



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION BASIN MANAGEMENT ACTION PLAN FIELD SHEET

January 2022

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Long Branch @ 0.7 mi DS OF CR 13

Date: 2/15/2022

WIN/Field ID: G2CE0036

WBID: 3030

ENR: -

Latitude: 28.5351

County: ORANGE

Org ID: 21FLCEN

Longitude: -81.11

Receiving Body of Water: Middle St. Johns

RQ- 2022-02-14-17

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒ Terry Riordan			☒		☒	☒
☒ Victoria Schwartz		☒		☒		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: Knothead	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded		Meter ID# CRAW DADDY	
Photos: YES	Flow: FLOW	Tide:	Tide Times: High: Low:
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:			
SBIO ID Numbers: SBIO 83908 RPS 9907			LIMS 2306135
Notes: OVERCAST AND COOL / SCI COLLECTION TIME: 1130			

Duplicate Sample

Time Zone: EST	Time: _____	Field ID: _____ (WIN ID_DUP)
WIN DMT Activity ID: _____		

Blank

Time Zone: _____	Time: _____	Field ID: _____ (Blank Type_DDMYYYY)
DI Source: _____	Location: _____	
DI Type: _____	Equipment ID: _____	
DI Container (Name/ID): _____		DI Container Type: _____

LIMS EVENT ID: CEN-DIST-2022-02-16-02

WIN Import ID: 32964

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 3/25/22

QC Station ID, Field Parameters In LIMS DMT: EB 4/12/22

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 5/26/22

(Initials/Date)

Migrate Data to WIN: KWM 5/26/22

(Initials/Date)

Verify Data In WIN: _____

(Initials/Date)



RQ-2022-02-14-17

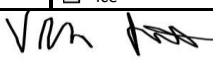
Customer: WQAP

Project ID: BMAP

Collected By: Terry Riordan, Victoria Schwartz

Field Report Prepared By: Terry Riordan

Sampling Agency: FDEP

Place Label Here						Comments:					
WIN ID/Field ID:  G2CE0036											
Location: Long Branch @ 0.7 mi DS OF CR 13											
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE					
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT)	
2/15/2022	1057 EST	7.78	73.9	13	7.14	0.15	0.3 ☒ VOB (S)	0.3	324.9	0.16	
	EST						Central Lab please use top row for login purposes				
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group	
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	A	
		Lot #	SA1105060		Exp:	4/30/22					
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A	
		Lot #	NA1105100		Exp:	6/7/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A	
		Filter Lot #	17135566			Syringe Lot #	1335260				
BOD (BP-1L)		☐ OV-BODUNIN				☐ Ice					
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A	
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A	
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice					
Macroinvertebrates (PJ-2L)		☒ MI-FW-QLDC				☒ Formalin			2	B	
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice					
Microbiology (Contract Lab Bottle)		☐ Coli ☐ Coli ☐ Enterococci ☐ Contract Lab				☐ Ice					
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐				☐ Ice					
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice		MCAA Exp.			
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ		W-CT-CL-R	☒ Ice	MCAA Lot#	5	A	
		W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)		☒ W-TR-SQ-R						
		W-PCB-TQ-R									
Phytoplankton/Periphyton				DTY-QN-C		PKD-QN-C	☐ Ice				
Name: Terry Riordan Victoria Schwartz					Signature: 					Date: 02/15/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

WBID: 3030

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

BMAP

SAMPLE ID _____ ORG ID _____ LATITUDE 28.5351
 COUNTY Orange STORET # G2CE0036 LONGITUDE -81.11
 DATE 2/15/22 TIME 10:57 SAMPLING AGENCY ALFLEN
 SITE NAME Long Branch @ 0.7 mi DS of CR 13
 FIELD ID/NAME G2CE0036 RECEIVING BODY OF WATER Middle St. Johns

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): nearby paintball field

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
<u>50</u>		<u>10</u>		<u>20</u>	<u>15</u>	<u>5</u>	

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: 718 Right Bank: 718

Hydrologic Modification Score (per FT 3101) 2

High Water Mark: 0.6 + 0.3 = 0.9
 (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%)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
516 m wide 2.5 m/s
0.20 m deep 0.3 m deep

SEDIMENT / SUBSTRATE

Sediment Oils N/A
☒ Absent ☐ Slight
☐ Moderate ☐ Profuse

Sediment Odors N/A
☒ 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)	<u>12</u>	<u>5</u>	
Undercut Banks / Roots	<u>11</u>	<u>5</u>	
Leaf Packs or Mat	<u>4</u>	<u>5</u>	
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand... (<u>min</u>)		<u>5</u>	
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:	<u>0.15</u>	<u>13.0</u>	<u>7.14</u>	<u>7.78</u>	<u>73.9</u>	<u>324.9</u>	<u>0.16</u>	<u>0.3</u>
Mid:								☒ VOB
Bottom								

