



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: POPOASH CREEK @ Pritchett Date: 04/16/2018
WIN/ Field ID: G3SD0079 WBID: 32400 Latitude: 26.715808
County: LEE ORG ID: Longitude: -81.808628
Receiving Body of Water: Caloosahatchee RQ-2018- 04-16-54

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Maryann Dugan		☒	☒			
NICOLE REISBACH				☒	☒	
CHASE CONLEY		☒				

Sampling Equipment	
☒ Sample Container	☐ Van Dorn ☐ Pole
☐ Carboy	☒ Syringe
☐ Dipper	☐ Other
Depth Measured with <u>SECTA</u>	
Equipment ID	

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# 9 (SNEK) 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 (PPTth)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1335	0.1	0.05	0.1	5.2	59	7.1	/	938	21.9
CEN										

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	SA7233030	08/21/18	☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUTE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / 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			

Notes: Visit # 78754 08/20/18
IP

Field ID/WIN ID: G3SD0079
Location: Popash Creek @ Pritchett

Signature: Maryann Dugan Date: 04/16/2018

Enter Field Parameters, Verify Station ID in LIMS DMT: MD 08/20/18 QC Station ID, Field Parameters in LIMS DMT: MD 08/20/18
Scan/Save Field Sheets: MD 08/20/2018 Migrate Data to WIN: MD 08/20/2018 Verify Data in WIN: MD 08/20/2018

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

Field ID/WIN ID

Location

Popash Creek @Pritchett



G3SD0079

STORET STATION NUMBER:

G3SD0079

DATE (MM/DD/YY):

04/10/18

RECEIVING BODY OF WATER:

Caloosa Hatchee

LOCATION:

LEE County

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>15</u>	20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</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 1
Water Velocity <u>4</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 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 <u>11</u> ----- Primary Score <u>38</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 1
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 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>20</u>	(20) 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>9</u> Left Bank <u>9</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 (9) RB LB	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. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>3</u> Left Bank <u>2</u>	Width of vegetation greater than 18 m 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 RB LB RB (3) (2) 1
Riparian Zone Vegetation Quality Right Bank <u>3</u> Left Bank <u>2</u> ----- Secondary Score <u>48</u>	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. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). RB LB (3) (2) 1

