

STREAM VERIFICATION FORM - STREAMS/RIVERS

Reviewed by (Initial): _____

SITE NAME: Arnold Crk at Luade DATE: 0.8.15.12.0.1.3 VISIT: 0 1 2 3

SITE ID: 10 Don't forget to record Reach Length on back. TEAM: WMTS Patricia

STREAM/RIVER VERIFICATION INFORMATION

Stream/River Verified by (X all that apply): GPS Local Contact Signs Roads Topo. Map
 Other (Describe Here): Not Verified (Explain in Comments)

Coordinates	Latitude North	Longitude West	Type of GPS Fix	Are GPS Coordinates w/ 10 Sec. of map?
MAP Degrees, Minutes, and Seconds OR Decimal Degrees	_____ _____ _____	_____ _____ _____	<input type="checkbox"/> 2D <input type="checkbox"/> 3D	<input type="checkbox"/> Yes <input type="checkbox"/> No
GPS Degrees, Minutes, and Seconds OR Decimal Degrees	_____ _____ _____	_____ _____ _____		

DID YOU SAMPLE THIS SITE?

YES If YES, check one below

NO If NO, check one below

SAMPLEABLE (Choose method used)

- Wadeable - Continuous water, greater than 50% wadeable
- Boatable
- Partial - Sampled by wading (Explain in comments)
- Partial - Sampled by boat (Explain in comments)
- Wadeable Interrupted - Not continuous water along reach
- Boatable Interrupted - Not continuous water along reach
- Altered - Stream/River Present but not as on Map

NON-SAMPLEABLE-PERMANENT

- Dry - Visited
- Dry - Not visited
- Wetland (No Definable Channel)
- Map Error - No evidence channel/waterbody ever present
- Impounded (Underneath Lake or Pond)
- Other (explain in comments)

NON-SAMPLEABLE-TEMPORARY

- Not boatable - Need a different crew
- Not wadeable - Need a different crew
- Other (Explain in comments)

NO ACCESS

- Access Permission Denied
- Permanently Inaccessible (Unable/Unsafe to Reach Site)
- Temporarily Inaccessible-Fire, etc. (Explain in comments)

GENERAL COMMENTS:

1 m unit lengths, starting at culvert

TOTAL WAG PROFILE (G-H) DONE TWICE; ONCE ON 8/15/13 and again ON 9/24/13 to show change if any in finishing survey date

DIRECTIONS TO STREAM/RIVER SITE:

56029

Record information used to define length of reach, and sketch general features of reach on reverse side.



STREAM VERIFICATION FORM - STREAMS/RIVERS (cont.)

Reviewed by (Initial): _____

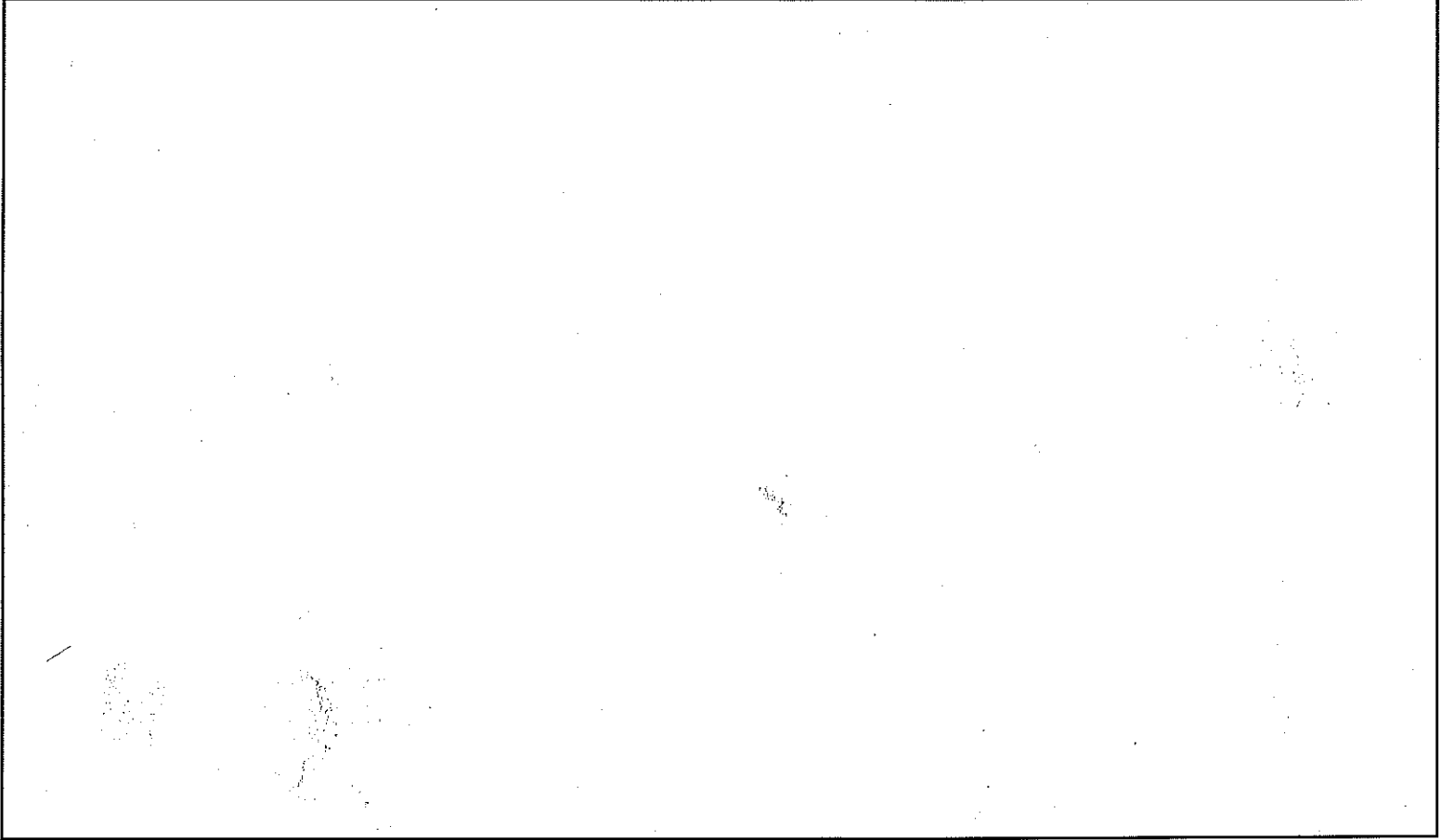
SITE NAME: Arnold Creek at Lunde DATE: 08/15/2013 VISIT: 0 1 2 3

SITE ID: 10 Willis, Corrina, Patrick TEAM: _____

STREAM/RIVER REACH DETERMINATION

Channel Width Used to Define Reach (m)	DISTANCE (m) FROM X-SITE		Total Reach Length Intended (m)	Comment
	Upstream Length	Downstream Length		

SKETCH MAP - Arrow Indicates North



PERSONNEL

NAME	Biomorph	DUTIES Geomorph	Forms
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

56029



PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: #10

DATE: 8/15/2012

TRANSECT: A-B

A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STA-TION	THALWEG DEPTH (m) (XXX)	WETTED WIDTH (m) (XXX)	BAR WIDTH 1		SOFT /SMALL SEDI-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	0.2	9.3	<input type="radio"/> N	5.3	<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		General bar caused by culvert
1	0.2		<input type="radio"/> N		<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
2	0.21		<input type="radio"/> N		<input type="radio"/> N	GF	N	<input type="radio"/> N	<input type="radio"/> N		
3	0.15		<input type="radio"/> N		<input type="radio"/> N	FN	N	<input type="radio"/> N	<input type="radio"/> N		
4	0.15		<input type="radio"/> N		<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
*5	0.6	2.6	<input type="radio"/> N	-	<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
6	0.74		<input type="radio"/> N		<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
*7	0.33	1.9	<input type="radio"/> N	-	<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
8	0.22		<input type="radio"/> N		<input type="radio"/> N	FN	N	<input type="radio"/> N	<input type="radio"/> N		
9	0.19		<input type="radio"/> N		<input type="radio"/> N	GC	N	<input type="radio"/> N	<input type="radio"/> N		
10	0.12		<input type="radio"/> N		<input type="radio"/> N		N	<input type="radio"/> N	<input type="radio"/> N		
11			<input type="radio"/> N		<input type="radio"/> N		N	<input type="radio"/> N	<input type="radio"/> N		
12			<input type="radio"/> N		<input type="radio"/> N		N	<input type="radio"/> N	<input type="radio"/> N		
13			<input type="radio"/> N		<input type="radio"/> N		N	<input type="radio"/> N	<input type="radio"/> N		
14			<input type="radio"/> N		<input type="radio"/> N		N	<input type="radio"/> N	<input type="radio"/> N		

