

Site Name Turkey Creek upstream of Eglin Rd 232

Date: 3/6/2019

Field ID/WIN ID G3NW0093

Project: SMP

Visit ID 79249

RQ: 2019-02-18-20

RPS ID 9258

LIMS ID: _____

VPDB ID

HA ID 15671

☒ ~~LVI~~ SCI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO

Initial

FK
3/12/19

☐ Date and Initial QA: _____

☒ RPS entered in SBIO

Initial

FK
3/12/19

☐ Date and Initial QA: _____

☐ LVI entered in SBIO

Initial

☐ Date and Initial QA: _____

☒ < 2 m² vegetation

☐ Plants getting verified

Date submitted: _____

☐ Plants verified

Date returned: _____

☐ RPS authorized in SBIO

☐ Date and Initial: _____

☐ RPS score: _____

☐ VPDB authorized in SBIO

☐ Date and Initial: _____

☐ VPDB score: _____

☐ SCI complete: _____

SCI Score: _____

☒ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Turkey Creek upstream of Eglin Road 232

Date: 3/6/19
(mm/dd/yyyy)

WIN/ Field ID: G3NW0093

WBID: 495

Latitude: 30.56202

County: Okaloosa

ORG ID: 21FLPNS

Longitude: -86.53627

Receiving Body of Water: Boggy Bayou

RQ-2019- 02-18-20

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
MIKE KING					☒	☒	☒	☒	☒
Nathan Murrey					☒	☒	☒	☒	☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	

Depth Measured with _____

Equipment ID _____

Collection Method		
☒ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded
Photos: Yes / No Flow: No Flow / Intestinal / (Flowing) / NA
Meter ID# 154179 Matrix: Fresh / Marine / DI
Tide: Rising/ Falling/ Slack/ (NA) Tide Times: High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (umhos/cm)	Temp. (C°)
EST	1005	1.2	0.3	VOB	9.93	96.6	4.36	0.0	12.5	14.1
CEN										

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:
SBIO ID Numbers: SBIO-ID: 79249 HA-ID: 15671 RPS-ID: 9258 Macrophyte-ID: N/A LIMS#:

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	SA 8197090	07/16/19	☒ <2
Metals	☒ W-ICPMS ☐ W-ICP	☒ Ice ☐ HNO3	NA 8344050	12/10/19	☒ <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 N/A	☐ 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	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Ref: _____ Dep: _____ Date: 24Sep18 Wgt: 10.00 LBS DV: _____ SHIPPING: 0.00 SPECIAL: 0.00 HANDLING: 0.00 TOTAL: 0.00 SVcs: PRIORITY OVERNIGHT Master 4385 5033 9413 TRCK: 4385 5033 9413	Field/WIN ID → G3NW0093 Location: Turkey Creek upstream of Eglin Road 232
Signature: _____ Date: 3/6/19	

LIMS EVENT ID: _____ WIN Import ID: _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____
Scan/Save Field Sheets _____ Migrate Data to WIN: _____ Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)

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

SAMPLE ID 79249 ORG ID 21FLPNS LATITUDE 30.56195
 COUNTY OKALOOSA STORET # A3NW0093 LONGITUDE 86.53634
 DATE 3/6/19 TIME 1005 SAMPLING AGENCY FDEP NW FOC
 SITE NAME TURKEY CREEK upstream of Eglin Rd 232
 FIELD ID/NAME A3NW0093 RECEIVING BODY OF WATER Boggy Bayou

