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: YSI EXO RQ- 2019-05-13-19 Project: LSJR ~~SCE~~ HA

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.	JParrish	5/14/19	718	23.4	758	8.5	8.5	99.7	—	—	P / F	L / F
ICV	"	"	720	23.4	758	8.5	8.5	99.8	—	—	P / F	L / F
CCV	JParrish	5/14/19	1500	26.8	758	8.0	7.9	99.2	—	—	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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	JParrish	5/14/19	722	1904304	5/20	1000	1000	P / F	L / F
ICV	"	"	725	147430	12/19	147	152	P / F	L / F
CCV	JParrish	5/14/19	1505	10141318	9/19	1413	1438	P / F	L / F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 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.	JParrish	5/14/19	727	2811681	11/20	7.	24.6	7.00	39.4	P / F	L / F
Calibr.	"	"	728	2901440	1/21	4.	24.6	4.00	~~138.5~~ 138.3	P / F	L / F
Calibr.	"	"	729	28099480	3/20	10.	24.5	10.04	208.2	P / F	L / F
ICV	"	"	730	2901440	1/21	4.0	24.6	4.05	136	P / F	L / F
CCV	JParrish	5/14/19	1512	28099480	3/20	10.0	24.4	9.95	204.9	P / F	L / F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 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						P / F	L / F

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

COMMENTS:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / No

WIN Station Name: SJR@CM6 Putnam CO **Date:** 5/14/19 (mm/dd/yyyy)

WIN/ Field ID: 20030222 **WBID:** 2213M **Latitude:** 29.640006 (Decimal Degrees)

County: Putnam **ORG ID:** 21FLA **Longitude:** -81.603430 (Decimal Degrees)

Receiving Body of Water: Atlantic **RQ-2018-** 2019-05-13-19

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J Parrish	✓		✓		
B Davis		✓		✓	✓

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☐ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with: MOE
- Equipment ID: Odeo #7

Collection Method
- ☐ Wading ☐ Canoe/Kayak
- ☐ From Shore ☐ Electric Motor
- ☐ Other ☑ Gasoline Motor

Water Level: Dry/ Pooled/ Low / (Normal) / (High) / Flooded **Meter ID#** MOE **Matrix:** (Fresh) / Marine / DI

Photos: (Yes) / No **Flow:** No Flow / Intestital / (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 8.44	Salinity (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1145	4.7	0.3	0.5	9.66	123.9	~~8.45~~ BV	0.45	919	28.09
CEN	1150		3.8		8.62	109.9	8.37	0.45	919	28.03

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 ☑ H_2SO_4	SA8344070	12/10/19	☑ <2
Metals	☑ W-ICPMS ☑ W-ICP	☑ Ice ☐ HNO_3	NA8344050	12/10/19	☐ <2
Filtered Nutrients	☑ W-PO4-F ☑ Field Filtered 0.45 µm Filter	☑ Ice	R7HA12518		
Chlorophyll	☑ CHLSUITE-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			

Contains: 1:1 HNO3 Lot No: NA8344050 Expires: 12/10/19 See Safety Data Sheet (SDS)

Contains: 1:1 H2SO4 Lot No.: SA8344070 Expires: 12/10/19 See Safety Data Sheet (SDS)

Notes: Algae Bloom in progress throughout water column. Algae kit sample taken at site. KQ-05-06-31

WIN ID/Field ID: 20030222

St Johns R @ CM6 Putname Co

Signature: B. D. **Date:** 5/14/19

LIMS EVENT ID: _____ **WIN Import ID:** _____

Enter Field Parameters, Verify Station ID in LIMS DMT: MC 5/17/2019 (Initials/Date) **QC Station ID, Field Parameters in LIMS DMT:** _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) **Migrate Data to WIN:** _____ (Initials/Date) **Verify Data in WIN:** _____ (Initials/Date)

ST JOHNS RIVER @ WELAKA PUBLIC BOAT DOCK

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / No

WIN Station Name: SJR @ Welka Boat Ramp Dock **Date:** 5/14/19 (mm/dd/yyyy)

WIN/ Field ID: 20030766 **WBID:** 2213N **Latitude:** 29.478611 (Decimal Degrees)

County: Putnam **ORG ID:** 21FLA **Longitude:** -81.675305 (Decimal Degrees)