Meter ID: Craw Daddy

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

Water Surface Oils Normal ☒ Sheen ☐
 Globbs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
 Sample Preserved? ☒ Yes ☐ No
 Lot Number: SA1105060 Exp: 4/30/22

Algae Sample Taken? ☐ Yes ☒ No
 Sample Preserved? ☐ Yes ☐ No
 Lot Number: _____ Exp: _____

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

Clarity Clear ☒ Slightly Turbid ☐
 Turbid ☐ Opaque ☐

ABUNDANCE

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

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

Overcast / cool temps
A lot of pig activity near/around stream
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Terry Riordan + Victoria Schwab

SIGNATURE:

Terry Riordan / Victoria Schwab

DATE:

2/15/22

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

SAMPLING AGENCY: <u>2IFLCEN</u>		STORE ^{WIN} STATION NUMBER: <u>G2CE0036</u>	DATE (MM/DD/YY): <u>2/15/22</u>	RECEIVING BODY OF WATER: <u>Middle St. Johns</u>
REMARKS: <u>Pig activity near stream</u>	COUNTY: <u>Orange</u>	LOCATION: <u>Long Branch BMAP</u>	FIELD ID/NAME: <u>G2CE0036</u>	

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>13</u>	20 19 18 17 16	15 <u>14</u> 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>15</u>	Greater than 30% major productive habitat present at site 20 19 18 17 <u>16</u>	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>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>16</u> Primary Score <u>58</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 <u>17</u> 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 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>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 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>10</u> Left Bank <u>10</u>	<u>10</u> 9	8 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>10</u> Left Bank <u>10</u>	<u>10</u> 9	8 7 6	5 4	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.	>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>10</u> Left Bank <u>10</u> Secondary Score <u>80</u>	<u>10</u> 9	8 7 6	5 4	3 2 1

