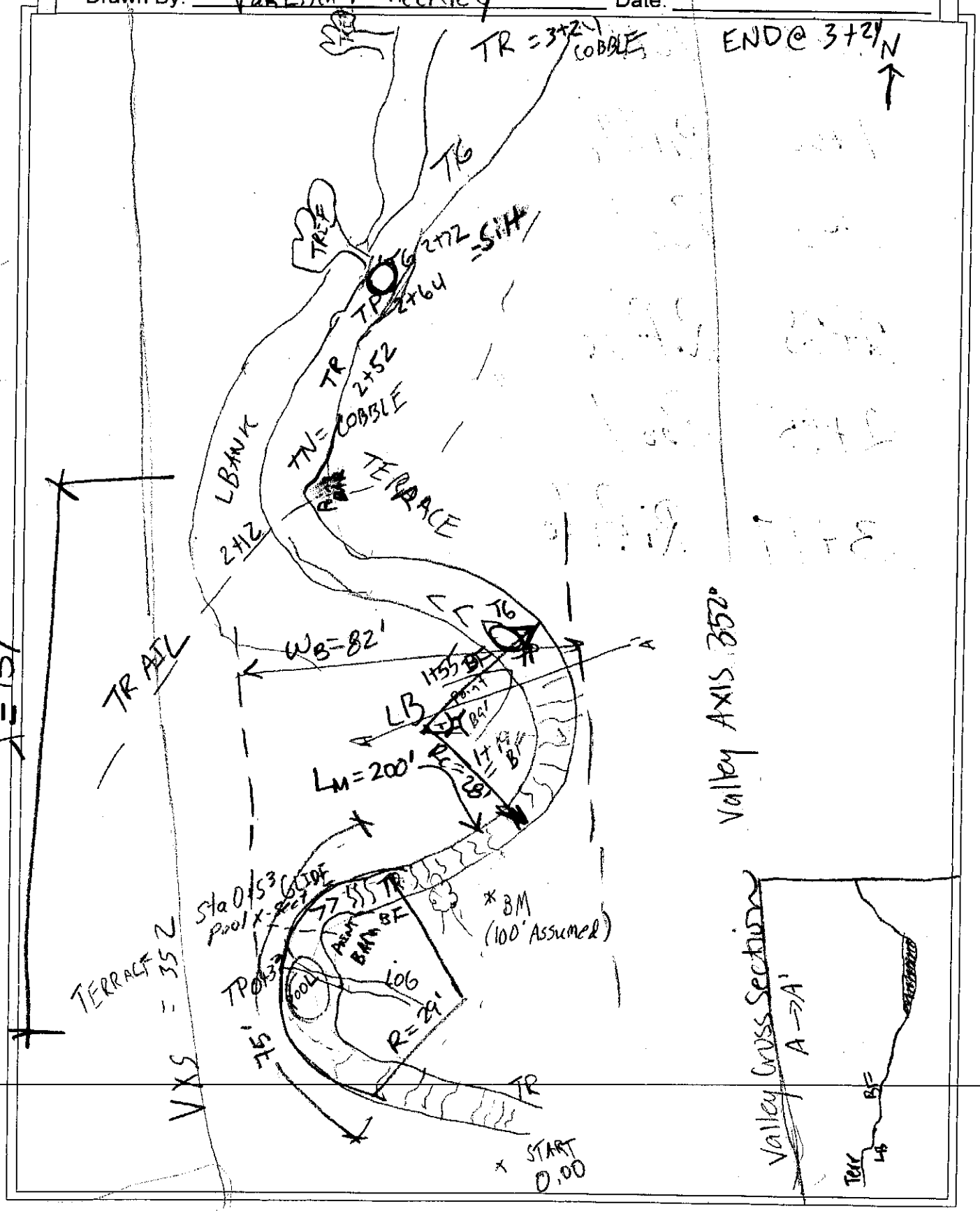
AREA-SITE LOCATION....REACH MAP

Stream: Sweet Reach: 2

Drawn By: VanEffen / Reckley Date:



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Geometry Measurements

Stream name/location: Reach 2 - meander 1 0+0 → 1+30

Date: _____ Team members: _____

Attribute	Measurement 1	Measurement 2	Measurement 3	Measurement 4	Measurement 5	Range	Average
Radius of Curvature **(R_c)**	29'						
Meander (Linear) Wavelength **(λ)**	151'						
Stream Meander Length **(L_m)**	200'						
Belt Width **(W_{blt})**	82'						
Arc Length **(A_L)**	75'						

