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:** 09/11/2018 (mm/dd/yyyy)

WIN/ Field ID: G3SD0102 **WBID:** 3237C **Latitude:** 26.796054 (Decimal Degrees)

County: Glades **ORG ID:** _____ **Longitude:** -81.13121 (Decimal Degrees)

Receiving Body of Water: Caloosahatchee River **RQ-2018-** 09-10-68

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mary Ann Dreyer	X		X		
Gary Small		X			
Steve Coronado				X	
Nicole Reisdorf					

Sampling Equipment
- [x] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [x] Syringe
- [ ] Dipper [ ] Other _____

Depth Measured with Secchi
Equipment ID 3312B

Collection Method
- [ ] Wading [ ] Canoe/Kayak
- [ ] From Shore [ ] Electric Motor
- [ ] Other _____ [x] Gasoline Motor

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded **Meter ID#** SNEW **Matrix:** Fresh / Marine / DI

Photos: Yes / No **Flow:** No Flow / Intestital / Flowing / NA **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 (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1140	2.0	0.3	0.4	3.14	41.2	6.5	0.25	517	29.3
CEN			1.5		2.86	37.3	6.5	0.24	509	29.1

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

SBIO ID Numbers: SBIO-ID: 7905 HA-ID: 15501 RPS-ID: 9150 Macrophyte-ID: 11132 LIMS#:

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	Ice H_2SO_4	SA727S010	10/02/18	<2
Metals	W-ICPMS W-ICP	Ice HNO_3			<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			
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 WE8321-MS W-CARB-AA	Ice Other			

Place Preservative Sticker(s) Here (If Available)

Notes:

Field ID/WIN ID G3SD0102

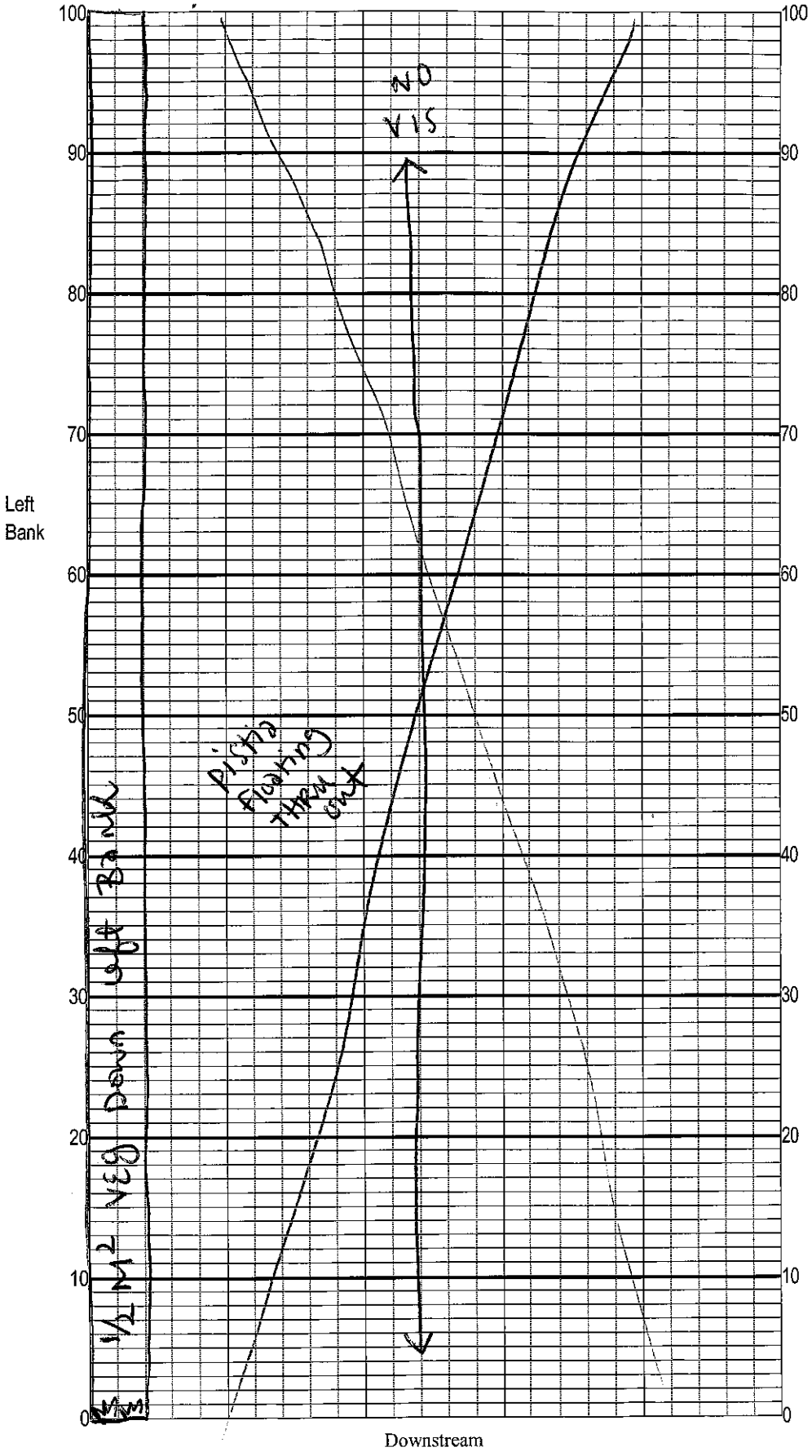
Location Lake Hicpochee in Canal

Signature: _____ **Date:** 9/11/18

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: LAR 10/22/18 (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) Migrate Data to WIN: LAR 10/22/18 (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 HIPPOCAMPUS

Date: 09/11/2018

Sampler: MD

100 m: Latitude	26.79613597
Longitude	-81.12985066
0 m: Latitude	26.79576727
Longitude	-81.13077603

