



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name:

Gold Head Branch

Date: 2/18/16

4/25/16
(mm/dd/yyyy)

STORET Station ID:

20030414

Latitude:

29° 50' 50"

(Decimal Degrees)

WBID:

2528 G

RQ - 2016-04-25-07

ORG ID: 21FLA

Longitude:

81° 57' 03"

(Decimal Degrees)

Receiving Body of Water:

St. Marys River

Field ID:

County:

Alachua

Clay

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Amy Kalmbacher												
Pat O'Connor												
- J Perkins						X	X		X	X		
- B Davis						X		X				

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Equipment ID		

Collection Method	
☒ Wading	☐ Via Boat
☐ From Shore	☐ Canoe/Kayak
☐ Other (note below)	☐ Electric Motor
	☐ Gasoline Motor

Water Level: Dry / Low / Normal / High / Flooded						Matrix: Fresh / Marine / DI					
Meter ID#			Photos: Yes / No			Tide Falling: Yes / No / NA					
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)	
EST	1015	0.2	0.2	7.54	84.6	7.67	0.01	VOB	21	21.02	
CEN											

Biological Samples Collected: None HA SCI LVS RPS LVI Other					
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ 1KN / TP / Nox / NH3 / TOC ☐ Other	☐ Ice ☐ H2SO4	589020	9/16	☒ <2
Metals	☐ W-ICPMS ☒ W-ICP	☐ Ice ☐ HNO2			☐ <2
Filtered Nutrients	☒ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice			
Chlorophyll	☒ CHLSUITE-W	☐ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other	☐ Ice			
Macroinvertebrates	☒ MI-FW-QQDC	☐ Formalin			
Microbiology	☒ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Source ID: W-PCP-AA-R W-SUC-AA-R

ICE

Notes: PCR-HF183 & 2 PCR	Place Label Here (If Available)
Signature:	Date:

Field Parameters Entered into LIMS: <u>JP 4/28/16</u> (Initials/Date)	Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date)	Field Sheets Scanned/Saved: <u>5010 entered JP 4/28</u> (Initials/Date)

