



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: Lake Hicpochee in Canal @ Riverside Dr.

Date: 12/12/2018

WIN/ Field ID: G3SD0102

WBID: 3237C

Latitude: 26.796054

(mm/dd/yyyy)

County: Glades

ORG ID:

Longitude: -81.13121

(Decimal Degrees)

Receiving Body of Water: Caloosahatchee River

RQ-2018-12-10-53

(Decimal Degrees)

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment		
Steve Cofone		☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole
Maryann Dugan		☒	☒	☒	☒	☒	☐ Carboy	☒ Syringe	☐ Other
							☐ Dipper	☐ Other	
							Depth Measured with <u>SECCHI</u>		
							Equipment ID <u>DEEPER BLOWER</u>		
							Collection Method		
							☐ Wading	☐ Canoe/Kayak	
							☐ From Shore	☐ Electric Motor	
							☐ Other	☒ Gasoline Motor	

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

Meter ID# KEU

Matrix: Fresh / Marine / DI

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

Tide: Rising/ Falling/ Slack/ NA

Tide Times: High NA Low NA

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (umhos/cm)	Temp. (C°)
EST	1345	1.8	0.3	0.5	8.88	97.7	7.45	0.20	413	19.92
CEN										

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

SBIO ID Numbers: SBIO-ID: 39073 HA-ID: 15520 RPS-ID: 9169 Macrophyte-ID: 2049592

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>SA8274050</u>	<u>10/1/19</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CI-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-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA	☐ Ice ☐ Other			

Notes:

Field ID/WIN ID: G3SD0102

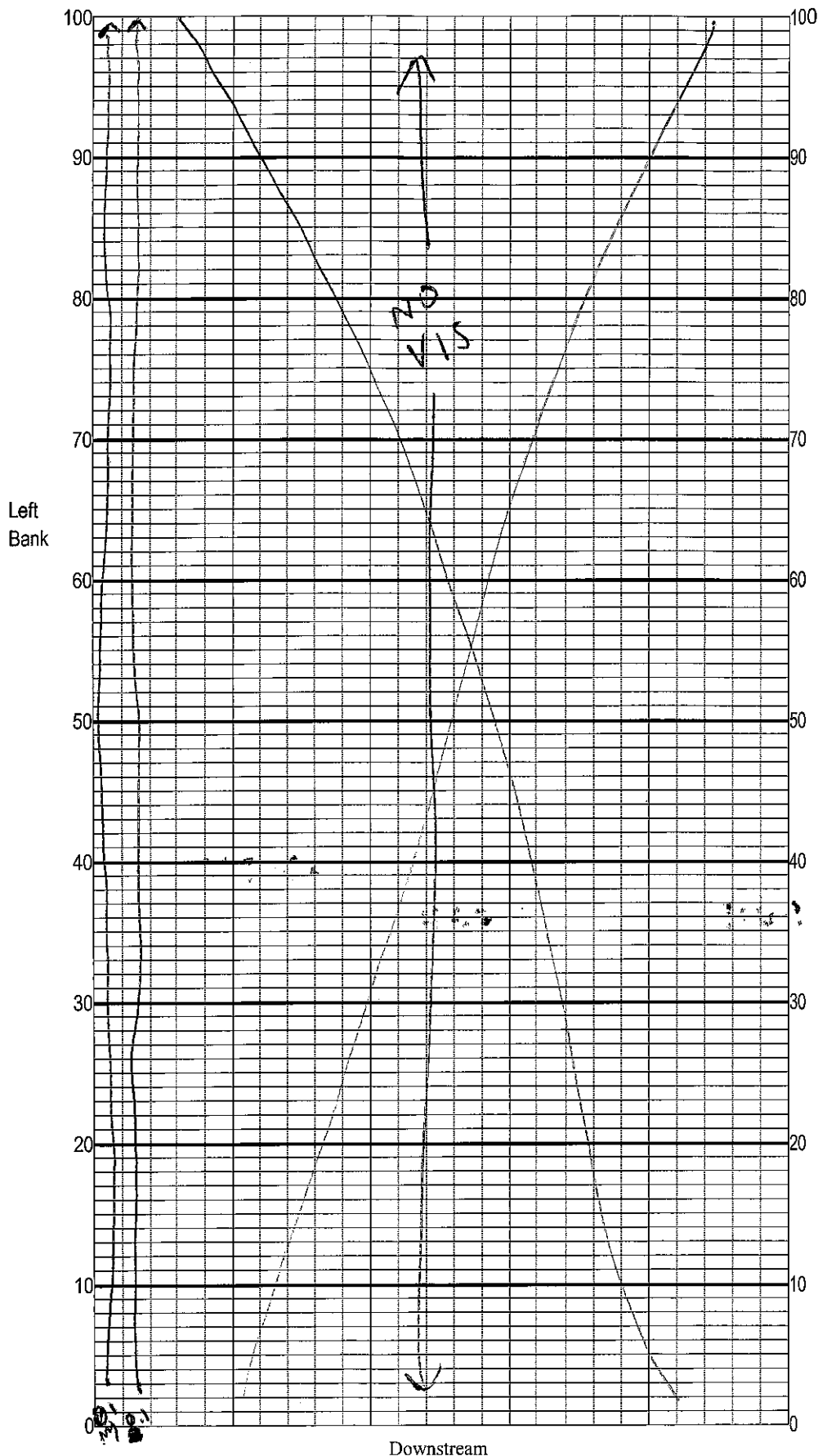
Location: Lake Hicpochee in Canal

Signature: Maryann Dugan Date: 12/12/2018

Enter Field Parameters, Verify Station ID in LIMS DMT: (Initials/Date) QC Station ID, Field Parameters in LIMS DMT: (Initials/Date)

Scan/Save Field Sheets: (Initials/Date) Migrate Data to WIN: (Initials/Date) Verify Data in WIN: (Initials/Date)

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Location: LAKE HIPPOCREE

Date: 12/12/2018

Sampler: MD, SC

100 m: Latitude 26.79613597
Longitude -81.12985066

0 m: Latitude 26.79576727
Longitude -81.13077603

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags _____

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes 0.105 10

☐ Rocks 0.105 10

☐ _____

☐ Pools total # observed = 0
range expected = 0-1

Average width 95.0 m

Average depth _____ m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 0 meter mark.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

$$\text{velocity} = 14 \text{ s/m}$$

$$= 0.07 \text{ m/s}$$

$$\text{AVAILABLE HABITAT} = 0.21\%$$

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>S ROL</u>		STORET STATION NUMBER: <u>G3500102</u>	DATE (MM/DD/YY): <u>12/12/2018</u>	RECEIVING BODY OF WATER: <u>CALOSANATUTEE</u>
REMARKS:	COUNTY: <u>GLADES</u>	LOCATION: <u>LAKE HILPOOTEE</u>	FIELD ID/NAME:	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	5 4 <u>3</u> 2 1
Substrate Availability <u>1</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 <u>1</u>
Water Velocity <u>8</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 <u>8</u> 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>1</u> ----- Primary Score <u>16</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 <u>1</u>
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.
Right Bank <u>7</u> Left Bank <u>4</u>	10 9	8 <u>7</u> 6	5 <u>4</u>	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>2</u>	<u>10</u> 9	8 7 6	5 4	3 <u>2</u> 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>4</u> Left Bank <u>1</u> ----- Secondary Score <u>31</u>	10 9	8 7 6	5 <u>4</u>	3 2 <u>1</u>

47

TOTAL SCORE

Date: <u>12/12/2018</u>	Analyst: <u>MARYANN DUGAN, STEVEN COFONE</u>	Signature: <u>Maryann Dugan</u>
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DEP-SOP-001/01: Form FD 9000-3 (9/19/12)
PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

RQ-2013-10-07-72

Date: 1/2/34

ABCDEFGH

Field ID ↑

STORET ↓

1234567890123456

User Defined Space.

Location, directions,
samplers, whatever...

