

Site Name Pine Barren Creek above Lumber Bridge Road

Date: 2/5/19

Field ID G4WW0218

Storet G4NW021P

Project: SMP

Visit ID 79218

RQ: 2019-02-04-54

RPS ID 9230

LIMS ID: _____

VPDB ID _____

HA ID 15644

☒ ~~LVI~~ ^{FD} SCI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO

Initial FS
2/19/19

☐ Date and Initial QA: _____

☒ RPS entered in SBIO

Initial FS
2/19/19

☐ Date and Initial QA: _____

☐ LVI entered in SBIO

Initial _____

☐ Date and Initial QA: _____

☒ < 2 m² vegetation

☐ Plants getting verified

Date submitted: _____

☐ Plants verified

Date returned: _____

☐ RPS authorized in SBIO

☐ Date and Initial: _____

☐ RPS score: _____

☐ VPDB authorized in SBIO

☐ Date and Initial: _____

☐ VPDB score: _____

☐ SCI complete: _____

SCI Score: _____

☐ If SMP, scanned into database



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / ☒ No

WIN Station Name:

Pine Barren Creek above Lamber Bridge Road

Date:

2/5/19
(mm/dd/yyyy)

WIN/Field ID:

G4NW0218

WBID: 5

Latitude: 30.8820646

County:

Escambia

ORG ID:

21FLPNS

Longitude: -87.3952236

Receiving Body of Water:

Escambia River

RQ-2019-02-04-54

Sampling Team Members

MIKE KING
NATHAN MURPHY

Sampling Equipment

☒ Sample Container ☐ Van Dorn ☐ Pole
☐ Carboy ☒ Syringe
☐ Dipper ☐ Other

Depth Measured with
Equipment ID

Collection Method

☒ Wading ☐ Canoe/Kayak
☐ From Shore ☐ Electric Motor
☐ Other ☐ Gasoline Motor

Water Level: Dry/ Pooled/ Low / ☒ Normal / High / Flooded

Meter ID# 154179

Matrix: ☒ Fresh / Marine / DI

Photos: ☒ Yes / No

Flow: No Flow / Intertidal / ☒ 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 (PPT)	Sp COND (umhos/cm)	Temp. (C°)
EST	1230	0.6	0.3	100	8.77	90.7	5.25	0.02	38.4	17.0
CEN										

Biological Samples Collected: None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:

SBIO ID Numbers: SBIO-ID: 79218 HA-ID: 15644 RPS-ID: 9230 Macrophyte-ID: N/A 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	518101020	4/11/19	☒ <2
Metals	☐ W-ICPMS ☒ W-ICP	☐ Ice ☒ HNO3	NA 8099110	4/09/19	☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☐ Ice	16570048		
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-JD NA	☐ 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	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Place Preservative Sticker(s) Here
(If Available)

Notes:

Field/WIN ID



G4NW0218

Location:

Pine Barren Creek above Lamber Bridge Road

Signature:

Date:

02/05/2019

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 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID 79217 ORG ID 21FLPNS LATITUDE 30.88017
 COUNTY Escambia STORET # 64NW0218 LONGITUDE 87.39454
 DATE 2/5/19 TIME 1230 SAMPLING AGENCY FDEP NWROC
 SITE NAME Pine Barren Creek above Lumber Bridge Rd
 FIELD ID/NAME 64NW0218 RECEIVING BODY OF WATER Escambia River