Sinuosity

Stream length = 325'
Valley length = 233'
Sinuosity = 1.39

$$\frac{\angle}{360} = \frac{X_a}{2\pi r}$$

$$\therefore \angle = \frac{(360)(75)}{2\pi(29)} = 148^\circ$$

Geometry Measurements

Stream name/location: SWEET RUN

Date: 3/22/16 Team members: _____

Attribute	Measurement 1	Measurement 2	Measurement 3	Measurement 4	Measurement 5	Range	Average
Radius of Curvature **(R_c)**	285						
Meander (Linear) Wavelength **(λ)**	70.6 ft	200.0					
Stream Meander Length **(L_m)**	62 190 128 ft						
Belt Width **(W_{blt})**	79						
Arc Length **(A_L)**	84-26 58						

Sinuosity

Stream length = 325

Valley length = 233

Sinuosity = 1.4

SURVEY DATA → **CROSS - SECTION** 1

SITE: Reach 2 Riffle Date:

Location: 1+18

Party / Notes: HUC:

Item	Distance, Point, or STATION ft	Back-Sight BS ft	Height of Instrument HI ft	Fore-Sight FS ft	Elevation ft	REMARKS / COMMENTS / NOTES
1	BM	4.47	104.47			Benchmark
2	+0	~~5.6~~		5.00		Left Lowbank
3	~~+3.2~~ 2.4			~~6.04~~ 5.45		
4	+3.2			6.04		Bankfull
5	+4.3			6.47		
6	+6.0			6.48		
7	+8.0			6.79		water surface
8	+10.0			7.11		Thalweg
9	+12.3			7.45		thalweg
10	+14.0			7.36		Channel
11	+16.0			7.20		Channel
12	+18.0			7.28		
13	+18.7			~~7.83~~ 6.83		edge of water
14	+19.4			6.62		Right
15	+20.4			5.49		HighBank/TRB
16	+22.0			5.19		
17	+24.0			5.07		
18	BM	4.50	104.50			
19						
20	Floodplain: 42' → CONFIRMED WITH ROD					
21						
22						
23						
24						
25						
26						
27						
28						

~~2.82~~ 4.63

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REACH #2 POOL

SURVEY DATA ⟹ **CROSS - SECTION** 1

SITE: Sweet Run Date: 3-22-16

Location: 0+53

Party / Notes: HUC:

Item	Distance, Point, or STATION ft	Back-Sight BS ft	Height of Instrument HI ft	Fore-Sight FS ft	Elevation ft	NOTES / COMMENTS / REMARKS
1	BM = 100	4.78	104.78			
2	25			5.58		RTB
3	23			5.80		
4	21			6.22		BF
5	19			6.80		
6	17.4			7.32		REW
7	15			8.06		RC
8	13			8.32		RC
9	11			9.06		
10	9			9.92		channel prot + [illegible]
11	7			10.24		THALWEG
12	5			9.90		
13	3			9.52		
14	2			9.32		
15	1			5.12		L Top of Bank
16	0			4.60		L Bank
17		4.72				
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

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SURVEY DATA ⟶ **LONGITUDINAL PROFILE 1**

SITE: SWEET RUN Date: 3/22/16

Location: REACH 2

Party / Notes: TEAM 2 HUC:

	Distance, Point, or	Back-Sight	Height of Instru-ment	Thalweg		Water Surface		Bankfull		Low Bank HI		NOTES e.g. Riffle Run Pool Glide
				Fore-Sight	Elevation	Fore-Sight	Elevation	Fore-Sight	Elevation	Fore-Sight	Elevation	
	STATION	BS	HI	FS	Elev.	FS	Elev.	FS	Elev.	FS	Elev.	
	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	BM1	4.62	104.62									TOP OF Reach 2 inside Bend
2	3+17			8.41		7.98				4.82		TR
3	2+86			9.43		7.98				5.25		P - Deepest part of pool
4	2+65			9.68		7.98				4.42		TP
5	2+60			8.85		7.98				4.50		MN
6	2+59			8.56		7.98				4.28		TN
7	2+43			8.43		7.84		6.72		4.09		Middle of Riffle
8	2+28			7.95		7.61				4.22		TR
9	2+14			8.26		7.61				5.24		MG
10	2+07			8.72		7.61				5.20		TG
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												

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SURVEY DATA → LONGITUDINAL PROFILE 2

SITE: Date:

Location:

Party / Notes: HUC:

	Distance, Point, or STATION ft	Back-Sight BS ft	Height of Instrument HI ft	Thalweg Fore-Sight FS ft	Thalweg Elevation Elev. ft	Water Surface Fore-Sight FS ft	Water Surface Elevation Elev. ft	Bankfull Fore-Sight FS ft	Bankfull Elevation Elev. ft	Low Bank HI Fore-Sight FS ft	Low Bank HI Elevation Elev. ft	NOTES e.g. Riffle Run Pool Glide
28	BM1	4.62	104.62									Reach 2 TOP
29	0+00			6.45		5.92				4.40		TR Inside of Bend
30	0+33			7.65		6.83				5.31		TP
31	0+49			9.60				5.79				Max Depth
32	0+68			9.11		6.82		5.63				
33	0+83			8.79								
34	0+95			8.15		6.82		~~6~~5.94				
35	1+00			7.30		6.79				4.82		TR
36	1+19			7.61		7.12		6.24		5.04		BF indicator
37	1+33			7.71		7.13		6.24		4.96		BF ind.
38	1+40			8.70		7.52				4.83		TP
39	1+49			9.00		7.58						MAX Depth
40	1+56			8.75		7.53		6.66		5.0		BF ind
41	1+93			8.65	7.61	~~7.6~~		6.90		6.13		BF ind
42	TRAIL CROSSES @ 2+10											
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												

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ROSGEN REPRESENTATIVE REACH PEBBLE COUNT

STREAM:	DATE:
REACH:	CREW:

PARTICLE TALLY COUNTS BY TRANSECT

ft	PARTICLE	mm		1 (R)	2 (R)	3	4	5	6	7 (R)	8 (R)	9	10	Tot Pool	Tot Riff	Comb Tot	%CUM
				111	121	168	200	209	222	232	238	273	314				
	Silt/Clay	< .062	S/C										II	2			2
	Very Fine	.062 - .125	S														
	Fine	.125 - .25	A	I	I		IIII		II		I		I	7	3		10
	Medium	.25 - .50	N				I		II	I		II	I	6	1		7
	Coarse	.50 - 1.0	D			III	II	(9) IIIIIIII	I		I	III	II	20	1		21
	Vry Coarse	1.0 - 2	S		I			(9) 2				I		4	1		2
	Very Fine	2 - 4															
	Fine	4 - 6	G		I				I					1	1		2
	Fine	6 - 8	R	II	I		I					II		3	3		6
	Medium	8 - 12	A									I		1			1
	Medium	12 - 16	V								II				2		2
	Coarse	16 - 24	E									I		1			1
	Coarse	24 - 32	L							II	II				4		4
	Vry Coarse	32 - 48	S	I	III	I			I	I				2	6		8
	Vry Coarse	48 - 64			I					II	I				4		4
0.21-0.31	Small	64 - 96	C	III		II	II		II	I	II			6	6		12
0.31-0.42	Small	96 - 128	O		I					I					2		2
0.42-0.63	Large	128 - 192	B		I	I				II	I		I	2	4		6
0.63-0.84	Large	192 - 256	L	I		I		I	I				I	4	1		5
0.84-1.26	Small	256 - 384	B	I		II							II	4	1		5
1.26-1.68	Small	384 - 512	L														
1.68-3.36	Medium	512 - 1024	D														
3.36-6.72	Lrg	1024 - 2048	R														
6.72-13.43	Vry Lrg	2048-4096															
	Bedrock	>4096	BDRK														

FEATURE SAMPLED

	Length	Proportion	No. Units	Sampled
REACH				
POOL				
RIFFLE				
RUN				

Transect	Feature	Length	Width
1	P	273	
4	P	200	
2	R	121	
4	R	232	
3	P	168	
1	R	111	
10	P	314	
8	R	238	
5	P	209	
6 10	P	222	

RIFFLE PEBBLE COUNT AND LARGEST PARTICLE ON BAR COUNT

STREAM: SWEET RUN	**DATE:** 3-23-16
REACH: 2	**CREW:**
XS No.:	**Riffle Location (also mark on reach sketch):**