76045

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

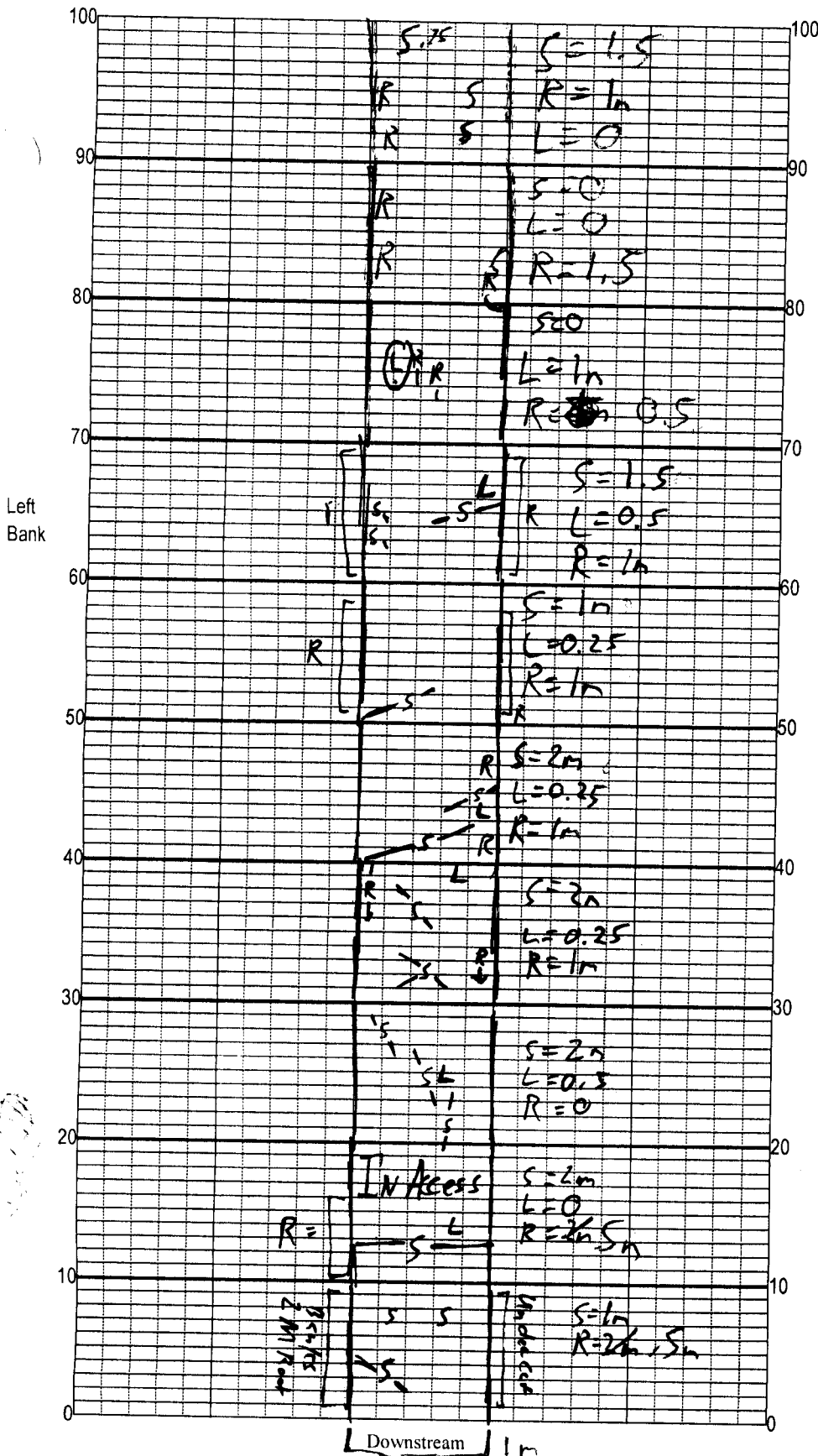
SAMPLING AGENCY:	STORET STATION NUMBER: <u>20030419</u>	DATE (MM/DD/YY): <u>4/25/10</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Clay</u>	LOCATION: <u>Goldens Pt. Mill site</u>	FIELD ID/NAME:

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>15</u>	20 19 18 17 16	<u>15</u> 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>14</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 <u>14</u> 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>16</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 <u>16</u>	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>14</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 <u>14</u> 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 Artificial Channelization <u>20</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. <u>20</u> 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank <u>8</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. <u>8</u> 7 6	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 <u>10</u> 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>76</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. <u>10</u> 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

135 **TOTAL SCORE**

Date: <u>4/25/10</u>	Analyst: <u>[Signature]</u>	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. %

☐ S	Snags	12	10.5
☐ R	Roots/undercut banks	7	
☐ L	Leaf Packs (or mats)	2.5	
☐	Aquatic Macrophytes		
☐			
☐			
☐ P	Pools	total # observed = 3	# range expected = 8

Average width 1 m

Average depth 0.2 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:



76045

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

SAMPLE ID 20030414 ORG ID 21FLA LATITUDE 29° 50' 50"
 COUNTY Clay STORET # 20030414 LONGITUDE 81° 57' 03"
 DATE 4/25/16 TIME 10:15 SAMPLING AGENCY FWP/NE
 SITE NAME Goldhead Mill site
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Lake

RIPARIAN ZONE / STREAM FEATURES

Meter ID: _____

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 _____ m/s _____ m/s _____ m/s _____ m deep _____ m deep _____ m deep
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>1</u>			
High Water Mark: <u>38.3</u> + <u>0.2</u> = <u>0.5</u> (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%)			

