

LVI

Site Name Lake Winyah Sample Date 7/5/18
WBID 2997L WIN ID G2CE0004 RQ 2018-07-02-29

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	KWM JUL 12 2018	LD 8/21/18
Create SBIO station visit	KWM JUL 13 2018	n/a
Vascular Entry (add LIMS ID)	KWM JUL 13 2018	LD 8/21/18
Lake Observation Sheet Entry	KWM JUL 17 2018	LD 8/21/18
Authorize SBIO data	LD 8/21/18	n/a
Scan all sheets to 21FLCEN folder		n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
COUNTY: Orange STORET #: 62CE0004 LONGITUDE: _____
DATE: 7/5/18 TIME: _____ SAMPLING AGENCY: _____
SITE NAME: Lake Winyah WBID: 2997L
FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: 2018-07-02-29

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category from GIS): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☒ <u>75</u> Commercial ☒ <u>25</u> Industrial ☐ Other (Specify) ☐						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:				
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Artificially Impounded ☐ Yes ☒ No						Land Use Source & Year:				
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy										
STORMWATER INPUTS <u>3</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>3</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>3</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 #: _____ Exp. Date: _____ Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____											
Meter Readings: Top: Depth (M) <u>0.3</u> Temp. (°C) <u>29.62</u> pH (SU) <u>7.47</u> D.O. (MG/L) <u>9.91</u> D.O. Sat. (%) <u>130.4</u> Cond. (UMHO/CM) <u>187</u> Salinity (PPT) <u>0.09</u> Mid-Depth: _____ Bottom: <u>4.4</u> <u>26.90</u> <u>6.55</u> <u>2.08</u> <u>262</u> <u>271</u> <u>0.13</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____											
Meter ID: <u>Betty 67</u>						Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☒ Tannic ☒ Green											
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☒ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____						SECCHI (M) <u>0.9</u> Total Station Depth (M) <u>4.9</u> VOB ☐											
Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____						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 ☐ ☐ ☒ ☐					
Additional Notes:																	
Weather Conditions:																	
SAMPLING TEAM: <u>Katie March, Jeff Boman</u>						SIGNATURE: <u>K March</u>			DATE: <u>7/5/18</u>								



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes ☒ No ☐

WIN Station Name: Lake Winyah @ Center

Date: 7/5/18

WIN/ Field ID: G2CE0004

WBID: 2997L

Latitude: 28.578239

(mm/dd/yyyy)

County: Orange

ORG ID: 21 FL CEN

Longitude: -81.368139

(Decimal Degrees)

Receiving Body of Water: _____

RQ-2018- 07-02-29

(Decimal Degrees)

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Lif Boman									
Katie March									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>[Secchi Disk Line] / Meter</u>		
Equipment ID <u>[KNOTHEAD (67) / LEADFOOT (NON)]</u>		

Collection Method		
☐ Wading	☐ Canoe/Kayak	
☐ From Shore	☒ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry / Pooled / Low / Normal / High / Flooded

Photos: Yes ☒ No ☐ Flow: No Flow / Intestinal / Flowing NA

Meter ID# Betty 67

Matrix: Fresh / Marine / DI

Tide: Rising / Falling / Slack NA Tide Times: High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1125	4.9	0.3	0.9	9.91	130.4	7.47	0.09	187	29.62
CEN			4.4		2.08	26.2	6.55	0.13	271	26.90

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 78571 HA-ID: _____ RPS-ID: NA Macrophyte-ID: 10989 LIMS#: 2005177

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	<u>SAB085170</u>	<u>3/26/19</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	<u>13615055</u>		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes: _____

WIN ID / Field ID →

Lake Winyah @ Center
(2997L)



G2CE0004

Signature: KM March

Date: 7/5/18

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM JUL 12 2018

QC Station ID, Field Parameters In LIMS DMT: _____

Scan/Save Field Sheets _____
(Initials/Date)

Migrate Data to WIN: _____
(Initials/Date)