				Particle Count										TOTALS	
										Reach BFE 121	232	238	273		
ft	PARTICLE	mm		1	2	3	4	5	6	7	8	9	10	Tot #	% Cum
	Silt/Clay	< .062	S/C												
	Very Fine	.062 - .125	S												
	Fine	.125 - .25	A							I		I			
	Medium	.25 - .50	N			II					I		II	2	
	Coarse	.50 - 1.0	D	I		I	I					I	III	3	
	Vry Coarse	1.0 - 2	S	I	II		II			I			I	5	
	Very Fine	2 - 4		III	I									4	
	Fine	4 - 6	G		I					I				1	
	Fine	6 - 8	R		I	I	II			I			II	4	
	Medium	8 - 12	A	I	I	I	I						I	4	
	Medium	12 - 16	V	II			II					II		4	
	Coarse	16 - 24	E		I	I	II						I	4	
	Coarse	24 - 32	L	~~IIII~~	I		II				II	II		~~4~~ 8	
	Vry Coarse	32 - 48	S	I	~~IIII~~	IIII				III	I			~~8~~ 10	
	Vry Coarse	48 - 64		~~IIII~~	III	I	I			I	II	I		10	
0.21-0.31	Small	64 - 96	C	~~IIII~~ II	II	IIII	II				I	II		15	
0.31-0.42	Small	96 - 128	O	~~IIII~~ II		I	I			I	I			[illegible]	
0.42-0.63	Large	128 - 192	B	I		I	IIII			I	II	I		8	
0.63-0.84	Large	192 - 256	L	I	II	II								6	
0.84-1.26	Small	256 - 384	B	~~IIII~~										5	
1.26-1.68	Small	384 - 512	L											0	
1.68-3.36	Medium	512 - 1024	D												
3.36-6.72	Lrg	1024 - 2048	R												
6.72-13.43	Vry Lrg	2048-4096													
	Bedrock	>4096	BDRK												

LARGEST PARTICLES ON BAR

Bar Location (also mark on reach sketch):

Bar Length:
Bar Width (Thalweg - BF):
Sketch bar profile (Thalweg - BF)

Part. #	mm	Part. #	mm	Part. #	mm
1		6		11	
2		7		12	
3		8		13	
4		9		14	
5		10		15	

Riffle #2
start 028

Riffle Stability Index

Material	Size Range (mm)		Pebble Counts 1	2	3	4	5	% in Class	Cumulative
silt/clay	0	0.062	I			II			3
very fine sand	0.062	0.13							
fine sand	0.13	0.25	IIII		IIII II	IIIIIIIIII			22
medium sand	0.25	0.5				12			12
coarse sand	0.5	1	I	IIII II					8
very coarse sand	1	2							
very fine gravel	2	4		I		I			2
fine gravel	4	6				3			3
fine gravel	6	8				I			1
medium gravel	8	11			I				1
medium gravel	11	16	I			2			3
coarse gravel	16	22			IIII I	2			7
coarse gravel	22	32			II	4			6
very coarse gravel	32	45	IIII	III	II	4			13
very coarse gravel	45	64	II	III	III	2			10
small cobble	64	90	IIII	III	I	2			10
medium cobble	90	128	I	II	I	5			9
large cobble	128	180	II	I	I	5			9
very large cobble	180	256	I	I		6			8
small boulder	256	362	I			3			4
small boulder	362	512							
medium boulder	512	1024				1			1
large boulder	1024	2048							
very large boulder	2048	4096							

0-2

4-8

8-16

13

23

19

17

Total Particles =

Enter intermediate diameters (mm) of 10 – 30 particles on bar:

1	230	11	120	21	108
2	230	12	120	22	75
3	160	13	130	23	82
4	150	14	110	24	92
5	240	15	120	25	90
6	130	16	115	26	90
7	175	17	110	27	
8	170	18	110	28	
9	140	19	105	29	
10	110	20	100	30	

Geometric Mean Grain Size (mm) =

Worksheet 26. Bar sample form

Point / Side BAR-BULK MATERIALS SAMPLE DATA: Size Distribution Analysis

Party: Group 2

Location: SWEET RUN T2

Date: 3/23/16

Notes:

SUB SAMPLES	Sieve SIZE < 2		Sieve SIZE 2		Sieve SIZE 4		Sieve SIZE 8		Sieve SIZE 16		Sieve SIZE 32		Sieve SIZE 64-128		Sieve SIZE		Sieve SIZE	
Tare Weight	1050		850		850		850		900		850							
Sample Weights	Total	Net	Total	Net	Total	Net	Total	Net	Total	Net	Total	Net	Total	Net	Total	Net	Total	Net
1	5350	3700	1150	300	950	100	875	25	905	5								
2	4300		1850		2250		2650		3250		5150		1200					
3					230		+											
4							950											
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
Net Wt. Total																		
% Grand Tot.																		
Accum. % =<																		

SURFACE MATERIALS DATA
(Two Largest Particles)

No.	Dia.	WT.
1	60mm	400
2	80mm	500

Bucket + Materials Weight_____

Bucket Tare Weight_____

Materials Weight_____
(Materials less than: _____mm.)

