



RQ-2021-05-17-38	Collected By: Mike King, Heather Schmuki
Customer: FDEP	Field Report Prepared by: Mike King, Heather Schmuki
Project ID: SMP	Sampling Agency: FDEP

WIN ID/Field ID:



WIN ID/Field ID: G4NW0491

Location: Deadfall Creek upstream of Old River Rd

Matrix: Fresh

(Check One) ☒ Grab ☐ Composite

Date and Time {CEN}	DO (mg/L)	DO (%SAT)	Temp. @	pH	Sample Depth (m)	Secchi Depth	Total Depth (m)	Sp COND (µmhos /cm)	Salinity (PPTH)
6/17/2021 1230	7.88	89.8	21.8	5.3	0.3	0.9	0.9	24.5	0.01

Central Lab please use top row for login purposes

Parameter Suite		Parameter Methods						Preservation			pH Check		# Bottles sent to Lab	Bottle Group		
Preserved Nutrients (P-500ML)	X	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP						X	Ice	X	H2SO4*	X	<2	1	A	
	Lot #		SA0353110		Exp:		01/11/2022									
Metals (P-500ML)	X	W-ICPMS		X	W-ICP		X	W-HARD	X	Ice	X	HNO3*	X	<2	1	A
	Lot #		NA0344060		Exp:		01/04/2022									
Filtered Nutrients (P125ML)	X	W-PO4-F		X	Field Filtered 0.45 um Filter				X	Ice				1	A	
	Filter Lot #		17097890													
	Syringe Lot #		79929													
Chlorophyll (BP-1L)	X	CHLSUITE-W						X	Ice		1			A		
Physical/Aggregate (Fresh) (P-1L)	X	Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W- TDS						X	Ice		1			A		
Physical/Aggregate (Marine) (P-1L)		Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY							Ice							
Macroinvertebrates (PJ-2L)	X	MI-FW-QLDC						X	Ice		2			B		
Periphyton (PT-50ML)		ALGAE-ID							Ice							
Microbiology (Contract Lab Bottle)		E Coli			F Coli			Enterococci		Ice						
	Contract Lab															
Molecular (QPCR-P-500ML)		PCR-HF183			PCR-BacR			PCR-DG3		Ice						
	PCR-GULL2			PCR-GFD												
Tracers (BG-500ML)		W-E8321-DI			W-E8321-MS					Ice						
Pesticides (BG-500ML) (BG-1L)		W-E8321-DI			W-E8321-MS			W-PSNP-TQ		Ice						
								W-DIELDRIN								
	W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)			W-CT-CL-R										
Phytoplankton		DTY-QN-C			PKD-QN-BV			Ice								

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

SAMPLE ID 64NW0491 ORG ID 21FLPN5 LATITUDE 30.8622
 COUNTY Calaveras STORET # 64NW0491 LONGITUDE -86.16362
 DATE 6/17/21 TIME 1230 SAMPLING AGENCY NW ROC
 SITE NAME Deadhill 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) ☐								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 m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: Right Bank:				Hydrologic Modification Score (per FT 3101)		m/s m/s m/s			
High Water Mark: + = (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		m deep 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 ☐ BioRecon ☐ < 2 m ² SAV			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: Mid: Bottom: Meter ID: Meter verify? ☒ Yes ☐ No		
Woody Debris (Snags)... Undercut Banks / Roots Leaf Packs or Mat Aquatic Vegetation Rock or Shell Rubble.. Sand..... Mud / Muck / Silt Other Other			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____ 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: ☒ ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐		
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 <u>H. Schmidt / M. King / W. M. King</u>			SIGNATURE: <u>H. Schmidt</u>		DATE: <u>6/17/21</u>

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Deadfall Creek County: Delaware Date: 6/17/21 Investigators: H. Schmidt / N. M. Kelly / M. King

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: AYNW0491

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				60	1			
	2					2			
	3					3			
	4					4			
	5			85		5			65
	6					6			
	7					7			
	8					8			
	9					9			
10	1				70	1			
	2					2			
	3					3			
	4					4			
	5			85		5			50
	6					6			
	7					7			
	8					8			
	9					9			
20	1				80	1			
	2					2			
	3					3			
	4					4			
	5			80		5			80
	6					6			
	7					7			
	8					8			
	9					9			
30	1				90	1			
	2					2			
	3					3			
	4					4			
	5			80		5			85
	6					6			
	7					7			
	8					8			
	9					9			
40	1				100	1			
	2					2			
	3					3			
	4					4			
	5			75		5			60
	6					6			
	7					7			
	8					8			
	9					9			
50	1				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 densimeter 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%.				
	2								
	3								
	4								
	5			70					
	6								
	7								
	8								
	9								

Secchi depth 1013
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 ☒
SOI/Biorecon ☒
Water sample ☒
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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

100 BF + %S - Vg +	Snags 0000 Roots 00 LP 0 Plants Other
90 BF + %S + Vg +	Snags 0000 Roots 0000 LP 0 Plants Other
80 BF + %S + Vg +	Snags 000 Roots 0 LP 0 Plants 0.2 Other
70 BF + %S - Vg +	Snags 00000 Roots 00 LP 0 Plants Other
60 BF + %S - Vg +	Snags 00000 Roots 00 LP 0 Plants Other
50 BF - %S - Vg +	Snags 00000 Roots 00 LP 0 Plants Other
40 BF - %S - Vg +	Snags 00 Roots 00 LP 0 Plants Other
30 BF + %S + Vg +	Snags 000 Roots 000 LP 0 Plants Other
20 BF + %S + Vg +	Snags 00000 Roots 000 LP 0 Plants Other
10 BF - %S - Vg +	Snags 000 Roots 0 LP 0 Plants Other

LOCATION: 0-3018622 100 86.6/362
100m-30186260 86.6/421

Substrates: Code key, draw proportionate habitat abundance.

1 Snags 39.5
S Roots/undercut banks 19
D Leaf Packs (or mats) 6.5
D 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
Shocky

2.9
0.4

Signature: H. S. L. Date: 6/17/21

Downstream

Storet Number:

Signature: H. E. Smith

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)	HERBACEOUS SPECIES	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												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 "																							

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

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

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>13</u>	20 19 18 17 16	15 14 <u>13</u> 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	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 <u>13</u> 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>13</u> ----- Primary Score <u>59</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 <u>13</u> 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 <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	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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>9</u> Left Bank <u>9</u>	10 <u>9</u>	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>10</u>	<u>10</u> 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	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.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>78</u>	<u>10</u> 9	8 7 6	5 4	3 2 1

137 **TOTAL SCORE**

Date: <u>6/17/21</u>	Analyst: <u>H. Schmidt</u> <u>M. King</u>	Signature: <u>H. Schmidt</u> <u>M. King</u>
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