



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

June 2016

PAGE 1 OF 6

Data Qualified?
Yes / No

STORET Station Name: Fen Holloway & Pocket Rd Date: 06-22-2016
(mm/dd/yyyy)
STORET Station ID: G1TLHR0030 WBID: 3473B Latitude: 30.05865
(Decimal Degrees)
County: Taylor RQ: 2016-05-23-29 ORG ID: 21FLTLHR Longitude: -83.58831
(Decimal Degrees)
Receiving Body of Water: Gulf of Mexico Field ID: G1TLHR0030 G1TLHR0030

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection	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 / <u>Low</u> / Normal / High / Flooded									Matrix: <u>Fresh</u> / Marine / DI		
Meter ID# <u>12 600 xlm</u>									Photos: Yes / <u>No</u>		
									Tide Falling: Yes / No / <u>NA</u>		

Field Sample										
ime Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
<u>EST</u>	<u>10:30</u>	<u>0.2</u>	<u>0.4</u>	<u>1.4</u>	<u>18</u>	<u>7.3</u>	<u>0.99</u>	<u>0.1</u>	<u>1966</u>	<u>28.7</u>
CEN										

Biological Samples Collected:		None	<u>HA</u>	SCI	<u>LVS</u>	<u>RPS</u>	LVI	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>SA-5259020</u>	<u>9/16/16</u>	☒ <2	
Metals	☐ W-ICPMS ☐ W-ICP		☐ Ice ☐ HNO2				☐ <2	
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 µm Filter		☒ Ice				Place Preservative Sticker(s) Here (If Available)	
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					
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR		☐ Ice					
Phytoplankton	☐ 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					

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

SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER: <u>GITLH20030</u>	DATE (MM/DD/YY): <u>6/22/16</u>	RECEIVING BODY OF WATER: <u>Gulf of Mexico</u>
REMARKS:	COUNTY: <u>Taylor</u>	LOCATION: <u>Fen holloway</u>	FIELD ID/NAME: <u>GITLH20030</u>	

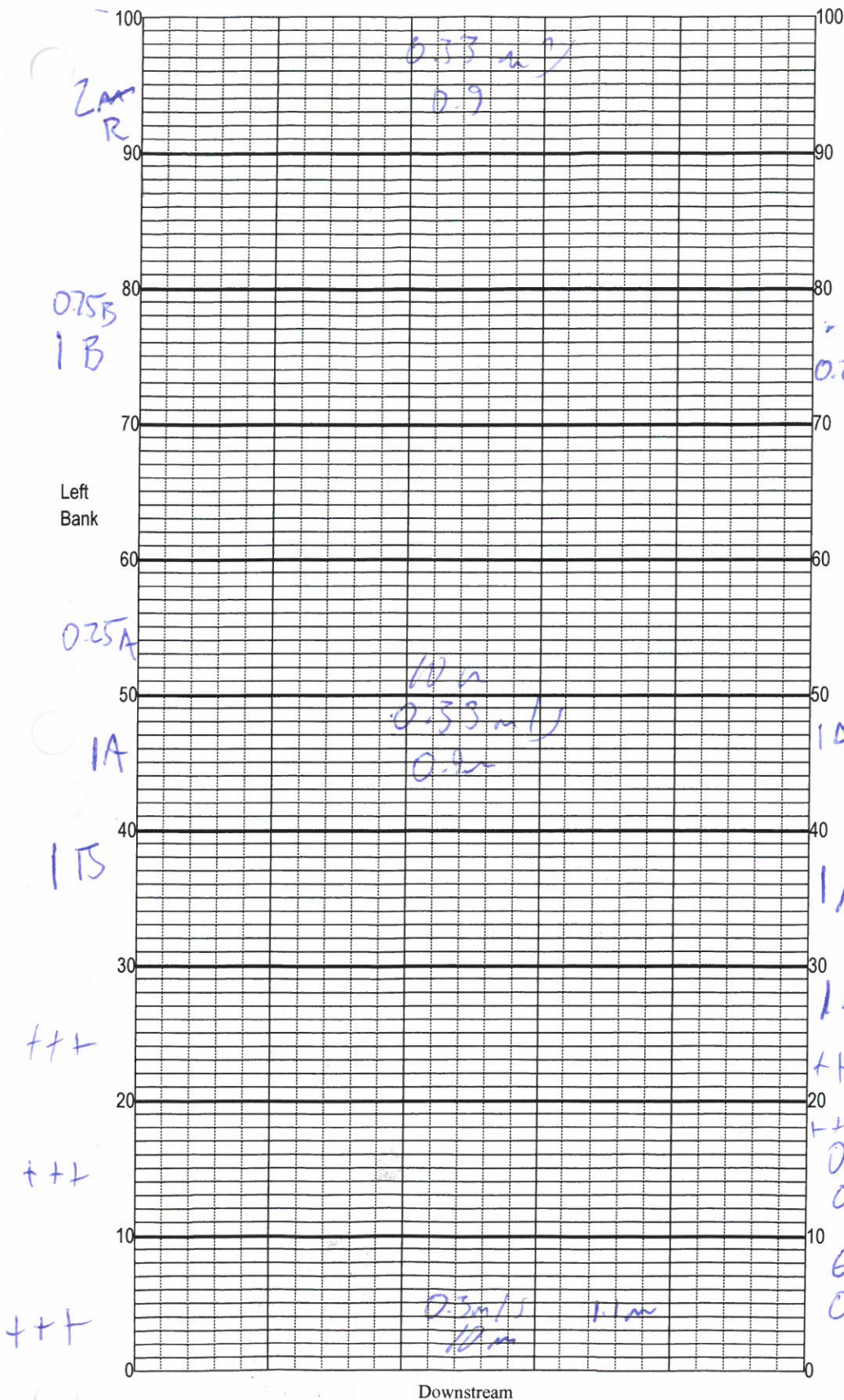
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>12</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>2</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>19</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>18</u> ----- Primary Score <u>51</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>19</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>10</u> Left Bank <u>10</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	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>10</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 3 2 1
Riparian Zone Vegetation Quality Right Bank <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>78</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). 3 2 1