Be Sure to Add Separate Material Weights to Grand Total

GRAND TOTAL SAMPLE WEIGHT

NOTES

Field Data Sheet for Discharge Measurements

Stream Discharge Measurement Sheet

Site ID #: SWEET RUN
Name and Location: T #2 R 2
Date: 3-24-16 Crew: 2

County:
Weather:
Cross-section Location: ↑ stream
Meter:

Station	Width	Depth	Area (Width x Depth)	Run Length	Secs	Velocity (fs)	Average Velocity Use with 2pt method (0.2+0.8)/2	Discharge (Area x Velocity) (cfs)
1.0	1.0	.2	.1			.06		0.06
2.0	1.0	.3	.3			.38		.11
3.0	1.0	.35	.35			.7		.25
4.0	1.0	.40	.40			.65		.26
5.0	1.0	.50	.50			.60		.3
6.0	1.0	.55	.55			.83		.46
7.0	1.0	.50	.50			.64		.32
8.0	1.0	.45	.45			.80		.36
9.0	1.0	.35	.35			.66		.23
10.0	1.0	.30	.30			.12		.04
11.0	1.0	.30	.30			.12		.04

Total Discharge: 2.43 CFS (oMeasured, o Estimated)

Comments:

Field Data Sheet for Discharge Measurements

Stream Discharge Measurement Sheet

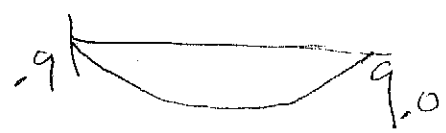
Site ID #: _____
Name and Location: _____
Date: _____ Crew: _____

County: _____
Weather: _____
Cross-section Location: _____
Meter: _____

Station	Width	Depth	Area (Width x Depth)	Run Length	Secs	Velocity (fs)	Average Velocity Use with 2pt method (0.2+0.8)/2	Discharge (Area x Velocity) (cfs)
2	1' ~~8.17~~	0.41	.41			0.06		.0246
3	1'	0.66	.66			1.1		.0726
4	1'	0.70	.70			1.09		.763
5	1'	0.66	.66			0.62		.4092
6	1'	0.59	.59			0.68		.4012
7	1'	0.49	.49			0.38		.1862
8	1'	0.42	.42			0.04		.0168
~~9~~		~~0.33~~	~~.33~~					2.461
6	1'	0.22	0.22			0.44		.0968
7	1'	0.28	0.28		0.69	- ~~0.69.57~~		.1932
8	1'	0.32	0.32			~~0.66~~ 57		.1824
9	1'	0.48	0.48			0.56		.2688
10	1'	0.58	0.58			0.57		.3306
11	1'	0.58	0.58			0.86		.4988
12	1'	0.42	0.42			0.78		.3276
13	1'	0.28	0.28			0.71		.1988
								2.097

Total Discharge: _____ CFS (oMeasured, o Estimated)

Comments:



Field Data Sheet for Discharge Measurements

Stream Discharge Measurement Sheet

Site ID #: _____
Name and Location: SWEET RUN
Date: 3/24/16 Crew: T2

County: _____
Weather: _____
Cross-section Location: ↓ Stream
Meter: _____

Station	Width	Depth	Area (Width x Depth)	Run Length	Secs	Velocity (fs)	Average Velocity Use with 2pt method (0.2+0.8)/2	Discharge (Area x Velocity) (cfs)
Eddy ~~.5~~ 1.5	1.5	~~.2~~ .45	.675			~~1.01~~ 0.77		.52
2	.5	.6	.3			1.27		.38
2.5	.5	.6	.3			1.12		.33
3.0	.5	.6	.3			1.14		.34
3.5	.5	.6	.3			.98		.29
4.0	.5	.6	.3			.75		.23
4.5	.5	.6	.3			.69		.20
5.0	.5	.65	.325			.69		.22
5.5	.5	.6	.3			.56		.16
6.0	.5	.5	.25			.45		.11
6.5	.5	.45	.225			.17		.03
7.0	.5	.5	.25			.09		.02
7.5	.5	.4	.20			.04		.008
8.0	.5	~~.2~~ .25	.125			.—		
9.5	.5	.25	.125			—		

Total Discharge: 2.83 CFS (oMeasured, o Estimated)

