u> ☒	Visibility extremely reduced due to high color ☐
	Optimal	Suboptimal	Marginal	Poor
Secchi	Secchi > 3 m Or VOB	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
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
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	Lake choked (>40%) with nuisance macrophytes (duckweed, 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	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	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	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	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	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	74	COMMENTS:
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ANALYSIS DATE: 5/19/16	ANALYST: Corey Anderson	SIGNATURE: 
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5/19/2016

WBID 19381

*26010647

Field ID

*26010647



SAMPLE ID: _____ MACROPHYTE ID: _____
 COUNTY: _____ STORET #: _____
 DATE: _____ TIME: _____
 SITE NAME: _____
 FIELD ID/NAME: _____

LATITUDE _____ Lake Rachard @
 LONGITUDE _____ Center
 SAMPLING AGENCY: _____
 WBID: _____
 LAKE SIZE: _____ RQ: _____

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) ☐					LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:				
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy					Artificially Impounded ☐ Yes ☒ No				
Local Watershed NPS Pollution : ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy									
STORMWATER INPUTS _____		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 _____		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 _____		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 ☐ pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # _____ Exp. Date: _____ Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☐ Normal ☐ High					Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____				
					Water Surface Oils: ☐ 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: _____ Mid-Depth: _____ Bottom: _____					Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green SECCHI (M) _____ Total Station Depth (M) _____ VOB ☐				
Sediment Type: (may check more than one) ☒ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Sand/Silt ☐ Organic smooth (muck)					Sediment Odors: ☐ Normal ☐ Other (Specify): _____ ☐ Anaerobic				
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					Abundance: Absent Rare Common Abundant Periphyton ☒ ☐ ☐ ☐ Nuisance Plants ☐ ☐ ☐ ☒ Submersed Plants ☒ ☐ ☐ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐				
Weather Conditions : Clear, 85°F					Additional Notes:				
SAMPLING TEAM: Anderson, Conley, DeAeth					SIGNATURE:		DATE: 5/25/16		

LVI Map for LAKE LACHARD, WBID 19381

- centroid19381
- Pts19381_84_rand_3
- Segment End Points
- LVI Segments
- WBID_Run49
- 1938ISegs_74
- 19381crosslines