Receiving Body of Water: Atlantic **RQ-** 2019-05-13-19

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J Parrish		✓		✓	✓
B Davis	✓		✓		

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☐ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with MOE
- Equipment ID Outho 7

Collection Method
- ☐ Wading ☐ Canoe/Kayak
- ☐ From Shore ☐ Electric Motor
- ☐ Other ☑ Gasoline Motor

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded **Meter ID#** MOE **Matrix:** (Fresh) / Marine / DI

Photos: (Yes) / No **Flow:** No Flow / Intestital / (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 (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1000	4.3	0.3	0.5	7.27	92.9	8.71	0.72	1442	27.74
CEN	1002		3.0		6.90	88.3	9.00	0.72	1441	27.8

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 ☑ H_2SO_4	SA8344070	12/10/19	☑ <2
Metals	☑ W-ICPMS ☑ W-ICP	☑ Ice ☑ HNO_3	NA8344050	12/10/19	☑ <2
Filtered Nutrients	☑ W-PO4-F ☑ Field Filtered 0.45 µm Filter	☑ Ice	R8KA12718		
Chlorophyll	☑ CHLSUITE-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			

Contains: 1:1 H2SO4
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

Contains: 1:1 HNO3
Lot No.: NA8344050
Expires: 12/10/19
See Safety Data Sheet (SDS)

Notes: Algae Bloom in progress in water column. Seperate kit sampled. RQ-2019-05-06-31

Contains: 1:1 H2SO4
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

WIN ID/Field ID: 20030766

St Johns River @ Welaka Boat Ramp Dock

Signature: B-D- **Date:** 5/14/19

LIMS EVENT ID: _____ **WIN Import ID:** _____

Enter Field Parameters, Verify Station ID In LIMS DMT: MC 5/17/2019 (Initials/Date) **QC Station ID, Field Parameters In LIMS DMT:** _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) **Migrate Data to WIN:** _____ (Initials/Date) **Verify Data In WIN:** _____ (Initials/Date)

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

SAMPLE ID _____ ORG ID 21FLA LATITUDE _____

COUNTY Putnam STORET # 20030766 LONGITUDE _____

DATE 5/14/19 TIME 1000 SAMPLING AGENCY DEANEP

SITE NAME SJR@ Welaka Boat Ramp

FIELD ID/NAME _____ RECEIVING BODY OF WATER Atlantic

RIPARIAN ZONE / STREAM FEATURES

Meter ID: MOE

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

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : 3m Right Bank : >18m

Hydrologic Modification Score (per FT 3101) _____

High Water Mark: _____ (m) + _____ (above present water level) = _____ (present depth) (above bed)

Artificially Impounded ☑ Yes ☐ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

530 m wide

m/s	0.06 m/s	m/s
m deep	4.3 m deep	m deep

Artificially Channelized : ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	1%		
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation	2%		
Rock or Shell Rubble..			
Sand.....			
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 :	0.3	27.74	8.71	7.27	92.9	1442	0.72	
Mid:	3.0	27.8	9.00	6.90	88.3	1441	0.72	TOTAL DEPTH
Bottom								4.3

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☑ Large River

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No

Sample Preserved? ☑ Yes ☐ No

Lot Number: SA8344010 Exp: 12/10/19

Color Tannic ☐ Green (Algae) ☑ Clear ☐ Other (Specify) ☐

Algae Sample Taken? ☑ Yes ☐ No

Sample Preserved? ☑ Yes ☐ No

Lot Number: SA8344010 Exp: 12/10/19

Clarity Clear ☐ Slightly Turbid ☐ Turbid ☑ Opaque ☐

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☐	☑	☐	☐
Fish:	☐	☐	☐	☑
Aquatic Plants:	☐	☑ BBT	☑	☐
Iron/Sulfur Bacteria:	☑	☐	☐	☐

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 _____ **SIGNATURE :** _____

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: SJR @ Welaka BR | County: Putnam | Date: 5/14/19 | Investigators: B Davis

STORET Station Number: 20030760

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4	N	*	
	5			O
	6			
	7	N		
	8			
	9			
10	1	N	X	
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
20	1	N	X	
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
30	1	N	X	
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
40	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9	5		
50	1	N	*	
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
70	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
80	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9	5		
90	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			
100	1	N		
	2			
	3			
	4	N		
	5			O
	6			
	7	N		
	8			
	9			

Secchi depth	0.5
Estimated?	No

# points ranked 4-6	2
total points assessed	99
% points ranked 4-6	2%

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓
RQ-2019-05-13-19	

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

Algae Bloom in progress in water column.