SUBSTRATE	Station (S or T)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS						
								CHECK IF UNMARKED BOXES ARE ZERO			FLAG			
	* 7	FN	GN	GC	GC	GC		DIAMETER LARGE END	PIECES ALL/PART IN BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL
								0.1-0.3 m	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
								0.3-0.6 m						
								0.6-0.8 m						
								>0.8 m						

SUBSTRATE SIZE CLASS CODES
 RS = BEDROCK (SMOOTH) - (LARGER THAN 4 CAR)
 RR = BEDROCK (ROUGH) - (LARGER THAN 4 CAR)
 RC = CONCRETE/ASPHALT
 RB = SAND (1000 TO 4000 mm) - METASTICK TO CAR
 RB = SAND (200 TO 1000 mm) - BASKETBALL TO BASKETBALL
 CB = COBBLE (64 TO 256 mm) - TENNIS BALL TO BASKETBALL
 GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL
 GF = FINE GRAVEL (2 TO 16 mm) - LABYRINTH TO MARBLE
 SA = SAND (106 TO 2 mm) - GRIFFY - UP TO LABYRINTH
 FN = SILT/CLAY/MUCK - (NOT GRIFFY)
 HP = HARPAN - (FIRM CONSOLIDATED FINE SUBSTRATE)
 WD = WOOD - (ANY SIZE)
 OT = OTHER COMMENT ON OTHER SIDE

POOL FORM CODES/CHANNEL UNIT CODES
 N = Not a pool
 W = Large Woody Debris
 R = Rockward
 B = Boulder or Bedrock
 F = Unknown, terrestrial
 PP = Pool, Plunge
 PT = Pool, Trench
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 PD = Pool, Impoundment
 GL = Gully
 RI = Rife
 RA = Rapid
 CA = Cascade
 FA = Falls
 DR = Dry Channel

POOL FORM CODES/CHANNEL UNIT CODES
 N = Not a pool
 W = Large Woody Debris
 R = Rockward
 B = Boulder or Bedrock
 F = Unknown, terrestrial
 PP = Pool, Plunge
 PT = Pool, Trench
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 PD = Pool, Impoundment
 GL = Gully
 RI = Rife
 RA = Rapid
 CA = Cascade
 FA = Falls
 DR = Dry Channel

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 10

DATE: 8/15/2013

TRANSECT:

- A-B
- B-C
- C-D
- D-E
- E-F
- F-G
- G-H
- H-I
- I-J
- J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STA-TION	THALWEG DEPTH (m) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH 1		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	1.3	1.9	Y	N	Y	GC	-	Y	N	Y	
1	1.1		Y	N	Y	GC	-	Y	N	Y	
2	1.4		Y	N	Y	FN	-	Y	N	Y	
3	1.3		Y	N	Y	FN	-	Y	N	Y	
4	1.45		Y	N	Y	FN	-	Y	N	Y	
5	1.35		Y	N	Y	FN	-	Y	N	Y	
6	1.5		Y	N	Y	GC	-	Y	N	Y	
*7	1.08	6.5	Y	N	Y	GC	-	Y	N	Y	
8	1.8		Y	N	Y	GC	-	Y	N	Y	
9	1.5		Y	N	Y	GC	-	Y	N	Y	
10	1.5		Y	N	Y	FN	-	Y	N	Y	
11			Y	N	Y			Y	N	Y	
12			Y	N	Y			Y	N	Y	
13			Y	N	Y			Y	N	Y	
14			Y	N	Y			Y	N	Y	

Gravel on fine sediments

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS		CHECK IF UNMARKED BOXES ARE ZERO		FLAG		
								DIAMETER (<10 cm small end diameter; >1.5 m length)	PIECES ALL-PART IN BANK-FULL CHANNEL	PIECES BRIDGE ABOVE BANK-FULL CHANNEL	PIECES ALL-PART IN BANK-FULL CHANNEL	PIECES BRIDGE ABOVE BANK-FULL CHANNEL	Length 1.5-5m	Length >15m
	*7	GC	GC	GC	GC	GC		0.1-0.3 m	0	0	0	0	0	0
								0.3-0.6 m	0	0	0	0	0	0
								0.6-0.8 m	0	0	0	0	0	0
								>0.8 m	0	0	0	0	0	0

SUBSTRATE SIZE CLASS CODES
 RS = BEDROCK (SMOOTH - LARGER THAN A CAR)
 RR = BEDROCK (ROUGH - LARGER THAN A CAR)
 RC = CONCRETE/ASPHALT
 XB = L.G. BOULDER (1000 TO 4000 mm) - METESTICK TO CAR
 SB = S.M. BOULDER (250 TO 1000 mm) - BASKETBALL TO METESTICK
 CB = COBBLE (64 TO 250 mm) - TENNIS BALL TO BASKETBALL
 GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL
 GF = FINE GRAVEL (2 TO 16 mm) - LADYBUG TO MARBLE
 SA = SAND (0.06 TO 2 mm) - GRITTY - UP TO LADYBUG SIZE
 FY = SILTY CLAY / MUCK - (NOT GRITTY)
 HP = HARDPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE)
 WD = WOOD - (ANY SIZE)
 OT = OTHER (COMMENT ON OTHER SIDE)

POOL FORM CODES/CHANNEL UNIT CODES
 N = Not a pool
 W = Large Woody Debris
 R = Rootwad
 B = Boulder or Bedrock
 F = Unknown, Surak

COMBINATIONS:
 W, R, B, BR, WRB

CHANNEL UNIT CODES:
 PP = Pool, Piling
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 GL = Guide
 RI = Riffle
 RA = Rapid
 FA = Falls
 DR = Dry Channel

Large Woody Debris
 Diameter: <10 cm small end diameter; >1.5 m length
 Pieces All-part in Bank-Full Channel: []
 Pieces Bridge Above Bank-Full Channel: []

Flag
 Length 1.5-5m: []
 Length >15m: []

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Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial): PH

SITE ID: 10

DATE: 8/15/2013

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE

STA-TION	THALWEG DEPTH (mm) (XXX)	WETTED WIDTH (mm) (XXX.X)	BAR WIDTH 1		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	22	7.8	Y	N	Y	N	R1	-	<input checked="" type="checkbox"/> N	Y	
1	1		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N		R1	-	<input checked="" type="checkbox"/> N	Y	
2	1.1		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	WFB	Y	<input checked="" type="checkbox"/> N	
3	1.5		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
4	1.0		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
*5	1.9		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
6	1.8		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
*7	1.02	4.8	Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
8	1.05		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
9	1.65		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
10	1.33		Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N	PL	F	Y	<input checked="" type="checkbox"/> N	
11			Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N			Y	<input checked="" type="checkbox"/> N	
12			Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N			Y	<input checked="" type="checkbox"/> N	
13			Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N			Y	<input checked="" type="checkbox"/> N	
14			Y	<input checked="" type="checkbox"/> N	Y	<input checked="" type="checkbox"/> N			Y	<input checked="" type="checkbox"/> N	

COMMENTS (for SUBSTRATE and LWD)

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS					CHECK IF UNMARKED BOXES ARE ZERO				
								DIAMETER					LENGTH				
*7								LARGE END					PIECES ALL/PART IN BANK/FULL CHANNEL				
								0.1-0.3 m					1				
								0.3-0.6 m									
								0.6-0.8 m									
								>0.8 m									

SUBSTRATE SIZE CLASS CODES

POOL FORM CODES/CHANNEL UNIT CODES

RS = BEDROCK (SMOOTH) - (LARGER THAN CAR)
 RR = BEDROCK (ROUGH) - (LARGER THAN CAR)
 RC = CONCRETE/SPHALT
 RB = SAND (1000 TO 4000 mm) - METESTOCK TO CAR
 SB = SAND (200 TO 1000 mm) - BASKETBALL TO METESTOCK
 CB = COBBLE (64 TO 250 mm) - TENNIS BALL TO BASKETBALL
 GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL
 GF = FINE GRAVEL (2 TO 16 mm) - LADYBUG TO MARBLE
 SA = SAND (0.06 TO 2 mm) - (GRAIN) - UP TO LADYBUG SIZE
 FN = SILT CLAY / MUCK - (NOT GRITTY)
 HP = HARDPAN - (FIRM CONSOLIDATED FINE SUBSTRATE)
 WD = WOOD - (ANY SIZE)
 OT = OTHER (COMMENT ON OTHER SIDE)

N = Not a pool
 W = Large Woody Debris
 R = Rock/bed
 B = Boulder or Bedrock
 F = Unknown, focal
 SP, WR, SR, WRS
 PP = Pool, Piling
 PT = Pool, Trench
 PL = Pool, Lateral Scour
 PS = Pool, Siphon
 PD = Pool, Impoundment
 GL = Gully
 RI = Ridge
 RA = Ridge
 CA = Cascade
 FA = Falls
 DR = Dry Channel



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Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 10

