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

SAMPLE ID 64NW0491 ORG ID 21FLPNS LATITUDE 30.8622
COUNTY Okaloosa STORET # 64NW0491 LONGITUDE -86.61362
DATE 6/17/21 TIME 1230 SAMPLING AGENCY NW ROC
SITE NAME Deadfall Creek
FIELD ID/NAME 64NW0491 RECEIVING BODY OF WATER Pensacola

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)
X							

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 2.8 m wide

0.33 m/s	0.33 m/s	0.33 m/s
0.3 m deep	0.3 m deep	0.3 m deep

Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : 18+ Right Bank : 18+

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.6 + 0.9 = 1.5
(m) (above present water level) (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

Artificially Channelized : ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe

Canopy Cover % ☐ Open ☐ Heavily Shaded ☐ Lightly Shaded (11-45%) ☑ Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils ☑ Absent ☐ Slight ☐ Moderate ☐ Profuse

Sediment Odors ☑ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify) :

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☑	☐	☐
Silt Smothering:	☐	☐	☑	☐
Algae Smothering:	☑	☐	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☑ SCI ☑ RPS ☐ LVS ☐ BioRecon ☐ < 2 m² SAV

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)...	14	5	
Undercut Banks / Roots	7	5	
Leaf Packs or Mat	2	5	
Aquatic Vegetation		1	
Rock or Shell Rubble..			
Sand......................		4	
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.3	21.8	5.3	7.88	89.8	24.5	0.01	0.9
Mid:								☑ VOB
Bottom								TOTAL DEPTH 0.9

Meter ID: 154179 **Meter verify?** ☑ Yes ☐ No

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ Other ☐

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 ☐

ABUNDANCE

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

System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM H Schmidt / M King / N Molloy

SIGNATURE : H Schmidt

DATE : 6/17/21

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site:	County:	Date:	Investigators:
Deadfall Creek	Okaloosa	6/17/21	H Schmidt/N Mulkey/M King

STORET Station Number: G4NW0491

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N ↓	N ↓	
	2			
	3			
	4			
	5			85
	6			
	7			
	8			
	9			
10	1	N ↓		
	2			
	3			
	4			
	5			85
	6			
	7			
	8			
	9			
20	1	N ↓		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			
30	1	N ↓		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			
40	1	N ↓		
	2			
	3			
	4			
	5			75
	6			
	7			
	8			
	9			
50	1	N ↓		
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9		↓	
60	1	N ↓	N ↓	
	2			
	3			
	4			
	5			65
	6			
	7			
	8			
	9			
70	1	N ↓		
	2			
	3			
	4			
	5			50
	6			
	7			
	8			
	9			
80	1	N ↓		
	2			
	3			
	4			
	5			20
	6			
	7			
	8			
	9			
90	1	N ↓		
	2			
	3			
	4			
	5			85
	6			
	7			
	8			
	9			
100	1	N ↓		
	2			
	3			
	4			
	5			60
	6			
	7			
	8			
	9		↓	

Secchi depth	VOB
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	✓
SCI/Biorecon	
Water sample	✓
RQ- 2021-05-17-38	

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.