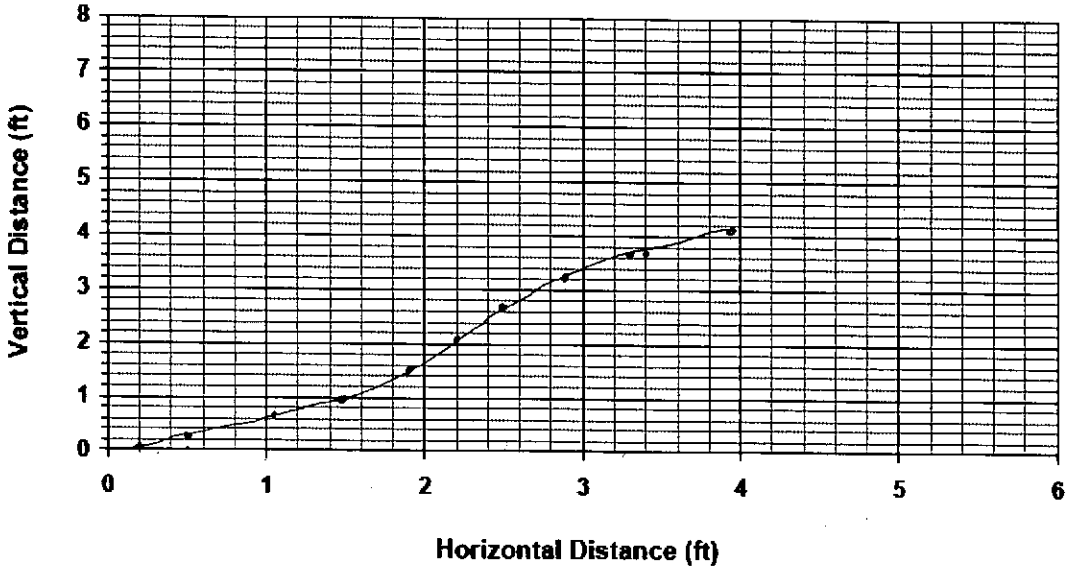
Comments:

Worksheet 6-2. Bank profile and bank erosion summary data form.

Stream:	Observers:
Location:	Date:
Cross-section:	BEHI adjective:
Bank:	NBS adjective:
Toe pin station (ft):	Predicted erosion (ft):
Toe pin elevation (ft):	Measured erosion (ft):

Date:			Date:		

PROFILE 2



Worksheet 6-2. Bank profile and bank erosion summary data form.

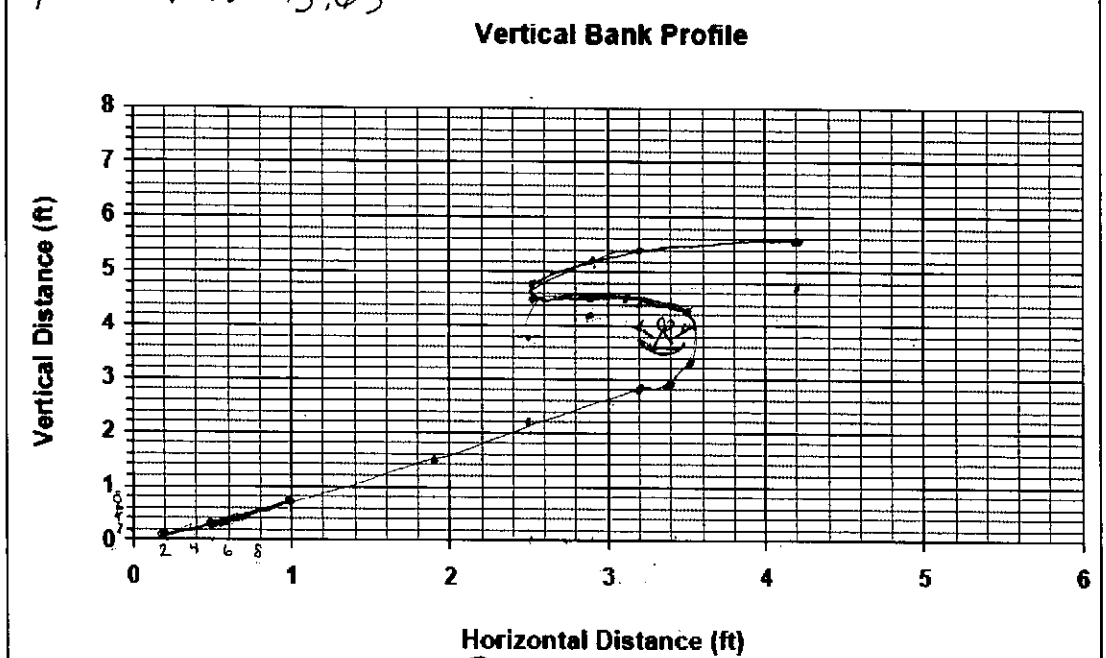
Stream: Sweet Run	Observers: Team 2
Location:	Date: 24 MAR 2016
Cross-section: #1	BEHI adjective:
Bank:	NBS adjective:
Toe pin station (ft):	Predicted erosion (ft):
Toe pin elevation (ft):	Measured erosion (ft):