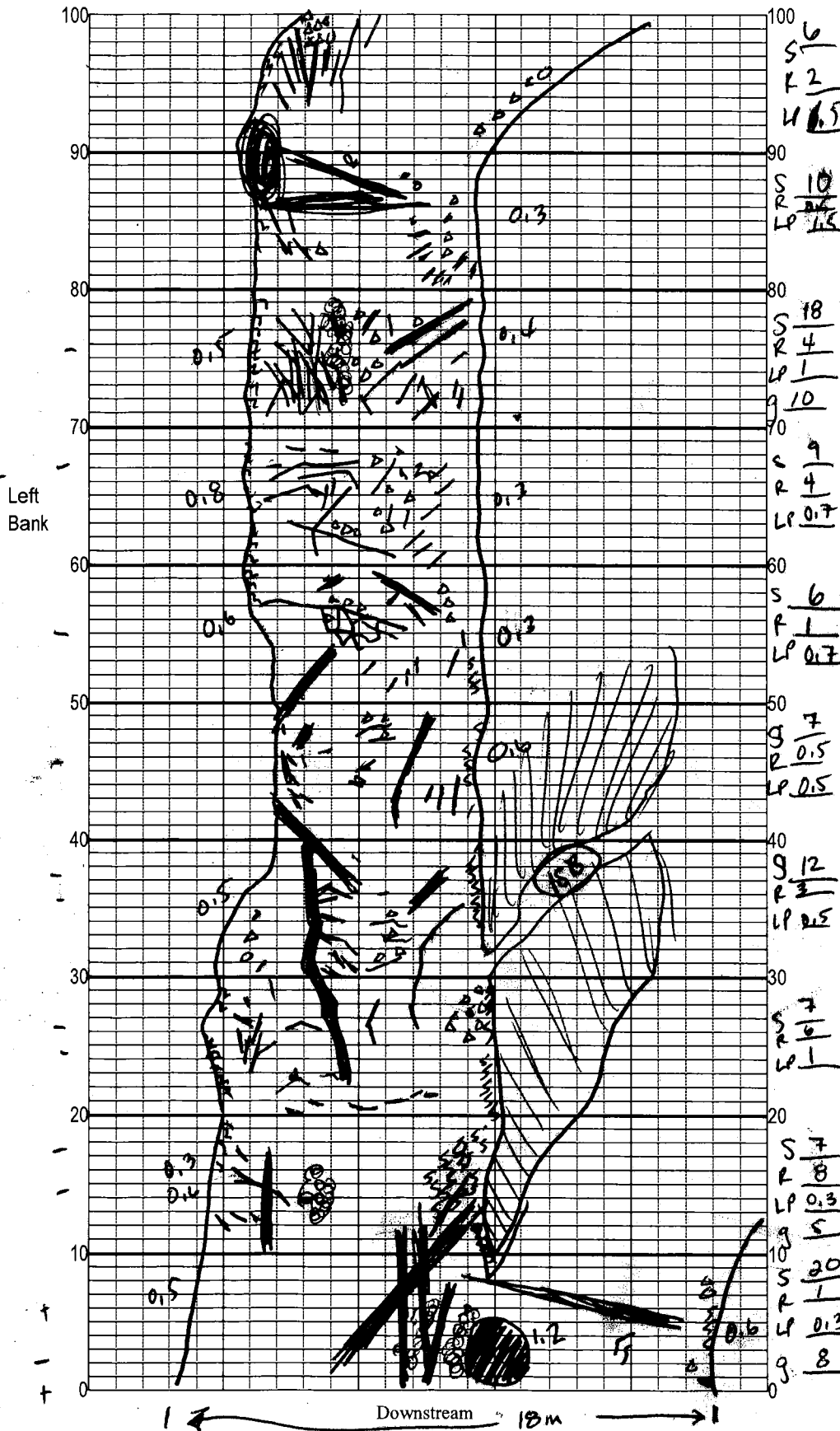
RIPARIAN ZONE / STREAM FEATURES

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							Typical Width (m) Depth (m)/Velocity (m/sec) Transect m wide
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>78</u> Right Bank: <u>78</u>				Hydrologic Modification Score (per FT 3101) <u>1-2</u>		0.33 m/s 0.33 m/s 0.33 m/s	
High Water Mark: <u>1.5</u> + <u>1.2</u> = <u>2.7</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		0.7 m deep 0.4 m deep 0.5 m deep	
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 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.6</u> <u>17.0</u> <u>5.25</u> <u>8.77</u> <u>90.7</u> <u>38.4</u> <u>0.02</u> <u>0.8</u> Mid: Bottom: Meter ID: <u>154179</u>		
Woody Debris (Snags) <u>12.8</u> <u>5</u> Undercut Banks / Roots <u>4</u> <u>5</u> Leaf Packs or Mat <u>1</u> <u>5</u> Aquatic Vegetation Rock or Shell Rubble.. Sand..... <u>78</u> <u>2</u> Mud / Muck / Silt Other <u>gravel</u> <u>4.5</u> <u>3</u> Other			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 Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☒ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☒ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify)			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>MIKE KING / Nathan Muirney</u>			SIGNATURE <u>[Signature]</u> DATE: <u>2/5/19</u>		

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: G4NW0218
Pine Barren Creek
 Date: 2/5/19
 Sampler: MIKE KING / NATHAN MUIKEY

100 m: Latitude 30.88081
 Longitude 87.39514
 0 m: Latitude 30.88017
 Longitude 87.39454

Substrates: Code key, draw proportionate habitat abundance.		%
	Snags	102 12.75
	Roots/undercut banks	30 3.8
	Leaf Packs (or mats)	1
	Aquatic Macrophytes	8
	gravel	30 4.5
	Pools	total # observed = 111 # range expected =

Average width 8 m
 Average depth 0.5 m

Velocity measured at 60 meter mark.

WQ & chemistry taken at 0 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:
SP10 ID 7921P

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

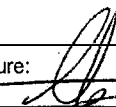
SAMPLING AGENCY: <u>FDEP NW ROC</u>		STORET STATION NUMBER: <u>G4NW0218</u>	DATE (MM/DD/YY): <u>2/5/19</u>	RECEIVING BODY OF WATER: <u>Escambia River</u>
REMARKS:	COUNTY: <u>Escambia</u>	LOCATION: <u>Pine Barren Creek abv Lambert</u>	FIELD ID/NAME: <u>G4NW0218</u>	

