



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name:

Cracker 1.3 North of 204

Date: 11/2/2016
(mm/dd/yyyy)

STORET Station ID:

27010063

Latitude:

27.6746

(Decimal Degrees)

WBID:

2553

RQ-2016-10-31-13

ORG ID: 21 FLA

Longitude:

81.2927

(Decimal Degrees)

Receiving Body of Water:

Pellicer Creek

Field ID:

County:

St Johns

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B. Davis						
J. Perkins						

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 / Flooded

Meter ID#

XST#3

Photos:

Yes / No

Matrix:

Fresh

Marine

DI

Tide 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	1010	0.3	0.4	4.36	49.4	7.08	0.13	20.2	268	21.5
CEN										

Biological Samples Collected:

None

HA

SCI

LVS

RPS

LVI

Other

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			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☒ Ice ☒ HNO3			☐ <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 Here

Sulfuric Acid
SA-6209120
EXP: 07/27/17

Notes:

field ID

Date:

Time:

Cracker 1.3 mi North
of CR204

storet ID

27010063

Signature:

Jeremy Carr

Date:

11/2/16

Field Parameters Entered into LIMS:

2/11/16

(Initials/Date)

Field Parameters QC in LIMS:

(Initials/Date)

Date Migrated to STORET:

(Initials/Date)

Field Sheets Scanned/Saved:

(Initials/Date)

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

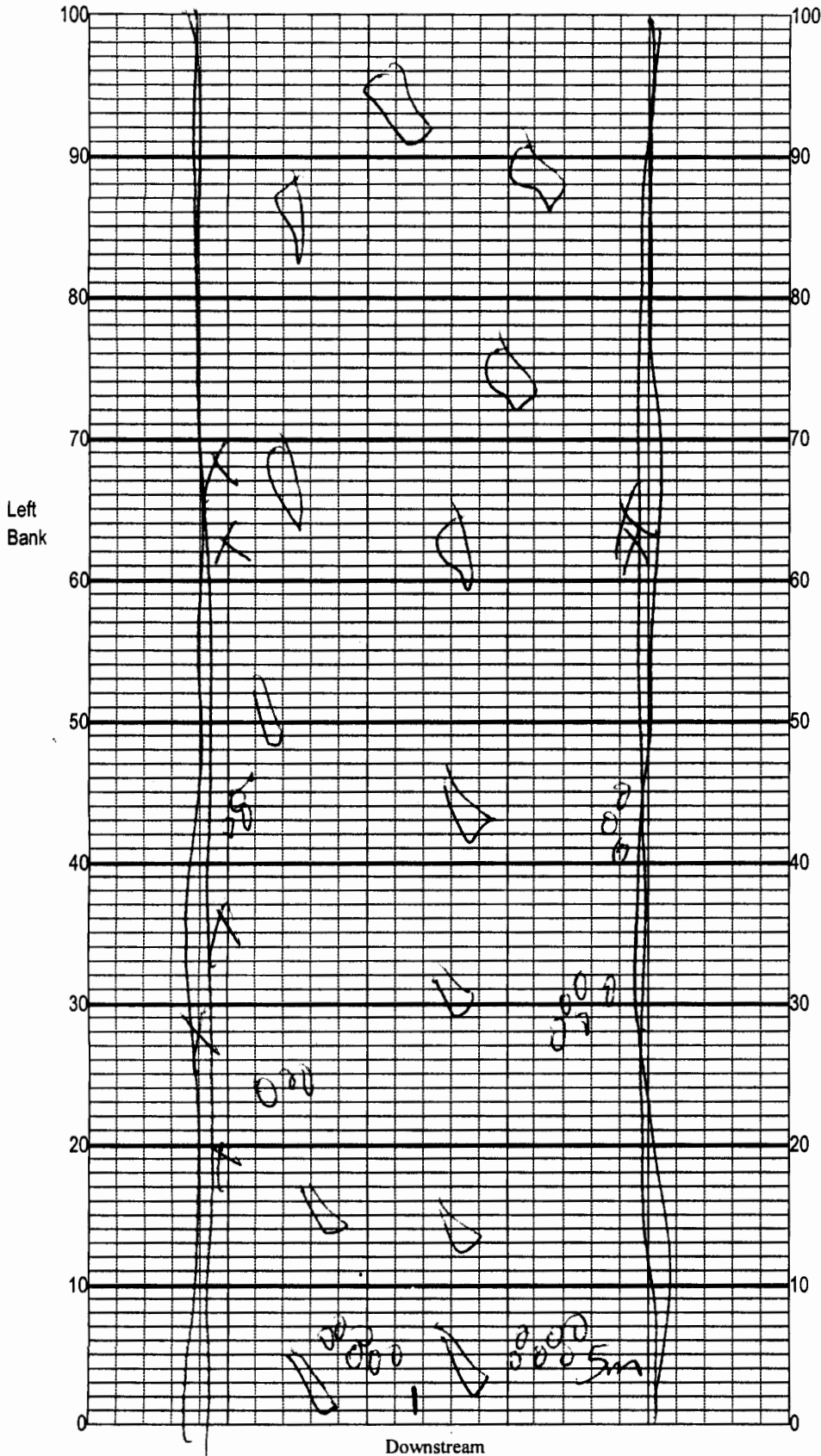
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 27010063	DATE (MM/DD/YY): 11/2/16	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: ST Johns	LOCATION: Cracker 1.3 abv 204	FIELD ID/NAME:	

