



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Bear Creek @ Beacon

Date: 11/21/19
(mm/dd/yyyy)

WIN/ Field ID: G5SW0102

WBID: 1420

Latitude: 28.33977

(Decimal Degrees)

County: Pasco

ORG ID: 21FLTPA

Longitude: -82.69204

(Decimal Degrees)

Receiving Body of Water: Gulf of Mexico

RQ-2019- 11-18-22

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment									
<u>Ben Paswater</u> <u>Judy Ashton</u>					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole							
										☐ Carboy	☐ Syringe								
										☐ Dipper	☐ Other								
Depth Measured with: <u>Secchi</u>					Equipment ID: <u>Secchi #1</u>					Collection Method									
					☒	☐	☐	☐	☐	☒ Wading	☐ Canoe/Kayak								
										☐ From Shore	☐ Electric Motor								
										☐ Other	☐ Gasoline Motor								
Water Level: <u>Dry</u> / Pooled / Low / <u>Normal</u> / High / Flooded					Meter ID# <u>Chewy</u>					Matrix: <u>Fresh</u> Marine / DI									
Photos: <u>Yes</u> No					Flow: No Flow / Interstitial / <u>Flowing</u> / NA					Tide: Rising / Falling / Slack / <u>NA</u>					Tide Times: High <u>Low</u>				
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)									
<u>EST</u>	<u>1045</u>	<u>0.8</u>	<u>0.3</u>	<u>0.8</u>	<u>5.47</u>	<u>57.1</u>	<u>5.59</u>	<u>0.41</u>	<u>841</u>	<u>17.5</u>									
Biological Samples Collected: <u>None</u> <u>HA</u> <u>SCI</u> <u>RPS</u> <u>Algae ID</u> <u>LVS</u> <u>LVI</u> Other:																			
SBIO ID Numbers: SBIO-ID: <u>80488</u> HA-ID: <u>16393</u> RPS-ID: <u>9490</u> Macrophyte-ID: <u>NA</u> LIMS#: <u>2138792</u>																			
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		<u>SA9063100</u>	<u>7/27/20</u>	☒ <2								
Metals		☐ W-ICPMS ☐ W-ICP					☐ Ice ☐ HNO3				☐ <2								
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 um Filter					☒ Ice												
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-BR-IC / 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-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ 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 ☐ W-E8321-MS ☐ W-CARB-AA					☐ Ice												
Phytoplankton		☐ DTY-QN-C ☐ PKD-QN-C					☐ Ice												
Notes: <u>SBio ready for approval</u> <u>A-Kit, E.coli</u>																			
Field ID/WIN: <u>G5SW0102</u> Site Name: <u>Bear Creek @ Beacon</u>																			
Signature: <u>Ben Paswater</u> Date: <u>11/21/19</u>																			

LIMS EVENT ID: 2019-11-22-01

WIN Import ID: 116203

Enter Field Parameters, Verify Station ID In LIMS DMT: SM 12/03/2019

QC Station ID, Field Parameters In LIMS DMT: SM 01/07/2020

Scan/Save Field Sheets SM 01/21/2020

Migrate Data to WIN: SM 01/07/2020

Verify Data In WIN: SM 01/21/2020

(Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-25 Rapid Periphyt

Site: _____ County: _____ Date: _____

Site Name: Bear Creek @ Beacon

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	6			60	1	6		
	2	5				2	4		
	3	3				3	3		
	4	4				4	5		
	5	3		88		5	5		75
	6	3				6	6		
	7	6				7	6		
	8	5				8	3		
	9	6				9	N		
10	1	6			70	1	N		
	2	5				2	3		
	3	4				3	N		
	4	4				4	4		
	5	3		82		5	3		65
	6	3				6	3		
	7	4				7	4		
	8	4				8	4		
	9	5				9	6		
20	1	6			80	1	N		
	2	5				2	3		
	3	6				3	4		
	4	6				4	5		
	5	4		80		5	5		60
	6	3				6	5		
	7	4				7	N		
	8	5				8	3		
	9	6				9	3		
30	1	6			90	1	N		
	2	4				2	3		
	3	6				3	3		
	4	5				4	4		
	5	4		85		5	4		40
	6	5				6	4		
	7	3				7	N		
	8	5				8	3		
	9	6				9	3		
40	1	6			100	1	N		
	2	6				2	3		
	3	5				3	4		
	4	5				4	6		
	5	3		75		5	5		0
	6	3				6	6		
	7	4				7	4		
	8	6				8	3		
	9	6				9	3		
50	1	6							
	2	6							
	3	5							
	4	4							
	5	6		80					
	6	6							
	7	5							
	8	5							
	9	6							