DATE: 08/15/2013

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

Comments

STATION	THALWEG DEPTH (m) (XXXX)	WETTED WIDTH (m) (XXXX)	BAR WIDTH 1		SOFT /SMALL SEDEMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	Comments
			Present	XXX							
0	0.65	5.5	<input type="checkbox"/> Y <input type="checkbox"/> N			PL		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
1	0.31		<input type="checkbox"/> Y <input type="checkbox"/> N			PL		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
2	0.53		<input type="checkbox"/> Y <input type="checkbox"/> N			PL		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
3	0.42		<input type="checkbox"/> Y <input type="checkbox"/> N			PL		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
4	0.72		<input type="checkbox"/> Y <input type="checkbox"/> N			PL		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
*5	0.04	6.8	<input type="checkbox"/> Y <input type="checkbox"/> N			RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
6	0.16		<input type="checkbox"/> Y <input type="checkbox"/> N			RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
*7	0.11	3.6	<input type="checkbox"/> Y <input type="checkbox"/> N	5.2		RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
8	0.21		<input type="checkbox"/> Y <input type="checkbox"/> N			RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
9	0.23		<input type="checkbox"/> Y <input type="checkbox"/> N			RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
10	0.38		<input type="checkbox"/> Y <input type="checkbox"/> N			RI		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
11			<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
12			<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
13			<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
14			<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		

SUBSTRATE	Station (5 or 7)	LFT	LCR	CTR	RCR	RGT	FLAG	LARGE WOODY DEBRIS			
								DIAMETER LARGE END	PIECES ALL/PART IN BANK/FULL CHANNEL	CHECK IF UNMARKED BOXES ARE ZERO	FLAG
*7		<input type="checkbox"/> G <input type="checkbox"/> F	<input type="checkbox"/> G <input type="checkbox"/> F	<input type="checkbox"/> G <input type="checkbox"/> C	<input type="checkbox"/> G <input type="checkbox"/> C	<input type="checkbox"/> G <input type="checkbox"/> C		<10 cm small end diameter > 1.5 m length	PIECES ALL/PART IN BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	
									Length 1.5-5m	5-15m	>15m
									Length 1.5-5m	5-15m	>15m

Substrate Size Class Codes	Pool Form Codes	Channel Unit Codes
RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR) RB = BEDROCK (ROUGH) - (LARGER THAN A CAR) RC = CONCRETE/ASPHALT XB = LG BOULDER (1000 TO 4000 mm) - METERSTICK TO CAR SB = SM BOULDER (200 TO 1000 mm) - BASKETBALL TO METERSTICK CB = COBBLE (64 TO 250 mm) - TENNIS BALL TO BASKETBALL GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL GF = FINE GRAVEL (2 TO 16 mm) - LADYBUG TO MARBLE SA = SAND (606 TO 2 mm) - (GRAIN) - UP TO LADYBUG SIZE FN = SILTY CLAY/MUCK - (NOT GRITTY) HP = HAIRPIN - (FRM. CONSOLIDATED FINE SUBSTRATE) WD = WOOD - (ANY SIZE) OT = OTHER (COMMENT ON OTHER SIDE)	N = Not a pool W = Large Woody Debris R = Rootwad B = Boulder or Bedrock F = Unbroken, Round COMBINATIONS: eg. WR, BR, WRB	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Secor PB = Pool, Bankwater PD = Pool, Impoundment GL = Side RI = Ridge RA = Rapid CA = Cascade FA = Falls DR = Dry Channel

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Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

STIE ID: 10

DATE: 08/15/2013

TRANSECT:

- A-B
- B-C
- C-D
- D-E
- E-F
- F-G
- G-H
- H-I
- I-J
- J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) XX:

Total Reach Length (m):

STATION	THALWEG DEPTH (m) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH ¹		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	0.63	4.8	Y	N	Y	RI	-	Y	N	Y	N
1	0.8		Y	N	Y	RI	-	Y	N	Y	N
2	0.75		Y	N	Y	RI	-	Y	N	Y	N
3	0.61		Y	N	Y	RI	-	Y	N	Y	N
4	0.28		Y	N	Y	RI	-	Y	N	Y	N
*5	0.25	6.3	Y	N	Y	RI	-	Y	N	Y	N
6	0.09		Y	N	Y	RI	-	Y	N	Y	N
*7	0.1	9.3	Y	N	Y	RI	-	Y	N	Y	N
8	0.14		Y	N	Y	RI	-	Y	N	Y	N
9	0.1		Y	N	Y	RI	-	Y	N	Y	N
10	0.1		Y	N	Y	RI	-	Y	N	Y	N
11			Y	N	Y			Y	N	Y	N
12			Y	N	Y			Y	N	Y	N
13			Y	N	Y			Y	N	Y	N
14			Y	N	Y			Y	N	Y	N

COMMENTS (FOR SUBSTRATE AND LWD)

STATION	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
	* 7	GP	GC	GC	GC	GC	

SUBSTRATE SIZE CLASS CODES

NS = BEDROCK (SMOOTH) - (LARGER THAN A CAR)
 RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)
 RC = CONCRETASPHALT
 XB = 1/8" BOULDER (1000 TO 4000 mm) - METESTICK TO CAR)
 SB = 3/8" BOULDER (250 TO 1000 mm) - BASKETBALL TO METESTICK)
 CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL)
 GC = COARSE GRAVEL (18 TO 64 mm) - (MARBLE TO TENNIS BALL)
 FG = FINE GRAVEL (2 TO 18 mm) - (LADYBUG TO MARBLE)
 SA = SAND (0.06 TO 2 mm) - (GIRTTY - UP TO LADYBUG SIZE)
 FM = SILT / CLAY / MUCK - (NOT GIRTTY)
 HP = HARPAN - (FIRM CONSOLIDATED FINE SUBSTRATE)
 WD = WOOD - (ANY SIZE)
 OT = OTHER (COMMENT ON OTHER SIDE)

POOL FORM CODES

N = Not a pool
 W = Large Woody Debris
 R = Rockweed
 B = Boulder or Bedrock
 F = Unknown, dual
 PP = Pool, Plunge
 PL = Pool, Lateral Secur
 PB = Pool, Backwater
 PD = Pool, Impediment
 GL = Gully
 RI = Riffle
 RA = Rapid
 CA = Cascade
 FA = Falls
 DR = Dry channel

LARGE WOODY DEBRIS

DIAMETER	PIECES ALL/PART IN BANK/FULL CHANNEL			CHECK IF UNMARKED BOXES ARE ZERO			FLAG
	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m	
0.1-0.3 m							
0.3-0.6 m							
0.6-0.8 m							
>0.8 m							



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Flag Codes: K = no measurement made; U = suspected measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 10

DATE: 08/15/2013

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STATION	THALWEG DEPTH (m) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH		SOFT / SMALL SEED-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	0.15	6.9	<input checked="" type="radio"/> N	5.3	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
1	0.18		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
2	0.21		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
3	0.3		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
4	0.48		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*5	0.34	6.0	<input checked="" type="radio"/> N	4.5	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
6	0.3		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*7	0.4	5.9	<input checked="" type="radio"/> N	3.4	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
8	0.54		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
9	0.49		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
10			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
11			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
12			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
13			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
14			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS						
								DIAMETER	PIECES ALL/PART IN BANK/FULL CHANNEL	CHECK IF UNMARKED BOXES/ARE ZERO	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	FLAG		
								LARGE END	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m

FLAG	COMMENTS (for SUBSTRATE and LWD)

SUBSTRATE SIZE CLASS CODES	POOL FORM CODES	CHANNEL UNIT CODES
RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR) RR = BEDROCK (ROUGH) - (LARGER THAN A CAR) RC = CONCRETE/ASPHALT XS = LG. BOULDER (1000 TO 4000 mm) - WETTER/STICK TO CAR) SB = SM. BOULDER (250 TO 1000 mm) - BANK/FULL TO WETTER/STICK) CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL) GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL) FS = FINE SAND (0.06 TO 0.2 mm) - (GRITTY - UP TO LAZYBUG TO SAND) SA = SAND (0.06 TO 0.2 mm) - (GRITTY - UP TO LAZYBUG TO SAND) SL = SILTY CLAY / MUCK - (NOT GRITTY) HP = HARDPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE) WD = WOOD - (ANY SIZE) OT = OTHER (COMMENT ON OTHER SIDE)	N = Not a pool V = Large Woody Debris R = Rootward B = Boulder or Bedrock F = Underway, stable	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Secor PB = Pool, Backwater PD = Pool, Impoundment GL = Glide RI = Riffle RA = Rapid CA = Cascade FA = Fall DR = Dry Channel

Flag Codes: k = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (initial):

SITE ID: # 10

DATE: 09/24/2013

TRANSECT:

- A-B
- B-C
- C-D
- D-E
- E-F
- F-G
- G-H
- H-I
- I-J
- J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STATION	THALWEG DEPTH (mm) (XXXX)	WETTED WIDTH (mm) (XXXX)	BAR WIDTH-1		SOFT / SMALL SEEDMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	148'	6 ft	<input checked="" type="checkbox"/> N	3.5'	<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		Overlap of transects G-H 8/15/13
1	55'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
2	52'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
3	18'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
4	18'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
*5	32'	6.1	<input checked="" type="checkbox"/> N	7.8'	<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
6	41'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	R1		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
7	42'	7.8	<input checked="" type="checkbox"/> N	9.2'	<input checked="" type="checkbox"/> N	PL		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
8	61'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	PL		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
9	97'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	PL		<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
10	123'		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		* Outlet Pipe
11			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
12			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
13			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
14			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		

