



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / ☒ No

WIN Station Name:

McCullough CR @ SR 13A

Date:

03-07-19

WIN/Field ID:

20030358

WBID:

2525

Latitude:

29.797944

County:

St. Johns

ORG ID:

21FLA

Longitude:

-81.5313055

Receiving Body of Water:

LSSR

RQ:

2019-03-04-17

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
C. Ruben					X	X	X	X	X
P. O'Connor						X	X	X	X

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>NET</u>		
Equipment ID <u>OPtho #44</u>		
Collection Method		
☒ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID#

EXO

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	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)
EST	0910	0.9	0.3	0.35	9.09	81%	6.93	0.15	771	10.6
CEN									307	

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	SA8274050	10-01-19	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA-8060070	3/19	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	RAKA12716		
Chlorophyll	☒ CHLSUTE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CL-IC / ☒ W-COLOR / ☒ W-SO4-IC / ☒ W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / ☐ W-BR-IC / ☐ 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-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice			
Pesticides	☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

WIN/
Field ID:



20030358

McCULLOUGH CR @ SR 13A

Signature:

Chloe R

Date:

3/7/19

LIMS EVENT ID:

2019-03-08-01

WIN Import ID:

Enter Field Parameters Verify Station ID in LIMS DMT:

3/14/19

QC Station ID, Field Parameters in LIMS DMT:

3/14/19

Scan/Save Field Sheets

3/14/19

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

(AK) 79250 ✓

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

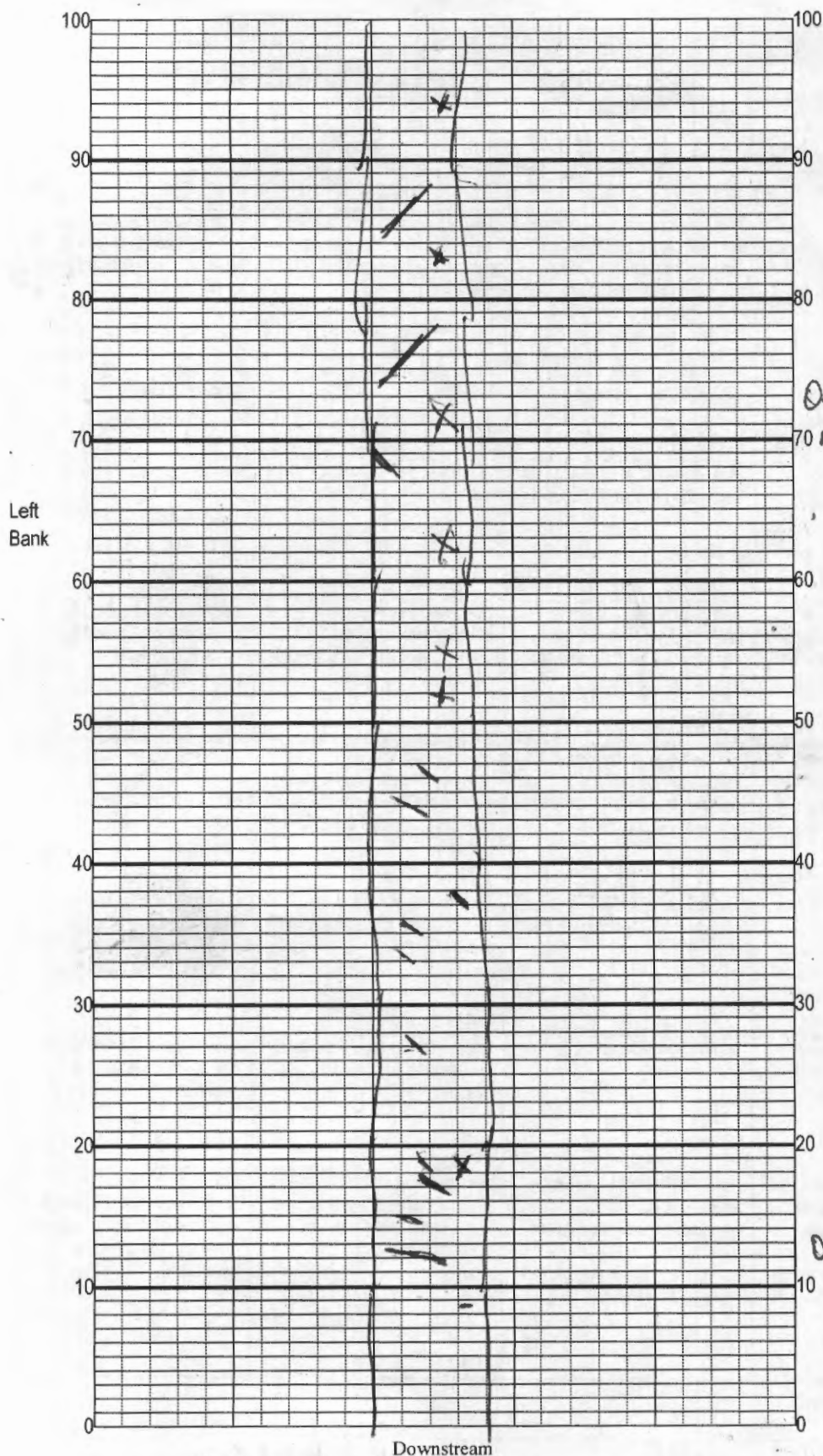
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 20030358	DATE (MM/DD/YY): 03-07-19	RECEIVING BODY OF WATER: LSJL
REMARKS:	COUNTY: St Johns	LOCATION: McCullough cr @ 13A	FIELD ID/NAME:	

