



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End

of Day CCV

☒ Yes / ☐ No

WIN Station Name: Williams Creek West Fork upstream of Antioch Rd

Date: 6/30/2021

WIN/Field ID: G4NW0489

WBID: 331

ENR:

Latitude: 30.70949

County: OKALOOSA

Org ID: 21FLPNS

Longitude: -86.60056

Receiving Body of Water: Pensacola

RQ: 2021-06-28-53

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Heather Schmuki	x		x		
☒	Frank Butera		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 154179 (PRODSS)							
Photos: Yes		Flow: FLOW		Tide:		Tide Times: High: Low:							
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:													
SBIO ID Numbers: Visit ID 82621. HA ID 16885. RPS ID 9730. Benth ID 45385													
Notes: SUNNY < 2 square meters vegetation, LVS not appropriate.													

Duplicate Sample

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

Blank

Time Zone:	Time:	Field ID:	(Blank Type_DDDMMYY)
DI Source:		Location:	
DI Type:		Equipment ID:	
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: 2258476

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 F. Butera 07/12/2021

(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2021-06-28-53

Customer: WQAP

Project ID: SMP

Collected By: Heather Schmuki, Frank Butera

Field Report Prepared By: Heather Schmuki

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4NW0489

Location: Williams Creek West Fork upstream of Antioch Rd

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 (PPTH)					
	1100 CEN	8.13	95.2	23.5	6.18	0.1	0.2 ☒ VOB (S)	0.2	123.3	0.06					
6/30/2021							Central Lab please use top row for login purposes								
	CEN														
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 #	Sa0353110		Exp:	1/11/22									
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A					
		Lot #	Na03144360		Exp:	1/4/22									
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A					
		Filter Lot #	17097890												
		Syringe Lot #	0079929												
Chlorophyll (BP-1L)		☐ CHLSUITE-W				☐ Ice									
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice									
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice									
Macroinvertebrates (PJ-2L)		☒ MI-FW-QLDC	Formalin Lot #	..		☒ Formalin			2						
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			1	A					
Pesticides (BG-500ML) (BG-1L)		☐ W-E8321-DI	☐ WE8321-MS	☒ W-PSNP-TQ	☐ W-CT-CL-R	☒ Ice			4	A					
Phytoplankton/Periphyton		☐ W-PCL-TQ-R	☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)		☐ DTY-QN-C ☐ PKD-QN-BV	☐ Ice									
Name: Heather Schmuki Frank Butera				Signature: <i>Heather Schmuki</i>				Date: 6/30/21							

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

Site Name: Williams Creek West Fork upstream Antioch Rd

Date: 06/30/2021

Storet G4NW0489 Field ID G4NW0489

Project: TMDL Studies / SMP

Visit ID 82621

RQ: 2021-06-28-53

RPS ID 9730

LIMS ID: 2258476

Macro ID _____

WBID: 331

HA ID 16885 Benth ID 45385

☒ SCI

RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB, 7/12/21

☒ Date and Initial QA: 7/14/2021 SS

☒ RPS entered in SBIO Initial FB, 7/12/21

☒ Date and Initial QA: 7/14/2021 SS

☐ LVS 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: 7/14/2021 FB

☒ RPS score: 0

☐ Macro authorized in SBIO

☐ Date and Initial: _____

☐ LVS Score: _____

☒ SCI complete: 9/22/2021 M. Heyn

SCI Score: 38

☒ Add SBIO-ID, HA-ID, RPS-ID, MACROPHYTE-ID and LIMS# to field sheet in database

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

SAMPLE ID 82621 ORG ID 21FLPNS LATITUDE 30.70902
 COUNTY Ocala STORET # 84NW0489 LONGITUDE 86.60019
 DATE 6/30/2021 TIME 11:00 CT SAMPLING AGENCY FL DEP, NWROC
 SITE NAME Williams Creek West Fork Upstream of Antioch rd
 FIELD ID/NAME 84NW0489 RECEIVING BODY OF WATER Yellow River