COMMENTS (for SUBSTRATE and LWD)

STATION	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
	* 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

SUBSTRATE SIZE CLASS CODES

POOL FORM CODES

CHANNEL UNIT CODES

RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR)
 RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)
 RC = CONCRETE/ASPHALT
 XB = U.G. BOULDER (1000 TO 4000 mm) - METERSICK TO CAR
 SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSICK
 CB = COBBLE (64 TO 250 mm) - TENNIS BALL TO BASKETBALL
 SC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL
 GF = FINE GRAVEL (2 TO 16 mm) - (GRAVEL) - UP TO LAZYBAG SIZE
 SA = SAND (BASE TO 2 mm) - (GRAVEL) - UP TO LAZYBAG SIZE
 FN = SILTY CLAY / MUCK - (NOT GRITTY)
 HP = HARD PAN - (FINEL CONSOLIDATED FINE SUBSTRATE)
 WD = WOOD - (ANY SIZE)
 OT = OTHER (COMMENT ON OTHER SIDE)

DIAMETER	LARGE WOODY DEBRIS (≤ 10 cm small end diameter; ≥ 1.5 m length)		CHECK IF UNMARKED BOXES ARE ZERO		FLAG
	Length 1.5-5m	5-15m	Length 1.5-5m	5-15m	
0.1-0.3 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0.3-0.6 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0.6-0.8 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
>0.8 m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS Reviewed by (Initial):

SITE ID: 10 DATE: 08/15/2013 TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE For Transect A-B ONLY: Increment (m) X.X: Total Reach Length (m):

STATION	THALWEG DEPTH (mm) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH ¹		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	0.48	7.5	<input checked="" type="radio"/> N	2.7	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
1	0.16		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
2	0.19		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
3	0.34		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
4	0.34		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*5	0.53	5.9	<input checked="" type="radio"/> N	5.2	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
6	0.73		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*7	1.1	9.5	<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
8	1.35		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
9	1.45		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
10			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
11			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
12			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
13			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
14			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		

Not sure if pipe is a side channel
 Not sure on type of pool

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS												
								DIAMETER	PIECES ALL PART IN BANKFULL CHANNEL	CHECK IF UNMARKED BOXES ARE ZERO	PIECES BRIDGE ABOVE BANKFULL CHANNEL									
	* 7	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N														

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Substrate Size Class Codes: RS = BEDROCK (SMOOTH - LARGER THAN A CAR); RR = BEDROCK (ROUGH - LARGER THAN A CAR); RC = CONCRETE/ASPHALT; XB = LG. BOULDER (1000 TO 4000 mm) - METERSICK TO CAR; SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSICK; CB = COBBLE (64 TO 250 mm) - TENNIS BALL TO BASKETBALL; GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL; GR = FINE GRAVEL (2 TO 16 mm) - LADYBUG TO MARBLE; SA = SAND (0.06 TO 2 mm) - GRTTY - UP TO LADYBUG SIZE; FN = SILTY CLAY / MUCK - (NOT GRTTY); HP = HARDPAN - (RIM, CONSOLIDATED FINE SUBSTRATE); WD = WOOD - (ANY SIZE); OT = OTHER COMMENT ON OTHER SIDE

Pool Form Codes/Channel Unit Codes: N = Not a pool; W = Large Woody Debris; R = Rockward; B = Boulder or Bedrock; F = Unknown, field; PP = Pool, Plunge; PL = Pool, Lateral Scour; PB = Pool, Backwater; PD = Pool, Impoundment; GL = Gully; RI = Riffle; RA = Rapid; CA = Cascade; FA = Falls; DR = Dry channel

Large Woody Debris: Diameter (<10 cm small end diameter; >1.5m length) | Pieces all part in bankfull channel | Check if unmarked boxes are zero | Pieces bridge above bankfull channel | Flag

Flags: A-B B-C C-D D-E E-F F-G G-H H-I I-J J-K

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

04/03/2002 2002 Phab Thalweg Stream

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: #10

DATE: 09/24/2013

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STA-TION	THALWEG DEPTH (mm) (XXX)	WETTED WIDTH (mm) (XXX)	BAR WIDTH 1		SOFT /SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	1.2'	9.88'	<input checked="" type="radio"/> N	4.65'	<input checked="" type="radio"/> N	PL	F	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
1	1.52'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL	"	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
2	1.6'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	"	"	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
3	1.65'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	"	"	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
4	1.59'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*5	1.18'	12.5	<input checked="" type="radio"/> N	2.6	<input checked="" type="radio"/> N	PP	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
6	1.8'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PD	W	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
*7	0.41'	8.8	<input checked="" type="radio"/> N	0	<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		* Standing on Large WD/Bio
8	0.19'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
9	1.4'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
10	2.7'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	R1	-	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
11			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
12			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
13			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
14			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS						
								DIAMETER (<10 cm small and diameter >15 m length)			CHECK IF UNMARKED BOXES ARE ZERO			FLAG
	*7	GF	GC	GC	GF	GF		Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m	

SUBSTRATE SIZE CLASS CODES

RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR)

RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)

RC = CONCRETE/ASPHALT

XB = LG. BOULDER (1000 TO 4000 mm) - METERSICK TO CAR)

SB = LG. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSICK)

CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL)

GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL)

GF = FINE GRAVEL (2 TO 16 mm) - QUARRYING TO MARBLE)

SA = SAND (0.6 TO 2 mm) - (DIRTY - UP TO LAZYBUG SIZE)

FN = SILT CLAY / MUCK - (NOT GRITTY)

HP = HARPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE)

WD = WOOD - (ANY SIZE)

OT = OTHER COMMENT ON OTHER SIDE

POOL FORM CODES/CHANNEL UNIT CODES

N = Not a pool

VI = Large V oody debris

R = Rockward

B = Boulder or Bedrock

F = Unknown, detail

COMBINATIONS: 99, WR, BR, WRB

RI = Rills

RA = Rapid

CA = Cascade

FA = Falls

DR = Dry Channel

PP = Pool, Plunge

PT = Pool, Trench

PL = Pool, Lateral Scour

PB = Pool, Backwater

PD = Pool, Impoundment

QL = Gully

RI = Rills

RA = Rapid

CA = Cascade

FA = Falls

DR = Dry Channel

LARGE WOODY DEBRIS

DIAMETER (<10 cm small and diameter >15 m length)

PIECES ALL/PART IN BANK/FULL CHANNEL

CHECK IF UNMARKED BOXES ARE ZERO

PIECES BRIDGE ABOVE BANK/FULL CHANNEL

FLAG

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: # 10

DATE: 09/24/2013

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

THALWEG PROFILE

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

STA. TON	THALWEG DEPTH (m) (XXX.X)	WETTED WIDTH (m) (XXXX.X)	BAR WIDTH 1		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	0.31'	2.14	<input checked="" type="radio"/> N	5-75	<input checked="" type="radio"/> N	RI		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
1	0.09'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	RI		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
2	0.22'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	RI		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
3	0.54'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
4	0.69'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
5	0.83'	8.4'	<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
6	1.06'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
7	1.41'	10.2'	<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
8	1.21'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	PL	RW	<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
9	0.26'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	RI		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
10	0.38'		<input checked="" type="radio"/> N		<input checked="" type="radio"/> N	RI		<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
11			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
12			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
13			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		
14			<input checked="" type="radio"/> N		<input checked="" type="radio"/> N			<input checked="" type="radio"/> N	<input checked="" type="radio"/> N		

Large maple leaves across

SUBSTRATE Station (5 or 7) * 7 LFT #N LCTR SA CTR GF RCTR GF RGT GC FLAG

COMMENTS (for SUBSTRATE and LWD)

LARGE WOODY DEBRIS

DIAMETER (< 10 cm small end diameter, > 1.5 m length)

PIECES ALL PART IN BANKFULL CHANNEL	5-15m	>15m	RECESS BRIDGE ABOVE BANKFULL CHANNEL	5-15m	>15m
0.1-0.3 m	5				
0.3-0.6 m	2				
0.6-0.8 m	1				
>0.8 m					

CHECK IF UNMARKED BOXES ARE ZERO

FLAG

SUBSTRATE SIZE CLASS CODES

RS = BEDROCK (SMOOTH - LARGER THAN A CAR)

RR = BEDROCK (ROUGH - LARGER THAN A CAR)

RC = CONCRETE/ASPHALT

XB = LG. BOUNDER (1000 TO 4000 mm) - METERS/STICK TO CAR)

SB = SM. BOUNDER (250 TO 1000 mm) - BASKETBALL TO METERS/STICK)

CB = COBBLE (64 TO 256 mm) - TENNIS BALL TO BASKETBALL)