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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>7</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 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>14</u>	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 <u>10</u> Primary Score <u>39</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 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>	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 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>6</u> Left Bank <u>6</u>	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 <u>10</u> Left Bank <u>10</u>	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 <u>10</u> Left Bank <u>10</u> Secondary Score <u>77</u>	10 9	8 7 6	5 4	3 2 1

111 **TOTAL SCORE**

Date: <u>03-07-19</u>	Analyst: <u>PO Ben</u>	Signature: <u>Patrick Ben</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



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

Location: MCCULLOUGH Cr @ 13A
Date: 03-07-19
Sampler: O'Connor

100 m: Latitude 29.838124
Longitude -81.498752
0 m: Latitude 29.837907
Longitude -81.500102

Substrates: Code key, draw proportionate habitat abundance. %

☒	Snags	_____
☒	Roots/undercut banks	_____
☐	Leaf Packs (or mats)	_____
☒	Aquatic Macrophytes	_____
☐		_____
☐		_____
☐	Pools	total # observed = <u>2</u> # range expected = <u>2</u>

Average width _____ m

Average depth _____ m

Velocity measured at 10 meter mark.

WQ & chemistry taken at 0 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:

0.2 m/s < 2 M of Macrophytes was observed while doing the LVS? YES or NO
24m² SNAG = 6%
7m² Roots = ~2%

79250

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: McCullough Cr

County:

Date: 3.7.19

Investigators: C Ruben P. Oconnor

STORET Station Number: 20030358

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	X	96	60	1	N	X	89
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
10	1	N	X	96	70	1	N	X	94
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
20	1	N	X	80	80	1	N	X	80
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
30	1	N	X	79	90	1	N	X	88
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
40	1	N	X	92	100	1	N	X	78
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
50	1	N	X	96	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 0.35
Estimated? N

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

Check accompanying data collected at same site/date.
Algal mat sample
Linear Veg Survey
Habitat Assessment
SCI/Biorecon
Water sample
RQ- 2019-03-04-17

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

79250 ✓

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

SAMPLE ID _____ ORG ID 21 FLA LATITUDE _____
 COUNTY _____ STORET # 20030358 LONGITUDE _____
 DATE 3/7/19 TIME 0910 SAMPLING AGENCY FDEP NE ROC
 SITE NAME McCollough Creek 815A
 FIELD ID/NAME 20030358 RECEIVING BODY OF WATER LSSR