RIPARIAN ZONE / STREAM FEATURES R2-2021-06-28-53 LMS ID

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>1.5</u> m wide
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>10</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) <u>7-8</u>				☐ m/s <u>33</u> m/s ☐ m/s
High Water Mark: <u>0.8</u> + <u>0.6</u> = <u>1.4</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				☐ m deep <u>0.7</u> 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			WATER QUALITY					
% Coverage Woody Debris (Snags) <u>16.3</u> Undercut Banks / Roots <u>15.2</u> Leaf Packs or Mat <u>0.8</u> Aquatic Vegetation Rock or Shell Rubble.. <u>0.1</u> Sand..... <u>67.5</u> Mud / Muck / Silt Other Other			Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.1</u> <u>23.5</u> <u>6.18</u> <u>8.13</u> <u>95.2</u> <u>123.3</u> <u>0.06</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>154179</u>					
INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) <u>7</u> Undercut Banks / Roots <u>7</u> Leaf Packs or Mat <u>3</u> Aquatic Vegetation Rock or Shell Rubble.. <u>1</u> Sand..... <u>2</u> Mud / Muck / Silt Other Other			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐		
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐					
AMBIENT FIELD CONDITIONS / NOTES: <u>Braided. < 2m vegetation. LVS NOT APPROPRIATE</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.								

SAMPLING TEAM

F. Bulmer, H. Schenck

SIGNATURE:

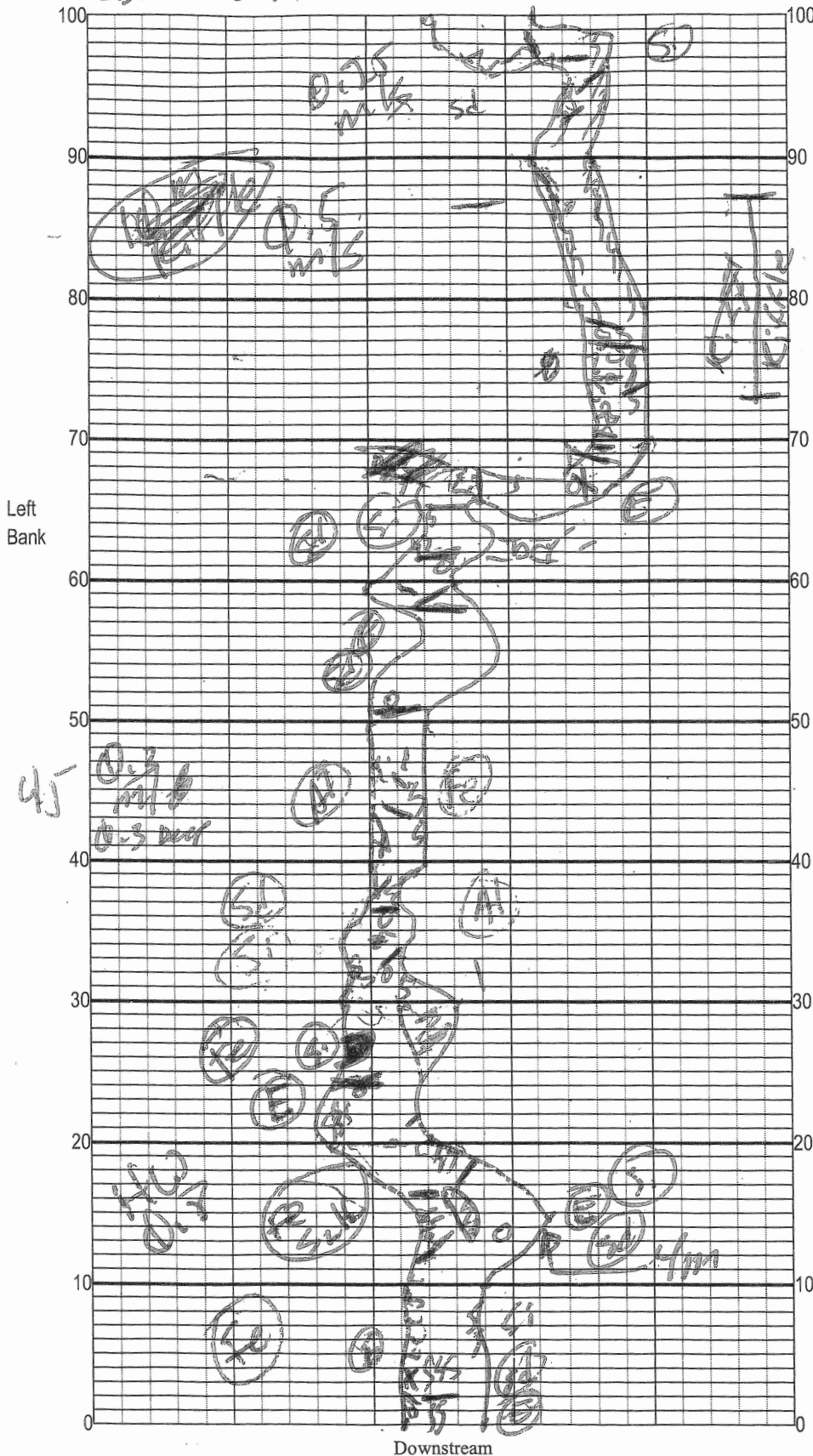
[Signature]