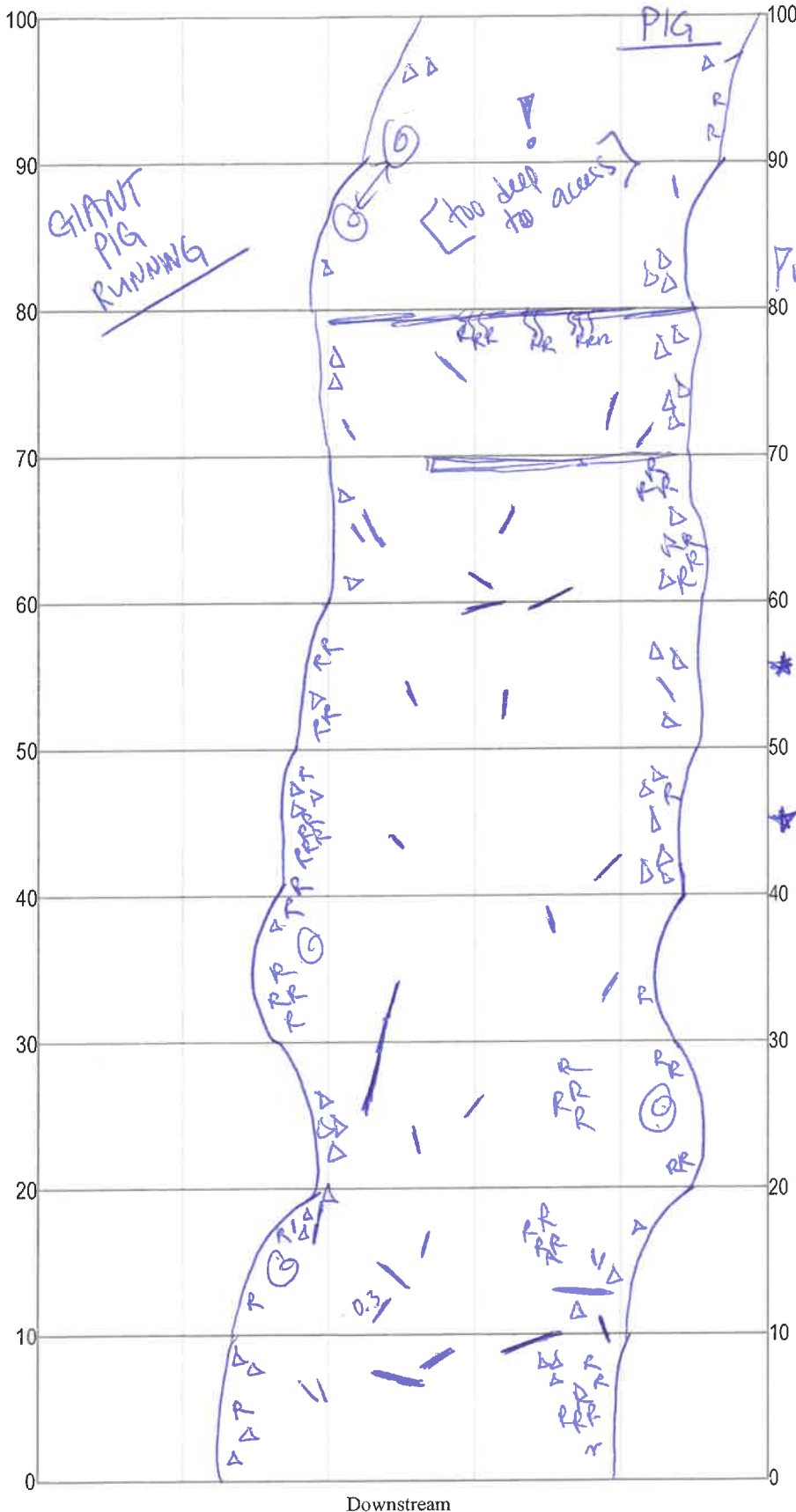
138

TOTAL SCORE

Date: <u>2/15/22</u>	Analyst: <u>Terry Riordan/Victoria Schwartz</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

SMEELING ↑



Location: Long Branch BMAP
Date: 2/15/22
Sampler: Victoria Schwartz

100 m: Latitude	<u>28.5351</u>
Longitude	<u>-81.11</u>
0 m: Latitude	<u>28.5351</u>
Longitude	<u>-81.11</u>
Substrates: Code key, draw proportionate habitat abundance.	
☒	Snags <u>12%</u>
☒	Roots/undercut banks <u>11%</u>
☒	Leaf Packs (or mats) <u>4%</u>
☒	Aquatic Macrophytes <u><1</u>
☒	Sand = minor habitat
☒	Pools total # observed = <u>4</u> # range expected = <u>4</u>
Average width <u>2.5</u> m	
Average depth <u>0.3</u> m	
Velocity measured at <u>50</u> meter mark.	
WQ & chemistry taken at <u>0</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:

* Between 40/50: very shallow
≈ 0.2m max began to
eroding around 55

! 80-100 estimated based
on what could be seen
but not accessed

Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Revision Date: March 1, 2014

$\Delta = 4.3$ 62-160.800, F.A.C
 $R = 13.4 \times 2 = 26.8$ 3.44%
 $S = 15$ 26.8 10.72%
36 12%

Slight silt smothering of
roots + leaf packs
along entire stream

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Long Branch BMAP</u>					County: <u>Orange</u>		Date: <u>2/15/22</u>		Investigator: <u>Victoria Schwartz</u>	
									STORET Station Number: <u>G 2CE0036</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	2			60	1	2			
	2	2				2	2			
	3	2				3	2			
	4	2				4	2			
	5	2		90		5	2		68	
	6	2				6	2			
	7	2				7	2			
	8	2				8	2			
	9	2				9	2			
10	1	2			70	1	2			
	2	2				2	2			
	3	2				3	2			
	4	2		91		4	2		84	
	5	2				5	2			
	6	2				6	2			
	7	2				7	2			
	8	2				8	2			
	9	2				9	2			
20	1	2			80	1	2			
	2	2				2	2			
	3	2				3	2			
	4	2		74		4	2		72	
	5	2				5	2			
	6	2				6	2			
	7	2				7	2			
	8	2				8	2			
	9	2				9	2			
30	1	2			90	1	2			
	2	2				2	2			
	3	2				3	2			
	4	2		83		4	2			
	5	2				5	2			
	6	2				6	2			
	7	2				7	2			
	8	2				8	2			
	9	2				9	2			
40	1	2			100	1	2			
	2	2				2	2			
	3	2				3	2			
	4	2		89		4	2			
	5	2				5	2			
	6	2				6	2			
	7	2				7	2			
	8	2				8	2			
	9	2				9	2			
50	1	2			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	2								
	3	2								
	4	2								
	5	2		76						
	6	2								
	7	2								
	8	2								
	9	2								

Secchi depth 0.3 (vdc)
Estimated?

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- 2022-02-14-17

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

too deep to assess

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

Waterbody: Long Branch BMAP	Date: 2/15/22	County: Orange	DIN Storet Number: 62LE0036
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Analyst: Victoria Schwarz	Signature: [Signature]
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Comments: $< 2m^2$ veg - no LVS

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

[illegible]