



field ID



21010018 01012016

PROTECTION
D SHEET

PAGE 1 OF 1

Data Qualified?
Yes / NoDate: 11/01/2016
(mm/dd/yyyy)

STORET Station Name: _____

Falling Creek
above Falls

storet ID



21010018

STORET Station ID: _____

Latitude: _____

(Decimal Degrees)

WBID: 3477 RQ-2016-10-2415

ORG ID: 21 FLA

Longitude: _____

(Decimal Degrees)

Receiving Body of Water: SUWANNEE R

Field ID: _____

County: COLUMBIA

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
BRIAN DAVIS			✓	✓		
PATRICK O'CONNOR		✓	✓	✓	✓	✓

Sampling Equipment	
☒ Sample Container	☐ Van Dorn ☐ Pole
☐ Carboy	☐ Syringe
☐ Dipper	☐ Other _____
Equipment ID _____	
Collection Method	
☒ Wading From	☐ Via Boat
☒ Shore	☐ Canoe/Kayak
☐ Other (note below)	☐ Electric
	☐ Motor

Water Level: Dry / Low / Normal / High / FloodedMeter ID# QUANTATHI DEP143731 Photos: Yes / NoMatrix: Fresh / Marine / DITide Falling: Yes / No / NA

Time Zon	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	1040	0.3	0.5	3.8	39.2	7.6-8	0.04	0.4	70	17.1
CEN										

Biological Samples Collected: None HA SCI LVS RPS LVI Other Phys chem

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	157449	12/19/2016	☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO2			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☐ BOD-UNIN	☐ Ice			
Physical/Aggregate (Kit A)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ 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			

Place Preservative Sticker(s) Here
(If Available)

Notes: Duplicate samples taken RPS LVS

field ID



21010018 01012016

Falling Creek
above Falls

storet ID



21010018

Signature: Patricia O'Connor

Date: 11/01/16

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)

DEP-SOP-001/01: Form FD 9000-3
PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

EL-25

SAMPLE ID: _____ ORG ID: _____ Latitude: _____ Longitude: _____
 COUNTY: Columbia STORET #: 210/0018
 DATE: 11/01/16 TIME: 1040
 SITE NAME: FALLING Creek Above Falls SAMPLE COMPLETE? Yes
 FIELD ID/NAME: _____ RECEIVING BODY OF WATER: SUWANNEE River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):
 Forest/Natural 15 silviculture _____ Field/Pasture _____ Agricultural _____ Residential 5 Commercial _____ Industry _____ Other (Specify) 80 County Park

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: 218 Right Bank: 218

High Water Mark: 2.0 + 0.5 = 2.5 Artificially Impounded ☐ Yes ☒ No
 (m) (above present water level) (present depth) (above bed)

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
5-7 m wide
0.05 m/s
0.5 m deep

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse
Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic
☐ Other (Specify): _____
Sediment Deposition ☐ Sludge Sand Smothering: None Slight Moderate Severe
 Silt Smothering: None Slight Moderate Severe
☐ Other (Specify): _____

SUBSTRATE TYPE
 Assessment Tool: ☐ SCI ☐ BioRecon ☐ LCI ☐ LVI
 Woody Debris (Snags) 21 NA —
 Undercut Banks / Roots 21 NA —
 Leaf Packs or Mat _____
 Aquatic Vegetation _____
 Rock or Shell Rubble 40 NA —
 Sand _____
 Mud / Muck / Silt _____
 Other _____
 Other _____

WATER QUALITY
 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)
 Top: _____
 Mid-Depth: 0.3 17.1 6.8 3.8 70 0.04 0.4
 Bottom: _____
 Water Surface Oils: ☒ None ☐ Sheen ☐ Globbs ☐ Slick
 Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical
☐ Other (Specify): _____
 Water Sample Taken ☒ Yes ☐ No
 Algae Sample Taken ☐ Yes ☒ No
 Clarity ☒ Clear ☐ Slightly Turbid ☐ Turbid ☐ Opaque
 Color ☒ Taninic ☐ Green (Algae) ☐ Clear ☐ Other (Specify): _____

SYSTEM TYPE ☒ Stream ☐ Lake ☐ Wetland ☐ Estuary
☐ Other (Specify): _____

WEATHER CONDITIONS / NOTES:
Low Flow
RQ-2016-10-24-15
☒ The antecedent hydrologic conditions have been met to my best knowledge.
 Water samples preserved? ☒ Yes ☐ pH<2 ☐ No ☐ Algae samples preserved? ☐ Yes ☐ No

