



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: STRAWBERRY CR AT END OF BOWLAN RD.

Date: 10/27/2019
(mm/dd/yyyy)

WIN/ Field ID: 20030579

WBID: 2239

Latitude: 30.32489

(Decimal Degrees)

County: Duval

ORG ID: 21FLA

Longitude: -81.56995

(Decimal Degrees)

Receiving Body of Water: Arlington River

RQ-2019- 10-21-32

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
<u>J. Parrish</u> <u>K. Appleby</u>					☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole		
										☐ Carboy	☐ Syringe			
										☐ Dipper	☐ Other			
										Depth Measured with <u>meters</u>				
										Equipment ID <u>ORW KR 44</u>				
										Collection Method				
					☒ Wading			☐ Canoe/Kayak						
					☐ From Shore			☐ Electric Motor						
					☐ Other			☐ Gasoline Motor						
Water Level: Dry/ Pooled/ Low / Normal <u>High</u> / Flooded					Meter ID# <u>Stretch</u>					Matrix: <u>Fresh</u> Marine / DI				
Photos: Yes ☒ No ☐					Flow: No Flow / Intertidal / <u>Flowing</u> / NA					Tide: Rising/ Falling/ Slack <u>NA</u>				
					Tide Times: High Low									
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)				
<u>EST</u>	<u>1020</u>	<u>0.1</u>	<u>0.05</u>	<u>0.1</u>	<u>5.60</u>	<u>66.6</u>	<u>6.89</u>	<u>0.17</u>	<u>360.4</u>	<u>24.0</u>				
<u>CEN</u>				<u>5</u>										
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>CRP</u> <u>Algae ID</u> <u>LVS</u> <u>LVI</u> Other:														
SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: LIMS#:														
Parameter Suite	Parameter Methods				Preservation		Lot#	Expiration	pH Check					
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4		<u>SA9129100</u>	<u>5/2020</u>	☒ <2					
Metals	☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO3		<u>NA989080</u>	<u>7/2020</u>	☒ <2					
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice		<u>R9BA86575</u>							
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									

Notes:

WIN ID/Field ID:



20030579

STRAWBERRY CR AT END OF BOWLAN RD.

Signature: [Signature]

Date: 10/27/19

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT:

QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>20530579</u>	DATE (mm/dd/yy): <u>10/22/19</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Doral</u>	LOCATION: <u>Strawberry Creek @ End of Bowlen</u>		FIELD ID/NAME:

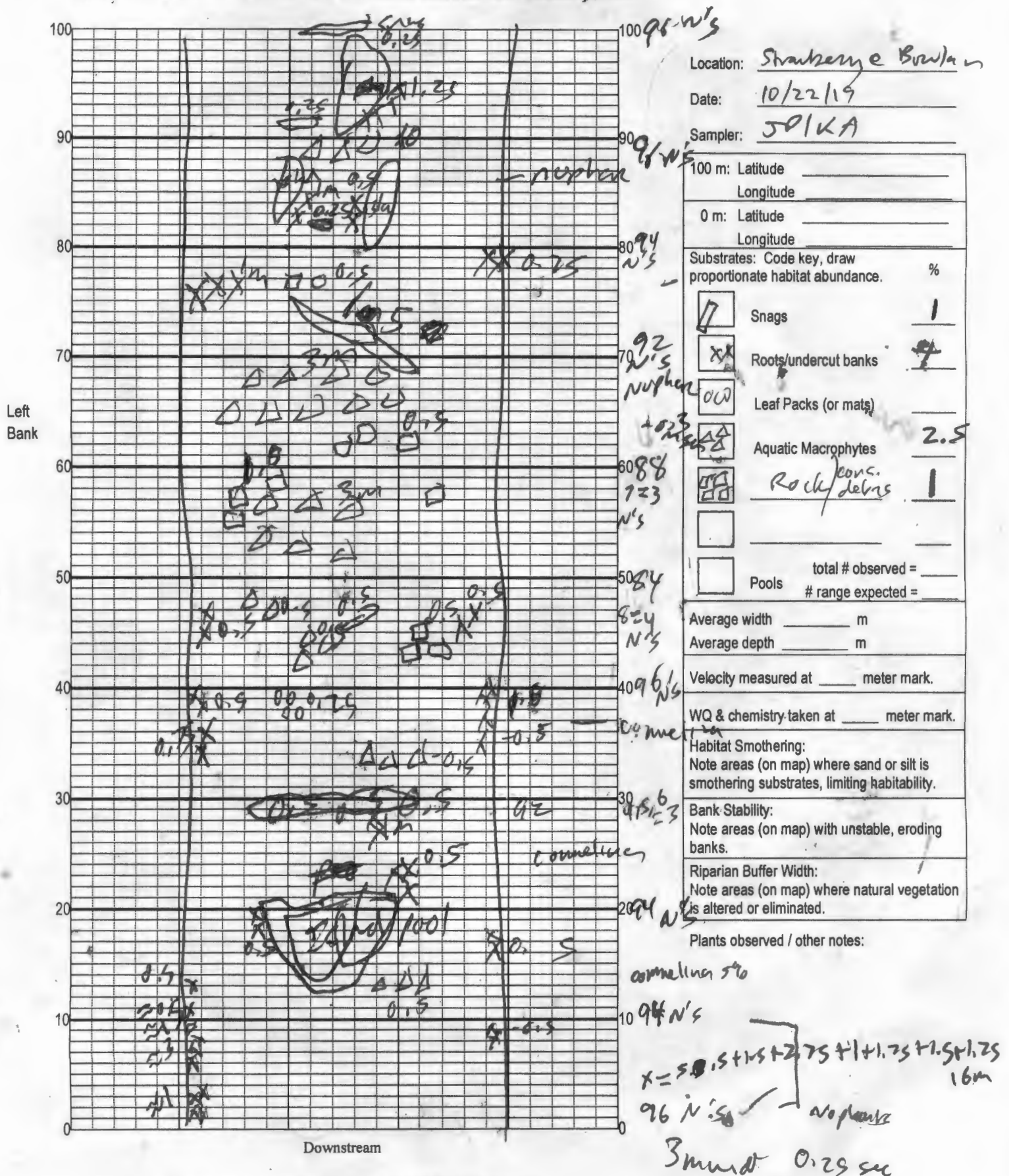
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>16</u>	20 19 18 17 <u>16</u>	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>7</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 <u>7</u> 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>17</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 <u>17</u> 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>53</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 <u>13</u> 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>19</u>	20 <u>19</u> 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.
Right Bank <u>8</u> Left Bank <u>4</u>	10 9	<u>8</u> 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>5</u> Left Bank <u>3</u>	10 9	8 7 6	<u>5</u> 4	<u>3</u> 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>7</u> Left Bank <u>5</u> Secondary Score <u>55</u>	10 9	8 <u>7</u> <u>6</u>	<u>5</u> 4	3 2 1