Station Number: _____

 Secchi depth 0.8
 Estimated? N

 # points ranked 4-6 48
 total points assessed 92
 % points ranked 4-6 108

Check accompanying data collected at same site/date.

 Algal mat sample ☒
 Linear Veg Survey ☒
 Habitat Assessment ☒
 SCI/Biorecon ☐
 Water sample ☒

RQ- 2019-11-18-22

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

*If you can see the secchi on the bottom, but you cannot see or reach surrounding substrate use "X"

5 m wide

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%.



Site Name: Bear Creek @ Beacon

STORET STATION NUMBER:	DATE (MM/DD/YY): 4/21/19	RECEIVING BODY OF WATER: Gulf of Mexico
LOCATION:		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>1</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <u>1</u>
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 2 <u>1</u>
Water Velocity <u>8</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 <u>8</u> 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>2</u> ----- Primary Score <u>12</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 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 <u>4</u> 3 2 1
Bank Stability <u>4</u> Right Bank <u>3</u> Left Bank	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 <u>4</u>	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. <u>3</u> 2 1
Riparian Buffer Zone Width <u>6</u> Right Bank <u>5</u> Left Bank	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m R 8 7 <u>6</u>	Width of vegetation 6 to 12 m. human activities close to system L <u>5</u> 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality <u>4</u> Right Bank <u>3</u> Left Bank ----- Secondary Score <u>27</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. R 5 <u>4</u>	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). L <u>3</u> 2 1

39 TOTAL SCORE

Date: 11/21/19	Analyst: Ben Paswater	Signature: Ben Paswater
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2: LINEAR VEGETATION SURVEY FIELD SHEET



Site Name: Bear Creek @ Beacon

Date: 11/21

County:

Signature: _____

Storet Number:

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.

HERBACEOUS SPECIES		Meter Mark										Specimen collected (check)	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	80-90	90-100											
Alternanthera philoxeroides																																	
Bacopa caroliniana																																	
Bacopa monneri																																	
Bidens mitis																																	
Boehmeria cylindrica																																	
Centella asiatica																																	
Ceratophyllum demersum																																	
Chara																																	
Cicuta maculata																																	
Cladium jamaicense																																	
Colocasia esculenta																																	
Commelina diffusa																																	
Commelina virginica																																	
Crinum americanum																																	
Diodia virginiana																																	
Eichhornia crassipes																																	
Eleocharis (wispy viviparous)																																	
Hydrilla verticillata																																	
Hydrocotyle																																	
Hygrophila polysperma																																	
Hymenocallis																																	
Lachnanthes caroliniana																																	
Landoltia punctata																																	
Lemna																																	
Limnophila sessiflora																																	

Site Name: Bear Creek @ Beacon

LATITUDE

LONGITUDE

SAMPLING AGENCY

SITE NAME

FIELD ID/NAME

RECEIVING BODY OF WATER

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)		
5				80	15				
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect	
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy								5 m wide	
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: 7		Right Bank: 12		6					
High Water Mark: 0.4 + 0.8 = 1.2				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☐ Yes ☒ No					
Artificially ☐ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☐ Open ☒ Lightly Shaded (11-45%)					
Channelized: ☐ Some recovery ☒ Recent, severe				☐ Heavily Shaded ☐ Moderate Shaded (46-80%)					

