



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

October 2017

PAGE 1 OF 1

Data Qualified?
Yes / No

Location/STORET Station Name: Tumblin Cr @ SW 9th 14th Date: 12/18/17
(mm/dd/yyyy)
STORET # G1NE0894 G1NE0854 WBID: 36718A Latitude: 29.64195
(Decimal Degrees)
County: ALACHUA RQ: 2017-12-04-30 ORG ID: 21 FLA Longitude: 82.33503
(Decimal Degrees)
Receiving Body of Water: BIWANS ARM LAKE Field ID: See label

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment	
N. Frederick			X	X	X		☒ Sample Container	☐ Van Dorn
P. O'Connor		X		X	X	X	☐ Carboy	☐ Syringe
							☐ Dipper	☐ Other
							Equipment ID ORTHO # <u>44</u> <u>6079245</u>	
							Collection Method	
							☒ Wading	☐ Canoe/Kayak
							☐ From Shore	☐ Electric Motor
							☐ Other	☐ Gasoline Motor

Water Level: Dry / Low / Normal / Above Normal / Flooded Meter ID# QUANTA #1 Matrix: Fresh / Marine / DI

Photos: Yes / No Flow: No Flow / Intestinal / Flowing / NA Tide: Rising / Falling / Slack / NA Tide Times: High / Low

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Secchi Disk (m)	COND (µmhos/cm)	Temp. (C°)
CEN	1035	0.3	0.4	6.1	64.9	7.7	0.19	0.45 V06	408	18.1

Biological Samples Collected: None / HA / SCI / RPS / Algae ID / LVS / LVI / Other

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: 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	<u>SAT275010</u>	<u>10-02-18</u>	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / 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-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☒ W-SUC-AA-R ☒ W-UHERB-AA ☒ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes:

Field ID: G1NE089412102017
Tumblin Cr @ SW 9th STORET: G1NE0854
Signature: Michele Date: 12/18/17

Field Parameters Entered into LIMS: 12/2/17 (Initials/Date) Field Parameters QC in LIMS: (Initials/Date)
Date Migrated to STORET: Field Sheets Scanned/Saved:

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

SAMPLE ID 78146 ORG ID 21 FIA LATITUDE 29.64195
 COUNTY Alachua STORET # G4NE0893856 LONGITUDE 82.33303
 DATE 12-18-17 TIME 1035 SAMPLING AGENCY DEAR NEP ROC
 SITE NAME TUMBLING CREEK SW 9TH 14th
 FIELD ID/NAME G4NE089312182017 RECEIVING BODY OF WATER BIVANS ARM LAKE

RIPARIAN ZONE / STREAM FEATURES

Meter ID: QUANTA #1

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ <u>10</u> <u>50</u> <u>40</u>								Landscape Development Intensity Index (LDI) ☐	
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>3</u> m wide <u>0.2</u> m/s <u>0.4</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>12</u> Right Bank: <u>12</u>				Hydrologic Modification Score (per FT 3101) <u>7-8</u>		High Water Mark: <u>3.0</u> + <u>0.4</u> = <u>3.4</u> (m) (above present water level) (present depth) (above bed)			
Artificially Impounded ☐ Yes ☒ No				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☒ Heavily Shaded ☐ Moderate Shaded (46-80%)					
Artificially ☐ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☒ Recent, severe									

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 Invert ☐ PERI ☐ % Coverage # Times Sampled # Times Sampled		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>18.1</u> <u>7.7</u> <u>6.1</u> <u>64.9</u> <u>408</u> <u>0.19</u> <u>0.45</u> Mid: <u>0.3</u> <u>18.1</u> <u>7.7</u> <u>6.1</u> <u>64.9</u> <u>408</u> <u>0.19</u> <u>0.4</u> Bottom: <u>0.3</u> <u>18.1</u> <u>7.7</u> <u>6.1</u> <u>64.9</u> <u>408</u> <u>0.19</u> <u>0.4</u>			
Woody Debris (Snags) <u>21</u> Undercut Banks / Roots <u>21</u> Leaf Packs or Mat Aquatic Vegetation Rock or Shell Rubble.. <u>3</u> Sand..... <u>90+</u> Mud / Muck / Silt Other Other		System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>Ditch</u> Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: <u>SA 727</u> Exp: <u>10-02-18</u> Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐		AMBIENT FIELD CONDITIONS / NOTES: <u>Highly Altered water conveyance system (Ditch)</u> Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☒ The antecedent hydrologic conditions have been met to my best knowledge.			