Date: PROFILE 1

0.28	~~0.36~~	0.12	just below H_2O surf.
0.52	~~0.73~~	~~0.36~~	0.62
0.99	~~1.14~~	~~0.76~~	0.90
1.92	~~1.84~~	~~1.20~~	1.55
	2.55	2.22	~~2.~~
	3.20	2.82	
	3.41	2.87	
	3.46	3.32	+0.
	3.43	~~(3.94)~~ →	~~+0.42~~ 4.36
	3.13	~~4.94~~ 4.52	
	2.92	4.58	
	2.57	4.56	
	2.55	~~3.78~~	4.78
	2.88	~~4.24~~	5.24
	3.20	~~4.41~~	5.41
	4.23	~~4.63~~	5.63

Date: PROFILE 2

0.23	0.10	JUST ABOVE H_2O
0.49	0.25	
1.04	0.70	
1.47	1.00	
1.88	1.50	
2.22	2.12	
2.54	2.71	
2.93	3.25	
3.34	3.70	
3.99	4.10	



PROFILE 1

Stream _____ Location: Reach 2 Team: 2

1) Extend both ends of the systematic transects for instream habitat to bankful locations. Where transect intercepts bankful location, center a 1 x 5 m quadrat perpendicular to the transect, with the bankful line marking the center of the streamside quadrat boundary. Make hardwood stem density counts just above ground level within each 1 x 5 m quadrat.
2) Extend both ends of the systematic transects for instream habitat 5 m into the riparian zone. Use a cruise prism to estimate area of board feet per acre via "point sampling". Multiply "in trees" by 10 to estimate basal area per acre in square feet.*

Start @ 3'
spacing = 26'

Distance (feet)	L or R Bank	Stem Density (#)	Point Sample # of "In" Trees	Basal Area (ft^2/acre)	L or R Bank	Stem Density (#)	Point Sample # of "In" Trees	Basal Area (ft^2/acre)
81	R	0	4	40	L	1	4	40

The prism is held a comfortable distance away from the eye with the bottom edge parallel to the ground, and trees are sighted through the prism approximately 4.5 ft. above the ground. A tree is an "in" tree if the offset section of the tree overlaps the bole. A tree where the offset section of the trunk is perfectly aligned with the original bole is a borderline tree and commonly in practice, every other borderline tree is counted. A tree where the offset section of the tree does not overlap or touch the original bole is an "out" tree and is not counted. Basal area is estimated by multiplying the count of "in" trees at a given point by the 'factor' of the prism.

Stream _____ Location: _____ Team: _____

Systematic transects spaced at 2 mean stream widths intervals. *Velocity*, *Depth*, *Substrate*, and *Embeddedness* measurements taken at points 0.25, 0.5, and 0.75 wetted stream width of transect. Four substrate measurements taken at each observation point. Measurements taken from left descending bank to right descending bank

Silt (<0.062) = 1, Sand (0.062 - 2 mm) = 2, Gravel (fine; 2 – 16 mm) = 3, Gravel (coarse or "Pebble"; 17 – 63 mm) = 4, Cobble (64 – 256 mm) = 5, Boulder (256 – 4,096 mm) = 6, Bedrock (> 4,096 mm)

Embeddedness: **1** = <5%, **2** = 5 – 25%, **3** = 26 – 50%, **4** = 51 – 75%, **5** > 75%

Canopy presence/absence: taken with tube densiometer at 10 evenly spaced points per transect; P = 1.

Strip transect: *Instream cover* (2 foot intervals); >10 cm = 2 surfaces, <10 cm = 1 surface, <3 cm apart = 1 surface, > 3 cm apart = 2 surfaces; *Structural complexity* (6 foot intervals) – vegetation or wood in stream

At each end of transect: *Bank angle* (taken with clinometer), *Riparian cover* density (taken with spherical densiometer) @ welted edge
–180 for undercut banks

spherical TUBE

Distance (feet)	Wetted Width	Velocity (ft/sec)	Depth (inches)	Substrate	Embedded	Bank angle L	Bank angle R	Instr Cover Instream	Mesohabitat Type	Rip density L	Rip density R	Canopy P/A
81'	~~11.5'~~ 14'	0.20 ~~.09~~ .13 0.17	~~[illegible]~~ 20" 9.75" 15.5"	2,2,2,2 2,2,2,2 2,2,2,2	N/A	135°	5°	2 0 0	POOL	16/17	15/17	Yes (M.T)