SAMPLE ID 2013-12-10-53 ORG ID _____
 COUNTY 912d55 SAMPLING AGENCY S ROL
 DATE 12/12/2018 TIME 1345
 SITE NAME LAKE HIGDON
 FIELD ID/NAME G3SD0102 RECEIVING BODY OF WATER CAHOONANATWEE

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>40</u> Silviculture _____ Field/Pasture _____ Agricultural <u>60</u> Residential _____ Commercial _____ Industry _____ Other (Specify) _____						Landscape Development Intensity Index (LDI) _____	
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy						Typical Width (m) _____ Depth (m) _____ Velocity (m/sec) <u>95.0</u> Transect _____ m wide	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>3</u> Right Bank: <u>55</u>				Hydrologic Modification Score (per FT 3101) _____		_____ m/s <u>0.07</u> m/s _____ m/s	
High Water Mark: <u>0.3</u> + <u>1.8</u> = <u>2.1</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No		_____ m deep <u>1.8</u> m deep _____ m deep	
Artificially ☐ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☒ Recent, severe				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)			

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): _____		Smothering of Substrates Sand Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐ Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐	
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon % Coverage <u>100</u> INVERT # Times Sampled _____ PERI # Times Sampled _____ Woody Debris (Snags) <u>0.105</u> Undercut Banks /Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation <u>0.105</u> Rock or Shell Rubble... <u>0.105</u> Sand/Silt..... _____ Sand/Gravel..... _____ Mud/Muck/Silt _____ Other _____		WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>19.92</u> <u>7.45</u> <u>8.88</u> <u>97.7</u> <u>413</u> <u>0.20</u> <u>0.5</u> Mid: _____ Bottom: _____ Meter ID: <u>KEYS</u> Meter Verify: ☒ Y ☐ N ☐ Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>8AB274050</u> Exp: <u>10/01/19</u> Algae Sample Taken? ☐ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____ System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☒ CANAL WEATHER CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.			
ABUNDANCE Absent Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐		Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐			
SAMPLING TEAM <u>MARYANN DULAN, STEVEN COFANE</u>		SIGNATURE: <u>Maryann Dulan</u>		DATE: <u>12/12/2018</u>	

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: LAKS HICPOCHEE					County: GLADES		Date: 12/12/2018		Investigators: MD, SC	
					STORET Station Number: G35D0102					
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	X			60	1	X			
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	X			70	1	X			
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	X			80	1	X			
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	X			90	1	X			
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	X			100	1	X			
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	X			Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank. Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6. Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.					
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

Secchi depth **0.5**
Estimated?

points ranked 4-6 **0**
total points assessed **0**
% points ranked 4-6 **0**

Check accompanying data collected at same site/date.

Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓

RQ-2018-12-10-53

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

Storet Number: ^ put sticker here

Date: 12/2/18

County: GLADES

Waterbody: LAKE WICPOCHEE

Analyst: MARYANN DUGAN, STEVEN COPEL

Signature: Maryann Dugan

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names. **bold is exotic invasive**

HERBACEOUS SPECIES	Meter Mark										Specime n collected (check)	HERBACEOUS SPECIES	Meter Mark										Specime n collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Alternanthera philoxeroides												Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monnieri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara sp.												Panicum repens	XXX										
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX		Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontederia cordata											
Cyperus												Potamogeton illinoensis											
Diodia virginiana												Ruellia simplex											
Eichhornia crassipes												Sacciolepis striata											
Eleocharis (wispy viviparous)												Sagittaria kurziana											
Hydrilla verticillata												Sagittaria lancifolia											
Hydrocotyle sp.												Sagittaria latifolia											
Hygrophila polysperma												Salvinia minima											
Hymenachne amplexicaulis												Samolus parviflora											
Hymenocallis												Saururus cernuus											
Lachnanthes caroliniana												Sparganium americanum											
Landoltia punctata												Sphagneticola trilobata (Wedelia)											
Lemna sp.												Typha sp.											
Limnophila sessiflora												Urochloa mutica (Brachiaria)											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX		SALIX CAROLINIANA				X	X			X			
Ludwigia repens												Echinocloa crugalli	D	D	D	D	D	D	D	D	D		
Luziola fluitans																							
If no Dominant or Co-Dominant were selected, indicate with "X"																							
Indicate % cover macrophytes per section																							
0-5% Macrophyte Coverage	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX													
>5 and ≤10% Macrophyte Coverage																							
>10 and ≤25% Macrophyte Coverage																							
>25 and ≤50% Macrophyte Coverage																							
> 50% Macrophyte Coverage																							