RIPARIAN ZONE / STREAM FEATURES

Meter ID: EXO

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>75</u> Silviculture <u>5</u> Field/Pasture <u>10</u> Agricultural <u>10</u> Residential <u>10</u> Commercial <u>10</u> Industry <u>10</u> Other (Specify) <u>10</u>						Landscape Development Intensity Index (LDI) <u> </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> </u> <u>4.0</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) <u> </u>		<u> </u> m/s <u> </u> m/s <u> </u> m/s	
High Water Mark: <u>.5</u> + <u>.9</u> = <u>1.4</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		<u> </u> m deep <u> </u> m deep <u> </u> 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): <u> </u>			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			WATER SURFACE OILS		
Invert ☐ Peri ☐ % Coverage # Times Sampled # Times Sampled			Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)			Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		
Woody Debris (Snags) <u>6</u> <u>7</u> <u> </u> Undercut Banks / Roots <u>2</u> <u>7</u> <u> </u> Leaf Packs or Mat <u> </u> <u> </u> <u> </u> Aquatic Vegetation <u> </u> <u> </u> <u> </u> Rock or Shell Rubble <u> </u> <u> </u> <u> </u> Sand <u>10</u> <u>2</u> <u> </u> Mud / Muck / Silt <u>82</u> <u>4</u> <u> </u> Other <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u>			Top: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u>0.35</u> Mid: <u>0.3</u> <u>10.6</u> <u>6.93</u> <u>9.09</u> <u>81.0</u> <u>307</u> <u>0.15</u> <u> </u> Bottom: <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u> </u> <u>0.9</u>			Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☒ ☐ ☐ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SAS2740</u> Exp: <u>10-01-19</u>			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐		
AMBIENT FIELD CONDITIONS / NOTES: <u>DO mg/L 9.09</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.			SIGNATURE: <u> </u>		
SAMPLING TEAM <u>G. Ruben, P. O'Connor</u>			SAMPLING TEAM <u> </u>			SAMPLING TEAM <u> </u>		

Storet Number: 20030358

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.

Request Number: RQ-2019-03-04-17

SCI 2525 McCullough, 2247A SMR

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Page 1 of 3

last revised Jan 25, 2018

Customer: NE-DIST

Project ID: SMP

Requester: Jeremy M. Parrish

Collected By: C. Ruben, P. O'Connor

Field Report Prepared By: P. O'Connor

Sampling Agency: DEAR NEA LOC

Location		WIN/ Field ID: 20030358	☐ Comp ☒ Grab		Collection (comp begin or grab) Date 03-07-19 Time 0910	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s) (See pg 2) A+B
Field ID			Matrix (type, e.g., Salt, Fresh, etc) Surface Water Fresh		Diss. Oxygen 9.09	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #		McCULLOUGH CR @ SR 13A	Temp (C) 10.6		pH 6.93	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 307
Latitude		☐ dd ☐ dms	Longitude		☐ dd ☐ dms	Salinity (ppt) 0.15		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude		☐ dd ☐ dms	Longitude		☐ dd ☐ dms	Salinity (ppt)		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude		☐ dd ☐ dms	Longitude		☐ dd ☐ dms	Salinity (ppt)		
Location			☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____	Eastern Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #			Temp (C)		pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)
Latitude		☐ dd ☐ dms	Longitude		☐ dd ☐ dms	Salinity (ppt)		

Relinquished By: PO'Connor	Date/Time 03-07-19 1330	Shipping Method Fed Ex	Number of Coolers Shipped: 1	Received By:	Date/Time
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Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 to ALS JAK
	NE-ALS-ECQ						
Group: A	Bottle Type:	BG-500ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-E8321-DI						
	W-E8321-MS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP						
	W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						
Group: A	Bottle Type:	BG-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	3
	W-PSNP-TQ						
Group: B	Bottle Type:	PT-50ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	10 20
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2