DATE:

6/30/2021

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet
SB10 82621

64NW0489



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

Location: Williams Cr
Date: 6/20/2021
Sampler: FBurke

400 m: Latitude 30.70902
Longitude 86.60019
170 m: Latitude 30.70995
Longitude 86.60031

Substrates: Code key, draw proportionate habitat abundance.		%
	Snags	16.3
	Roots/undercut banks	15.2
	Leaf Packs (or mats)	6.8
	Aquatic Macrophytes	
	BANK	
	Gravel	
	Pools	
total # observed = 4		
# range expected = 8		

Average width 1.5 m
Average depth 0.4 m

Velocity measured at 90 meter mark.

WQ & chemistry taken at 4 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:
Woodruff
Poa
Mazus
Water Oak
Chickadee
Pines
Lycopodium
Centella
Sweet Gum

William, Cke P. J. Abrams K2
Upstream of Antigua Rd

G4NW0489

0-10 meter [A]	Habitat Area (M)	Left Bank	Right Bank
	Snag 1.0	Bankfull	Bankfull
0m width (m)	Root 1.3	—	—
10m width	Leaf —	Slope	Slope
Avg. Depth 0.6	Veg —	+	—
Max Depth 0.6	Gravel —	Veg +	Veg —
Rip. Buff L 7.8	Rock —	+	—
Rip. Buff R 7.8	Fe, Si, Fe		

50-60 meter [F]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3.0	Bankfull	Bankfull
60m width	Root 1.5	—	—
Avg. Depth 0.4	Leaf 0.1	Slope	Slope
Max Depth 0.5	Gravel —	Veg +	Veg +
Rip. Buff L 7.18	Rock —		
Rip. Buff R 7.18	Fe, Si		

10-20 meter [B]	Habitat Area (M)	Left Bank	Right Bank
	Snag 2.0	Bankfull	Bankfull
20m width	Root 1.0	—	—
Avg. Depth 0.4	Leaf 0.1	Slope +	Slope
Max Depth 0.6	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		
	Fe, Fe, Si, Si, Si		

60-70 meter [G]	Habitat Area (M)	Left Bank	Right Bank
	Snag 4.0	Bankfull	Bankfull
70m width	Root 2.0	—	—
Avg. Depth 0.4	Leaf 0.1	Slope	Slope
Max Depth 0.5	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		
	Si, Fe, Si		

20-30 meter [C]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3.0	Bankfull	Bankfull
30m width	Root 2.0	—	—
Avg. Depth 0.4	Leaf 0.2	Slope	Slope
Max Depth 0.6	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		
	Fe, Fe, Si, Si		

70-80 meter [H]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3.0	Bankfull	Bankfull
80m width	Root 2.0	+	—
Avg. Depth 0.3	Leaf 0.2	Slope +	Slope
Max Depth 0.5	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		

30-40 meter [D]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3.0	Bankfull	Bankfull
40m width	Root 2.0	—	—
Avg. Depth 0.4	Leaf 0.2	Slope	Slope
Max Depth 0.5	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock 0.2		
	Si, Si, Si		