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 9000-5 Stream/River Habitat Assessment Field Sheet

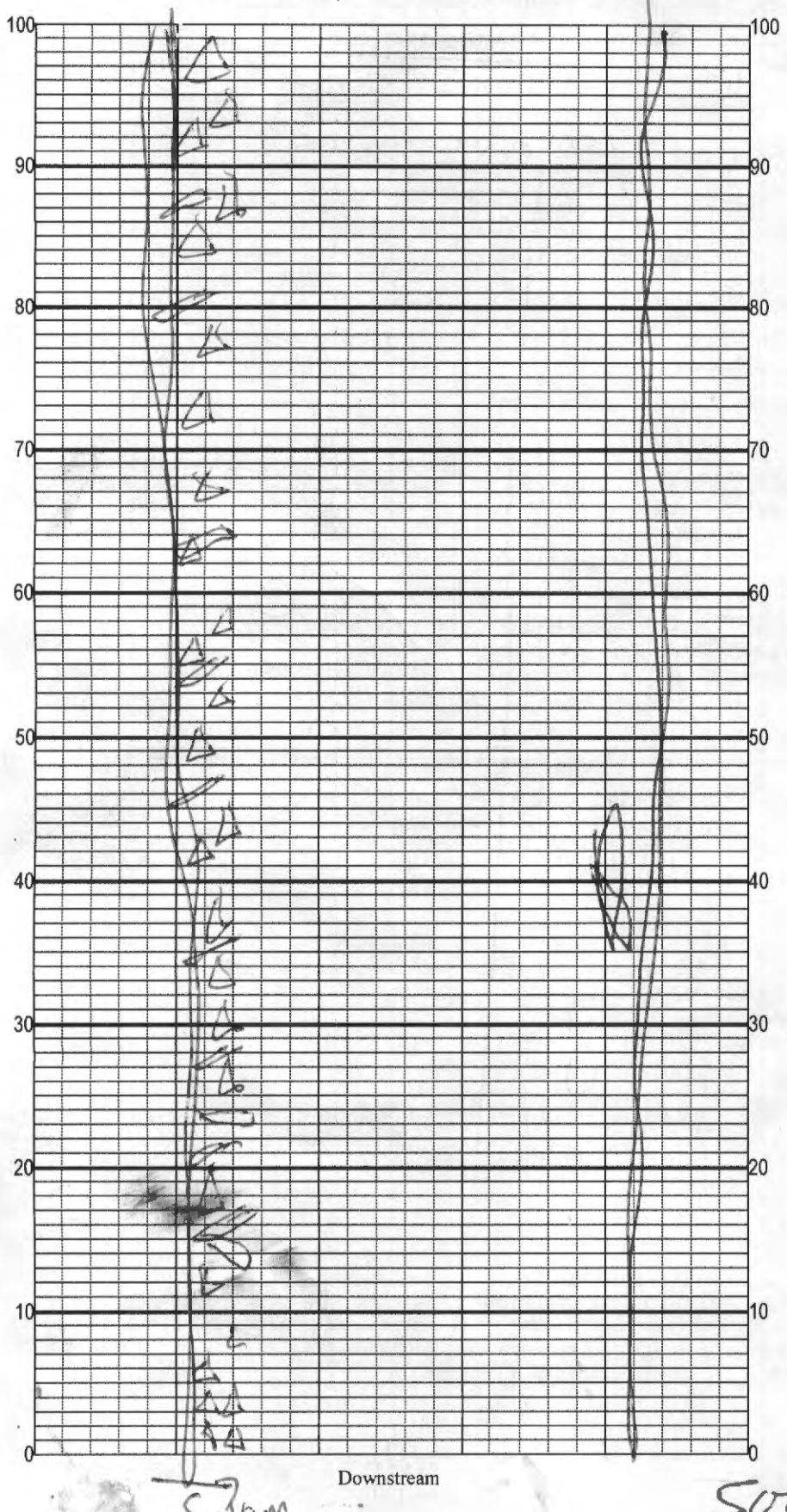
SAMPLING AGENCY: DEP DEAR	STORET STATION NUMBER: 20030766	DATE (MM/DD/YY): 5/14/19	RECEIVING BODY OF WATER: Atlantic
REMARKS:	COUNTY: Putnam	LOCATION: LSSR @ Welaka Dock	FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 5	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 2	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 7	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 8 Primary Score 22	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 **Artificial Channelization** 17	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening 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 2 Left Bank 10 17	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the woody 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 2 Left Bank 10 34	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 2 Left Bank 10 24 Secondary Score 58	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

