

data entry 1/12/21 SN

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

SAMPLE ID 8658 ORG ID 21FLWQSP LATITUDE 30.32555N
COUNTY Leon Co. STORET # 22020063 LONGITUDE -84.69391W
DATE 11/9/2020 TIME 950AM SAMPLING AGENCY FDEP/AEQAS
SITE NAME Black Creek
FIELD ID/NAME BLK375REF* RECEIVING BODY OF WATER Ochlocknee R.
LIMS ID 2207201

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) <u>1.1 (2015)</u>
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy				Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>4.5</u> m wide			
Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy							
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18m</u> Right Bank: <u>>18m</u>				Hydrologic Modification Score (per FT 3101) <u>1-2</u>			
High Water Mark: <u>1.5</u> + <u>0.6</u> = <u>2.1</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)			
Channelized: ☐ Some recovery ☐ Recent, severe				☒ 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 ☐ LCI ☐ BioRecon % Coverage Woody Debris (Snags) <u>6</u> Undercut Banks / Roots <u>8</u> Leaf Packs or Mat <u>2</u> Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>84</u> 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: <u>0.1</u> <u>20.6</u> <u>7.67</u> <u>7.9</u> <u>88</u> <u>75.2</u> Mid: Bottom: Meter ID: <u>154185</u> 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: System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐		
INVERT PERI # Times # Times Sampled Sampled Woody Debris (Snags) <u>5</u> Undercut Banks / Roots <u>5</u> Leaf Packs or Mat <u>5</u> Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>5</u> Mud / Muck / Silt Other Other			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☒ ☐ ☐ ☐ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		

SAMPLING TEAM
S. Noble, J. Jackson, J. Piacente

SIGNATURE:
Paul L. Noble

DATE:
11/9/2020

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

SAMPLING AGENCY: <u>FDEP/AEQAS</u>		STORET STATION NUMBER: <u>22020063</u>	DATE (MM/DD/YY): <u>11/9/2020</u>	RECEIVING BODY OF WATER: <u>Ochlocknee R.</u>
REMARKS:	COUNTY: <u>Leon</u>	LOCATION: <u>Black Creek</u>	FIELD ID/NAME: <u>BLACK 375 REF</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>11</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 <u>11</u>	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>15</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 <u>15</u> 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>18</u> Primary Score <u>57</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 <u>18</u> 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>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>86</u> Left Bank <u>8</u>	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 <u>6</u>	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 <u>10</u> Left Bank <u>10</u>	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 <u>10</u> Left Bank <u>10</u> Secondary Score <u>57</u> <u>74</u>	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