86

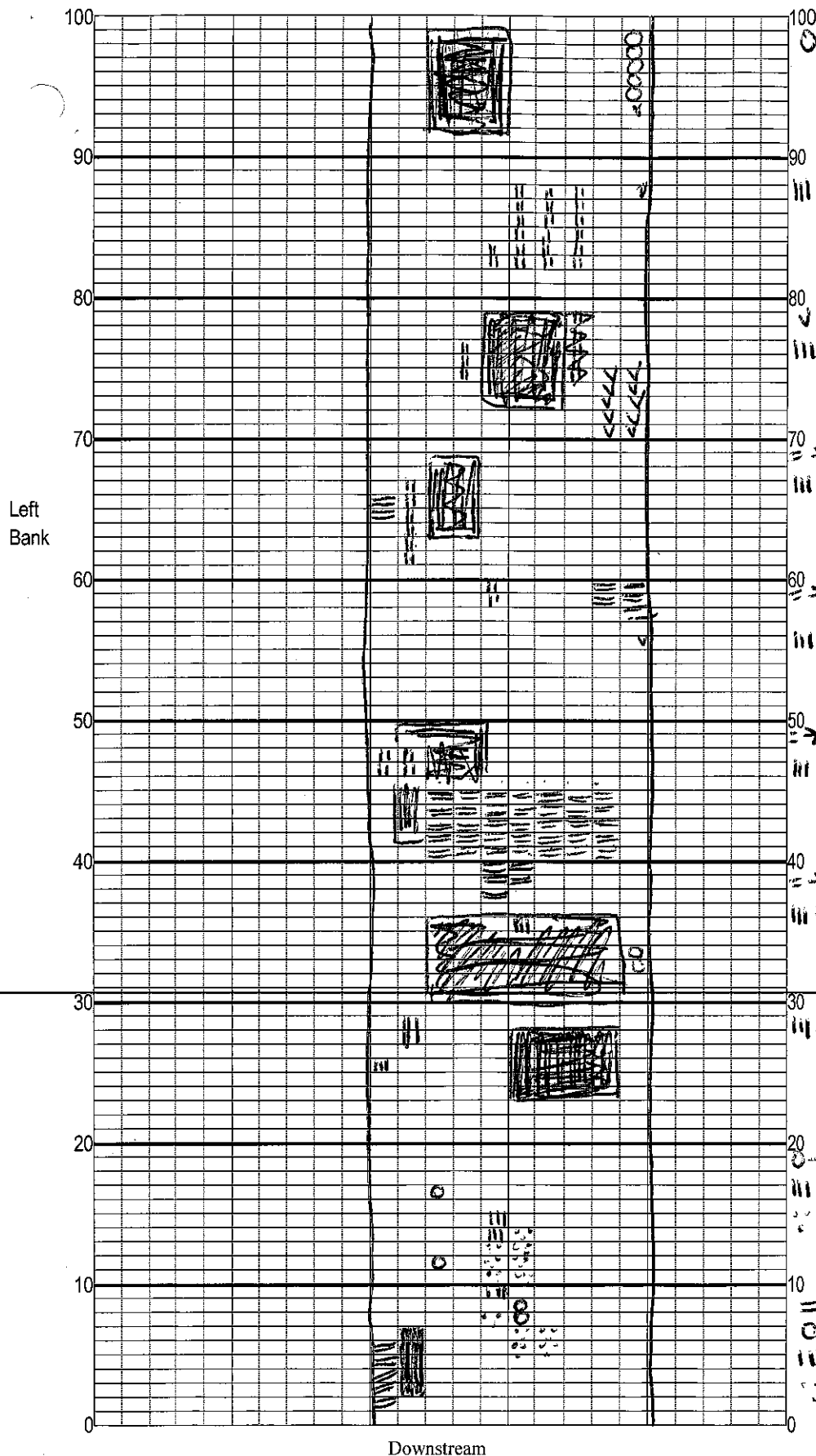
TOTAL SCORE

Date: 04/10/2018

Analyst: MD, NR, CC

Signature: [Signature]

#15339



Location: POPAASH CREEK
 Date: 04/16/2018
 Sampler: MARYANN DUGAN

100 m: Latitude _____
 Longitude _____
 0 m: Latitude 26.7265222
 Longitude -81.8092595

Substrates: Code key, draw proportionate habitat abundance. %

	Snags	<u>3.9</u>	<u>7.8</u>
	Roots/undercut banks	<u>5.2</u>	<u>10.4</u>
	Leaf Packs (or mats)	<u>1.2</u>	<u>2.4</u>
	Aquatic Macrophytes	<u>1</u>	<u>2</u>
	ROCKS	<u>0.7</u>	<u>1.4</u>
	Pools	total # observed = <u>7</u> # range expected = _____	

Average width 2 m
 Average depth 0.3 m

Velocity measured at 15 meter mark.

WQ & chemistry taken at 15 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:

#15339

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

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

SAMPLE ID G3SD0079 RG-2018-04-16-54
 COUNTY Lee STORET #
 DATE 04/14/2018 TIME 1335
 NAME Popash Creek @ Pritchett
 FIELD ID/NAME G3SD0079 RECEIVING BODY OF WATER Caloosahatchee River

LATITUDE 26.715808
 LONGITUDE -81.808628
 SAMPLING AGENCY FDEP-SROC

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)
<u>60</u>		<u>15</u>	<u>15</u>	<u>5</u>	<u>5</u>		

☒ 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: ☐ Right Bank: ☐

Hydrologic Modification Score (per FT 3101) ☐

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

Artificially Impounded ☐ Yes ☒ No

Artificially ☒ No ☐ Mostly recovered, more sinuous

Channelized: ☐ Some recovery ☐ Recent, severe

Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)
☒ Heavily Shaded ☐ Moderate Shaded (46-80%)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
2 m wide
☐ m/s 0.04 m/s ☐ m/s
0.1 m deep 0.3 m deep 0.1 m deep