ABUNDANCE
 Absent Rare Common Abundant
 Periphyton: ☐ ☐ ☒ ☐
 Fish: ☒ ☐ ☐ ☐
 Aquatic Macrophytes: ☒ ☐ ☐ ☐
 Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐

SAMPLING TEAM: B. DAVIS, P. O'Connor **SIGNATURE:** [Signature] **DATE:** 11/01/16

e:				County:		Date:		Investigators:			
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (0-6)	Canopy Cover (# shaded)	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (0-6)	Canopy Cover (# shaded)	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (0-6)	Canopy Cover (# shaded)
0	1	N		40	1	N		80	1	N	
	2	N			2	N			2	N	
	3	N			3	N			3	N	
	4	N			4	N			4	N	
	5	N	96		5	N	87		5	N	87
	6	N			6	N			6	N	
	7	N			7	N			7	N	
	8	N			8	N			8	N	
	9	N			9	N			9	N	
10	1	N		50	1	N		90	1	N	
	2	N			2	N			2	N	
	3	N			3	N			3	N	
	4	N			4	N			4	N	
	5	N	95		5	N	88		5	N	96
	6	N			6	N			6	N	
	7	N			7	N			7	N	
	8	N			8	N			8	N	
	9	N			9	N			9	N	
20	1	N		60	1	N		100	1	N	
	2	N			2	N			2	N	
	3	N			3	N			3	N	
	4	N			4	N			4	N	
	5	N	93		5	N	96		5	N	87
	6	N			6	N			6	N	
	7	N			7	N			7	N	
	8	N			8	N			8	N	
	9	N			9	N			9	N	
30	1	N		70	1	N			1	N	
	2	N			2	N			2	N	
	3	N			3	N			3	N	
	4	N			4	N			4	N	
	5	N	73		5	N	85		5	N	
	6	N			6	N			6	N	
	7	N			7	N			7	N	
	8	N			8	N			8	N	
	9	N			9	N			9	N	

Check accompanying data collected at same site/date.

Water sample

Algal mat sample

SCI/Biorecon (circle 1)

Habitat Assessment

RQ:

Algal Thickness Rank

0	rough, no algae
1	< or =0.5 mm or slimy
2	>0.5 - 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 10 cm
6	>10 cm

Record an "X" for points where algae is not sampled because the substrate cannot be seen or reached with the hand. If the cell is left blank, data managers will assume point was not evaluated.

Record canopy cover as the NUMBER OF SMALL DENSIOMETER SQUARES (OUT OF 96) THAT HAVE CANOPY COVER. Measure while facing upstream.

Collect an 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-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