80-90 meter [I]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3.0	Bankfull	Bankfull
90m width	Root 3.0	—	—
Avg. Depth 0.4	Leaf 0.1	Slope	Slope
Max Depth 0.5	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		

40 - 50 meter [E]	Habitat Area (M)	Left Bank	Right Bank
	Snag 2.0	Bankfull	Bankfull
50m width	Root 3.0	—	—
Avg. Depth 0.4	Leaf —	Slope	Slope
Max Depth 0.5	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		
	Fe		

90 - 100 meter [J]	Habitat Area (M)	Left Bank	Right Bank
	Snag 1.5	Bankfull	Bankfull
100m width	Root 4.0	—	—
Avg. Depth 0.4	Leaf 0.2	Slope +	Slope +
Max Depth 0.6	Veg —	Veg +	Veg +
Rip. Buff L 7.18	Gravel —		
Rip. Buff R 7.18	Rock —		
	Fe, Si, Si		

Little Black Creek
Upstream of Black Ck

Store: G3NW0200

Date 6/30/2021

0 meter (Dec Deg)

30.70902

86.60019

100 meter (Dec Deg)

30.70995

86.60021

Water Quality Measured at

Q/M

Stream Velocity and location. 0m

33.30 meter mark

0.5 90

Number of Pools & Location 0

High Water: 0.8

Silt smothering @

A-D, G, J

Sand Smothering @

A-D, F, G, J

Algae Smothering @

D

Degraded Banks @

A-C,

Fe/Sulfur Bact. @

A-C, E, J

Bank Stability Score. Left Bank 1.3 Right Bank 1.5 Category Left Bk Marginal Right Bk Marginal
Add all plus signs (Max. 30 possible) and Divide by 10. Scoring. Poor: 0.0 - 0.9 pts. Marginal: 1.0-1.9 pts. Suboptimal: 2.0 - 2.9 Optimal: 2.1 +

Notes.

G4NW0489

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

SAMPLING AGENCY: 21FLPNS		STORET STATION NUMBER: G3NW0200 64NW0489	DATE (MM/DD/YY): 6/30/24	RECEIVING BODY OF WATER: Black Creek Yellow R
REMARKS: WSD 331 WBID 710	COUNTY: Walton Okaloosa	LOCATION: Little Black Creek upstream of Black Creek Williams ck		FIELD ID/NAME: G3NW0200 64NW0489

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>10</u>	20 19 18 17 16	15 14 13 12 11	<u>10</u> 9 8 7 6	5 4 3 2 1
Substrate Availability <u>16</u>	Greater than 30% major productive habitat present at site 20 19 18 17 <u>16</u>	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 <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>4</u> ----- Primary Score <u>50</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 <u>4</u> 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 <u>20</u>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>5</u> Left Bank <u>4</u>	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 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>10</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>8</u> Left Bank <u>7</u> ----- Secondary Score <u>63</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. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

113 TOTAL SCORE 70.6%

Date: <u>6/30/2024</u>	Analyst: <u>F. Bahr</u>	Signature: <u>[Signature]</u>
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SBIO ID: 82621
62-160.800, F.A.C.

HA ID: 16885

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Williams Ck Upstream Antixil Rd</u>					County: <u>Oklahoma</u>		Date: <u>6/30/2021</u>		Investigators: <u>F Butler</u>	
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	STORET Station Number: <u>G4NW0489</u>
										<u>G4NW0489</u>
0	1	N	NO	96	60	1	N	NO	96	Secchi depth <u>0.2</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
10	1	N	NO	96	70	1	N	NO	96	# points ranked 4-6 <u>0</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
20	1	N	NO	96	80	1	N	NO	96	total points assessed <u>99</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
30	1	N	NO	96	90	1	N	NO	96	% points ranked 4-6 <u>0</u>
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
40	1	N	NO	96	100	1	N	NO	96	Check accompanying data collected at same site/date:
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
50	1	N	NO	96	100	1	N	NO	96	Algal mat sample ☐
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

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

SB10 ID 82621

RPS ID 9734

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%.