80 **TOTAL SCORE**

Date: 5/14/19	Analyst: Jerry Camp & Shawn	Signature: Jerry Camp

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: SJR eWelaka

Date: 5/14/19

Sampler: JP/BP

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- [x] Snags ____
- [ ] Roots/undercut banks ____
- [ ] Leaf Packs (or mats) ____
- [x] Aquatic Macrophytes ____
- [ ] _____ ____
- [ ] _____ ____
- [ ] Pools total # observed = ____ # range expected = ____

Average width 530 m
Average depth 4.3 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:

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

Waterbody: SJR@ Welaka BR | Date: 5/14/19 | County: Putnam | Storet Number: 20030766

Analyst: B Davis | Signature: B Davis

Comments: Algae Bloom in progress in Water Column

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m^2 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides				✓						✓	
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes				✓							
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle			✓	✓	✓	✓					
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
~~Limnobium~~				X							
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	D
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides				✓							
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											
Scbst Palmetto									✓		

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

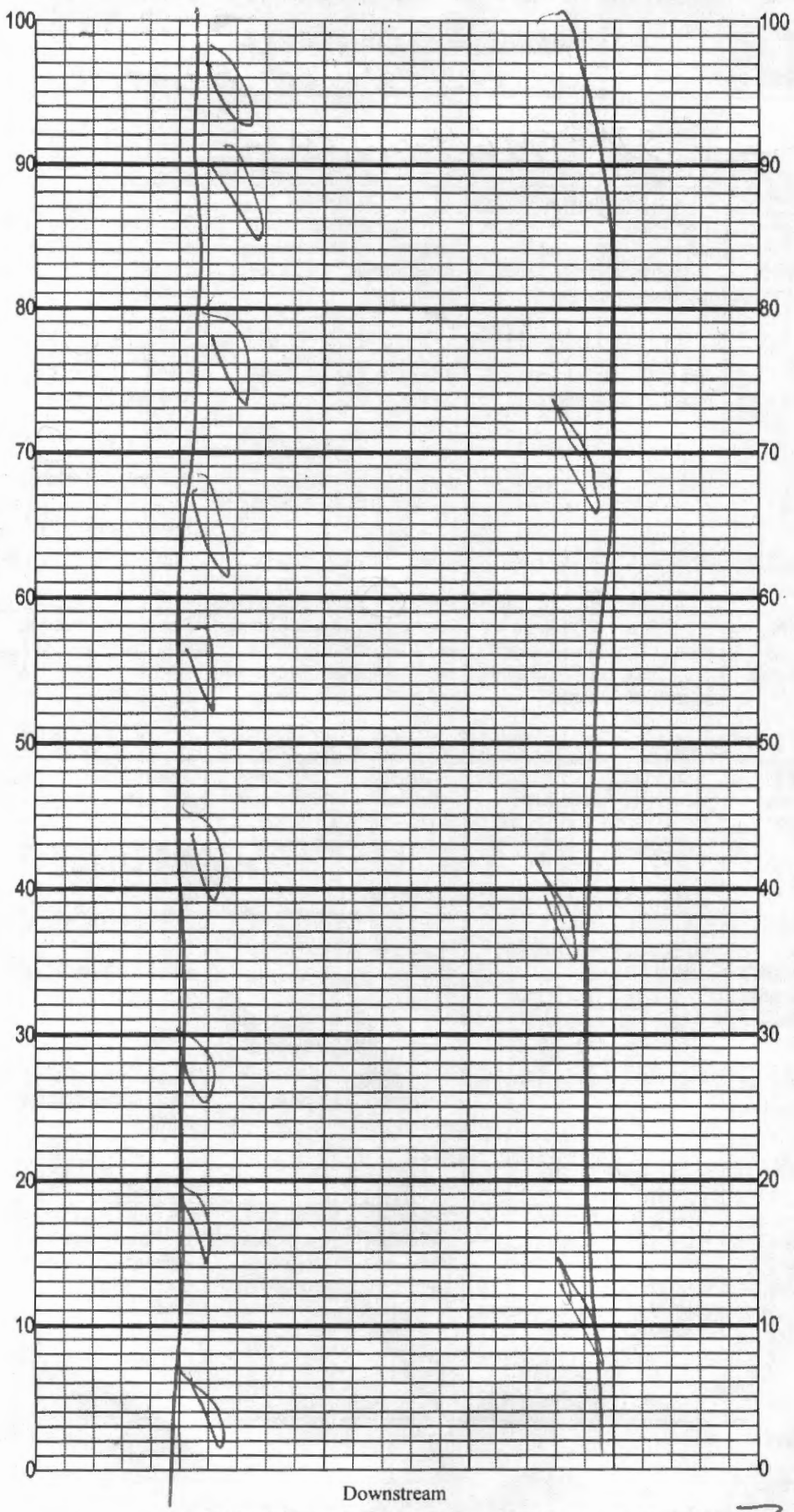
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 20030222	DATE (MM/DD/YY): 5/14/19	RECEIVING BODY OF WATER: Atlantic
REMARKS:	COUNTY: Putnam 5/14/19	LOCATION: SJR@CM6/Putnam Co.		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 3	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 (3) 2 1
Substrate Availability 2	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 9	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 7 Primary Score 24	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 **Artificial Channelization** 17	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 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 7 Left Bank 10	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 3 Left Bank 12	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 9 Left Bank 3 Secondary Score 55	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