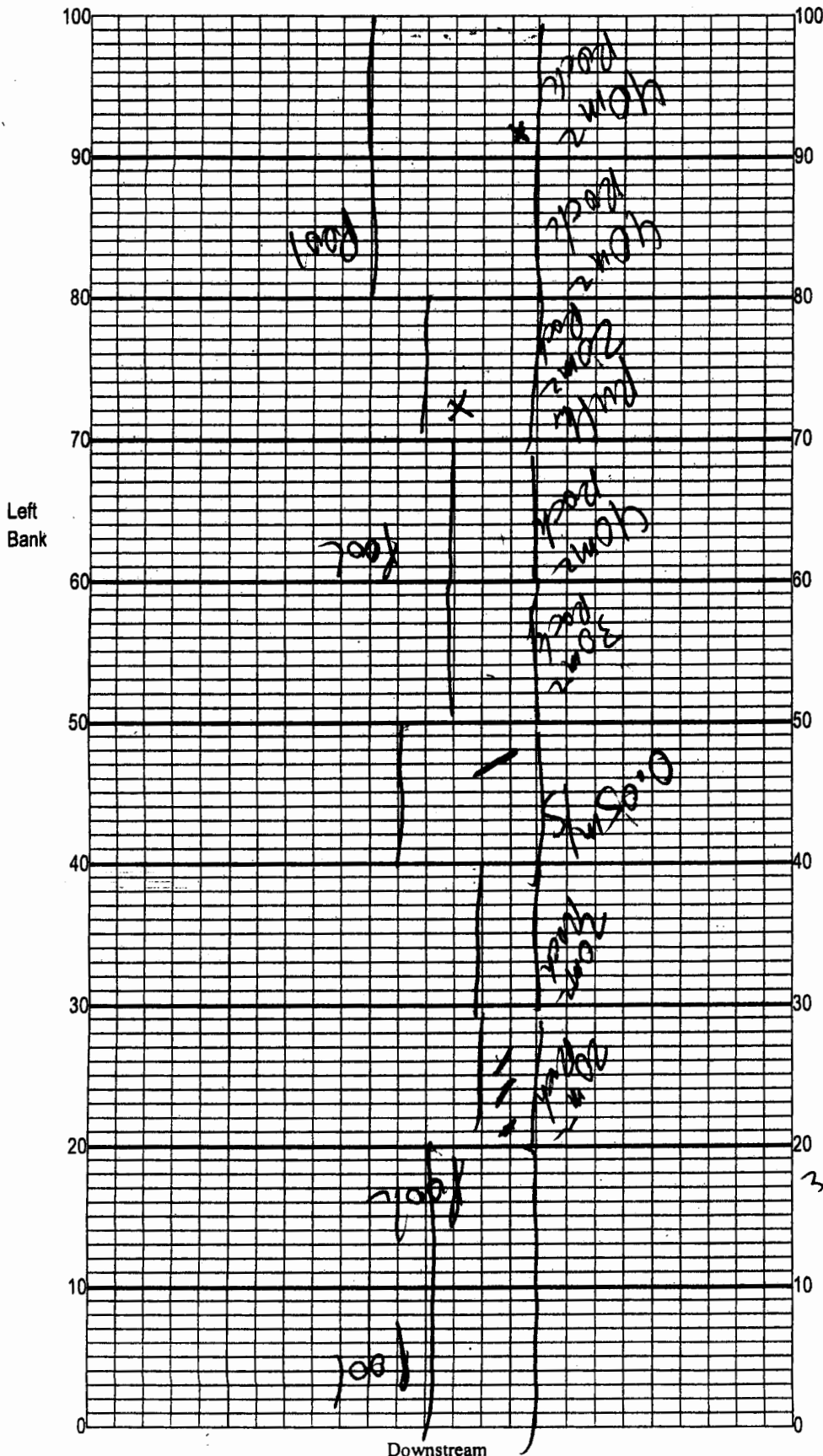
SUBMITTING AGENCY CODE: _____ SUBMITTING AGENCY NAME: _____		STORET STATION NUMBER: <u>21010018</u>	DATE (MM/DD/YY): <u>11/01/16</u>	RECEIVING BODY OF WATER: <u>SUN AMMER River</u>
REMARKS:	COUNTY: <u>Colusa</u>	LOCATION: <u>Fallings Crs Above falls</u>	FIELD ID/NAME: _____	

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>11</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>20</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>6</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>13</u> Primary Score <u>50</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 Right Bank <u>6</u> Left Bank <u>6</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 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 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>72</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

122 TOTAL SCORE

Date: <u>11/01/16</u>	Analyst: <u>P. O. Conn</u>	Signature: <u>P. O. Conn</u>
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DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Falling Creek
Above Falls

Date: 11/01/16

Sampler: POC

100 m: Latitude _____	Longitude _____
0 m: Latitude _____	Longitude _____
Substrates: Code key, draw proportionate habitat abundance. %	
☐ Snags	4
☐ Roots/undercut banks	4
☐ Leaf Packs (or mats)	_____
☐ Aquatic Macrophytes	_____
☐ Rock	40
☐ _____	_____
☐ Pools	total # observed = _____ # range expected = _____
Average width <u>5</u> m	
Average depth <u>0.4</u> m	
Velocity measured at <u>50</u> meter mark.	
WQ & chemistry taken at <u>100</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:

370m²

210m² - Rock

6m² SNA

2m² Root

No AQUATIC
Vegetation

QA/QC Sample Information

field ID



G1NE0236 01012016

Duplicate

Time Zone: EST CENSample Depth (m): 0.3Falling Creek
above Falls DUP

storet ID



21010018

Time: 1045Total Depth (m): 0.5

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☒ Ice ☒ H ₂ SO ₄	157449	12/19/16	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 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			
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 _____			
Place Preservative Sticker(s) Here (If Available)					

Blank

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			
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 _____			
Place Preservative Sticker(s) Here (If Available)					

Notes:

Duplicate H₂O Quality Samples
RQ-2016-10-24-15

field ID



G1NE0236 01012016

Falling Creek
above Falls DUP

storet ID



21010018

Signature: PO CommDate: 11/01/16

Field Parameters Entered into LIMS:

(Initials/Date)

Field Parameters QC in LIMS:

(Initials/Date)

Date Migrated to STORET:

(Initials/Date)

Field Sheets Scanned/Saved:

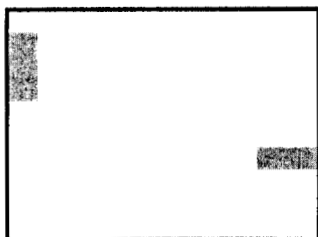
(Initials/Date)

[illegible]

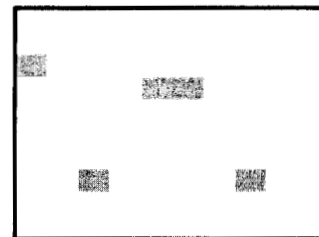
* NO AQUATIC VEGETATION

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

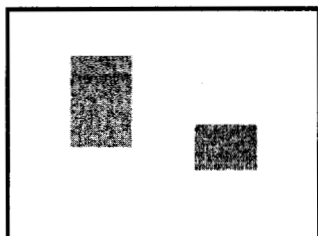
5% Macrophyte Coverage



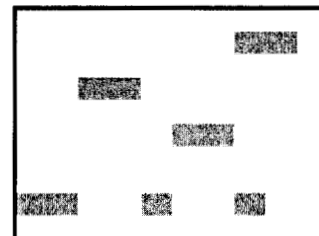
5% Macrophyte Coverage



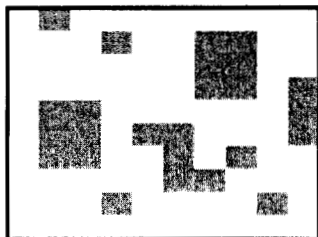
10% Macrophyte Coverage



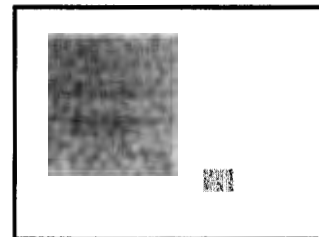
10% Macrophyte Coverage



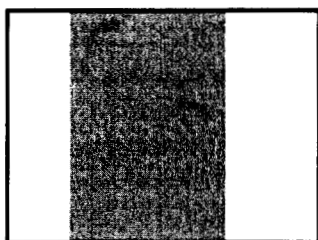
25% Macrophyte Coverage



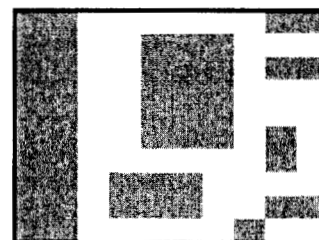
25% Macrophyte Coverage



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 this page.

Meter QUANTA #1 RQ- 2016-10-24-15 Project Swanagee #1

- 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 07/16

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

03/04/2016 - 07/16

DO FDEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	POCorm	11/01/16	0655	23.3	8.53	8.50	100.0	—	—	Pass	LAB
ICV	✓	✓	0705	23.5	8.49	8.47	100.0	—	—	Pass	LAB
CCV	POCorm	11/01/16	1405	23.5	8.79	8.49	100.3	—	—	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. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	POCorm	11/01/16	0710	160616A	06/2017	1000	1000	Pass	LAB
ICV	✓	✓	0712	160616B	12/2016	100	104	Pass	LAB
CCV	B P. v. 15	11/01/16	1415	160616A	06/17	1000	1005	P	L
CCV									

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

Conductivity Acceptance criteria $\pm 5\%$

pH FDEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	POCorm	11/01/16	0715	2606EC4	06/2018	7.0	7.00	—	Pass	LAB
Calibr.	✓	✓	0718	2602556	01/2018	4.0	4.00	—	Pass	LAB
Calibr. ICV	✓	✓	0720	2510A88	04/2017	10.0	9.93	—	Pass	LAB
ICV	B P. v. 15	11/1/16	1418	2602556	06/18	4.0	4.12	—	P	L
CCV										
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU; mV pH7 Range 0 $\pm$ 50; mV pH 4 Range +180 $\pm$ 50;
 mV pH 10 Range -180 $\pm$ 50; Slope from 7 to 10 and 4 to 7 must be between 165 and 180mV

Depth (Quarterly)

Date of Last Depth Verification

N/A

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

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