

SCI

BMAP

Site Name

Long Branch

Sample Date

2/11/19

WBID

3030

WIN ID

G21E0034

RQ

2019-02-11-34

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	KWM FEB 18 2019	LB 2/27/19
Create SBIO station visit	KWM FEB 18 2019	n/a
Phys/Chem entry	KWM FEB 18 2019	LB 2/27/19
Habitat Assessment entry	KWM FEB 19 2019	LB 2/27/19
Vascular entry (add LIMS ID to entry)	n/a	n/a
RPS entry	KWM FEB 18 2019	LB 2/27/19
Authorize SBIO data	LB 2/27/19	n/a
Scan all sheets to 21FLCEN folder	LB 2/27/19	n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

< 2 m² vegetation, no LVS

* waiting for HA + sketch 2/18-km



Long Branch BMAP Monitoring

January 2019

Data Qualified?

Yes / No

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

Date: 2/11/19

(mm/dd/yyyy)

WIN/ Field ID: G2CE0036

WBID: 3030

Latitude: 28.53508

(Decimal Degrees)

County: Orange

ORG ID: 21FLCEN

Longitude: -81.10941

(Decimal Degrees)

Receiving Body of Water: Econ River

RQ-2019- 02-11-36

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Leif Boman										☒ Sample Container	☐ Van Dorn	☐ Pole		
Katie March										☐ Carboy	☒ Syringe			
										☐ Dipper	☐ Other			
										Depth Measured with Secchi Disk Line / Meter				
										Equipment ID Leadfoot Knothead Crusty Bucket / Trap				
										Collection Method				
										☒ Wading	☐ Canoe/Kayak			
										☐ From Shore	☐ Electric Motor			
										☐ Other	☐ Gasoline Motor			
Water Level: Dry / Pooled / Low / Normal / High / Flooded					Meter ID# Shrimp Trap					Matrix: Fresh / Marine / DI				
Photos: Yes / No					Flow: No Flow / Intestinal / 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	1045	0.5	0.3	0.5(s)	6.37	68.4	6.89	0.14	3010	18.8				
GEN														
Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:														
SBIO ID Numbers: SBIO-ID: 79214 HA-ID: 15642 RPS-ID: 9228 Macrophyte-ID: n/a LIMS#: 2061786														
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					☒ <2		
Metals		☒ W-ICPMS ☒ W-ICP					☒ Ice ☒ HNO3					☒ <2		
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 um Filter					☒ Ice		13615055					
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-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 ☐ Other							
Phytoplankton		☒ BOD-UNIN (BOD 5 Day)					☒ Ice							

Notes:

Orange County gate at 28.53217419 x -81.09828093; combo for lock is 3535

Signature: K March

Date: 2/11/19

WIN ID / Field ID →

Long Branch @ 0.7 mi DS of CR 13



G2CE0036

LIMS EVENT ID: CEN-DIST-2019- 02-12-02

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:

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

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY Orange STORET # 62CE0036 LONGITUDE _____
 DATE 2/11/19 TIME _____ SAMPLING AGENCY _____
 SITE NAME Long Branch @ 0.7 mi DS
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Econ River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>60</u> Silviculture _____ Field/Pasture <u>40</u> 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 _____ m/s <u>0.17</u> m/s _____ m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>0.2</u> + <u>0.5</u> = <u>0.7</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 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>18.9</u> <u>6.89</u> <u>6.37</u> <u>68.4</u> <u>301.0</u> <u>0.14</u> _____ Mid: _____ Bottom: _____ Meter ID: <u>Shrimp Trap</u>		
Woody Debris (Snags) <u>3.6</u> <u>7</u> _____ Undercut Banks / Roots <u>.98</u> <u>7</u> _____ Leaf Packs or Mat <u>.48</u> <u>3</u> _____ Aquatic Vegetation _____ Rock or Shell Rubble.. _____ Sand..... <u>3</u> _____ Mud / Muck / Silt _____ Other _____ 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 ☐		
SAMPLING TEAM <u>KWM, LGB</u>			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____ AMBIENT FIELD CONDITIONS / NOTES: <u>high 70s, sunny, recent rains over weekend but not flooded</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SIGNATURE: <u>KMaurice</u>			DATE: <u>2/11/19</u>		

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Long Branch</u>				County: <u>Orange</u>		Date: <u>2/11/19</u>		Investigators: <u>KWM</u>	
STORET Station Number: <u>6260036</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		60	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
10	1	N	N		70	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
20	1	N	N		80	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
30	1	N	N		90	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
40	1	N	N		100	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
50	1	N	N			1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N			5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	

Secchi depth	<u>0.5(s)</u>
Estimated?	<u>No</u>

# points ranked 4-6	<u>0</u>
total points assessed	<u>99</u>
% points ranked 4-6	<u>0</u>

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	<u>✓</u>
SCI/Biorecon	<u>✓</u>
Water sample	<u>✓</u>
RQ- <u>2018-02-11-36</u>	