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>12</u>	20 19 18 17 16	15 14 13 <u>(12)</u> 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</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 <u>(13)</u> 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>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>(20)</u> 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>14</u> ----- Primary Score <u>59</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 <u>(14)</u> 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>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>7</u> Left Bank <u>6</u>	10 9	8 <u>(7)</u> <u>(6)</u>	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>9</u>	<u>(10)</u> <u>(9)</u>	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>9</u> Left Bank <u>6</u> ----- Secondary Score <u>66</u>	10 <u>(9)</u>	8 7 <u>(6)</u>	5 4	3 2 1

125

TOTAL SCORE

HA ID 15644

Date: <u>2/5/19</u>	Analyst: <u>MIKE KING / Nathan Muirney</u>	Signature: 
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SBIO ID 79212

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: G4NW0218	County: Escambia	Date: 2/5/19	Investigators: MIKE KING / Nathan Murray
			STORET Station Number:

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		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5					5				56
	6	4				6				
	7	N				7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2	N				2				
	3	3				3				
	4	N				4				
	5					5				48
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5					5				36
	6					6				
	7					7				
	8					8				
	9					9				
30	1	3			90	1	N			
	2	N				2				
	3					3				
	4					4				
	5					5				24
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2	3				2				
	3	N				3				
	4					4				
	5					5				30
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N			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			62						
	6									
	7									
	8									
	9									

Secchi depth	0.8
Estimated?	N

# points ranked 4-6	1
total points assessed	99
% points ranked 4-6	1

Check accompanying data collected at same site/date.	
Algal mat sample	NA
Linear Veg Survey	NA
Habitat Assessment	✓
SC/Biorecon	✓
Water sample	✓
RQ-2019-02-04-54	

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

SB10 ID
7921P
RPS ID 9234

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

Waterbody: <i>Pine Barren Creek</i>	Date: <i>2/5/14</i>	County: <i>Essex</i>	Storet Number: <i>G44W0218</i>
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Analyst: MIKE KING Signature: [Signature]

Comments: LESS 2m² plants

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]

LUS not performed