Substrates: Code key, draw proportionate habitat abundance. (%) M^2

	Snags	
	Roots/undercut banks	
	Leaf Packs (or mats)	
AM	Aquatic Macrophytes	0.53 50
	Pools	total # observed = 0 # range expected = 0-1

Average width 95.0 m

Average depth 2.0 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 50 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:

* 1 BOX = .25 M^2

velocity = VERY slow

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
S ROC		G3SD0102	09/11/2018	Caloosahatchee
REMARKS:	COUNTY:	LOCATION:		FIELD ID/NAME:
	Glades	Lake Hicpochee		

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 3	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 (3) 2 1
Substrate Availability 1	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 (1)
Water Velocity 1	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 8 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 1 Primary Score 16	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 (1)
Secondary Habitat Components **Artificial Channelization** 4	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 (4) 3 2 1
Bank Stability Right Bank 7 Left Bank 5	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 (7) 6	Only meets 1 of the 3 requirements for optimal bank stability. L (5) 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 2	Width of vegetation greater than 18 m R (10) 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities L 3 (2) 1
Riparian Zone Vegetation Quality Right Bank 5 Left Bank 2 Secondary Score 35	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. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. R (5) 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). L 3 (2) 1

41 **TOTAL SCORE**

Date:	Analyst:	Signature:
09/11/2018	MARYANN DUGAN, NICOLE REISTAD, STEVEN LOFONE, GARY SNIDER	

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID . ORG ID 8052 LATITUDE 26.795767 27
COUNTY GLADES STORET # LONGITUDE -81.307 7603
DATE 09/11/2018 TIME SAMPLING AGENCY S ROC
SITE NAME LAKE Hicpochee @ Riverside Dr
FIELD ID/NAME G35D0102 RECEIVING BODY OF WATER Caloosahatchee

RIPARIAN ZONE / STREAM FEATURES

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

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
40			60				

Landscape Development Intensity Index (LDI):

Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : 3.0 Right Bank : 10+

Hydrologic Modification Score (per FT 3101):

High Water Mark: 0 (m) + 2.0 (above present water level) = 2.0 (present depth) (above bed)

Artificially Impounded ☒ Yes ☐ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
95.0 m wide
m/s m/s m/s
VERY SLOW <0.01
m deep m deep m deep

Artificially Channelized : ☐ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☒ 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	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)			
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.3	29.3	6.5	3.14	41.2	517	0.25	0.4
Mid:								☐ VOB
Bottom	1.5	29.1	6.5	2.86	37.3	509	0.24	TOTAL DEPTH

Meter ID: SONDE 2.0

Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
Sample Preserved? ☒ Yes ☐ No
Lot Number: SA72756L6 Exp: 10/02/2018

Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ tan

Algae Sample Taken? ☐ Yes ☒ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: _____ Exp: _____

Clarity Clear ☒ Slightly Turbid ☐ Turbid ☒ Opaque ☐

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☒	☐	☐	☐
Fish:	☐	☐	☒	☐
Aquatic Plants:	☐	☐	☒	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☒ CANAL

AMBIENT FIELD CONDITIONS / NOTES:

☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM
MARTHANN DUGAN, NICOLE REISTAD, STEVEN COFONE, GARY SNORER

SIGNATURE : [signature]

DATE : 09/11/2018

Form FD 9000-25 **FDEP Rapid Periphyton Survey (DEP SOP FS 7230)** Revised 6/12/12

Site: | County: | Date: | Investigators:

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
0	1	X		40	1	X		80	1	X	
	2	UNABLE			2	X			2	X	
	3	TO			3				3		
	4	ANALYZE	0		4		0		4		
	5				5				5		0
	6				6				6		
	7	(TOO			7				7		
	8	DEEP)			8				8		
	9				9				9		
10	1			50	1			90	1		
	2				2				2		
	3				3				3		
	4		0		4		0		4		
	5				5				5		0
	6				6				6		
	7				7				7		
	8				8				8		
	9				9				9		
20	1			60	1			100	1		
	2				2				2		
	3				3				3		
	4		0		4		0		4		
	5				5				5		0
	6				6				6		
	7				7				7		
	8				8				8	|	
	9				9				9		
30	1			70	1						
	2				2						
	3				3						
	4		0		4						
	5				5		0				
	6				6	|					
	7				7						
	8	V			8						
	9				9						

# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Secchi depth: 0.4

Check accompanying data collected at same site/date.	
Algal mat sample	
Habitat Assessment	X
Linear Veg. Survey	X
SCI/Biorecon (circle 1)	
Water sample	X
RQ: 2012-09-10-68	

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

Record "N" for points deeper than the Secchi depth; algae are presumed absent. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. Note if thickness estimated for deep points which can be seen but not reached.

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 an 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%.

(This fits with paper margins and orientation.)

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

Storet Number: ^ put sticker here | Date: 09/11/18 | County: Glades | Waterbody: Lake Hicpochee

Analyst: MARYANN DUGAN | 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 m^2 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 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara sp.											
Cicuta maculata											
Cladium jamaicense	X	X	X	X	X	X	X	X	X	X	2 no
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Cyperus											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle sp.											
Hygrophila polysperma											
Hymenachne amplexicaulis											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna sp.											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana	X	X	X	X	X	X	X	X	X	X	
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage											
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens	X										
Panicum rigidulum											
Pistia stratioides	X	X	X	X	X	X	X	X	X	X	
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Sphagneticola trilobata (Wedelia)											
Typha sp.											
Urochloa mutica (Brachiaria)											
Vallisneria americana											
Zizania aquatica											
Echinochloa crusgalli	X	X	X	X	X	X	X	X	X	X	D
Salix Caroliniana					X		X			X	