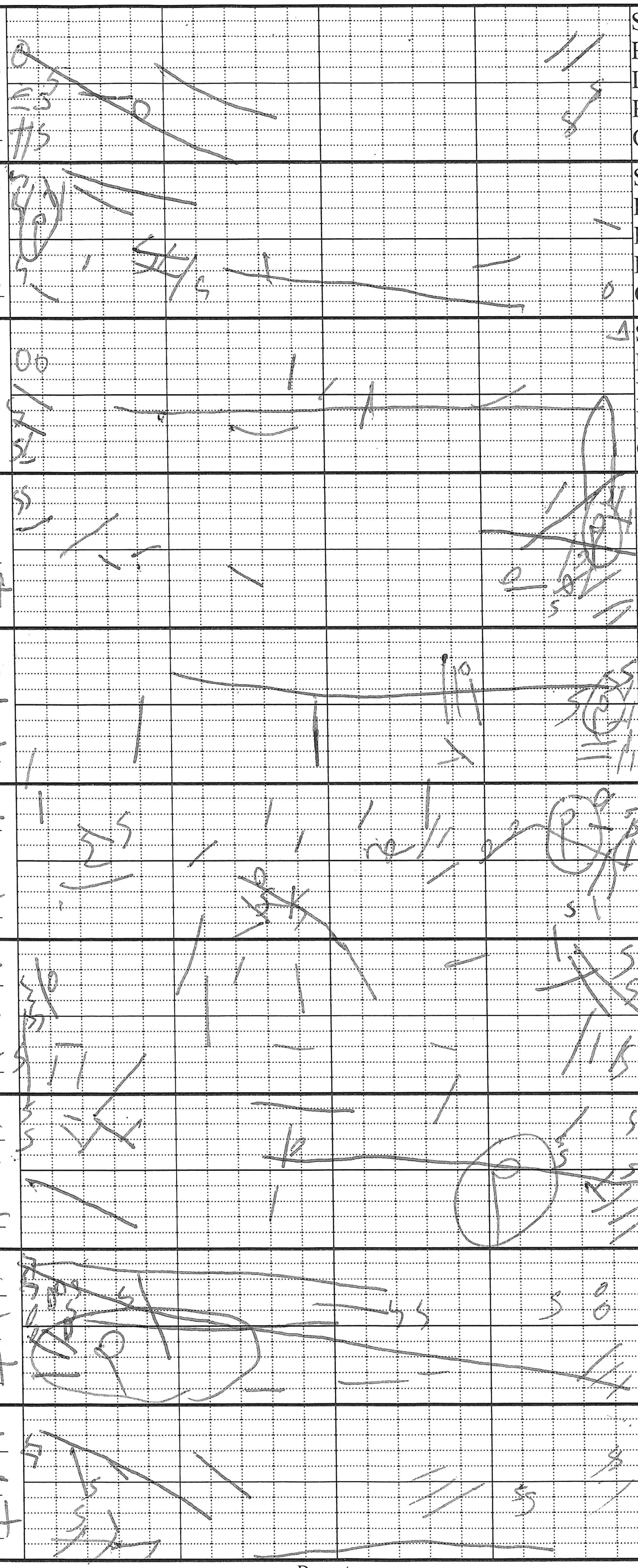
Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

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%.

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (June 1, 2001) Length of grid represents 100 m of stream (not linear meters).(Horizontal scale is double vertical scale, draw proportionately).

LOCATION: 0-30.8622 100' 86.61362
100m-30.86260 86.61421



Segment	BF	%S	Vg	Snags	Roots	LP	Plants	Other
100				0000	OC	C		
90				009C	000C	C		
80				000	0	0	0.2	
70				0000C	0C	0		
60				00000	0C C	C C		
50				000000	00C	0		
40				00	0C	C		
30				000	000	C		
20				00000C	000	0		
10				00C	C			

Downstream

22 22

Substrates: Code key, draw proportionate habitat abundance.

Code	Substrate	Amount
/	Snags	39.5
S	Roots/undercut banks	19
0	Leaf Packs (or mats)	6.5
Δ	Macrophytes	0.2
	______	
	______	
	______	

Velocity: 0.33
Note where velocity measurements were taken.

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:

Dead kill
Shockly

2.9
0.4

H Sullivan (signature) — 6/17/21

Signature **Date**

Form FD 9000-32	**FDEP Linear Stream Vegetation Survey (DEP SOP FS 7320)**	Revised 10-11-11

Waterbody: Dead Fall Creek	Date: 6/17/21	County: Okaloosa	Storet Number:
Analyst:		Signature: H [signature]	

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 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 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											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Cephalanthus occidentalis											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Fontinalis											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Itea virginica											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Lobelia cardinalis											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with an "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage											
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salix caroliniana											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Scirpus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											
Zizaniopsis milacea											

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
NW ROC		G4NW0491	06/17/21	Yellow River
REMARKS:	COUNTY: Okaloosa	LOCATION: Deadfall Creek		FIELD ID/NAME: G4NW0491

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 13	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 (13) 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 13	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 1
Water Velocity 20	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 <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering 13 Primary Score 59	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 **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging 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 Right Bank 9 Left Bank 9	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 10	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 10 Left Bank 10 Secondary Score 78	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

137 **TOTAL SCORE**

Date: 6/17/21	Analyst: H Schmuh M. Kim	Signature: H Schmuh

62-160.800, F.A.C.

Revision Date: March 1, 2014