



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

June 2016

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Data Qualified?
Yes / No

STORET Station Name: Site in Nubbin Slough

Date: 8/24/16

(mm/dd/yyyy)

STORET Station ID: G1SE0003

G1SE0020

WBID: 3203A

Latitude: 27.205556

(Decimal Degrees)

County: Okeechobee RQ - 2016-08-22-52

ORG ID: 21FLWPB

Longitude: -80.741667

(Decimal Degrees)

Receiving Body of Water: L-63 Canal

Field ID: G1SE0004

G1SE0020

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Hurley									☒ Sample Container	☐ Van Dorn	☐ Pole	
Sewell									☐ Carboy	☐ Syringe		
Pitts									☐ Dipper	☐ Other		
									Equipment ID			
									Collection Method			
									☒ Wading	☐ Via Boat		
									☐ From Shore	☐ Canoe/Kayak		
									☐ Other (note below)	☐ Electric Motor		
										☐ Gasoline Motor		
Water Level: Dry / Low / Normal / High / Flooded				Matrix: Fresh / Marine / DI				Tide Falling: Yes / No / NA				
Meter ID#				Photos: Yes / No								
Time 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°)		
EST	1330	0.1	0.2	5.7	71	7.1	0.2	0.2	380	26.7		
CEN								S				
Biological Samples Collected: None HA SCI LVS RPS 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				☐ <2		
Metals		☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO2				☐ <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-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						
Microbiology		☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR				☐ Ice						
Periphyton		☐ ALGAE-ID				☐ Ice						
Pesticides		☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R				☐ Ice						
		☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH				☐ Other						

Notes:

sbio#77007

Place Label Here
(If Available)

Signature:

Date: 8/24/16

Field Parameters Entered into LIMS: 8/22/2016

(Initials/Date)

Field Parameters QC in LIMS: 8/22/16

(Initials/Date)

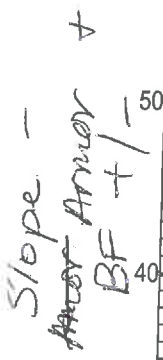
Date Migrated to STORET: 8/22/16

(Initials/Date)

Field Sheets Scanned/Saved: 8/22/16

(Initials/Date)

100



1.5m

$$\begin{array}{r} V-1.5 \\ R-0.1 \end{array} / 150$$

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

SAMPLING AGENCY: GCSO FDEP		STORET STATION NUMBER: 2615EC0000	DATE (MM/DD/YYYY): 8/24/16	RECEIVING BODY OF WATER: C-63 canal
REMARKS: most common g.r. selected	COUNTY:	LOCATION: Numbin Slough	FIELD ID/NAME: G15EC000	

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 1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability +	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 13	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 16 ----- Primary Score 31	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 18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 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 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 root zone with raw, eroded areas.
Right Bank 7 Left Bank 8	10 9	8 7 6	5 4	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 18 Left Bank 18	10 9	8 7 6	5 4	3 2 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 8 Left Bank 8 ----- Secondary Score 69	10 9	8 7 6	5 4	3 2 1

100

TOTAL SCORE

SPBIO # 2007

Date: 8/24/16	Analyst: Hurley/Sewell/Pitts	Signature: [Signature]
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DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: <u>Krookin Slough</u>	Date: <u>6/24/16</u>	County:	Storet Number:
Analyst:		Signature:	
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.

[illegible]

8640 # 70007

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Nubbin Slough</u>	County:	Date: <u>8/24/16</u>	Investigators: <u>Hurley / Sewell</u>
STORET Station Number:			

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			96		5			80	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			100	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			90		5			100	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			88		5			48	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			80	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N			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			88						
	6									
	7									
	8									
	9									

Secchi depth	0.5
Estimated?	0.5

# points ranked 4-6	
total points assessed	
% 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-	

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

9340 70007

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

SAMPLE ID GISE0020 ORG ID 21FWPB LATITUDE 27.22280
 COUNTY Oregon STORET # GISE0020 LONGITUDE -80.726341
 DATE _____ TIME _____ SAMPLING AGENCY 21FWPB
 SITE NAME Nubbin Slough upstream of STA
 FIELD ID/NAME _____ RECEIVING BODY OF WATER L-63 canal

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) ☐								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 ☐ m wide ☐ m/s ☐ m/s ☐ m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: ☐ Right Bank: ☐				Hydrologic Modification Score (per FT 3101) ☐				☐ m deep ☐ m deep ☐ m deep
High Water Mark: ☐ + ☐ = ☐ (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				☐ m deep ☐ 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 ☐ ☐ ☐ INVERT # Times Sampled ☐ ☐ ☐ PERI # Times Sampled ☐ ☐ ☐			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ 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: _____		
Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble.. ☐ ☐ ☐ Sand..... ☐ ☐ ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			TOTAL DEPTH ☐ 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) ☐			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>Harley / Senell</u>			SIGNATURE: <u>Harley Senell</u>			DATE: <u>8/24/16</u>		