57 123 131 **TOTAL SCORE**

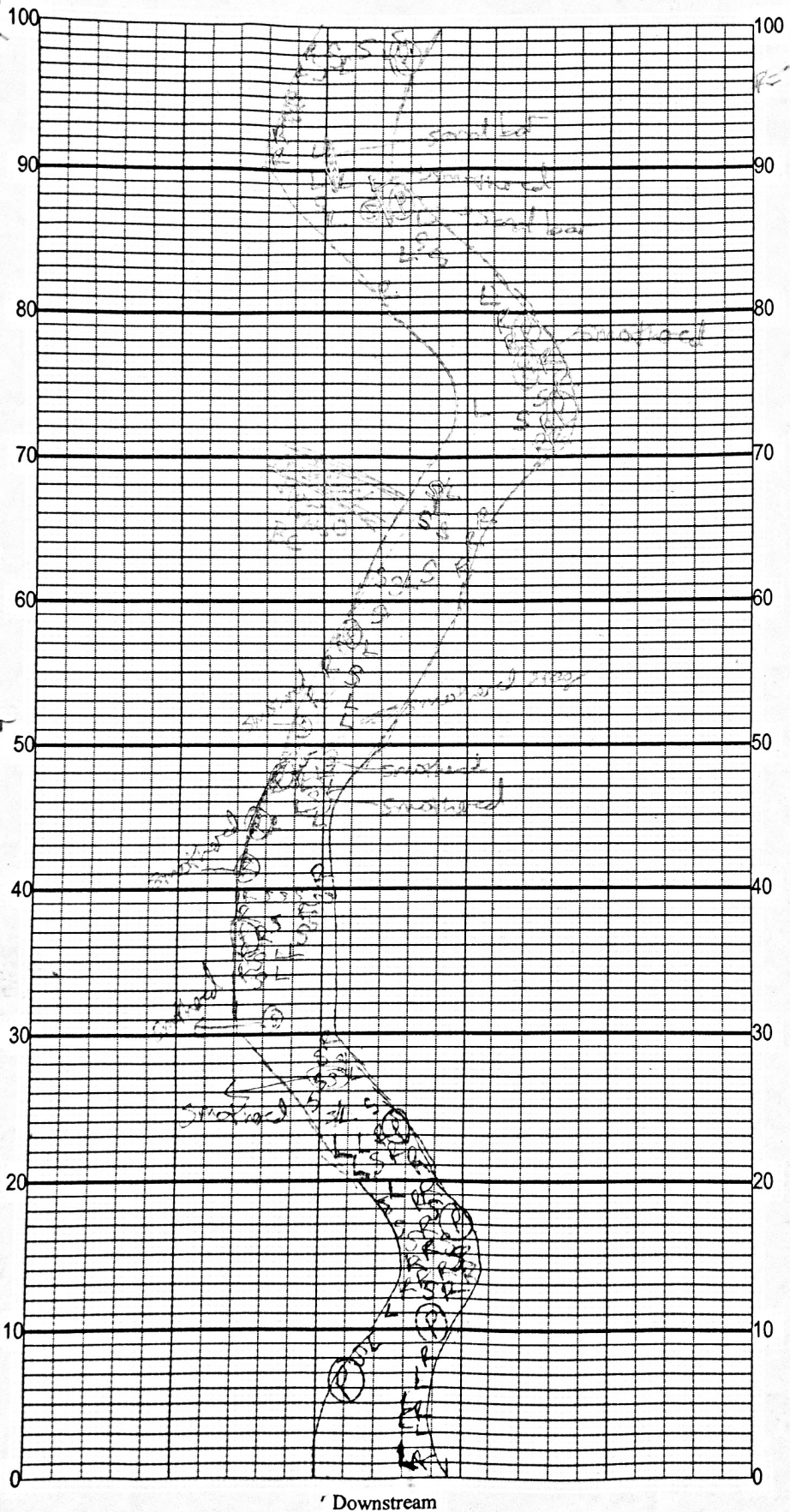
Date: <u>11/9/2020</u>	Analyst: <u>J. DiCente & S. Noble</u>	Signature: <u>J. DiCente</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

W=4m
d=.3m

d=.3m
w=3.5m

Left Bank



Location: Black Creek
Date: 11/9/2020
Sampler: Jennifer Racente

100 m: Latitude	
Longitude	
0 m: Latitude	<u>30.3255 N</u>
Longitude	<u>-84.6939 W</u>
Substrates: Code key, draw proportionate habitat abundance.	
☐ S	Snags <u>96</u> %
☐ R	Roots/undercut banks <u>8</u> %
☐ L	Leaf Packs (or mats) <u>2</u> %
☐ A	Aquatic Macrophytes <u> </u> %
☐ P	Pool <u> </u> %
☐	<u> </u> %
☐	<u> </u> %
total # observed = <u> </u>	
# range expected = <u> </u>	
Average width <u>4.5</u> m	
Average depth <u>0.6</u> m	
Velocity measured at <u>30</u> meter mark.	
WQ & chemistry taken at <u> </u> 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:

R 1/5
C 1/4
L 1/5
33
33

4.5 m = width
0.6 m = depth

RPS ID 9639

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

 Site: Black Creek County: Leon Date: 11/9/2020 Investigators: Jennifer Paccante/Sarah Noble
STORET Station Number: 22020063

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			60	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		92
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		96
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
30	1	N			90	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		96		5	N		94
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
40	1	N			100	1	X		
	2	N				2	X		
	3	N				3	X		
	4	N				4	X		
	5	X		96		5	X		nb
	6	X				6	X		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		

 Secchi depth
 Estimated?

 # points ranked 4-6 0
 total points assessed 80
 % 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-2020-11-09-36

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%.

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Date: 11/9/20 County: Leon

Storet Number: 2202006...