GC = COARSE GRAVEL (16 TO 64 mm) - MARBLE TO TENNIS BALL)

GF = FINE GRAVEL (2 TO 16 mm) - (LAZYBUG TO MARBLE)

SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LAZYBUG SIZE)

FN = SILTY CLAY / MUCK - (NOT GRITTY)

HP = HARPAN - (FRISK CONSOLIDATED FINE SUBSTRATE)

WD = WOOD - (ANY SIZE)

OT = OTHER (COMMENT ON OTHER SIDE)

POOL FORM CODES/CHANNEL UNIT CODES

N = Not a pool

W = Large Woody Debris

R = Rock

B = Boulder or Bedrock

F = Unknown, Reveal

PP = Pool, Flange

PT = Pool, Trench

PL = Pool, Lateral Scour

PB = Pool, Bivalve

PD = Pool, Impoundment

GL = Gully

RI = Ridge

RA = Rapid

CA = Cascade

FA = Falls

DR = Dry Channel

17021

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (initial):

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

DATE: 09/24/2013

SITE ID: #10

THALWEG PROFILE		For Transect A-B ONLY:		Increment (m) X.X:		Total Reach Length (m):				
STA-TION	THALWEG DEPTH (m) (XXX.X)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH1 Present XX.X	SOFT /SMALL SEDI-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
0	0.29	1.65	5.8	Y (N)	RI		Y (N)	Y (N)		
1	0.16			Y (N)	RI		Y (N)	Y (N)		
2	0.14			Y (N)	RI		Y (N)	Y (N)		
3	0.17			Y (N)	RI		Y (N)	Y (N)		
4	0.14			Y (N)	RI		Y (N)	Y (N)		
*5	0.20	7.4		Y (N)	RI		Y (N)	Y (N)		
6	1.04			Y (N)	RI		Y (N)	Y (N)		
*7	1.5	9.5		Y (N)	RI		Y (N)	Y (N)		
8	0.28			Y (N)	RI		Y (N)	Y (N)		
9	0.38			Y (N)	RI		Y (N)	Y (N)		
10	0.43			Y (N)	RI		Y (N)	Y (N)		
11				Y (N)			Y (N)	Y (N)		
12				Y (N)			Y (N)	Y (N)		
13				Y (N)			Y (N)	Y (N)		
14				Y (N)			Y (N)	Y (N)		

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS (>10 cm small end diameter; <2.15 m length)		CHECK IF UNMARKED BOXES ARE ZERO	FLAG	
								DIAMETER LARGE END	PIECES ALL/PART IN BANKFULL CHANNEL			
	*7	GC	GC	GC	GC	GC	FN	0.1-0.3 m	Length 1.5-5m	>15m	Length 1.5-5m	>15m
								0.3-0.6 m				
								0.6-0.8 m				
								>0.8 m				

SUBSTRATE SIZE CLASS CODES	POOL FORM/CODES	CHANNEL UNIT CODES
RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR) RR = BEDROCK (ROUGH) - (LARGER THAN A CAR) RC = CONCRETE/ASPHALT XB = L.G. BOULDER (1000 TO 4000 mm) - NETS/TICK TO CAR SB = S.M. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSTICK CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL) GC = COARSE GRAVEL (16 TO 64 mm) - (MARBLE TO TENNIS BALL) GF = FINE GRAVEL (2 TO 16 mm) - (LADYBUG TO MARBLE) SA = SAND (0.6 TO 2 mm) - (GRITTY - 1/4 TO LADYBUG SIZE) FN = SILT/CLAY/SLICK - (NOT GRITTY) HP = HARDPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE) WD = WOOD - (ANY SIZE) OT = OTHER (COMMENT ON OTHER SIDE)	N = Not a pool W = Large Woody Debris R = Rootwad B = Boulder or Bedrock F = Unknown, float COMBINATIONS: eg. WR, BR, WRB	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Scour PB = Pool, Backwater PD = Pool, Impoundment GL = Grice RI = Riffa RA = Rapid CA = Cascade FA = Falls DR = Dry Channel

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

TRANSECT: A-B B-C C-D D-E E-F
 F-G G-H H-I I-J J-K

DATE: / /

For Transect A-B ONLY:

Total Reach Length (m):

Increment (m) X.X:

STA-TION	THALWEG DEPTH (cm) (XXX)	WETTED WIDTH (m) (XXXX)	BAR WIDTH ¹		SOFT /SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0			Y	N	Y	N		Y	N		
1			Y	N	Y	N		Y	N		
2			Y	N	Y	N		Y	N		
3			Y	N	Y	N		Y	N		
4			Y	N	Y	N		Y	N		
*5			Y	N	Y	N		Y	N		
6			Y	N	Y	N		Y	N		
*7			Y	N	Y	N		Y	N		
8			Y	N	Y	N		Y	N		
9			Y	N	Y	N		Y	N		
10			Y	N	Y	N		Y	N		
11			Y	N	Y	N		Y	N		
12			Y	N	Y	N		Y	N		
13			Y	N	Y	N		Y	N		
14			Y	N	Y	N		Y	N		

SUBSTRATE	Station (5 or 7)					LARGE WOODY DEBRIS (>10 cm small end diameter > 1.5 m length)	CHECK IF UNMARKED BOXES ARE ZERO	FLAG
	LFT	LCTR	CTR	RCTR	RGT			
FLAG						DIAMETER LARGE END	PIECES ALL/PART IN BANKFULL CHANNEL	PIECES BRIDGE ABOVE BANKFULL CHANNEL
						0.1-<0.3 m	Length 1.5-5m	Length 1.5-5m
						0.3-0.6 m	>15m	>15m
						0.6-0.8 m		
						>0.8 m		

SUBSTRATE SIZE CLASS CODES	POOL FORM CODES	CHANNEL UNIT CODES
RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR) RR = BEDROCK (ROUGH) - (LARGER THAN A CAR) RC = CONCRETE/ASPHALT XB = LG. BOULDER (1000 TO 4000 mm) - METERSTICK TO CAR) SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERBALL) CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL) GC = COARSE GRAVEL (16 TO 64 mm) - (MARBLE TO TENNIS BALL) GF = FINE GRAVEL (2 TO 16 mm) - (LADYBUG TO MARBLE) SA = SAND (106 TO 2 mm) - (GRITTY - UP TO LADYBUG SIZE) FN = SILTY CLAY / MUCK - (NOT GRITTY) HP = HARDPAV. (FIRM, CONSOLIDATED FINE SUBSTRATE) WD = WOOD - (ANY SIZE) OT = OTHER (COMMENT ON OTHER SIDE)	N = Not a pool W = Large W body Debris R = Rootwad B = Boulder or Bedrock F = Unknown, fluvial COMBINATIONS: eg. WR, BR, WRB	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Scour PB = Pool, Backwater PD = Pool, Impoundment GL = Gully RI = Riffle RA = Rapid CA = Cascade FA = Falls DR = Dry Channel

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, etc. = flags assigned by each field crew; G1, G2, etc. = flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mid-Station (5 or 7).

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: 10 DATE: 8/15/2013 TRANSECT: A B C D E F X-tra Side Channel

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB	Depth	Size Class	Embed.	Flag
XX.XX m	XX m		0-100%	
Left	0	.05	GC	50
Lctr	.35	0	GC	50
Ctr	.55	0	GC	50
Rctr	.75	0	GC	50
Right	.93	.01	GC	75

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
RG = Concrete/Asphalt	
RB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	
GF = Fine Gravel (2 to 16 mm) - (Ladypug to marble)	100
SA = Sand (0.06 to 2 mm) - (Gritty - Up to Ladypug size)	100
FI = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Firm, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	
OT = Other (Write comment below)	

FISH COVER/ OTHER	Cover In Channel	Flag
Filamentous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Roots	0 1 2 3 4	
Overhanging Veg. <1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	B

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
Left	Right	Left	Right
CanUp	11	CanR	14
CanL	16	CanL	14
CanDwn	12	CanR	13

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	80	0
Right	70	0
Wetted Width XXX.X m	9.34	
Bar Width XX.X m	5.36	
Bankfull Width XXX.X m	21.4	A
Bankfull Height XX.X m	4.4	A
Inclined Height XX.X m	0	

Comments

A Culvert back working causing wide and high riparianes
 B Tech rock for culvert

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)

D = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

RIPARIAN VEGETATION COVER	Canopy (>5 m high)		Flag
	Left Bank	Right Bank	
Vegetation Type	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

INFLUENCE	Left Bank		Right Bank		Flag
	Left Bank	Right Bank	Left Bank	Right Bank	
Wall/Dike/Revetment /Riprap/Dam	0 P C B	0 P C B	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	0 P C B	0 P C B	
Pasture/Ranger/Hay Field	0 P C B	0 P C B	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	0 P C B	0 P C B	