108

TOTAL SCORE

Date: <u>10/22/19</u>	Analyst: <u>Jeremy Pann / Kim Appleby</u>	Signature: <u>[Signature]</u>
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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).

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

SAMPLE ID _____	ORG ID _____	LATITUDE <u>30.32489</u>
COUNTY _____	STORET # <u>20130579</u>	LONGITUDE <u>-81.56995</u>
DATE <u>10/22/19</u>	TIME <u>1020</u>	SAMPLING AGENCY _____
SITE NAME <u>Smuckers bowler</u>		
FIELD ID/NAME _____ RECEIVING BODY OF WATER _____		

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):		Landscape Development Intensity Index (LDI)					
Forest/Natural ☐	Silviculture ☐	Field/Pasture ☐	Agricultural ☐	Residential ☐	Commercial ☐	Industry ☐	Other (Specify) ☐
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy		Typical Width (m) Depth (m)/Velocity (m/sec) Transect					
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy		<u>3.5</u> m wide					
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>6</u> Right Bank: <u>6-12</u>		Hydrologic Modification Score (per FT 3101) _____					
High Water Mark: <u>0.4</u> + <u>0.3</u> = <u>0.7</u> (m) (above present water level) (present depth) (above bed)		Artificially Impounded ☐ Yes ☒ No					
Artificially ☒ No ☐ Mostly recovered, more sinuous		Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)					
Channelized: ☐ Some recovery ☐ Recent, severe		☒ 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 ☒ TRPS ☒ 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>0.15</u> <u>21.0</u> <u>6.99</u> <u>5.60</u> <u>66.6</u> <u>360</u> <u>0.17</u> ☒ VOB Bottom: <u>0.3</u> _____ Meter ID: _____			
Woody Debris (Snags) <u>1</u>		Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐	
Undercut Banks / Roots <u>4</u>		Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐	
Leaf Packs or Mat <u>2.5</u>		Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐	
Rock or Shell Rubble.. <u>1</u>		System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐			
Sand..... <u>91</u>		ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☐ ☒ ☐ ☐			
Mud / Muck / Silt		AMBIENT FIELD CONDITIONS / NOTES: <u>No SCI</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.			
Other		SAMPLING TEAM <u>Jerry Rand / Kim Appleby</u>		SIGNATURE: <u>Jerry Rand</u>	
Other		DATE: <u>10/22/19</u>			

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Strawberry Creek</u>					County: <u>Duval</u>		Date: <u>10/22/19</u>		Investigator: <u>JP/KA</u>		
STORET Station Number: <u>20030579</u>											
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover		
0	1	N	N	96	60	1	N	N	88		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
10	1	N	N	94	70	1	N	N	92		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
20	1	N	N	94	80	1	N	N	94		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
30	1	N	N	92	90	1	N	N	96		
	2	N									
	3	N									
	4	3									
	5	3									
	6	3									
	7	N									
	8	N									
	9	N									
40	1	N	N	96	100	1	N	N	96		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
50	1	N	N	84 96 96	Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank. Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6. Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.						
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										

Secchi depth 2.3
Estimated?

points ranked 4-6 1
total points assessed 97
% points ranked 4-6 1%

Check accompanying data collected at same site/date.
Algal mat sample N
Linear Veg Survey +
Habitat Assessment +
SCI/Biorecon N
Water sample
RQ- 2019-10-21-22

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

Waterbody: <i>Strawberry Creek of Norton</i>	Date: <i>10/21/13</i>	County: <i>Nevada</i>	Store Number: <i>20031519</i>
Analyst: <i>J Parnish</i>	Signature: <i>J Parnish</i>		
Comments:			

[illegible]