Signature: Haral L Noble

Comments: $< 2\text{m}^2$, no plants in stream/

[illegible]

spaces for additional taxa names.										Meter Mark										Specime n collected (check)	Meter Mark										Specime n collected (check)								
HERBACEOUS SPECIES										0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100		HERBACEOUS SPECIES											0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Alternanthera philoxeroides																		Micranthemum glomeratum																					
Bacopa caroliniana																			Micranthemum umbrosum																				
Bacopa monneri																			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)																			Sacciolepis striata																				
Hydrilla verticillata																			Sagittaria kurziana																				
Hydrocotyle																			Sagittaria lancifolia																				
Hygrophila polysperma																			Sagittaria latifolia																				
Hymenocallis																			Salvinia minima																				
Lachnanthes caroliniana																			Samolus parviflora																				
Landoltia punctata																			Saururus cernuus																				
Lemna																																							

DATE: 11/9/20 TIME 0500 EST CST DEPTH: 0.1 ft in FIELD ID: BLK375REF
(military)

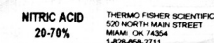
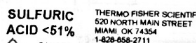
SAMPLING TEAM MEMBERS					WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
SARAH NOBLE						X		X	X
JOY JACKSON							X		
JENNIFER PIACENTE					X				

SAMPLING EQUIPMENT	
☐ Sample Container	☐ Tubing type: _____
☐ Pole	☐ Other _____
☐ Pump ID#: _____	☐ Other _____

WATER QUALITY MEASUREMENTS	
Instrument ID: <u>154185</u>	
COLLECTION MODE	
<u>Via Boat</u>	
☒ Wading	☐ Canoe
☐ Diving	☐ Electric Motor
☐ From Shore	☐ Gasoline Motor
☐ Other	

Parameter/Section	Parameter(s)/Method	Main Code	Preservation	Lot #	pH Check	# Bottles
Preserved Nutrients	☐ TKN ☐ TP ☐ NOx ☐ NH3 ☐ TOC ☐ Total N ☐ Other: _____	5 W	☒ Ice ☒ H2SO4		☒ <2	1
Filtered Nutrients	☐ oP ☐ Other: _____	5 W	☐ Ice ☒ .45 um Filter			1
Unpreserved Nutrients	☐ NO2 ☐ NO3 ☐ SO4 ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☐ TDS ☐ TSS ☐ TS ☐ Turbidity ☐ Alk ☒ Color ☐ Other: <u>2500 F, 404</u>	5 W	☒ Ice			1
Chlorophyll	☐ CHL-PPTN-W	5 W	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☒ E coli ☐ T Coli ☐ F Coli ☐ Entero ☐ F Strep	6 W	☒ Ice			1
Macroinvertebrates	☐ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	5 W	☒ Formalin			3
Phytoplankton	☐ PKD-QN-C ☐ DTY-QN-C	W	☐ Lugol's			
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☐ W-ICP ☐ W-FIAS ☒ W-ICPMS ☐ W-ICP-Tr	5 W	☒ HNO3		☐ <2	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO3 ☐ .45 um Filter		☐ <2	
Mercury	☐ W-HG-AF	W				
Base/Neutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice			
	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB	W	☐ Ice		☐ <2	
Pesticides	☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP ☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____ ☐ W-ACIDHERB	W	☐ Ice			
	☐ W-CARB	W	☐ Ice ☐ H2SO4			
	☐ W-VOC-MS	W	☐ Ice ☐ MCAA			
Purgeables	☐ W-VOC-MS-A	W	☐ Ice ☐ HCl			
Bioassay	Specify Test: _____	W	☐ Ice			
OTHER	PCR-BACR, GFD, HFI83	5 W	☐ Other: <u>ICE</u>			1

Notes:

[illegible]

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/protective face protection. Wash contaminated clothing before reuse. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/soak immediately all contaminated clothing. Rinse skin with water at least in a position comfortable for breathing. IF IN EYES: Cautionously and gently, for several minutes, flush eyes with water. If present and easy to do. Continue to flush. Store in container resistant to water. resistant to water.

W-E8321-D1 ICE (1)
W-E8321-MS ICE (1)
W-PSNP-TQ ICE (4)

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate sheet for field or laboratory duplicate or blank or different water depth

Enter "S" for surface if collected at a depth less than or equal to 1 foot

Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

PRESERVATIVES: 1 ml added unless otherwise noted

*Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

DEP Bureau of Laboratories Water Sample Collection Record

(Use with FDEP SOP-001/01 Form FD 9000-3 Physical/Chemical Characterization Field Sheet)