27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): **PH**

SITE ID: **10** DATE: **8/15/2013** TRANSECT: A B C D E F X-tra side Channel
 G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	Depth	Size Class	Embed.	Flag
XX.XX m	XXX mm	Code	0-100%	
0	.05	FN	100	
LcR	0.5	GF	25	
Ctr	1.0	GF	25	
RcR	1.45	GF	25	
Right	1.9	GF	25	

FISH COVER/ OTHER	Cover in Channel	Flag
Flaminateous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Foliage	0 1 2 3 4	
Overhanging Veg. <1 m at Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)
 RB = Bedrock (Rough) - (Larger than a car)
 RC = Concrete/Asphalt
 XB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)
 SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)
 CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)
 GC = Coarse Gravel (16 to 64 mm) - (Marble to tennis ball)
 GF = Fine Gravel (2 to 16 mm) - (Ladyping to marble)
 SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladyping size)
 FN = Silt / Clay / Muck - (Not Gritty)
 HP = Hardpan - (Firm, Consolidated Fine Substrate)
 WD = Wood - (Any Size)
 OT = Other (Write comment below)

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	160	0.4
Right	50	0
Wetted Width XXX.X m	1.9	
Bar Width XX.X m	-	
Bankfull Width XXX.X m	11.2	
Bankfull Height XX.X m	4.4	
Incised Height XX.X m	0	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CentUp	CentR	Left	Right
13	12	16	14
CentDwn	14	16	

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)

D = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

RIPARIAN VEGETATION COVER

Vegetation Type	Left Bank	Right Bank	Flag
Vegetation Type	D C E N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

Left Bank	Right Bank	Flag
Waldike/Revetment /Riprap/Dam	D P C B	X
Buildings	0 P C B	
Pavement/Cleaned Lot	0 P C B	
Road/Railroad	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	
Landfill/Trash	0 P C B	
Park/Lawn	0 P C B	
Row Crops	0 P C B	
Pasture/Rangeland/Hay Field	0 P C B	
Logging Operations	0 P C B	
Mining Activity	0 P C B	

27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): **PH**

SITE ID: **10** DATE: **8/15/2013** TRANSECT: A B C D E F X-tra Side Channel G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	Depth	Size Class	Embed.	Flag
XX.XX ft	XXX cm	Code	0-100%	
Left	0	1	FN	100
Lctr	.2	.05	GC	50
Ctr	.4	0	GC	50
Rctr	.6	.01	GC	50
Right	.78	.15	FN	100

SUBSTRATE SIZE CLASS CODES

Embed. (%)

RS = Bedrock (Smooth) - (Larger than a car)
 RR = Bedrock (Rough) - (Larger than a car)
 RC = Concrete/Asphalt
 RB = Large Boulder (1000 to 4000 mm) - (Basketball to car)
 SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)
 CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)
 GB = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)
 GF = Fine Gravel (2 to 16 mm) - (Ladyping to marble)
 SA = Sand (0.06 to 2 mm) - (Grity - up to Ladyping size)
 FH = Silt / Muck - (Not Grity)
 HP = Handpan - (Firm, Consolidated Fine Substrate)
 WD = Wood - (Any Size)
 OT = Other (Write comment below)

FISH COVER/ OTHER

Category	Code	In Channel	Flag
Filamentous Algae	0	1 2 3 4	
Macrophytes	1	2 3 4	
Woody Debris >0.3 m (BIG)	1	2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	1	2 3 4	
Live Trees or Roots	1	2 3 4	
Overhanging Veg. <1 m of Surface	1	2 3 4	
Undercut Banks	1	2 3 4	
Boulders	1	2 3 4	
Artificial Structures	1	2 3 4	

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)
 (Circle one)

BANK MEASUREMENTS

Bank Angle	Undercut Dist. (m)	Flag
0 - 360		
Left	60	0
Flight	85	0
Wetted Width XXX.X m	7.8	
Bar Width XXX.X m	3.8	
Bankfull Width XXX.X m	1.0	
Bankfull Height XXX.X m	2.4	
Inclined Height XXX.X m	0	

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)

Category	Left	Center	Right	Flag
CanUp	14	11		
CanL	15	13		
CanWm	12	11		

Flag codes: K = Sample not collected; U = Suspect sampler; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

VISUAL RIPARIAN ESTIMATES

Category	Left Bank	Right Bank	Flag
RIPARIAN VEGETATION COVER	Canopy (>5 m high)		
Vegetation Type	D C E M N	D C E M N	
Big Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)

D = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

HUMAN INFLUENCE

Category	Left Bank	Right Bank	Flag
Waldike/Retrofitment / Riprap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Ranger/Hay Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	

0 = Not Present P = >10 m C = Within 10 m B = On Bank



27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 10 DATE: 08/15/2013 TRANSECT: A B C D E F X-tra Side Channel G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB	Depth	Size Class	Embed.	Flag
XXX m	cm		0-100%	
0	0.13	GC	25	
Lctr	1.75	GC	70	
Ctr	2.5	GC	80	
Rctr	3.75	GC	50	
Right	5.5	GC	100	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
RC = Concrete/Asphalt	0
XB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	
GF = Fine Gravel (2 to 16 mm) - (Ladylbug to marble)	100
SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladylbug size)	100
FN = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Firm, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	0
OT = Other (Write comment below)	

FISH COVER/ OTHER

Flamantous Algae	Macrophytes	Woody Debris >0.3 m (BIG)	Brush/Woody Debris <0.3 m (SMALL)	Live Trees or Roots	Overhanging Veg. <1 m of Surface	Undercut Banks	Boulders	Artificial Structures
0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17% Max)		Flag	
CanUp	CanR	CanL	CanDwn
10	16	13	14

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

BANK MEASUREMENTS

Bank Angle	Undercut	Dist. (m)	Flag
0 - 360			
Left	20	-	
Right	120	1.2	
Wetted Width XXX.X m	5.5		
Bar Width XXX.X m	-		
Bankfull Width XXX.X m	15		
Bankfull Height XX.X m	3.6		
Inclined Height XX.X m	-		



27657

04/07/2002 2002 PHAB Chan/Riparian - Str

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
1 = Sparse (<10%)
2 = Moderate (10-40%)
3 = Heavy (40-75%)
4 = Very Heavy (>75%)

D = Deciduous
C = Coniferous
E = Broadleaf Evergreen
M = Mixed
N = None

RIPARIAN VEGETATION COVER	Left Bank				Right Bank				Flag
	D	C	E	N	D	C	E	N	
Vegetation Type	D	C	E	N	D	C	E	N	
BIG Trees (Trunk >0.3 m DBH)	0	1	2	3	4	0	1	2	3
SMALL Trees (Trunk <0.3 m DBH)	0	1	2	3	4	0	1	2	3
Understory (0.5 to 5 m high)	0	1	2	3	4	0	1	2	3
Vegetation Type	D	C	E	N	D	C	E	N	
Woody Shrubs & Saplings	0	1	2	3	4	0	1	2	3
Non-Woody Herbs, Grasses, & Forbs	0	1	2	3	4	0	1	2	3
Ground Cover (<0.5 m high)	0	1	2	3	4	0	1	2	3
Woody Shrubs & Saplings	0	1	2	3	4	0	1	2	3
Non-Woody Herbs, Grasses and Forbs	0	1	2	3	4	0	1	2	3
Bare, Bare Dirt or Duff	0	1	2	3	4	0	1	2	3

HUMAN INFLUENCE

INFLUENCE	Left Bank				Right Bank				Flag
	D	C	E	N	D	C	E	N	
Wa/Dike/Revetment /Riprap/Dam	0	P	C	B	0	P	C	B	
Buildings	0	P	C	B	0	P	C	B	
Pavement/Cleared Lot	0	P	C	B	0	P	C	B	
Road/Railroad	0	P	C	B	0	P	C	B	
Pipes (Inlet/Outlet)	0	P	C	B	0	P	C	B	
Landfill/Trash	0	P	C	B	0	P	C	B	
Park/Lawn	0	P	C	B	0	P	C	B	
Row Crops	0	P	C	B	0	P	C	B	
Pasture/Rangeland/Play Field	0	P	C	B	0	P	C	B	
Logging Operations	0	P	C	B	0	P	C	B	
Mining Activity	0	P	C	B	0	P	C	B	

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: #10

DATE: 8/15/2013

TRANSECT: A B C D E F X-tra Side Channel

G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
Left	0	FN	100	
Lctr	1.2	FN	100	
Cr	2.4	GF	75	
Rcr	3.6	GC	50	
Right	4.8	GC	50	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (larger than a cat)
 RR = Bedrock (Rough) - (larger than a car)
 RC = Concrete/Asphalt
 XB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)
 SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)
 CB = Cobble (64 to 250 mm) - (Tennis ball to basketball)
 GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)
 GF = Fine Gravel (2 to 16 mm) - (Ladypug to marble)
 SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladypug size)
 FN = Silt / Clay / Muck - (Not Grity)
 HP = Hardpan - (Firm, Consolidated Fine Substrate)
 WD = Wood - (Any Size)
 OT = Other (Write comment below)