80 **TOTAL SCORE**

Date: 5/14/19	Analyst: Jerry Farmer / B Davis	Signature: Jerry Farmer

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: TSJR cm 6

Date: 5/14/19

Sampler: JRansh

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- ☐ Snags <1
- ☐ Roots/undercut banks ____
- ☐ Leaf Packs (or mats) ____
- ☐ Aquatic Macrophytes ____
- ☐ _____ ____
- ☐ _____ ____
- ☐ Pools total # observed = ____ # range expected = ____

Average width 350 m
Average depth 3-4 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:

<2 M of Macrophytes was observed while doing the LVS? YES or NO

0,1

351m

62-160.800, F.A.C

Revision Date: March 1, 2014

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

Waterbody: SJR@ CM 6/Putnam Co. | Date: 5/17/17 | County: Putnam | Storet Number: 20030222

Analyst: B Davis | Signature: B — D —

Comments: Algae Bloom is progress throughout water Column

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m^2 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum				✓			✓				
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta					✓						
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓		
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon				✓	✓						
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata				X	X						
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus				X	✓						
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											

Less than 2m of Veg.

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: SJR@CR 6 / Putnam Co.

County: Putnam

Date: 5/14/19

Investigators: B Davis, J Parrish

STORET Station Number: 20030222

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
10	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
20	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
30	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
40	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
50	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
70	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
80	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
90	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			
100	1			
	2			
	3			
	4			
	5			0
	6			
	7			
	8			
	9			

Secchi depth	0.5
Estimated?	NO

# points ranked 4-6	0
total points assessed	99
% 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-2019-05-13-19

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

Algae Bloom in progress throughout water column.

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 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLA LATITUDE _____
COUNTY Putnam STORET # 20030222 LONGITUDE _____
DATE 5/14/15 TIME 1145 SAMPLING AGENCY PEAR NED
SITE NAME SJRWMG / Putnam Co
FIELD ID/NAME _____ RECEIVING BODY OF WATER Atlantic

RIPARIAN ZONE / STREAM FEATURES

Meter ID: MOE

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

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : ~5 Right Bank : >18

Hydrologic Modification Score (per FT 3101):

High Water Mark: (m) + (above present water level) = (present depth) (above bed)

Artificially Impounded ☑ Yes ☐ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

BD 350 ~~330~~ m wide

m/s	0.09 m/s	m/s
m deep	4.7 m deep	m deep

Artificially Channelized : ☑ No ☐ Mostly recovered, more sinuous ☐ 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

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<1		
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
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 :	0.3	28.09	8.44	9.66	123.9	919	0.45	0.5
Mid:	3.8	28.03	8.37	8.62	109.9	919	0.45	TOTAL DEPTH
Bottom								4.7

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☑ Large River

Water Odors Normal ☐ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☑

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No
Sample Preserved? ☑ Yes ☐ No
Lot Number: SA834401D Exp: 12/10/15

