

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:	Silver Strand At SR29				Sample Date:	12/5/2022	
WIN / Field ID:	G1SD0128	ORG ID:	21FLFTM	ENR:			
County:	Collier	WBID:	3278W	STREAM			
Receiving Body of Water:	Gulf of Mexico				RQ-	2022-12-05-33	
Latitude:	26.35472			Longitude:	-81.34367		

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad	x		x		
Monica Jaeger		x		x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
x	Syringe	Pole	
Syringe Lot# 1363442		Filter Lot# 17347262	
Secchi Equipment ID:		3312A	
Collection Method			
	Wading	Canoe/Kayak	
x	From Shore	Electric Motor	
		Gasoline Motor	
Depth Measured With Secchi			

Water Level:	Low
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	President Camacho
Depth Gauge ID:	depth_gauge

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	915	0.8	0.3	3.68	41.2	20.8	7.27	0.8	479.2	0.23
								VOB (s)		

Biological Samples Collected: HA LVS RPS

SBIO Visit ID: HA ID: RPS ID: Macrophyte ID: LIMS Sample ID Entered Into The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology								
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE				
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE	Syringe Lot#: Fill in later; Filter Lot#: 17347262			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA2229010	08/30/23	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1105100	06/07/23	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice				
Macroinvertebrates								
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
DOC					SyringeLot#		FilterLot#	
Other(s)								
Field Comments:								
Comments on COC:								
Relinquish Date:	12/05/2022	Signature:						

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
Save Field Sheets on Network: Migrate Data to WIN:

SAMPLE ID	ORG ID <u>21FLFTM</u>	LATITUDE <u>26.35472</u>
COUNTY <u>Collier</u>	STORET#	LONGITUDE <u>-81.34367</u>
DATE <u>12/05/2022</u>	TIME <u>0915</u>	SAMPLING AGENCY <u>FDEP-SROC</u>
SITE NAME <u>Silver Strand A+ SR29</u>	RECEIVING BODY OF WATER <u>Gulf of Mexico</u>	
FIELD ID/NAME <u>GISDO128</u>		

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>15</u> Silviculture <u>—</u> Field/Pasture <u>30</u> Agricultural <u>50</u> Residential <u>NR32</u> Commercial <u>1</u> Industry <u>2</u> Other (Specify) <u>—</u>		Landscape Development Intensity Index (LDI) <u>—</u>
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>13</u> m wide <u>—</u> m/s <u>0.06</u> m/s <u>—</u> m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>1m</u> Right Bank: <u>8</u>		Hydrologic Modification Score (per FT 3101) <u>6</u>
High Water Mark: <u>1.2</u> + <u>0.8</u> = <u>2.0</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	INVERT PERI % Coverage # Times Sampled # Times Sampled
Woody Debris (Snags)	<u>—</u> <u>—</u> <u>—</u>
Undercut Banks / Roots	<u>—</u> <u>—</u> <u>—</u>
Leaf Packs or Mat	<u>—</u> <u>—</u> <u>—</u>
Aquatic Vegetation	<u>6.29</u> <u>—</u> <u>—</u>
Rock or Shell Rubble..	<u>0.36</u> <u>—</u> <u>—</u>
Sand.....	<u>—</u> <u>—</u> <u>—</u>
Mud / Muck / Silt	<u>93</u> <u>—</u> <u>—</u>
Other	<u>—</u> <u>—</u> <u>—</u>
Other	<u>—</u> <u>—</u> <u>—</u>

WATER QUALITY

Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top: <u>0.3</u>	<u>20.8</u>	<u>7.27</u>	<u>3.68</u>	<u>41.2</u>	<u>479.2</u>	<u>0.23</u>	<u>0.8</u>
Mid:							☒ VOB
Bottom:							<u>0.8</u>
Meter ID: <u>PRESIDENT CAMACHO</u>							

Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐
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Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____
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Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____
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Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐
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Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐

Clarity Clear ☒ Slightly Turbid ☒ <u>NR</u> Turbid ☐ Opaque ☐

ABUNDANCE

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

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☒ <u>CANAL</u>

AMBIENT FIELD CONDITIONS / NOTES:

vegetation has been sprayed previously, regular mowing of left bank

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

SAMPLING TEAM

NICOLE REISTAD, MONICA JAEGER

SIGNATURE:

[Signature]

DATE:

12/05/2022

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

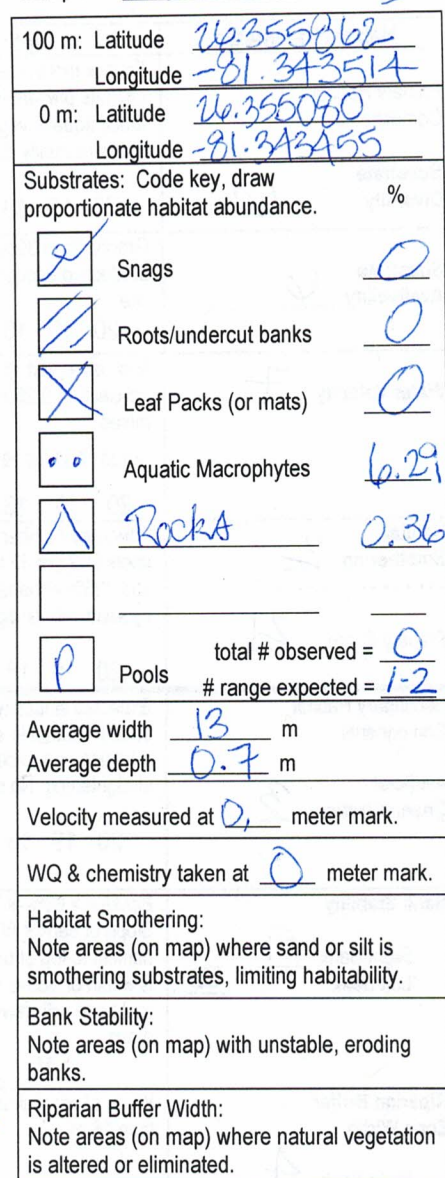
SAMPLING AGENCY: <u>7DEP-DEAR SOROC</u>		STORET STATION NUMBER: <u>GISDO128</u>	DATE (MM/DD/YY): <u>12/05/22</u>	RECEIVING BODY OF WATER: <u>Gulf of Mexico</u>
REMARKS:	COUNTY: <u>Collier</u>	LOCATION: <u>Silver Strand @ SR29</u>	FIELD ID/NAME:	

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>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	5 4 3 2 1
Substrate Availability <u>6</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 <u>6</u>	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>7</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 <u>7</u> 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>2</u> ----- Primary Score <u>21</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
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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 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 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>9</u> Left Bank <u>2</u>	10 <u>9</u> <u>R</u>	8 7 6	5 4	3 <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>4</u> Left Bank <u>2</u>	10 9	8 7 6	5 <u>4</u> <u>R</u>	3 <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>4</u> Left Bank <u>1</u> ----- Secondary Score <u>25</u> <u>46</u>	10 9	8 7 6	5 <u>4</u> <u>R</u>	3 2 <u>1</u>

TOTAL SCORE

Date: <u>12/05/2022</u>	Analyst: <u>NICOLE REISTAD, MONICA JAEGER</u>	Signature: <u>[Signature]</u>
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Silver Strand @ SR29
GSD0128



Plants observed / other notes:

Velocity 0m = 13s
50m = 15s

2 4.7m ^
81.8m ..

drainage canal, very
straight and dredge
40+ years ago

Revision Date: January 2017

small amount
iron bacteria
Left
Bank
60

 20 m^2

drainage canal, very straight and dredged 40+ years ago

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Silver strand At SR29					County: Collier		Date: 12/5/22		Investigators: Nicole Reistad Monica Jaeger	
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	Y		60	1	N	Y		
	2	N	Y			2	N	Y		
	3	N	Y			3	N	Y		
	4	N	Y			4	N	Y		
	5	N		0		5	N	Y		
	6	N				6	N	Y	0	
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
10	1	N	Y		70	1	N	Y		
	2	N	X			2	N	Y		
	3	N	Y			3	N	Y		
	4	N	Y			4	N	Y		
	5	N		0		5	N		7	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
20	1	N	Y		80	1	N	Y		
	2	N	X			2	N	Y		
	3	N	Y			3	N	Y		
	4	N	Y			4	N	Y		
	5	N		0		5	N		2	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
30	1	N	Y		90	1	N	Y		
	2	N	Y			2	N	Y		
	3	N	Y			3	N	Y		
	4	N	Y			4	N	Y		
	5	N		0		5	N		0	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
40	1	N	Y		100	1	N	Y		
	2	N	Y			2	N	Y		
	3	N	Y			3	N	Y		
	4	N	Y			4	N	Y		
	5	N		0		5	N		0	
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
50	1	N	Y		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	N	Y							
	3	N	Y							
	4	N	Y							
	5	N		0						
	6	N								
	7	N								
	8	N								
	9	N								

STORET Station Number:

GISD0128

Secchi depth	0.8
Estimated?	

# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓
RQ-2022-12-5-33	

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