SEDIMENT / SUBSTRATE

Sediment Oils			Sediment Odors			Smothering of Substrates					
☒ Absent ☐ Slight			☒ Normal ☐ Sewage ☐ Petroleum			Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐					
☐ Moderate ☐ Profuse			☐ Chemical ☐ Anaerobic			Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐					
			☐ Other (Specify):			Algae Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☒					
SUBSTRATE TYPE			WATER QUALITY								
Assessment Tool: ☐ SCI ☒ RPS ☒ LVS			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	
☐ LCI ☐ BioRecon			Top: 0.3	17.5	5.54	5.47	57.1	841		0.8	
Woody Debris (Snags)			Mid:							☒ VOB	
Undercut Banks / Roots			Bottom:								
Leaf Packs or Mat			Meter ID: chelwy								
Aquatic Vegetation			Water Odors Normal ☒ Petroleum ☐			Water Surface Oils Normal ☒ Sheen ☐					
Rock or Shell Rubble..			Sewage ☐ Chemical ☐ Other ☐			Globs ☐ Slick ☐ Other ☐					
Sand.....			Water Sample Taken? ☒ Yes ☐ No			Color Tannic ☐ Green (Algae) ☐					
Mud / Muck / Silt			Sample Preserved? ☐ Yes ☐ No			Clear ☒ Other (Specify) ☐					
Other			Lot Number: Exp:			Clarity Clear ☒ Slightly Turbid ☐					
Other			Algae Sample Taken? ☒ Yes ☐ No			Turbid ☐ Opaque ☐					
			Sample Preserved? ☐ Yes ☐ No			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☒ Canal					
			Lot Number: Exp:			AMBIENT FIELD CONDITIONS / NOTES:					
ABUNDANCE			☒ The antecedent hydrologic conditions have been met to my best knowledge.								
Not Obs. Rare Common Abundant											
Periphyton: ☐ ☐ ☐ ☒											
Fish: ☐ ☐ ☒ ☐											
Aquatic Plants: ☐ ☒ ☐ ☐											
Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐											

SAMPLING TEAM

Ben Paswater, Wdy Ashton

SIGNATURE:

Ben Paswater

DATE:

11/21/19



Site Name: Bear Creek @ Beacon

Sampler: _____

 100 m: Latitude _____
 Longitude _____

 0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags _____

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☒ Rocks _____

☐ _____

☐ Pools total # observed = _____
 # range expected = _____

Average width _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ meter mark.