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

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

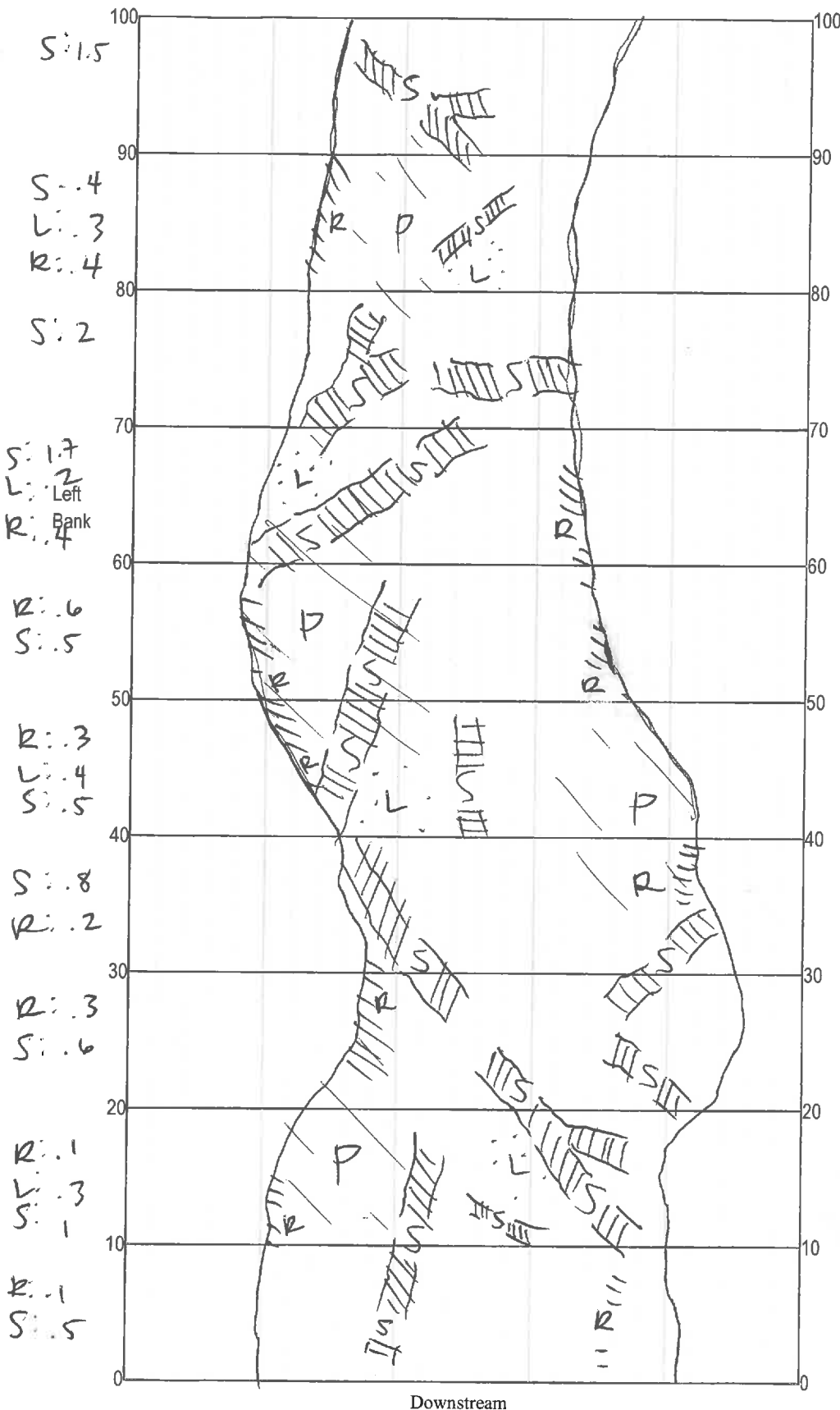
SAMPLING AGENCY: <u>FDEP-COROL</u>		STORET STATION NUMBER: <u>62CE0036</u>	DATE (MM/DD/YY): <u>02/11/19</u>	RECEIVING BODY OF WATER: <u>Econ River</u>
REMARKS:	COUNTY: <u>Orange</u>	LOCATION: <u>Long Branch</u>	FIELD ID/NAME:	

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>10</u>	20 19 18 17 16	15 14 13 12 11	<u>10</u> 9 8 7 6	5 4 3 2 1
Substrate Availability <u>4</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 5.24 10 9 8 7 <u>6</u>	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>1.3</u> <u>6 seconds</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 14 <u>13</u> 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 <u>8</u> 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>17</u> ----- Primary Score <u>46</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. <u>18</u> 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 Artificial Channelization <u>20</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. <u>20</u> 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 <u>9</u> Left Bank <u>9</u>	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. 10 <u>9</u>	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 <u>10</u> Left Bank <u>10</u>	Width of vegetation greater than 18 m <u>10</u> 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 <u>10</u> Left Bank <u>10</u> ----- Secondary Score <u>78</u>	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

124 TOTAL SCORE

Date: <u>2/11/19</u>	Analyst: <u>KWM, LGB</u>	Signature: <u>Kman</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).

Location: Long Branch
Date: 02/11/19
Sampler: Lif Brown, Kate

100 m: Latitude _____
Longitude _____
0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

	Snags	3.8
	Roots/undercut banks	.96
	Leaf Packs (or mats)	.48
	Aquatic Macrophytes	
	Pools	total # observed = _____ # range expected = _____

Average width 2.5 m

Average depth _____ m

Velocity measured at 50 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:

lots of previous larger
snags seem to have been
washed out. Less leaves
& roots as well.

5.24% but

fairly productive
still.

L: 1.2
R: 2.4
S: 9.5

Revision Date: March 1, 2014