Store Number: 64141489

Signature: [Signature]

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.

	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												
HERBACEOUS SPECIES											HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											Micranthemum glomeratum											
Bacopa caroliniana											Micranthemum umbrosum											
Bacopa monnieri											Myriophyllum aquaticum											
Bidens mitis											Najas guadelupensis											
Boehmeria cylindrica											Nuphar											
Centella asiatica											Orontium aquaticum											
Cephalanthus occidentalis											Panicum hemitomon											
Ceratophyllum demersum											Panicum repens											
Chara											Panicum rigidulum											
Cicuta maculata											Pistia stratioides											
Cladium jamaicense											Polygonum glabra											
Colocasia esculenta											Polygonum hydropiperoides											
Crinum americanum											Polygonum punctatum											
Diodia virginiana											Pontedaria cordata											
Eichhornia crassipes											Potamogeton illinoensis											
Eleocharis (wispy viviparous)											Sacciolepis striata											
Fontinalis											Sagittaria kurziana											
Hydrilla verticillata											Sagittaria lancifolia											
Hydrocotyle											Sagittaria latifolia											
Hygrophila polysperma											Salix caroliniana											
Hymenocallis											Salvinia minima											
Itea virginica											Samolus parviflora											
Lachnanthes caroliniana											Saururus cernuus											
Landoltia punctata											Scirpus											
Lemna											Sparganium americanum											
Limnophila sessiflora											Typha											
Lobelia cardinalis											Vallisneria americana											
Ludwigia leptocarpa											Zizania aquatica											
Ludwigia palustris											Zizaniopsis milacea											
Ludwigia peruviana																						
Ludwigia repens																						
Luziola fluitans																						
If no Dominant or Co-Dominant were selected, indicate with an "X"	X	X	X	X	X																	

Station: Williams Creek West Fork upstream Antioch Rd
Sample Date 6/30/2021
SBIO ID 82621 Benth ID 45385
Project: SMP / TMDL Studies

Storet: G4NW0357
WBID: 336
LIMS ID 2258476
RQ-2021-06-28-53

SCI 2012 38

Variable Name	Rep 1	Rep 2	Pooled
AmphipodPct	0.68	1.34	1.01
ChironPct	21.62	2.01	11.815
ChironTaxa	6	1	7
ClingerTaxa	7	6	13
ColeopteraPct	47.97	72.48	60.225
DecapodaPct	0	0	0
DipteraPct	26.35	6.71	16.53
DominantPct	20.27	36.91	28.59
Dominant Taxon	Microcylloepus pusillus	Microcylloepus pusillus	M. pusillus
EPTTaxa	7	6	13
EphemPct	7.43	1.34	4.385
EphemTaxa	4	2	6
FFBrowGrazPct	0.34	0.67	0.505
FFEpiColDepPct	45.61	50.34	47.975
FFParasitePct	0	0	0
FFPIPiercePct	1.01	0.67	0.84
FFPredCarnPct	0.68	1.68	1.18
FFScavPct	0.34	0.67	0.505
FFScrapePct	17.91	25.17	21.54
FFShredPct	7.09	1.34	4.215
FFSubColDepPct	0	0	0
FFSuspFiltPct	26.35	19.46	22.905
FFUnknownPct	0.68	0	0.34
GastropodaPct	0	0	0
IsopodaPct	0	0	0
LongLivedTaxa	0	0	0
OdonataPct	0.68	1.34	1.01
OligocPct	0	0	0
OligocTaxa	0	0	0
PelecypodaPct	0	0	0
PlecopPct	0	0	0
PolychaetePct	0	0	0
PolychaeteTaxa	0	0	0
SCI_2012_Rep	48.53822706	28.21181553	38.37502129
SensitiveTaxa	8	6	14
TanytarsiniPct	7.43	0	3.715
TotalDBar	0	0	0
TotalDensity	0	0	0
TotalNind	148	149	297
TotalTaxa	22	16	38
TrichopPct	16.89	16.78	16.835
TrichopTaxa	3	4	7
TrombidPct	0	0	0
VeryTolerantPct	1.35	2.01	1.68