SAMPLING TEAM

N. Frederick, P. O'Connor

SIGNATURE:

Michael K

12/18/17

78146

grubm

RPS 4850

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Tumblin Creek @ SW 4th 14thCounty: AlachuaDate: 12-18-17Investigators: N. Frederick, P. O'ConnorSTORET Station Number: 61N0856

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	4			
	5			96		5	N		96	
	6					6	4			
	7					7	3			
	8					8	N			
	9					9	N			
10	1	N			70	1	N			
	2					2				
	3					3				
	4	3				4	4		96	
	5	3		96		5	4			
	6	N				6	4			
	7					7	4			
	8					8	N			
	9					9	N			
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			92	
	6					6				
	7					7				
	8					8	4			
	9					9	3			
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9	N			
40	1	N			100	1	N			
	2					2				
	3					3				
	4			96		4				
	5					5			96	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5			96		5				
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth	0.27
Estimated?	

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

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	
SCI/Biorecon	
Water sample	
RQ-2017-12-04-38	

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%.

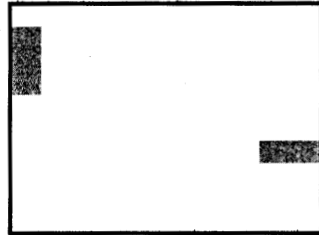
Signature: M. J. R.

0-5% Macrophyte Coverage
>5 and ≤10% Macrophyte Coverage
>10 and ≤25% Macrophyte Coverage
>25 and ≤50% Macrophyte Coverage
> 50% Macrophyte Coverage

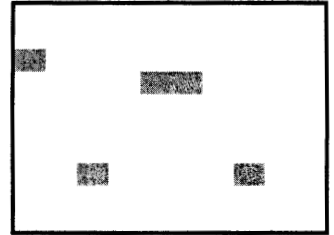
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

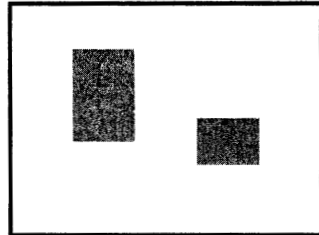
5% Macrophyte Coverage



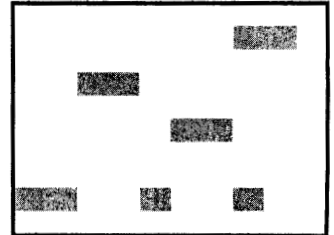
5% Macrophyte Coverage



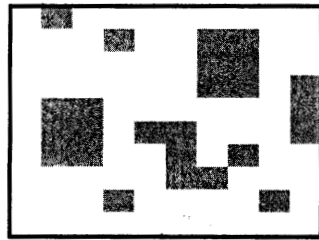
10% Macrophyte Coverage



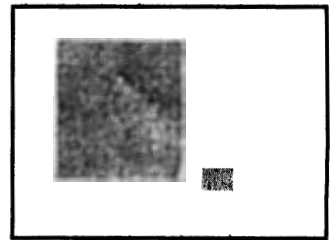
10% Macrophyte Coverage



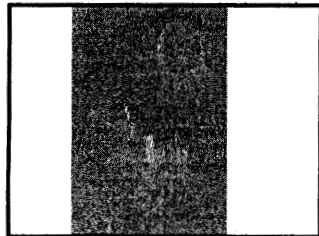
25% Macrophyte Coverage



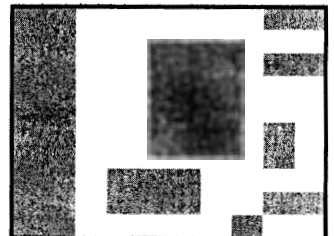
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



48146
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

20 12/21/17

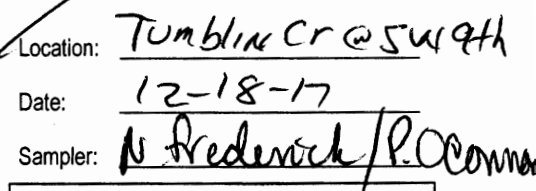
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: G1NE0893	DATE (MM/DD/YY): 12-18-17	RECEIVING BODY OF WATER: BIVANS ARM
REMARKS:	COUNTY: AIAChua	LOCATION: 856 Tumbling Creek SW 4th	FIELD ID/NAME: G14NE089312182017	

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 5	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 4	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 4% 5 4 3 2 1
Water Velocity 14	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 0.20 <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering 18 ----- Primary Score 41	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 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 11	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank 4 Left Bank 7	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 1 Left Bank 3	Width of vegetation greater than 18 m 10 9	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 1 Left Bank 3 ----- Secondary Score 27	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

68 TOTAL SCORE

Date: 12/18/17	Analyst: N. Frederick, 80' GONAR	Signature: [Signature]
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total 250 mm



Plants observed / other notes:
 <2 M of Macrophytes was observed while doing
 the LVS? YES or NO

2.5 m wide

Revision Date: March 1, 2014