129

TOTAL SCORE

Date: <u>6/22/2016</u>	Analyst: <u>Chris Green</u>	Signature: <u>Chris Green</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: GITLHR0630

Date: 6/22/16

Sampler: Calvin Marshall

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

A Snags 0.43

B Roots/undercut banks 0.38

C Leaf Packs (or mats) _____

D Aquatic Macrophytes _____

R Rocky 0.2

0 Pools total # observed = _____
range expected = _____

Average width 10 m
Average depth 0.9 m

Velocity measured at 50 meter mark.

WQ & chemistry taken at 10 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:

0.5A
0.75B
0.75A
0.5
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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 G1TL4R0030 ORG ID 21 FLTLAR LATITUDE _____
 COUNTY Taylor STORET # G1TL4R0030 LONGITUDE _____
 DATE 6/22/16 TIME 1100 SAMPLING AGENCY 8034
 SITE NAME Percholloway River @ Puckett Rd
 FIELD ID/NAME G1TL4R0030 RECEIVING BODY OF WATER Gulf of Mexico

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>90</u> <u>10</u>								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) Transect <u>10</u> m wide <u>0.3</u> m/s <u>0.3</u> m/s <u>0.3</u> m/s <u>0.5</u> m deep <u>0.9</u> m deep <u>0.5</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>518</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) ☐					
High Water Mark: <u>1.25</u> + <u>0.9</u> = <u>2.15</u> (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%)					

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
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SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☐ LVS ☐ LCI ☐ BioRecon				WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: ☐ ☐ ☐ ☐ ☐ ☐ ☐ <u>0.1</u> Mid: <u>0.2</u> <u>28.4</u> <u>7.3</u> <u>1.4</u> <u>18</u> <u>1966</u> <u>1.0</u> ☐ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>600 XLM #12</u> TOTAL DEPTH <u>0.9</u>							
Woody Debris (Snags) <u>0.43</u> Undercut Banks / Roots <u>0.38</u> Leaf Packs or Mat Aquatic Vegetation Rock or Shell Rubble.. <u>0.2</u> Sand..... <u>99</u> Mud / Muck / Silt Other Other				Water Odors Normal ☐ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☒				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			
Water Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: <u>54-5259022</u> Exp: <u>9/16</u>				Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐				Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐			
Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____				System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐							

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

AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.	
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SAMPLING TEAM Chris Green/Colby Marshall/ SIGNATURE: Ch3 DATE: 6/22/2016
Jon Woods

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Pen Holloway River</u>					County: <u>Taylor</u>		Date: <u>6/22/16</u>		Investigators:	
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				60	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

STORET Station Number: G124R0030

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

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

Check accompanying data collected at same site/date.

Algal mat sample ☐

Linear Veg Survey ☒

Habitat Assessment ☒

SCI/Biorecon ☐

Water sample ☒

RQ-2016-05-23-29

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

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%.

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: <u>Ferholway River</u>	Date: <u>6/22/16</u>	County: <u>Taylor</u>	Storet Number: <u>G174R0030</u>
Signature: <u>[Signature]</u>			

Comments: LUS 22m2

Comments: EUS 22m

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.

spaces for additional taxa names.																					
HERBACEOUS SPECIES	Meter Mark									Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark									Specimen 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	
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										
Hydrilla 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																					
Ludwigia repens																					
Luziola fluitans																					
If no Dominant or Co-Dominant were selected, indicate with "X"																					
Indicate % cover macrophytes per section																					
0-5% Macrophyte Coverage																					

QA/QC Sample Information

Duplicate

Time Zone: <u>EST</u> <u>CEN</u>		Sample Depth (m): <u>0.2</u>		Field ID: <u>61TLHRO030</u>	
Time: <u>10:30</u>		Total Depth (m): <u>0.4</u>			
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 ☒ H ₂ SO ₄	<u>SA-5259020</u>	<u>9/16/16</u>	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)		
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			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Blank

Time Zone: <u>EST</u> <u>CEN</u>		Time: <u>11:00</u>		Field ID: <u>Field Blank #2</u>		Location: <u>Fenholloway @ Pocket Rd.</u>	
☒ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank		Equipment ID: _____					
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 ☒ H ₂ SO ₄	<u>SA-5259020</u>	<u>9/16/16</u>	☒ < 2		
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice			☐ < 2		
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)				
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					
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice					
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other					

Notes:		Place Label Here (If Available)	
Signature: <u>Ch-J</u>		Date: <u>06-22-2016</u>	

Field Parameters Entered into LIMS: JW 7/12/16 (Initials/Date) Field Parameters QC in LIMS: cm 9/12/16 (Initials/Date)

Date Migrated to STORET: cm 9/28/16 (Initials/Date) Field Sheets Scanned/Saved: CB 10/6/16 (Initials/Date)