FISH COVER/ OTHER	Cover in Channel	Flag
Flamantous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Roots	0 1 2 3 4	
Overhanging Veg. <=1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

Embed. (%)
0
0
0
0
100
100
0

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CanUp	12	CanR	14
CanL	15	Left	15
CanDwn	11	Right	13

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	25	-
Right	40	-
Wetted Width XXX.X m	4.8	
Bar Width XX.X m	-	
Bankfull Width XXX.X m	11.5	
Bankfull Height XX.X m	2.8	
Inclosed Height XX.X m	-	

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)

D = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

RIPARIAN VEGETATION COVER	Canopy (>5 m high)	
	Left Bank	Right Bank
Vegetation Type	D C E M N	D C E M N
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4
Understory (0.5 to 5 m high)	D C E M N	D C E M N
Vegetation Type	D C E M N	D C E M N
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4

HUMAN INFLUENCE	Left Bank		Right Bank		Flag
	Wall/Dike/Revetment /Flood/Dam	0 P C B	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	0 P C B	0 P C B	
Pasture/Range/Hay Field	0 P C B	0 P C B	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	0 P C B	0 P C B	

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PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: 1D DATE: 08/15/2013 TRANSECT: A B C D E F X-tra Side Channel
 G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB.	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
Left	0	GC	25	
Lctr	1.7	GC	50	
Ctr	3.4	GC	25	
Rctr	5.1	GC	25	
Right	6.9	GC	25	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
RG = Cobble/Asphalt	0
XR = Large Boulder (250 to 1000 mm) - (Masterstick to car)	100
XB = Small Boulder (250 to 1000 mm) - (Basketball to masterstick)	100
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	100
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	100
GF = Fine Gravel (2 to 16 mm) - (Ladbug to marble)	100
SA = Sand (0.06 to 2 mm) - (Grity - up to Ladbug size)	100
FI = Silt / Clay / Muck - (Not Grity)	0
HP = Hardpan - (Firm, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	0
OT = Other (Write comment below)	

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	90	0.5
Right	45	-
Wetted Width XXX.X m	6.9	
Bar Width XX.X m	5.3	
Bankfull Width XXX.X m	16	
Bankfull Height XX.X m	3.0	
Inclined Height XX.X m	0.5	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)			
Flag	CanR	Left	Right
CentUp	12	13	
CentL	15	13	
CentDwn	16	14	

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

FISH COVER/ OTHER	Cover in Channel	Flag
Filamentous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Bruish/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Fools	0 1 2 3 4	
Overhanging Vet. >1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

VISUAL RIPARIAN ESTIMATES

RIPARIAN VEGETATION COVER	Left Bank		Right Bank		Flag
	Canopy (>5 m high)				
Vegetation Type	D C E M N	D C E M N	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Understory (0.5 to 5 m high)	D C E M N	D C E M N	D C E M N	D C E M N	
Vegetation Type	D C E M N	D C E M N	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

HUMAN INFLUENCE	Left Bank		Right Bank		Flag
Wallo/Dike/Revetment /Riprap/Dam	0 P C B	0 P C B	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	0 P C B	0 P C B	
Pasture/Rangeland/Hay Field	0 P C B	0 P C B	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	0 P C B	0 P C B	



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PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 10 DATE: 08/15/2013 TRANSECT: A B C D E F G H I J K L

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
Left	0	005	60	60
Lctr	1.4	0.18	60	45
Ctr	3.75	0.43	60	80
Rctr	5.2	0.5	FN	100
Right	7.5	0.39	FN	100

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
RC = Concrete/Asphalt	0
XB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	
GF = Fine Gravel (2 to 16 mm) - (Ladypug to marble)	100
SA = Sand (0.06 to 2 mm) - (Grity - up to Ladypug size)	100
FN = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Ferrn, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	0
OT = Other (write comment below)	

FISH COVER/ OTHER	Cover in Channel	Flag
Filamentous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (Blk)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Roots	0 1 2 3 4	
Overhanging Veg. =<1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CanUp	10	CanR	15
CanL	15	Left	15
CanDwn	16	Right	16

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

BANK MEASUREMENTS

Bank Angle	Undercut Dist. (m)	Flag
Left	55	-
Right	40	-
Wetted Width XXX.X m	7.5	
Bar Width XX.X m	2.7	
Bankfull Width XXX.X m	11.1	
Bankfull Height XX.X m	2.2	
Incised Height XX.X m	0	

Comments

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
1 = Sparse (<10%)
2 = Moderate (10-40%)
3 = Heavy (40-75%)
4 = Very Heavy (>75%)
D = Deciduous
C = Coniferous
E = Broadleaf Evergreen
M = Mixed
N = None

RIIPARIAN VEGETATION COVER	Left Bank	Right Bank	Flag
Vegetation Type	D C E M N	D C E M N	
Big Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Small Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)			

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Wall/Dike/Retement /Riprap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Rangeland/Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	



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PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: #15

DATE: 09/23/2013

TRANSECT: G H I J K

A B C D E F X-tra Side Channel

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB. #	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
Left	0	CG	100%	
LCtr	2.5'	CG	60%	
Ctr	5'	CG	50%	
RCtr	7.5'	CG	50%	
Right	9.5'	CG	80%	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RFR = Bedrock (Rough) - (Larger than a car)	0
RC = Concrete/Asphalt	0
XS = Large Boulder (1000 to 4000 mm) - (Meterstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	
GF = Fine Gravel (2 to 16 mm) - (Lobby to Tennis ball)	
SA = Sand (0.06 to 2 mm) - (Grity - up to Lobby size)	100
FI = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Firm, Consolidated Fine Substrate)	100
WD = Wood - (Any Size)	0
OT = Other (Write comment below)	

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	60°	0
Right	140°	.4'
Wetted Width XXX.X m	6'	
Bar Width XX.X m	3.5'	
Bankfull Width XXX.X m	11.3'	
Bankfull Height XX.X m	2.4'	
Inclosed Height XX.X m	—	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CanUp	CanL	CanR	CanDwn
15	17	16	17
15	17	16	17

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)

O = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

RIPARIAN VEGETATION COVER

Vegetation Type	Left Bank	Right Bank	Flag
Big Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

Influence	Left Bank	Right Bank	Flag
Walldike/Revetment/Riprap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Rangeland/Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	

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PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: #10 DATE: 09/24/2013 TRANSECT: A B C D E F X-tra Side Channel

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. L.B. / Depth	Size Class	Embed. (%)	Flag
Dist. L.B. / XXXX m	XXX cm	0-100%	
Left	0	2'	GF
LCR	4'	1.04'	GF
CR	8'	.74'	GC
RCH	12'	0	GC
Right	16'	0	FN

SUBSTRATE SIZE CLASS CODES

Embed. (%)

FS = Bedrock (Smooth) - (Larger than a car)

FR = Bedrock (Rough) - (Larger than a car)

RG = Concrete/Asphalt

RE = Large Boulder (1000 to 4000 mm) - (Material to car)

SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)

GB = Gravel (64 to 250 mm) - (Tennis ball to Basketball)

GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)

SA = Sand (0.06 to 2 mm) - (Ladypug to marble)

FN = Fine (Firm, Consolidated Fine Substrate)

HP = Hardpan - (Firm, Consolidated Fine Substrate)

WD = Wood - (Any Size)

OT = Other (Write comment below)

BANK MEASUREMENTS

Bank Angle	Undercut	Dist. (m)	Flag
0 - 360			
Left	90		
Right	130		
Wetted Width XXX.X m	9.88'		
Bar Width XX.X m	4.65'		
Bankfull Width XXX.X m	16.1'		
Bankfull Height XX.X m	2.9'		
Inclosed Height XX.X m			

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CentUp	13	CentR	12
CentL	16	Left	15
CentDwn	14	Right	12

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

FISH COVER/ OTHER	Cover in Channel	Flag
Flamantous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Roots	0 1 2 3 4	
Overhanging Veg. <=1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

Visual Riparian Estimates	Left Bank	Right Bank	Flag
RIPARIAN VEGETATION COVER	Canopy (<5 m high)		
Vegetation Type	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Wald/Revetment/Riprap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row/Crops	0 P C B	0 P C B	
Pasture/Range/Hay Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	

27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: #10 DATE: 2/9/2013 TRANSECT: A B C D E F X-tra Side Channel
 G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	Depth	Size Class	Embed.	Flag
XXX.XX m	XXX cm	Code	0-100%	
Left	0	GC	50	
Lctr	2.7	GL	50	
Gr	5.5	GL	50	
Rctr	8	GC	75	
Right	11	FN	100	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	Embed. (%)
RB = Bedrock (Rough) - (Larger than a car)	0
RC = Concrete/Asphalt	0
XB = Large Boulder (1000 to 4000 mm) - (Meterstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)	
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)	
GF = Fine Gravel (2 to 16 mm) - (Lampbug to marble)	
SA = Sand (0.06 to 2 mm) - (Grity - tip to Lampbug size)	100
FN = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Firm, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	0
OT = Other (Write comment below)	