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 <u>11</u>	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent <u>8</u> 15 14 13 12 <u>11</u>	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>14</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 <u>14</u> 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>11</u> Primary Score <u>43</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 <u>11</u>	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>20</u>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	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 <u>7</u> 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	Width of vegetation greater than 18 m Right Bank <u>10</u> Left Bank <u>10</u>	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	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. Right Bank <u>10</u> Left Bank <u>10</u> Secondary Score <u>74</u>	>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

117 TOTAL SCORE

Date: 11/2/16	Analyst: <u>Planner</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: Crocker 1.3 ab 204
Date: 11/2/16
Sampler: JL BD

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

	Snags	<u>4</u>
	Roots/undercut banks	<u>1.5%</u>
	Leaf Packs (or mats)	<u>5%</u>
	Aquatic Macrophytes	_____
	Pools	_____

total # observed = _____
range expected = _____

Average width 2.5 m
Average depth 0.4 m

Velocity measured at 0.18008 meter mark.

WQ & chemistry taken at 10 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

300 10m x = 3.5 = 15
000 = 12 = 9%
3m wide
snag = 10 = 4%

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

SAMPLE ID _____ ORG ID 21 FLA LATITUDE 27.6746
 COUNTY St Johns STORET # 27010063 LONGITUDE 81.2927
 DATE 11/2/16 TIME 1010 SAMPLING AGENCY NE ROC
 SITE NAME Cracker 1.3m abv 204
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

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) ☐ <u>100</u> ☐ ☐ ☐ ☐ ☐ ☐ ☐							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>2.5</u> m wide _____ m/s <u>0.18</u> m/s _____ m/s _____ m deep <u>0.4</u> m deep _____ m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>18m</u> Right Bank: <u>18m</u>		Hydrologic Modification Score (per FT 3101) ☐					
High Water Mark: <u>0.8</u> + <u>0.4</u> = <u>1.2</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 <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.2</u></td> </tr> <tr> <td>Mid:</td> <td><u>0.3</u></td> <td><u>21.5</u></td> <td><u>7.08</u></td> <td><u>4.36</u></td> <td><u>48.4</u></td> <td><u>268</u></td> <td><u>0.13</u></td> <td>TOTAL DEPTH</td> </tr> <tr> <td>Bottom:</td> <td><u>0.4</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:								<u>0.2</u>	Mid:	<u>0.3</u>	<u>21.5</u>	<u>7.08</u>	<u>4.36</u>	<u>48.4</u>	<u>268</u>	<u>0.13</u>	TOTAL DEPTH	Bottom:	<u>0.4</u>							
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Woody Debris (Snags) <u>4</u> <u>5</u> Undercut Banks / Roots <u>1.5</u> <u>5</u> Leaf Packs or Mat <u>5</u> <u>5</u> Aquatic Vegetation _____ Rock or Shell Rubble _____ Sand _____ Mud / Muck / Silt <u>89</u> <u>5</u> Other _____ Other _____		System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____ 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 <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>			Not Obs.	Rare	Common	Abundant	Periphyton:	☒	☐	☐	☐	Fish:	☐	☒	☐	☐	Aquatic Plants:	☒	☐	☐	☐	Iron/Sulfur Bacteria:	☐	☒	☐	☐	Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) _____ Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐														
	Not Obs.	Rare	Common	Abundant																																					
Periphyton:	☒	☐	☐	☐																																					
Fish:	☐	☒	☐	☐																																					
Aquatic Plants:	☒	☐	☐	☐																																					
Iron/Sulfur Bacteria:	☐	☒	☐	☐																																					
SAMPLING TEAM <u>John / B. Davis</u>		SIGNATURE: <u>[Signature]</u>		<u>11/2/16</u>																																					
AMBIENT FIELD CONDITIONS / NOTES: <u>ortho #3</u> Hydrologic Disturbance Scoring ☒ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																									

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Cracker 1.3 abn 204 County: St Johns Date: 11/2/16 Investigators: J P / B D