Verify Data In WIN: _____
(Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Wingah</u>		County: <u>Orange</u>		Date: <u>7/5/18</u>							
Analyst: <u>K. March, L. Roman</u>		Signature: <u>K. March</u>		STORET: <u>0240004</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold = FLEPPC invasive exotic.				Lake units sampled (circle one group): 1, 4, <u>7</u> , 10 2, 5, 8, 11 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	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Acer rubrum						Fraxinus					
Alternanthera philoxeroides	/	/	/	/		Fuirena scirpoides					
Amaranthus australis						Gordonia lasianthus					
Andropogon sp.						Habenaria repens					
Azolla filiculoides (A. caroliniana)						Hibiscus coccineus					
Baccharis sp.						Hibiscus grandiflora					
Bacopa caroliniana						Hydrilla verticillata	/				/
Bacopa monnieri						Hydrocotyle sp.					
Bidens alba						Hygrophila polysperma					
Bidens laevis						Hymenocallis sp.					
Bidens mitis						*Hypericum fasciculatum					
Blechnum serrulatum						*Hypericum hypericoides					
Boehmeria cylindrica						*Hypericum myrtifolium					
Brasenia schreberi						Ilex cassine					
Cabomba caroliniana						Ipomoea aquatica					
Canna						Ipomoea sagittata					
Centella asiatica						Itea virginica					
Cephalanthus occidentalis						Juncus effusus					
Ceratophyllum demersum	C/		/	/		*Juncus marginatus					
Chara sp.						*Juncus megacephalus					
Cicuta maculata						Juncus repens					
Cinnamomum camphora						*Juncus scirpoides					
Cladium jamaicense						Lachnanthes caroliniana					
Colocasia esculenta	/		/	/		Leersia hexandra					
*Commelina						Landoltia punctata (Spirodela punctata)					
Crinum americanum						Lemna sp.	/				
*Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus articulatus						Limnium spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						*Ludwigia grandiflora					
*Cyperus surinamensis						*Ludwigia hexapetala					
Cyrtilla racemiflora						*Ludwigia leptocarpa					
Decodon verticillatus						Ludwigia (native)					
Diodia virginiana						*Ludwigia octovalvis					
*Echinochloa crus-galli						*Ludwigia peruviana					/
*Echinochloa muricatum						*Ludwigia repens					
Echinochloa walteri						Ludwigia suffruticosa					
Eclipta prostrata (E. alba)						Luziola fluitans (Hydrochloa carolinensis)					
Eichhornia crassipes						Magnolia virginiana					
*Eleocharis						Mayaca fluviatilis					
Eleocharis cellulosa						Melaleuca quinquenervia					
*Eleocharis elongata						Micranthemum glomeratum					
Eleocharis equisetoides						Micranthemum umbrosum					
Eleocharis interstincta						Mikania scandens					
Eleocharis submersa viviparous						Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera					
*Eriocaulon decangulare											
Eupatorium capillifolium											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:				Date:			
SPECIES			Collected? (✓)	SPECIES			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 mexicana				*Sesbania			
Nymphaea odorata				Solidago sp.			
Nymphoides aquatica				Sparganium americanum			
Nyssa sylvatica var. biflora				Spartina bakeri			
Orontium aquaticum				Spirodela polyrhiza			
Osmunda cinnamomea				Taxodium sp.	/	/	
Osmunda regalis				Thalia geniculata			
Panicum hemitomon				Thelypteris interrupta			
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 foliosa			
Pennisetum purpureum				*Utricularia inflata			
Phragmites australis				*Utricularia purpurea			
Pinus elliotii				*Utricularia radiata			
Pistia stratioides				*Utricularia resupinata			
Pluchea sp.				Vallisneria americana		/	
*Polygonum glabrum (densiflorum)				Vitis sp.			
Polygonum hirsutum				*Websteria confervoides			
*Polygonum hydropiperoides				Wedelia trilobata (Sphagneticola trilobata)			/
*Polygonum punctatum				Wolffiella spp.			
*Polygonum <u>punctatum</u>	/		/	Woodwardia virginica			
Pontederia cordata			/	Xyris sp.			
*Potamogeton diversifolius				Zizania aquatica			
*Potamogeton illinoensis				Zizaniopsis milacea			
*Potamogeton pusillus				<u>phyllanthiflora</u>	/		
*Potamogeton pectinatus (Stuckenia pectinatus)							
Proserpinaca pectinata							
*Rhexia							
*Rhynchospora comiculata							
*Rhynchospora inundata							
Rhynchospora nitens							
Ricciocarpus natans							
Sabal palmetto							
Sacciolepis striata	/		/				
*Sagittaria filiformis							
*Sagittaria graminea							
*Sagittaria isoetiformis							
Sagittaria lancifolia	/	/	/				
Sagittaria latifolia							

Lake Winyah (Orange County)

12/1	28.579549, -81.368357	6/7	28.576971, -81.368337
1/2	28.579353, -81.367582	7/8	28.577169, -81.369141
2/3	28.578805, -81.366972	8/9	28.577833, -81.369712
3/4	28.578081, -81.366846	9/10	28.578384, -81.370087
4/5	28.577362, -81.366817	10/11	28.579036, -81.369877
5/6	28.577160, -81.367425	11/12	28.579416, -81.369136

