

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there are qualified data on this page.

Meter ID: 151

RQ: 2019-09-

Project: GCI

- Notes: (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification _____

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro- meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	J. Parnish	12/19/19	742	21.6	765	8.9	8.9	100.0	—	1.02	P/F	L/F
ICV	J. Parnish	12/19/19	743	21.6	765	8.8	8.87	100.7	—	1.02	P/F	L/F
CCV	A. Kalmbacher	12/19/19	1440	21.1	764	9.0	8.89	100.0	—	1.02	P/F	L/F
CCV											P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	J. Parnish	12/19/19	745	191018	10/20	1000	1000	P/F	L/F
ICV	J. Parnish	12/19/19	746	1907114	7/20	100	104	P/F	L/F
CCV	A. Kalmbacher	12/19/19	1443	191018	10/2020	1,000	1,002	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	J. Parnish	12/19/19		2902778	1/21	7.	22.4	7.01	19.6	P/F	L/F
Calibr.	J. Parnish			2904691	10/20	4.	22.7	4.00	60.9	P/F	L/F
Calibr.	J. Parnish			2904691	10/20	10.	22.8	10.03	-140.7	P/F	L/F
ICV	J. Parnish			2904691	10/20	4.	22.8	4.05	158	P/F	L/F
CCV	J. Parnish	12/19/19	→	2902778	11/2021	7.0	22.8	7.00	-15.1	P/F	L/F
CCV	A. Kalmbacher	12/19/19	1444							P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	J. Parnish	12/19/19	801	0.00	0.00	P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes ☒ No ☐

WIN Station Name: MILL BRANCH 400m upstream of Old San Mateo at Corrections

Date: 12/19/2019

(mm/dd/yyyy)

WIN/ Field ID: G2NE1209

WBID: 2592

Latitude: 29.6479

(Decimal Degrees)

County: Putnam

ORG ID: 21FLA

Longitude: -81.58877

(Decimal Degrees)

Receiving Body of Water: SJR

RQ-2019- 09-09-18

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment									
J. Parrish J. Kalmbacher						☒	☒	☒	☒	☒	☒ Sample Container ☐ Van Dorn ☐ Pole ☐ Carboy ☐ Syringe ☐ Dipper ☐ Other Depth Measured with <u>Secchi</u> Equipment ID <u>Ortho Rt 44</u>									
											Collection Method ☒ Wading ☐ Canoe/Kayak ☐ From Shore ☐ Electric Motor ☐ Other ☐ Gasoline Motor									
Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded						Meter ID# <u>YSI Pro DSS Slitch</u>					Matrix: <u>Fresh</u> Marine / DI									
Photos: Yes / <u>No</u>						Flow: No Flow / Intestinal <u>Flowing</u> / 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 (µmhos/cm)	Temp. (C°)										
<u>EST</u>	<u>1100</u>	<u>0.15</u>	<u>0.07</u>	<u>0.15</u>	<u>6.85</u>	<u>63.8</u>	<u>7.0</u>	<u>0.39</u>	<u>787</u>	<u>12.1</u>										
CEN				<u>S</u>																
Biological Samples Collected: <u>None</u> 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		<u>SA9203100</u>		<u>7/2020</u>		☐ <2								
Metals		☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO3		<u>NA834405</u>		<u>12/2019</u>		☐ <2								
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice		<u>R9BA88015</u>												
Chlorophyll		☒ CHLSUITE-W				☒ Ice														
Physical/Aggregate (Fresh)		☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CI-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 ID/Field ID:



G2NE1209

Mill Branch 400m upstream of Old San Mateo at Corrections

Signature:

J. Kalmbacher

Date:

12-19-2019

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

SCI Brandy Br and Cracker Br

Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: NE-DIST

Requester: Jeremy M. Parrish

Field Report Prepared By:

A. Kalmbacher

Project ID: SMP

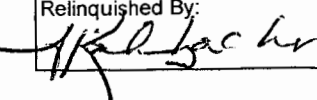
Collected By:

Jeremy Parrish

Sampling Agency:

FDEP/NE ROC

Location	WIN ID/Field ID:  G2NE1209	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 12-19-2019 Time 1100	Eastern ☒ Central	Composite end Date	Time	Bottle Group(s) (See pg 2)	
Field ID	Mill Branch 400m upstream of Old San Mateo at Corrections	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 6.85	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	A, B	
WIN/STO		Temp (C) 12.1	pH 7.0	Sample Depth 0.07	☐ ft ☒ m	Sp. Conductance (umho/cm) 787		
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt) 0.39	Comments			
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	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)	Comments			
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	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)	Comments			
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date	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)	Comments			