STORET Station Number: 27010063

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	N		60	1	N	N	
	2					2			
	3					3			
	4					4			
	5			96		5			94
	6					6			
	7					7			
	8					8			
	9					9			
10	1	N	N		70	1	N	N	
	2					2			
	3					3			
	4					4			
	5			96		5			96
	6					6			
	7					7			
	8					8			
	9					9			
20	1	N	N		80	1	X	N	
	2					2			
	3					3			
	4					4			
	5			96		5			92
	6					6			
	7					7			
	8					8			
	9					9			
30	1	N	96		90	1	N	N	
	2					2			
	3					3			
	4					4			
	5			96		5			92
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N	N		100	1	N	N	
	2					2			
	3					3			
	4					4			
	5			96		5			92
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N	N			1	N	N	
	2					2			
	3					3			
	4					4			
	5			92		5			
	6					6			
	7					7			
	8					8			
	9					9			

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%.

Secchi depth 0.2
Estimated?

points ranked 4-6 8
total points assessed 94
% points ranked 4-6 8

Check accompanying data collected at same site/date.
Algal mat sample ☐
Linear Veg Survey ☐
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒
RQ- 2016-10-31-13

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

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

Waterbody: <u>Cracker 1.3abv 204</u>	Date: <u>11/2/10</u>	County: <u>ST Johns</u>	Storet Number: <u>27010063</u>
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Analyst: Harish Signature: Harish

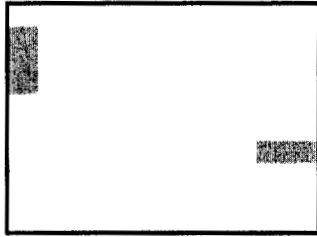
Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² 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.

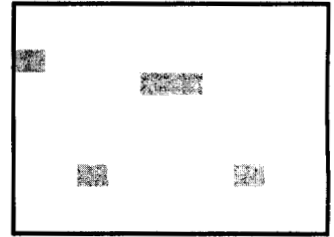
HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>												<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>											
<i>Bidens mitis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>											
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Ceratophyllum demersum</i>												<i>Panicum hemitomon</i>											
<i>Chara</i>												<i>Panicum repens</i>											
<i>Cicuta maculata</i>												<i>Panicum rigidulum</i>											
<i>Cladium jamaicense</i>												<i>Pistia stratioides</i>											
<i>Colocasia esculenta</i>												<i>Polygonum glabra</i>											
<i>Commelina diffusa</i>												<i>Polygonum hydropiperoides</i>											
<i>Commelina virginica</i>												<i>Polygonum punctatum</i>											
<i>Crinum americanum</i>												<i>Pontederia cordata</i>											
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>												<i>Ruellia simplex</i>											
<i>Eleocharis (wispy viviparous)</i>												<i>Sagittaria striata</i>											
<i>Hydrilla verticillata</i>												<i>Sagittaria kurziana</i>											
<i>Hydrocotyle</i>												<i>Sagittaria lancifolia</i>											
<i>Hygrophila polysperma</i>												<i>Sagittaria latifolia</i>											
<i>Hymenocallis</i>												<i>Salvinia minima</i>											
<i>Lachnanthes caroliniana</i>												<i>Samolus parviflora</i>											
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>											
<i>Lemna</i>												<i>Sparganium americanum</i>											
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>																							
<i>Ludwigia repens</i>																							
<i>Luziola fluitans</i>																							
					</																		

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

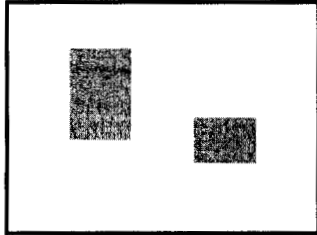
5% Macrophyte Coverage



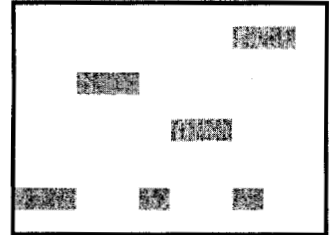
5% Macrophyte Coverage



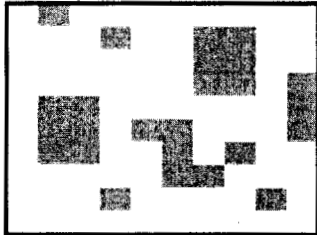
10% Macrophyte Coverage



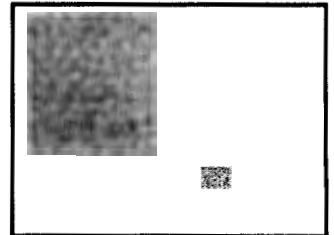
10% Macrophyte Coverage



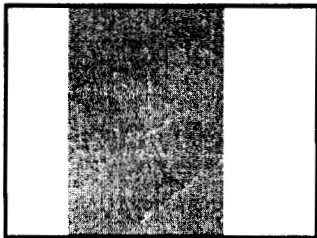
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