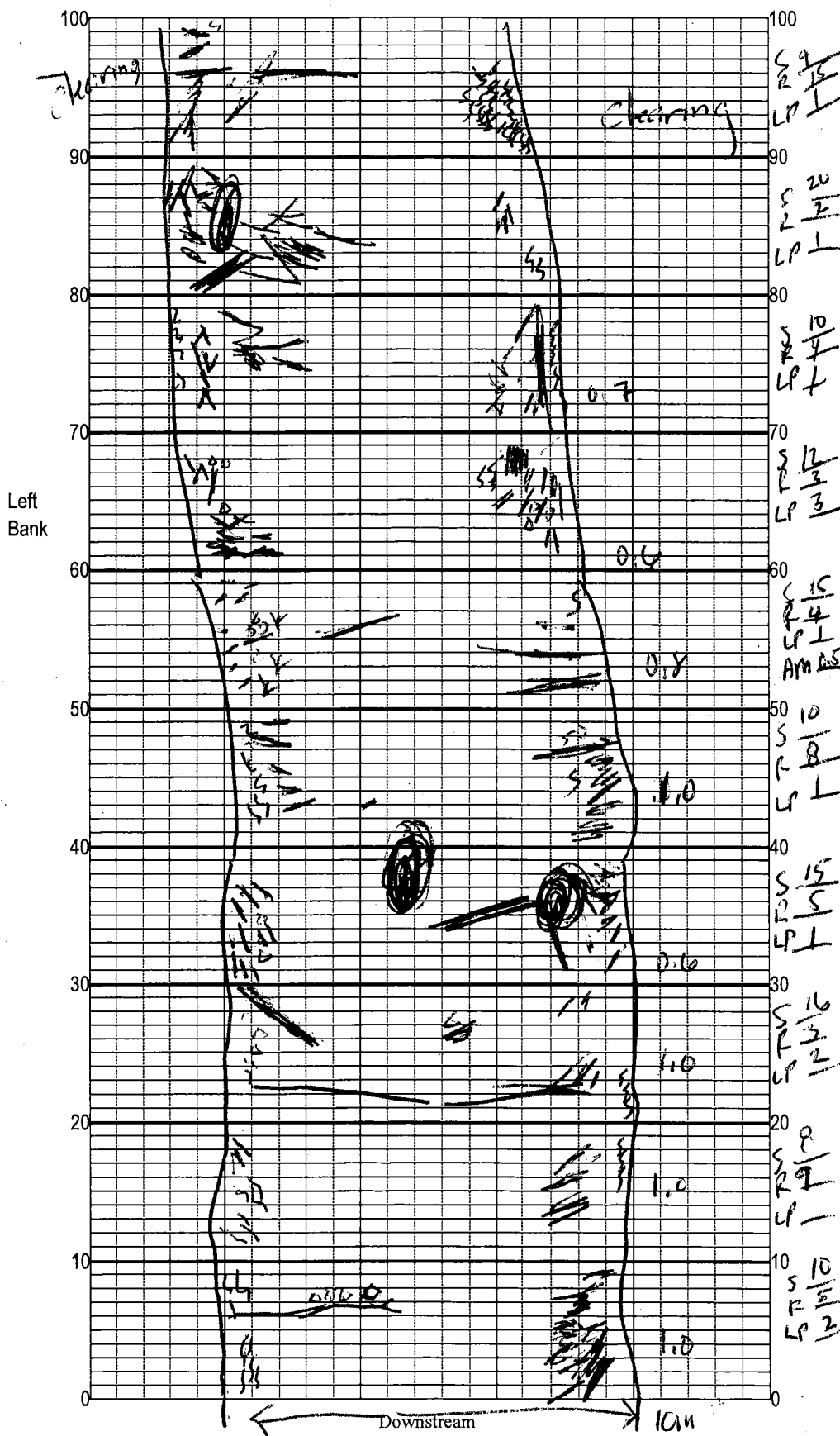
RIPARIAN ZONE / STREAM FEATURES

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) <u>N/A</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>10</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>30 most some clearing</u> Right Bank: <u>15 most clearing</u>				Hydrologic Modification Score (per FT 3101) <u>12</u>		<u>0.33</u> m/s <u>0.5</u> m/s <u>0.33</u> m/s	
High Water Mark: <u>0.7</u> + <u>0.8</u> = <u>1.5</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		<u>0.7</u> m deep <u>0.8</u> m deep <u>0.7</u> 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 <u>N/A</u> ☐ LCI ☐ BioRecon				WATER QUALITY																																											
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ABUNDANCE				Water Surface Oils Normal ☒ Sheen ☐ Globes ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																											
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Iron/Sulfur Bacteria:	☐	☒	☐	☐																																											
SAMPLING TEAM <u>MIKE King / Nathan Muirkey</u>				SIGNATURE: _____ DATE: <u>3/11/19</u>																																											
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																															

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



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

63NW0093

Location: TURKEY CREEK

Date: 3/6/19

Sampler: MIKE KING

100 m: Latitude 30.56204
Longitude 86.53695

0 m: Latitude 30.56195
Longitude 86.53634

Substrates: Code key, draw proportionate habitat abundance.

Symbol	Code	%
	125	12.5
	58	5.8
	13.1	1.1
	13.1	1.1
	total # observed = 3 # range expected = 1	

Average width 10 m
Average depth 0.7 m

Velocity measured at 30 meter mark.

WQ & chemistry taken at 0 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:
SB10 70 79249

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

SAMPLING AGENCY: FDEP NW 202		STORET STATION NUMBER: G3NW0093	DATE (MM/DD/YY): 03/06/19	RECEIVING BODY OF WATER: Boggy Bayou
REMARKS: SB10 ID 79249	COUNTY: OKALOOSA	LOCATION: TURKEY CREEK Egin 232	FIELD ID/NAME: G3NW0093	

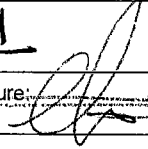
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>14</u>	20 19 18 17 16 <u>14</u>	15 <u>14</u> 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16 <u>13</u>	16% to 30% major productive habitat, by aerial extent 15 14 <u>13</u> 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>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>20</u> 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>17</u> ----- Primary Score <u>64</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 <u>17</u> 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 Artificial Channelization <u>20</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. <u>20</u> 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability <u>10</u> 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 woody root zone with few raw, eroded areas. <u>10</u> 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>9</u> Left Bank <u>9</u>	Width of vegetation greater than 18 m <u>10</u> <u>9</u>	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>9</u> Left Bank <u>9</u> ----- Secondary Score <u>75</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. <u>10</u> <u>9</u>	>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

139

TOTAL SCORE

HA ID

15671

Date: 3/11/19	Analyst: MIKE KNOX	Signature: 
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G3NW0093 DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Turkey Creek upstream of Egin 232 County: OKALOOSA Date: 3/6/19 Investigators: MIKE KING / Nathan MURPHY

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	N		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5					5				72
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1	N			
	2					2				
	3					3				
	4					4				
	5					5				80
	6					6				
	7					7				
	8					8				
	9					9				
20	1	X			80	1	N			
	2					2				
	3					3				
	4					4				
	5					5				80
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5					5				76
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5					5				20
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth > 1.2
Estimated? Y

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 ☒
SO/Biorecon ☒
Water sample ☒
RQ- 2019-02-18-20

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

SBIO ID 79249
RPS ID 79
9258

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: TURKOP CREEK	Date: 3/6/19	County: OKALOOSA	Storet Number: G3NW0093
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Analyst: <u>MIKE KING</u>	Signature: <u>[Signature]</u>
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Comments: Plants $< 2 \text{ m}^2$

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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]

SBIV ZD 79249