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
	12-19-2019	FedEx	1		

1430

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 → Sent to ALS
	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	0
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2

Group: B Bottle Type: PJ-2L # of Bottles: 4 Preservative: Formalin Enter Number of Bottles Sent to Lab

2

MI-FW-QLDC

1400

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

SAMPLE ID _____ ORG ID 21FLA LATITUDE 29.6479
 COUNTY Putnam STORET # 62NE1209 LONGITUDE -81.58877
 DATE 12/19/19 TIME 1100 SAMPLING AGENCY _____
 SITE NAME Mill Branch 400m upstream of Old Sunnyside Correctional
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

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 <u>1.75</u> m wide
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>218</u> Right Bank: <u>218</u>				Hydrologic Modification Score (per FT 3101) ☐		m/s <u>0.125</u> m/s ☐ m/s	
High Water Mark: <u>0.9</u> + <u>0.2</u> = <u>0.7</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		m deep <u>0.75</u> 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 ☐ LCI ☐ BioRecon			WATER QUALITY							
Woody Debris (Snags) <u>3.75</u> <u>7</u> <u>7</u> Undercut Banks / Roots <u>4.25</u> <u>7</u> <u>7</u> Leaf Packs or Mat Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>75</u> <u>3</u> <u>3</u> Mud / Muck / Silt <u>25</u> <u>3</u> <u>3</u> Other Other			Depth (M) Top: ☐ Mid: ☐ Bottom: <u>0.15</u>	Temp. (°C) <u>12.1</u>	pH (SU) <u>7.0</u>	D.O. (MG/L) <u>6.85</u>	D.O. Sat (%) <u>63.8</u>	Cond. (UMHO/CM) <u>787</u>	Salinity (PPT) <u>0.34</u>	SECCHI (M) <u>0.15</u> ☒ VOB TOTAL DEPTH ☐
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☒ ☐ ☐			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Water Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐				
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>not 25g water plants</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM

SIGNATURE:

DATE:

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Mill Branch</u>					County: <u>Putnam</u>		Date: <u>12-19-2019</u>		Investigators: <u>J. Parrish / A. K. Imbecher</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	STORET Station Number: <u>G2NE1209</u>
0	1	N	N		60	1	N	N		Secchi depth Estimated?
	2					2				
	3					3				
	4					4				
	5			96		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N	N		# points ranked 4-6 <u>0</u> total points assessed <u>99</u> % points ranked 4-6 <u>0/100</u>
	2					2				
	3					3				
	4					4				
	5			88		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N	N		Check accompanying data collected at same site/date. Algal mat sample Linear Veg Survey Habitat Assessment SCI/Biorecon Water sample RQ- <u>2019-09-09-18</u>
	2					2				
	3					3				
	4					4				
	5			76		5			80	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	N		90	1	N	N		Algal Thickness Rank
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	N		100	1	N	N		N rough, no algae, slimy, algae up to 1mm 3 >1mm - 6mm 4 >6mm - 20mm 5 >20mm - 10 cm 6 >10 cm
	2					2				
	3					3				
	4					4				
	5			96		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N			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			96						
	6									
	7									
	8									
	9									

