



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: ShadrowCanal@EIDorado

Date: 9/7/2021

WIN/Field ID: G2SD0051

WBID: 3240A3

ENR: -

Latitude: 26.649

County: LEE

Org ID: 21FLFTM

Longitude: -82.02

Receiving Body of Water: Charlotte Harbor

RQ: 2021-09-06-62

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	William Mullen			x		
☒	Nicole Reistad		x		x	x
☒	Thomas Baker	x				
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: 3312A	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☒ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# OLD MAN JENKINS					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers:											
Notes:											

Duplicate Sample

Time Zone: EST	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone: EST	Time: 1230	Field ID: FB_09072021	(Blank Type_DDMYYYY)
DI Source: Fort Myers lab		Location: Fort Myers	
DI Type: Field Blank		Equipment ID:	
DI Container (Name/ID): Short Rpund		DI Container Type: Carboy	

LIMS EVENT ID:	WIN Import ID:	
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)



RQ-2021-09-06-62

Customer: WQAP

Project ID: SMP

Collected By: William Mullen, Nicole Reistad

Field Report Prepared By: William Mullen

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2SD0051

Location: ShadrowCanal@ElDorado

Comments: Microbiology sample(s) submitted to contract laboratory

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)		
	1220 EST	8.09	109.3	31.13	7.68	0.3	0.8 ☒ VOB (S)	0.8	681	0.33		
9/7/2021							Central Lab please use top row for login purposes					
	EST											
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group		
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	A		
		Lot #	SA1105060		Exp:	04/30/22						
Metals (P-500ML)		☐ W-ICPMS ☐ W-ICP ☐ W-HARD				☐ Ice ☐ HNO3*		☐ <2				
		Lot #			Exp:							
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17162587									
		Syringe Lot #	0079931									
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A		
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A		
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice						
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC	Formalin Lot #			☐ Formalin						
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice						
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☒ Contract Lab				☒ Ice			1	A		
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice						
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice						
Pesticides (BG-500ML) (BG-1L)		☐ W-E8321-DI	☐ WE8321-MS	☐ W-PSNP-TQ	☐ W-CT-CL-R	☐ Ice						
		☐ W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)									
Phytoplankton/Periphyton				DTY-QN-C		☐ Ice						
				PKD-QN-BV								
Name: William Mullen Nicole Reistad					Signature:				Date:			

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



RQ- 2021-09-06-62

Collected By: William Mullen, Nicole Reistad

Customer: WQAP

Field Report Prepared By: William Mullen, Nicole Reistad

Project ID: SMP

Sampling Agency: FDEP

BLANK



Field ID: FB 09072021

Comments:

Matrix: Field Blank

(Check one) ☐ COMPOSITE ☒ GRAB

Date

Time

DI Source: Fort Myers lab

9/7/2021

1230

EST

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☐ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☐ Ice ☐ H2SO4	☐ <2		
	Lot # Exp:				
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ H2SO4	☐ <2		
	Lot # Exp:				
Filtered Nutrients (P125ML)	☐ W-PO4-F Filter ☐ Field Filtered 0.45 µm	☐ Ice			
	Filter Lot #				
	Syringe Lot #				
Physical/Aggregate (Fresh) (P-1L)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-IC / TDS	☐ Ice			
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Tracers (BG-500ML)	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-TQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐	☐ Ice			
Name: William Mullen Nicole Reistad		Signature: _____		Date: _____	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

SAMPLE ID

ORG ID

LATITUDE

COUNTY

STORET #

LONGITUDE

DATE

TIME

SAMPLING AGENCY

SITE NAME

RECEIVING BODY OF WATER

FIELD ID/NAME

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)

5%

0

0

0

85%

8%

2%

0

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:

2.0

+

1.5

=

3.5

(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

SUBSTRATE TYPE

Assessment Tool:

SCI

RPS

LVS

LCI

BioRecon

% Coverage

INVERT # Times Sampled

PERI # Times Sampled

Woody Debris (Snags)

0

Undercut Banks / Roots

0.005

Leaf Packs or Mat

0

Aquatic Vegetation

0.44

Rock or Shell Rubble..

0

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

31.13

7.68

8.09

109.3

681

0.33

0.8

Mid:

Bottom

Meter ID:

Old Man Jenkins

0.8

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:

SANOS060

Exp:

04/30/22

Algae Sample Taken?

Yes

No

Sample Preserved?

Yes

No

Lot Number:

SANOS060

Exp:

04/30/22

Color

Tannic

Green (Algae)

Clear

Other (Specify)

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:

SAMPLING TEAM

SOROC

SIGNATURE :