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 ☒ DRPS ☒ LVS
☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)			
Undercut Banks / Roots			
Leaf Packs or Mats			
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	<u>0.05</u>	<u>21.9</u>	<u>7.1</u>	<u>5.2</u>	<u>59</u>	<u>938</u>	<u>-</u>	<u>0.1</u>
Mid								☒ VOB
Bottom								

Meter ID: 9(SNEK) TOTAL DEPTH 0.1

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: _____ Exp: _____

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

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

Clarity Clear ☒ Slightly Turbid ☐
 Turbid ☐ Opaque ☐

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

ABUNDANCE Not Obs. Rare Common Abundant

Periphyton:	☒	☐	☐	☐
Fish:	☐	☒	☐	☐
Aquatic Plants:	☐	☒	☒	☐
n/Sulfur Bacteria:	☒	☐	☐	☐

AMBIENT FIELD CONDITIONS / NOTES:
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM NR, MD, CC FDEP-SROC

SIGNATURE [Signature] **DATE** 04/16/18

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>PUPASH CREEK</u>					County: <u>LEE</u>		Date: <u>04/16/2018</u>		Investigators: <u>MD, CC, NR</u>	
					STORET Station Number: <u>G3SD0079</u>					

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	N			60	1	N			
	2					2				
	3					3				
	4					4				
	5			84		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2				
	3					3				
	4			86		4			82	
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4			95		4			89	
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4			91		4			80	
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4			92		4			90	
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4			90		4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth	<u>0.1</u> m
Estimated?	

# points ranked 4-6	<u>0</u>
total points assessed	<u>99</u>
% points ranked 4-6	<u>0</u>

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	<u>X</u>
Habitat Assessment	<u>X</u>
SCI/Biorecon	
Water sample	<u>X</u>
RQ-2018-04-16-54	

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

RPS ID # 9079

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%.

Waterbody: POPASH CREEK	Date: 04/10/18	County: LEE	Storet Number: 63800079
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Analyst: MARYHUN DUGAN, CHASE CONLEY, NICOLE Signature: Maryhun Dugan

Comments: REISTAD

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.

	Meter Mark										Specime n collected (check)		Meter Mark										Specime n collected (check)
HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100		HERBACEOUS SPECIES	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 monneri											Myriophyllum aquaticum												
Bidens mitis											Najas guadelupensis												
Boehmeria cylindrica											Nuphar luteum												
Centella asiatica											Orontium aquaticum												
Ceratophyllum demersum											Panicum hemitomon												
Chara											Panicum repens												
Cicuta maculata											Panicum rigidulum												
Cladium jamaicense											Pistia stratioides												
Colocasia esculenta											Polygonum glabra												
Commelina diffusa											Polygonum hydropiperoides												
Commelina virginica											Polygonum punctatum												
Crinum americanum											Pontedaria cordata												
Diodia virginiana											Potamogeton illinoensis												
Eichhornia crassipes											Ruellia simplex												
Eleocharis (wispy viviparous)											Sacciolepis striata												
'drilla verticillata											Sagittaria kurziana												
Hydrocotyle											Sagittaria lancifolia												
Hygrophila polysperma											Sagittaria latifolia												
Hymenocallis											Salvinia minima												
Lachnanthes caroliniana											Samolus parviflora												
Landoltia punctata											Saururus cernuus												
Lemna											Sparganium americanum												
Limnophila sessiflora											Typha												
Ludwigia leptocarpa											Vallisneria americana												
Ludwigia palustris											Zizania aquatica												
Ludwigia peruviana											Paspalum												
Ludwigia repens											Salix caroliniana												
Luziola fluitans											Weidelia												
											Taxodium Ind												
If no Dominant or Co-Dominant were selected, indicate with "X"																							
Indicate % cover macrophytes per section																							

~~#~~ 11027