SEDIMENT / SUBSTRATE

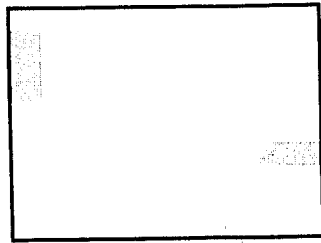
Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): _____		Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐	
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☐ RPS ☐ LVS ☐ LCI ☐ BioRecon			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: _____ Mid: <u>0.1</u> <u>21.0</u> <u>7.67</u> <u>7.5</u> <u>84.6</u> <u>21</u> <u>0.01</u> <u>NOB</u> Bottom: <u>0.2</u> _____ System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐		
Woody Debris (Snags) <u>10.5</u> <u>5</u> _____ Undercut Banks / Roots <u>7</u> <u>5</u> _____ Leaf Packs or Mat <u>2.5</u> <u>5</u> _____ Aquatic Vegetation _____ Rock or Shell Rubble.. _____ Sand..... <u>80</u> <u>5</u> _____ 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 ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐		
AMBIENT FIELD CONDITIONS / NOTES: Hydrologic Disturbance Scoring ☒ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.			SAMPLING TEAM <u>JP Miller</u> SIGNATURE: <u>JP Miller</u> <u>4/25/16</u>		

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

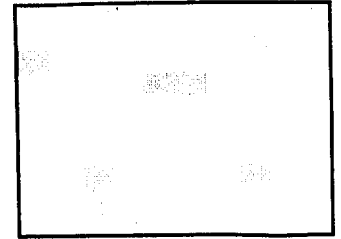
Site: <u>Goldhead Br.</u>					County:		Date: <u>4/25/16</u>		Investigators: <u>SP 1B</u>	
									STORET Station Number:	
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	
0	1	N	N	96	60	1	N	N	94	Secchi depth
	2					2				Estimated?
	3					3				
	4					4				# points ranked 4-6
	5					5				total points assessed
	6					6				% points ranked 4-6
	7					7				
	8					8				
	9	X	N			9				
10	1	N	N	96	70	1	N	N	96	Check accompanying data collected at same site/date.
	2					2				Algal mat sample
	3					3				Linear Veg Survey
	4					4				Habitat Assessment
	5					5				SCI/Biorecon
	6					6				Water sample
	7					7				RQ-
	8					8				
	9	X	N			9				
20	1	N	N	96	80	1	N	N	96	Algal Thickness Rank
	2					2				N
	3					3				rough, no algae, slimy, algae up to 1mm
	4					4				3
	5					5				>1mm - 6mm
	6					6				4
	7					7				>6mm - 20mm
	8					8				5
	9	X	N			9				>20mm - 10 cm
30	1	N	N	96	90	1	N	N	96	6
	2					2				>10 cm
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9	X	N			9				
40	1	N	N	92	100	1	N	N	96	
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9	X	N			9				
50	1	N	N	96		1	N	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.
	2					2				Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.
	3					3				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.
	4					4				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%.
	5					5				
	6					6				
	7					7				
	8					8				
	9	X	N			9				

