



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End

of Day CCV

Yes / No

WIN Station Name: Gap Creek powerline South of Overbrook Drive

Date:

(mm/dd/yyyy)

WIN/ Field ID: G3NW0142

WBID: 843A

Latitude: 30.431944

(Decimal Degrees)

County: OKALOOSA

ORG ID: 21FLPNS

Longitude: 86.648757

(Decimal Degrees)

Receiving Body of Water: Cinco Bayou

RQ-2020- 06-29-41

Sampling Team Members

WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check

Sampling Equipment

☒ Sample Container ☐ Van Dorn

☒ Syringe ☐ Pole

☐ 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

Meter ID#

155072

Photos: Yes / No

Flow: No Flow / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

Tide Times:

High

Low

Biological Samples Collected:

None

HA

SCI

RPS

Algae ID

LVS

LVI

Other:

SBIO ID Numbers:

SBIO-ID: 81124

HA-ID:

RPS-ID:

Macrophyte-ID:

LIMS#:

Notes:

Duplicate Sample

Time Zone: EST CEN Time:

Field ID: (WIN ID_DUP)

WIN DMT Activity ID:

Blank

Time Zone: EST CEN Time:

Field ID: (Blank Type_DMMYYYY)

DI Source:

Location:

☐ Field Blank

☐ Equipment Blank

☐ Field Cleaned Equipment Blank

Equipment ID:

Signature:

N. Mulvey

Date:

6/29/20

LIMS EVENT ID:

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

7/1/20

(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2020-

Customer: NW-DIST

Project ID: SMP

Collected By: _____

Field Report Prepared By: _____

Sampling Agency: NWROC

Field/WIN ID →



G3NW0142

Location:

Gap Creek powerline South of Overbrook Drive

Comments:

Matrix: ☒ Fresh ☐ Marine

(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 (PPT _h)
6/29/20	1200 EST / CST	3.76	45.5	25.1	5.64	0.2	☒ VOB (S)	0.4	116.7	0.05

Cental Lab please use top row for login purposes

	EST / CST									

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		
	Lot # 9354050	Exp: 12/20/20			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3*	☐ <2		
	Lot # 9301040	Exp: 10/28/20			
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
	Filter Lot # 15159049	Exp:			
	Syringe Lot # 9029988	Exp:			
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / 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			
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 ☐ W-CT-CL-R	☒ Ice			
	☒ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)	☐ Ice			

Relinquished By: _____

Date/Time: _____

Shipping Method: _____

Number of Coolers Shipped: _____

Received By: _____

Date/Time: _____

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

Email Submittal form to : lab.receiving@floridadep.gov.

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

SAMPLE ID _____ ORG ID 21FLPKS LATITUDE 30.42157
 COUNTY OKlahoma STORET # 63NW0142 LONGITUDE 86.64906
 DATE 6/29/20 TIME 1200 SAMPLING AGENCY FDEP NWROC
 SITE NAME Gap Creek confluence South of Overbrook Drive
 FIELD ID/NAME 63NW0142 RECEIVING BODY OF WATER Circo 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) ☐

Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy
 Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
 Left Bank: 5 Right Bank: 8 Hydrologic Modification Score (per FT 3101) ☐

High Water Mark: 0.7 + 0.5 = 1.2
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded ☒ Yes ☐ No

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

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

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
2.5 m wide
.13 m/s .13 m/s .13 m/s
0.5 m deep 0.5 m deep 0.5 m deep

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

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>4.4</u>		
Undercut Banks / Roots	<u>1.6</u>		
Leaf Packs or Mat	<u>0.8</u>		
Aquatic Vegetation	<u>7.2</u>		
Rock or Shell Rubble			
Sand			
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: 0.2 25.1 5.54 3.76 45.5 116.7 0.05
 Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB
 Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
 Meter ID: 155077 TOTAL DEPTH 0.4

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

Water Surface Oils Normal ☐ Sheen ☒
 Clots ☐ Slick ☐ 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: _____