1
4.5
8

Large Woody Debris Measurement

Three types of LWD: logs, rootwads, and jams:

Log criteria: dead, 5 cm minimum diameter at some point, 2 meters minimum length, 5 cm minimum within bankfull channel
Rootwads: dead root system fully detached from original position, 20 cm minimum diameter, less than 2 meters length, 5 cm minimum within bankfull channel
Jams: accumulation of 3 or more qualifying logs physically touching at one or more points, 5 cm minimum of jam within bankfull channel; (data- count number of jams and number of logs within a jam)

Length:
Logs: from end to end, include root system if present
Rootwads: from end to end

Diameter:
Logs: measure diameter to nearest cm at the log midpoint (if branches at midpoint of length, measure diameter just below)
Rootwads: measure diameter to nearest cm at the point where the trunk (bole) meets the roots

Conduct a count of all large woody debris, root wads, and jams (number and # logs per jam) within the reach that meet dimensions described above. Count all pieces of wood lying within the reach that has any portion within the bankfull width and depth of the channel. Assign to class categories.

Size classes of large woody debris (logs and rootwad)

	Diameter (cm)			
Length (meters)	5 – 10	11 – 50	>50	Rootwad
2 – 5	Class 1	Class 2	Class 3	Class 7
> 5	Class 4	Class 5	Class 6	

Data (counts)

Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Rootwad	Jam*
II	IIII	I	I			III	I

*Count the number of jams and the number of logs per jam (count rootwads as rootwads, even if associated)
Example: Jam1/4 logs, Jam2/3 logs, etc.

Examples:
Basinwide Visual Estimation Technique
Method Manual for Large Woody Debris Survey (http://access.nwifc.org/tfw/documents/TFW_Large_Woody_Debris.pdf

Worksheet A-1. Field Form for Level II Stream Classification.

Stream: Sweet Run	
Basin: Potomac	Drainage Area: acres 1,628 mi²
Location: Reach 2 Virginia	
Twp.&Rge:	Sec.&Qtr.: Reach 2
Cross-Section Monuments (Lat./Long.): 39°17'.0994, -77°44'29.3126'	Date: 3/25/16
Observers: Team	Valley Type:

Bankfull WIDTH (W_{bkf}) WIDTH of the stream channel at bankfull stage elevation, in a riffle section.	~~14.5~~ 16.7	ft
Bankfull DEPTH (d_{bkf}) Mean DEPTH of the stream channel cross-section, at bankfull stage elevation, in a riffle section ($d_{bkf} = A_{bkf} / W_{bkf}$).	.9	ft
Bankfull X-Section AREA (A_{bkf}) AREA of the stream channel cross-section, at bankfull stage elevation, in a riffle section.	15.4	ft²
Width/Depth Ratio (W_{bkf} / d_{bkf}) Bankfull WIDTH divided by bankfull mean DEPTH, in a riffle section.	18.2	ft/ft
Maximum DEPTH (d_{max}) Maximum depth of the bankfull channel cross-section, or distance between the bankfull stage and Thalweg elevations, in a riffle section.	1.4	ft
WIDTH of Flood-Prone Area (W_{fpa}) Twice maximum DEPTH, or ($2 \times d_{mbkf}$) = the stage/elevation at which flood-prone area WIDTH is determined in a riffle section.	42	ft
Entrenchment Ratio (ER) The ratio of flood-prone area WIDTH divided by bankfull channel WIDTH (W_{fpa} / W_{bkf}) (riffle section).	2.5	ft/ft
Channel Materials (Particle Size Index) D_{50} The D_{50} particle size index represents the median or dominant diameter of channel materials, as sampled proportionately from the channel surface, between the bankfull stage and Thalweg elevations.	8	mm
Water Surface SLOPE (S) Channel slope = "rise over run" for a reach approximately 20–30 bankfull channel widths in length, with the "riffle-to-riffle" water surface slope representing the gradient at bankfull stage.	.0065	ft/ft
Channel SINUOSITY (k) Sinuosity is an index of channel pattern, determined from a ratio of stream length divided by valley length (SL / VL); or estimated from a ratio of valley slope divided by channel slope (S_{val} / S).	1.4	

Stream Type C4 **See Classification Key (Figure A-2)**

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