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

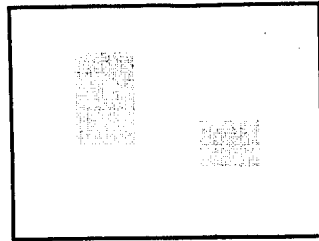
5% Macrophyte Coverage



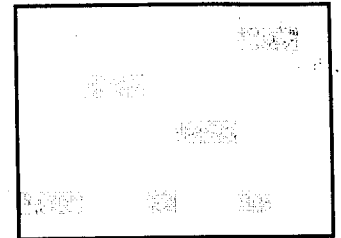
5% Macrophyte Coverage



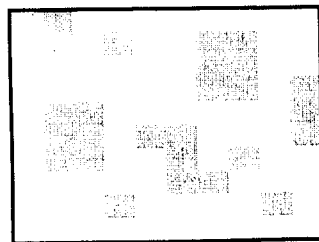
10% Macrophyte Coverage



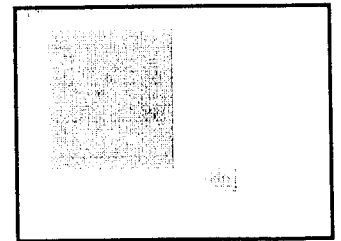
10% Macrophyte Coverage



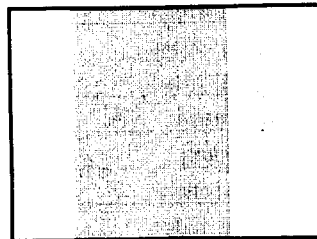
25% Macrophyte Coverage



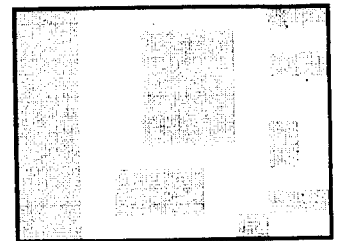
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



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

Boldly "X" this box if there is qualified data on

Meter ID: **YSI 556 #1**

Project: **SCI Reference**

RQ - 2016-04-25-07

- Notes:** (1) Numbers ≤ 4 , are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
 (2) Always wait for meter to stabilize before recording any readings.
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site **Lab**

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification **4/16**

DO DEP SOP FT 1500 Calibr.	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass /	Lab /
	B. Davis	4/25	848	23.45	8.49	8.49	100	/	/	P	L
ICV	↓	↓	779	23.45	8.49	8.50	100	/	/	P	L
CCV	↓	↓	1550	26.25	8.06	8.12	100.5	/	/	P	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

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; DO charge N/A.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec.	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass /	Lab /
Cond.									
Calibr.	B. Davis	4/25	753	160216A	2/17	1000	1000	P	L
ICV	↓	↓	753	↓	↓	1000	1000	P	L
CCV	↓	↓	1551	160216B	8/16	100	101	P	L
CCV									

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

pH	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer	Meter reading SU	mV	Pass /	Lab /
DEP SOP										
Calibr.	B. Davis	4/25	755	2509677	8/17	7.0	7.0		P	L
Calibr.	↓	↓	759	2509674	9/17	4.0	4.0		P	L
Calibr.	↓	↓	803	2510488	4/17	10.0	10.0		P	L
ICV	↓	↓	807	2509677	8/17	7.0	7.0		P	L
CCV	↓	↓	1555	2509674	9/17	4.0	3.94		P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU; mV pH7 Range 0 ± 50 ;

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

mV pH 10 Range -180 ± 50 ; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 m

Depth (Quarterly)

Date of Last Depth Verification

Depth Sensor	Name	Date	Time	Zero the Sensor	ICV Value	Pass /	Lab /
Pressure mode in air				0.000			

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater

Sci CP 7/5/16

QA/QC Sample Information

Duplicate

Time Zone: EST CEN		Sample Depth (m): _____		Field ID: _____	
Time: _____		Total Depth (m): _____			
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☐ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☐ Ice ☐ H ₂ SO ₄			☐ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☐ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice			
Physical/Aggregate	☐ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____			

Blank

Time Zone: EST CEN		Time: _____		Field ID: _____		Location: _____	
☐ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank		Equimnet ID _____					
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check		
Preserved Nutrients	☐ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☐ Ice ☐ H ₂ SO ₄			☐ < 2		
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2		
Filtered Nutrients	☐ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)				
Chlorophyll	☐ CHLSUITE-W	☐ Ice					
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice					
Physical/Aggregate	☐ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☐ Ice					
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ QPCR	☐ Ice					
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____					

Notes:		Place Label Here (If Available)	
Signature: _____		Date: _____	

Field Parameters Entered into LIMS: _____ (Initials/Date)	Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date)	Field Sheets Scanned/Saved: _____ (Initials/Date)