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

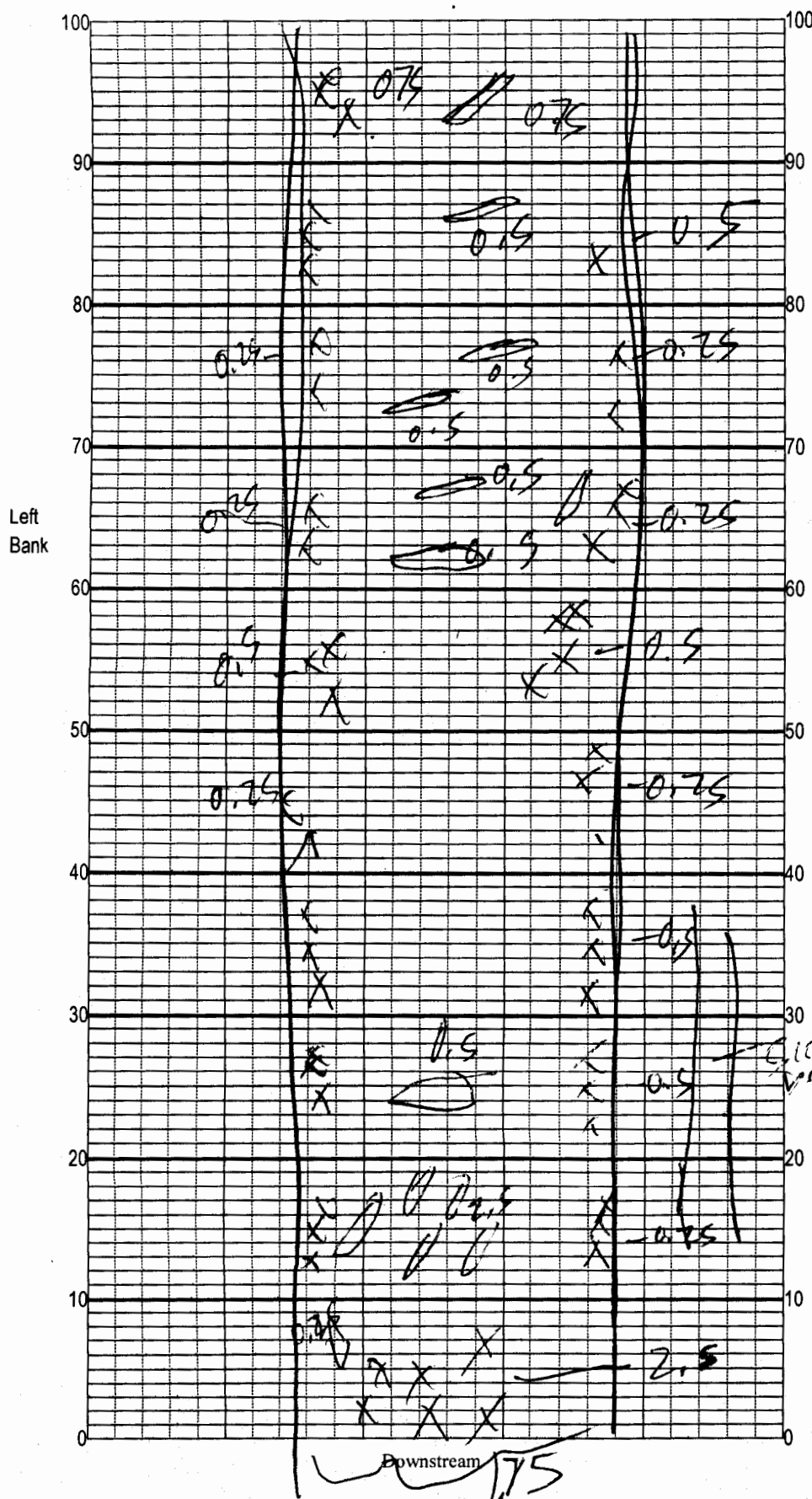
SAMPLING AGENCY:		STORET STATION NUMBER: <u>62NE1209</u>	DATE (MM/DD/YY): <u>12/19/19</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Penn</u>	LOCATION: <u>Mill Branch 400m above old Sunnyside Prison</u>	FIELD ID/NAME:	

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 <u>8</u> 7 6	5 4 3 2 1
Substrate Availability <u>5</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 <u>8</u> 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>13</u> Primary Score <u>44</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 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 <u>19</u>	20 <u>19</u> 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 <u>6</u> Left Bank <u>6</u>	10 9	8 7 <u>6</u>	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>8</u> Left Bank <u>10</u>	<u>10</u> 9	<u>8</u> 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>7</u> Left Bank <u>8</u> Secondary Score <u>64</u>	10 9	<u>8</u> <u>7</u> 6	5 4	3 2 1

108 TOTAL SCORE

Date: <u>12/19/19</u>	Analyst:	Signature:
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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: _____

Date: _____

Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags 3.75

☒ Roots/undercut banks 4.25

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☐ _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ 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:

Snags 1.25 + 1 + 0.5 + 2.5
3.75
2.5
6.25
Roots - 2.5 + 0.25 + 1.5 + 1.5
+ 1.5 + 1.5 + 1.75
0.25 m sec 3.5 5.75
6.75
7.5
1.75 - 1
3.5 = 2
5.25 - Revision Date: January 2017

[illegible]