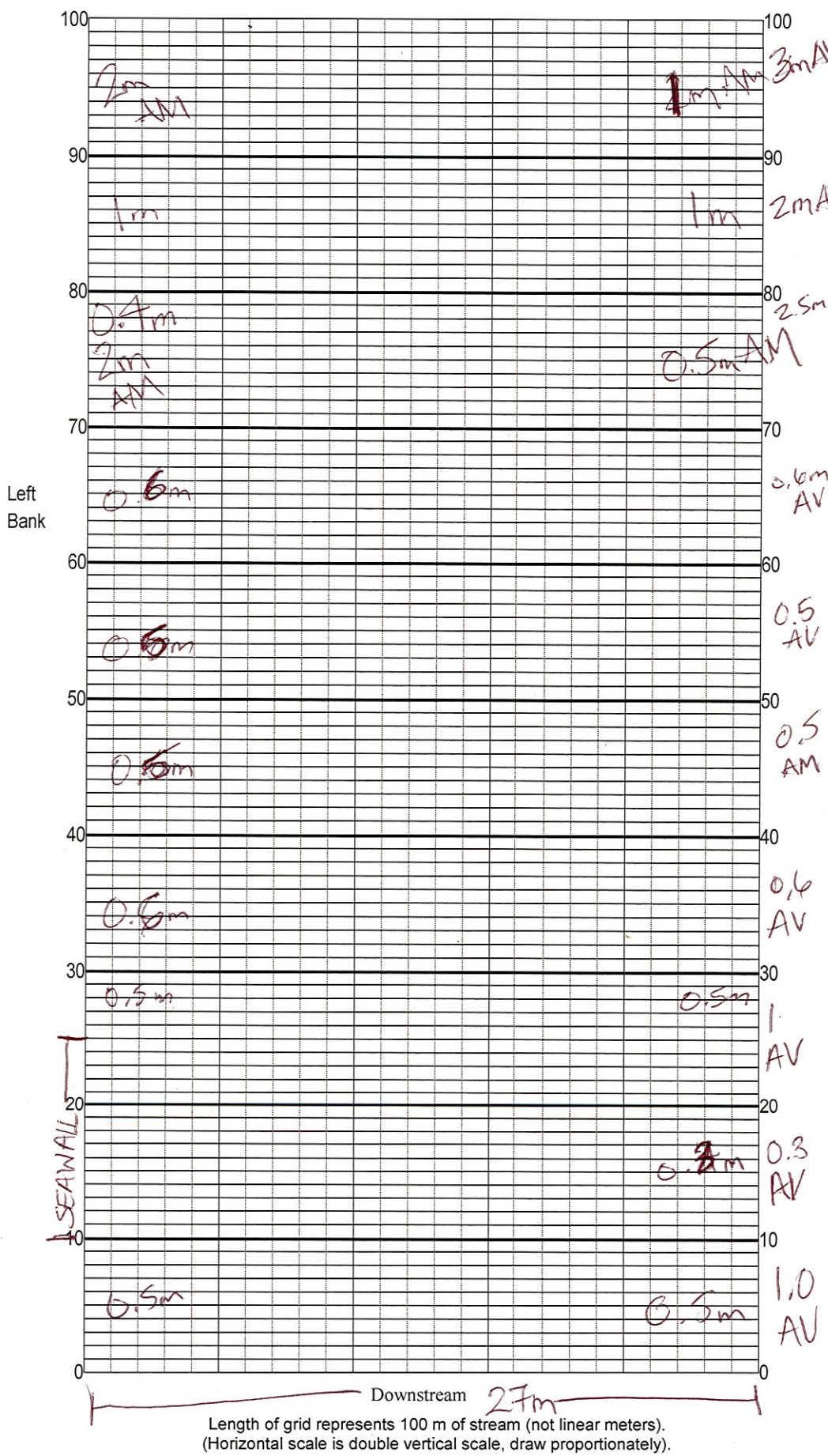
DATE:

09/09/2021

62-160.800, F.A.C.

Revision Date: January 2017

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



Location: G2SD0051 Shadow Canal

Date: 09/07/21

Sampler: Nicole Reistad

100 m: Latitude 26.6489645
Longitude -82.0220251

0 m: Latitude 26.6489759
Longitude -82.0230874

Substrates: Code key, draw proportionate habitat abundance. %

☒	Snags	<u>0</u>
☒	Roots/undercut banks	<u>0.0015</u>
☒	Leaf Packs (or mats)	<u>0</u>
☒	Aquatic Macrophytes	<u>0.44</u>
☒	<u>Rocks</u>	<u>0</u>
☐		
☒	Pools	total # observed = <u>0</u> # range expected = <u>1-2</u>

Average width 27 m
Average depth 1.5 m

Velocity measured at 80 meter mark.

WQ & chemistry taken at 80 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:
12m AV
Visit ID
83047

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

SAMPLING AGENCY: <u>4DEP - SROC</u>		STORET STATION NUMBER: <u>GZSD0051</u>	DATE (MM/DD/YY): <u>09/07/21</u>	RECEIVING BODY OF WATER: <u>Charlotte Harbor</u>
REMARKS:	COUNTY: <u>Lee</u>	LOCATION: <u>Shadow Canal</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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 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 <u>2</u> 1
Water Velocity <u>1</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 <u>2</u> 1
Habitat Smothering <u>2</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 <u>2</u> 1
Primary Score <u>6</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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 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>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u>	<u>3</u> <u>2</u> 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>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	<u>3</u> <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>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	<u>3</u> <u>2</u> 1
Secondary Score <u>18</u>				
<u>24</u>	TOTAL SCORE			

Date: <u>09/07/21</u>	Analyst: <u>Nicole Reistad</u>	Signature: <u>[Signature]</u>
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Site: Shadrow Canal

County: Lee

Date: 09/07/21

Investigators:

Nicole Reistad

STORET Station Number:

Secchi depth	
Estimated?	

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- 2021-09-06-62

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%.

Waterbody: Shadow Canal
 Analyst: Nicole Reistad
 Date: 09/07/2 County: Lee
 Comments:
 Instructions: Note taxa growing in the water with a checkmark in the boxes below.
 Signature: Nicole Reistad Storet Number: GZSD0051

62-160.800, F.A.C.