Color Tannic ☐ Green (Algae) ☑ Clear ☐ Other (Specify) ☐

Algae Sample Taken? ☑ Yes ☐ No
Sample Preserved? ☑ Yes ☐ No
Lot Number: SA834401D Exp: 12/10/15

Clarity Clear ☐ Slightly Turbid ☐ Turbid ☑ Opaque ☐

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☑	☑ BD	☐	☐
Fish:	☐	☐	☐	☑
Aquatic Plants:	☐	☑	☐	☐
Iron/Sulfur Bacteria:	☑	☐	☐	☐

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 B Davis J Parrish

SIGNATURE : B Davis 5/14/15

Request Number: RQ-2019-05-13-19

2213 LSJR M&N

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: NE-DIST

Project ID: SMP

Requester: Jeremy M. Parrish

Field Report Prepared By: Jeremy Parrish

Collected By: Jeremy Parrish/ Brian Davis

Sampling Agency: FDEP NE ROC

WIN ID/Field ID: 20030766

St Johns River @ Welaka Boat Ramp Dock

Latitude ☐dd ☐dms	Longitude ☐dd ☐dms	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/14/19 Time 1000 Eastern Central	Composite end Date Time	Bottle Group(s) (See pg 2) A	Matrix (type, e.g., Salt, Fresh, etc) Fresh	Diss. Oxygen 7.27 ☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	Temp (C) 27.7	pH 8.71
Sample Depth 0.3 ☐ ft ☒ m	Sp. Conductance (umho/cm) 1442	Salinity (ppt) 0.72	Comments							

WIN ID/Field ID: 20030222

St Johns R @ CM6 Putname Co

Latitude ☐dd ☐dms	Longitude ☐dd ☐dms	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/14/19 Time 1145 Eastern Central	Composite end Date Time	Bottle Group(s) A	Matrix (type, e.g., Salt, Fresh, etc) FRESH	Diss. Oxygen 9.66 ☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	Temp (C) ~~28.0~~ 28.1	pH 8.44
Sample Depth 0.3 ☐ ft ☒ m	Sp. Conductance (umho/cm) 919	Salinity (ppt) 0.45	Comments							

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)	Comments							

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)	Comments							

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Jerry Parrish	5/14/19 1600	Fedex	1		

Request Number: RQ-2019-05-06-31

NEROC Algae Bloom Response-as needed

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: WQAP

Project ID: BLOOM-RESP

Requester: Jeremy M. Parrish

Collected By: Jeremy Parrish / Bryan Parks

Field Report Prepared By: Jeremy Parrish

Sampling Agency: FDEP NEROC

Location: SJR @ Welaka Bt Ramp	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/14/19 Time 1005 Eastern Central	Composite end Date Time	Bottle Group(s) (See pg 2): A, B, C, D							
Field ID	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen: 7.27 ☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)								
WIN/STORET #: 20030766	Temp (C): 27.7	pH: 8.7	Sample Depth: 0.1 ☐ ft ☒ m	Sp. Conductance (umho/cm): 1442							
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt): 0.72	Comments								
Location: SJR @ CR 6 Putnam Co.	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/14/19 Time ~~1255~~ 1155 Eastern Central	Composite end Date Time	Bottle Group(s): A, B, C, D							
Field ID	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen: 9.66 ☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)								
WIN/STORET #: 20030222	Temp (C): 28.1	pH: 8.44	Sample Depth: 0.3 ☐ ft ☒ m	Sp. Conductance (umho/cm): 919							
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt): 0.45	Comments								
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)	Comments								
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)	Comments								

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Jeremy Parrish	5/14/19 1600	Fedex	1		

Group: A	Bottle Type: BLOOM-ID	PT-50ML	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab 2
Group: B	Bottle Type: W-MCYST-AA	BG-250ML-WDMTH	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab 2
Group: C	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab 2
Group: C	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN	P-500ML	# of Bottles: 8	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab 2
Group: C	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 8	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab 2
Group: D	Bottle Type: DTY-QN-C PKD-QN-BV	BP-1L	# of Bottles: 8	Preservative:	Lugols	Enter Number of Bottles Sent to Lab 2

Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab 2
	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 2
	CHLSUITE-W					
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab 0
	NE-ALS-ECQ					
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab 2
	W-ICP W-ICPMS					
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab 2
	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 2
	W-PO4-F					