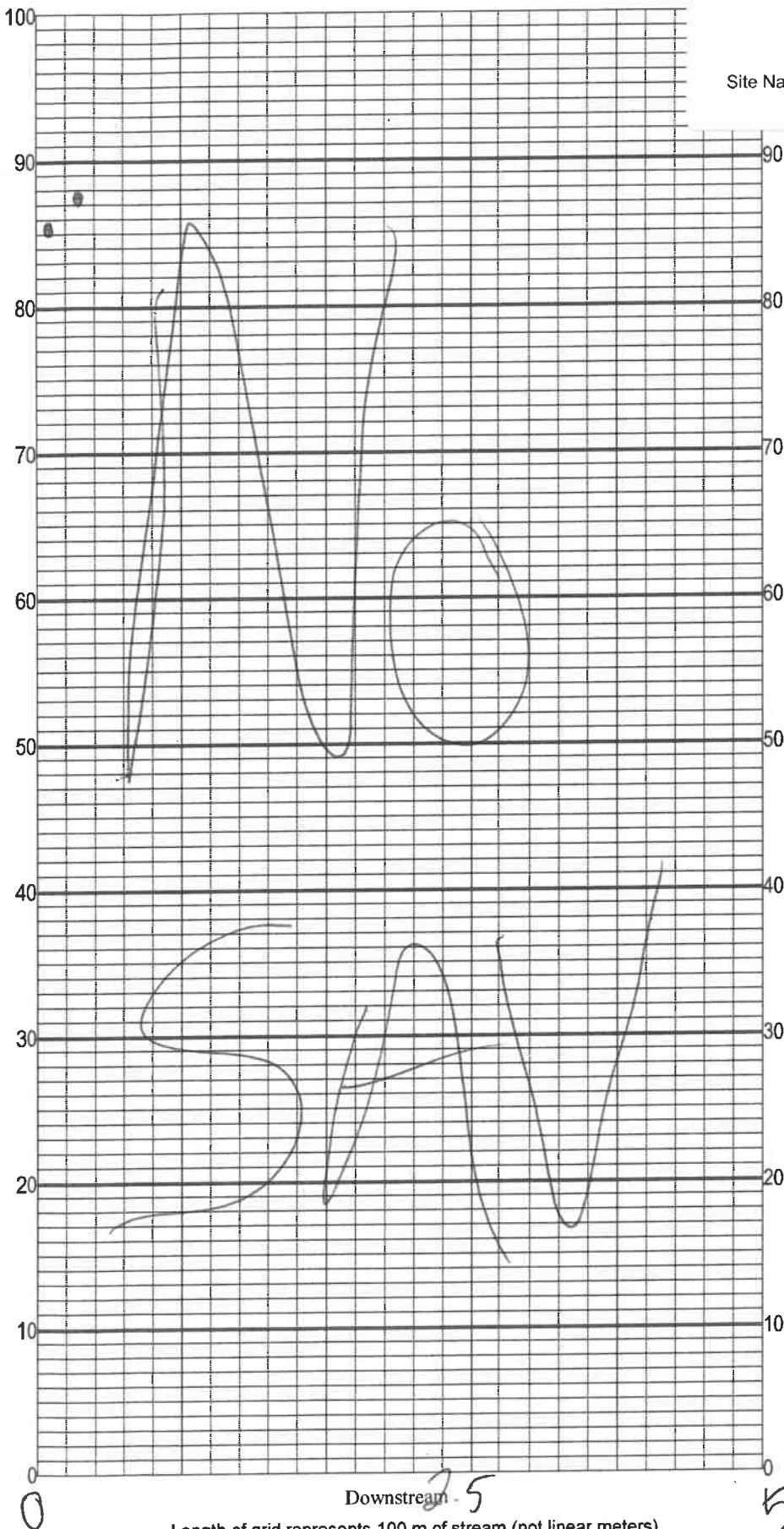
 Habitat Smothering:
 Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

 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:

Left Bank


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

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Bear Creek HA

last revised Jan 25, 2018

Customer: SW-DIST

Requester: Judy Ashton

Field Report Prepared By:

Project ID: SMP

Collected By:

Sampling Agency:

Location		☐ Comp ☒ Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2)
Field ID/WIN G5SW0102		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		A+B
WIN/ Site Name: Bear Creek @ Beacon		Temp (C)	pH	Sample Depth	☐ ft ☒ m	Sp. Conductance (umho/cm)		
Latitude ☐ dms		☐ dd ☐ dms	Salinity (ppt)	Comments E. COLI DROPPES UP 2 AEL				
Location		☐ Comp ☒ Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID/WIN G2SW0012		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		A
WIN/ Site Name: Baker Creek @ Thonotosassa Rd		Temp (C)	pH	Sample Depth	☐ ft ☒ m	Sp. Conductance (umho/cm)		
Latitude ☐ dms		☐ dd ☐ dms	Salinity (ppt)	Comments				
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #		Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	Time	Eastern Central	Composite end Date	Time	Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/STORET #		Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)		
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments				

Relinquished By:

Date/Time

Shipping Method

Number of Coolers Shipped:

Received By:

Date/Time

J. Ashton

11-21-19 1000

FED EX

1

Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: A	Bottle Type:	P-120ML-WC-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	SW-AEL-ECQ						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 1	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	2
	W-PO4-F						



☐ **Gainesville:** 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6639
☐ **Jacksonville:** 6681 Southpoint Pkwy. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354
☐ **Tallahassee:** 2639 North Monroe Street, Suite D • Tallahassee, FL 32303 • 850.219.6274 • Fax 850.219.6275
☒ **Tampa:** 9810 Princess Palm Ave. • Tampa, FL 33619 • 813.630.9616 • Fax 813.630.4327

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