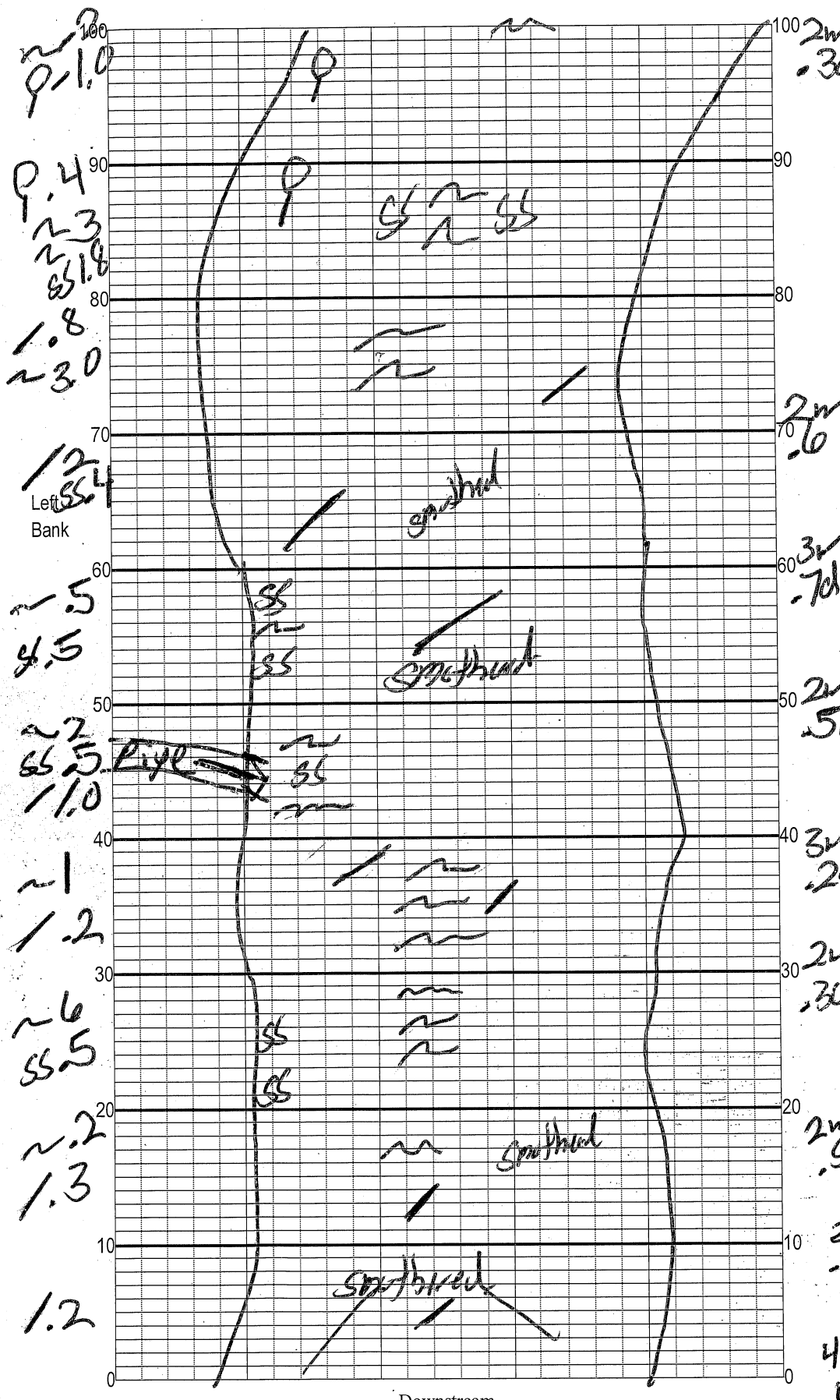
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐

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

AMBIENT FIELD CONDITIONS / NOTES:
e/locharis
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM Nathan Melby / Stephen Stale **SIGNATURE** [Signature] **DATE:** 6/29/20

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



Location: Gap Creek
 Date: 6/29/20
 Sampler: Nathan Mulkey

100 m: Latitude 30.43206
 Longitude 86.64967
 0 m: Latitude 30.43157
 Longitude 86.64906

Substrates: Code key, draw proportionate habitat abundance. %

☒	Snags	11	4.4
☒	Roots/undercut banks	4	1.6
☒	Leaf Packs (or mats)	2	0.8
☒	Aquatic Macrophytes	18	7.2
☐			
☐			
☐	Pools	total # observed =	
		# range expected =	

Average width 2.5 m
 Average depth 0.5 m

Velocity measured at 30 meter mark.

WQ & chemistry taken at 40 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: 11
250

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

- Hydraulic
 - Chromium

• alter

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

SAMPLING AGENCY: FDEP MWROC		STORET STATION NUMBER: 63NW0142	DATE (MM/DD/YY): 06/29/20	RECEIVING BODY OF WATER: Circo Bayou
REMARKS:	COUNTY: Okauchosa	LOCATION: Camp Creek	FIELD ID/NAME: 63NW0142	

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 11	20 19 18 17 16	15 14 13 12 (11)	10 9 8 7 6	5 4 3 2 1
Substrate Availability 9	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 11	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 5 ----- Primary Score 36	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 or straightening 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 10	20 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 woody 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 woody root zone with raw, eroded areas.
Right Bank 6 Left Bank 6	10 9	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 4 Left Bank 2	10 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 4 Left Bank 4 ----- Secondary Score 36	10 9	8 7 6	5 4	3 2 1

72 TOTAL SCORE

Date: 6/29/20	Analyst: Nathan Melkey	Signature: Nathan Melkey
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Gap Creek</u>					County: <u>OKaloosa</u>		Date: <u>6/29/20</u>		Investigator: <u>Nathan Mulken</u>	
					STORET Station Number: <u>63NW0142</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	
0	1	N		84	60	1	N		84	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N		84	70	1	N		80	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N		84	80	1	N		80	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N		86	90	1	N		72	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N		90	100	1	N		86	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N		90	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%.					
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									

Secchi depth 1.4
Estimated?

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	X
SCI/Biorecon	X
Water sample	X

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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

Waterbody: <u>Gard Creek</u>	Date: <u>6/29/20</u>	County: <u>Okfuska</u>	Storet Number: <u>031W0142</u>
Analyst: <u>Nathan Mulky / Stephen Slade</u>		Signature: <u>Nathan Mulky</u> <u>Stephen Slade</u>	
Comments:			

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			X			X	X					Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monnieri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta												Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontedaria cordata											
Diodia virginiana												Potamogeton illinoensis											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)		X	X	X	X	X	X	X	X	X		Sacciolepis striata											
Hydrilla verticillata												Sagittaria kurziana											
Hydrocotyle			X			X						Sagittaria lancifolia											
Hygrophila polysperma												Sagittaria latifolia											
Hymenocallis												Salvinia minima											
Lachnanthes caroliniana												Samolus parviflora											
Landoltia punctata												Saururus cernuus											
Lemna												Sparganium americanum											
Limnophila sessiflora												Typha											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana																							
Ludwigia repens												Crinum americanum				X							
Luziola fluitans																							
If no Dominant or Co-Dominant were selected, indicate with "X"																							