FISH COVER/ OTHER

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)
 (circle one)

COVER IN CHANNEL	Flag
Filamentous Algae	0 1 2 3 4
Macrophytes	0 1 2 3 4
Woody Debris >0.3 m (BIG)	0 1 2 3 4
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4
Live Trees or Roots	0 1 2 3 4
Overhanging Veg. <=1 m of Surface	0 1 2 3 4
Undercut Banks	0 1 2 3 4
Boulders	0 1 2 3 4
Artificial Structures	0 1 2 3 4

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	45	
Right	105	
Wetted Width XXX.X m	8.3	
Bar Width XXX.X m	—	
Bankfull Width XXX.X m	11.	
Bankfull Height XXX.X m	2.2	
Incised Height XXX.X m	—	

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		
Flag	Centr	Flag
CentUp	11	
Cent	13	
CentDown	15	
CentR	17	
Left	13	
Right	17	

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

VISUAL RIPARIAN ESTIMATES

0 = Absent (0%)
 1 = Sparse (<10%)
 2 = Moderate (10-40%)
 3 = Heavy (40-75%)
 4 = Very Heavy (>75%)
 D = Deciduous
 C = Coniferous
 E = Broadleaf Evergreen
 M = Mixed
 N = None

VEGETATION COVER	Left Bank	Right Bank	Flag
RIPARIAN Canopy (>5 m high)			
Vegetation Type	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Understory (0.5 to 5 m high)			
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)			
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

0 = Not Present P = >10 m C = Within 10 m B = On Bank

WALD/Revegetation/Riparian/Dam	Left Bank	Right Bank	Flag
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Ranger/Play Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	



27657

Phab: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: # 10 DATE: 09/24/2013 TRANSECT: A B C D E F X-tra Side Channel
 G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
0	0	FL	100	
2.5	.15	GF	50	
5	0	GC	20	
7.5	0	GC	20	
10.7	0	GF	100	

SUBSTRATE SIZE CLASS CODES Embed. (%)

- RS = Bedrock (Smooth) - (larger than a car)
- RR = Bedrock (Rough) - (larger than a car)
- RC = Concrete/Asphalt
- XB = Large Boulder (1000 to 4000 mm) - (Masterstick to car)
- SB = Small Boulder (250 to 1000 mm) - (Basketball to masterstick)
- CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)
- GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)
- GF = Fine Gravel (2 to 16 mm) - (Ladbug to marble)
- SA = Sand (0.06 to 2 mm) - (Grity - up to Ladbug size)
- FN = Silt / Clay / Muck - (Not Grity)
- HP = Hardpan - (Firm, Consolidated Fine Substrate)
- WD = Wood - (Any Size)
- OT = Other (Write comment below)

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	80	—
Right	150	—
Wetted Width XXX.X m	2.14'	
Bar Width XX.X m	5.75'	
Bankfull Width XXX.X m	10.7'	
Bankfull Height XX.X m	2'	
Inclined Height XX.X m	—	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CanUp	16	CanR	15
CanL	15	Left	15
CanDwn	11	Right	13

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

FISH COVER/ OTHER

Fish Cover/ OTHER	Cover in Channel	Flag
Filamentous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Roots	0 1 2 3 4	
Overhanging Veg. <1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

VISUAL RIPARIAN ESTIMATES

VEGETATION COVER	Left Bank	Right Bank	Flag
RIPARIAN VEGETATION COVER	Canopy (>5 m high)		
Vegetation Type	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Understory (0.5 to 5 m high)			
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Bare, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)			
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses and Forbs	0 1 2 3 4	0 1 2 3 4	
Bare, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Wall/Dike/Retirement /slp/rap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Rangeland/Hay Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	



27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: #10

DATE: 09/24/2013

TRANSECT: 06 0H 01 0J 0K

A B C D E F X-tra Side Channel
 G H I J K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist. LB	Depth	Size Class	Embed.	Flag
XX.XX m	XXX cm	Code	0-100%	
Left	0	GC	20	
Lctr	2.8	GC	20	
Ctr	5.6	GC	20	
Rctr	8.0	GC	20	
Right	10.6	GC	100	

SUBSTRATE SIZE CLASS CODES

Embed. (%)

RS = Bedrock (Smooth) - (Larger than a car) 0
 RR = Bedrock (Rough) - (Larger than a car) 0
 RC = Concrete/Asphalt
 XB = Large Boulder (250 to 1000 mm) - (Material to car)
 SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)
 GB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)
 GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)
 GF = Fine Gravel (2 to 16 mm) - (Ladbug to marble)
 SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladbug size)
 FN = Silt / Clay / Muck - (Not Grilly)
 HP = Handpan - (Firm, Consolidated Fine Substrate)
 WD = Wood - (Any Size)
 OT = Other (Write comment below)

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	30	
Right	110	
Wetted Width XXX.X m	1.65	
Bar Width XX.X m	5.8	
Bankfull Width XXX.X m	10.6	
Bankfull Height XX.X m	2.3	
Inclined Height XX.X m		

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
CentUp	CentR	CentL	CentDwn
12	12	13	13
		Left	Right

Flag codes: K = Sample not collected; U = Suspect sample; F1, F2, etc. = misc. flag assigned by field crew. Explain all flags in comment sections.

Comments

FISH COVER/ OTHER	Cover in Channel	Flag
Filamentous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (BIG)	0 1 2 3 4	
Brush/Woody Debris <0.3 m (SMALL)	0 1 2 3 4	
Live Trees or Fools	0 1 2 3 4	
Overhanging Veg. <1 m of Surface	0 1 2 3 4	
Undercut Banks	0 1 2 3 4	
Boulders	0 1 2 3 4	
Artificial Structures	0 1 2 3 4	

VISUAL RIPARIAN ESTIMATES	Left Bank	Right Bank	Flag
RIPARIAN VEGETATION COVER	Canopy (>5 m high)		
Vegetation Type	D C E M N	D C E M N	
BIG Trees (Trunk >0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
SMALL Trees (Trunk <0.3 m DBH)	0 1 2 3 4	0 1 2 3 4	
Vegetation Type	D C E M N	D C E M N	
Woody Shrubs & Saplings	0 1 2 3 4	0 1 2 3 4	
Non-Woody Herbs, Grasses, & Forbs	0 1 2 3 4	0 1 2 3 4	
Ground Cover (<0.5 m high)	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Valid/Revetment/Riprap/Dam	0 P C B	0 P C B	
Buildings	0 P C B	0 P C B	
Pavement/Cleared Lot	0 P C B	0 P C B	
Road/Railroad	0 P C B	0 P C B	
Pipes (Inlet/Outlet)	0 P C B	0 P C B	
Landfill/Trash	0 P C B	0 P C B	
Park/Lawn	0 P C B	0 P C B	
Row Crops	0 P C B	0 P C B	
Pasture/Rangeland/Field	0 P C B	0 P C B	
Logging Operations	0 P C B	0 P C B	
Mining Activity	0 P C B	0 P C B	

RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (Initial):

SITE ID: 15

DATE: 08/15/2013

Tran	LARGEST POTENTIAL LEGACY TREE VISIBLE FROM THIS STATION				ALIEN PLANT SPECIES PRESENT IN LEFT AND RIGHT RIPARIAN PLOTS		
	Trees not visible	DBH (m)	Height (m)	Dist. from wetted margin (m)	Type	Taxonomic Category	
D	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>5m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Douglas Fir</u>	<input checked="" type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input checked="" type="checkbox"/> Engl Ivy <input type="checkbox"/> CanThis <input type="checkbox"/> Ch Grass <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
E	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>3m</u>	<input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Eng leaf Maple</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
F	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>6m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Cedar</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
G	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>3m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Douglas Fir</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
H	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>8m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Western Red cedar</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
I	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>30m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Western Red cedar</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
J	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>15m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Douglas Fir</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi
K	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>13m</u>	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Douglas Fir</u>	<input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Rus Oi <input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Oi

RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (initials):

SITE ID: 10

DATE: 08/15/2013

22977

LARGEST POTENTIAL LEGACY TREE VISIBLE FROM THIS STATION				ALIEN PLANT SPECIES PRESENT IN LEFT AND RIGHT RIPARIAN PLOTS										
Transect	Trees not visible	DBH (m)	Height (m)	Dist. from wetted margin (m)	Type	Taxonomic Category	Check all that are present							
A	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input checked="" type="checkbox"/> 0.1-0.3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	4.5	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	Maple	<input type="checkbox"/> RC Grass <input checked="" type="checkbox"/> Engl Ivy <input type="checkbox"/> Ch Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> CanThis <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Ol <input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> G Reed <input type="checkbox"/> Engl Ivy <input type="checkbox"/> CanThis <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Ch Grass <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Rus Ol <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> G Reed <input type="checkbox"/> Engl Ivy <input type="checkbox"/> CanThis <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Ch Grass <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Rus Ol							
B	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> 0.1-0.3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	3	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	Cedar	<input type="checkbox"/> RC Grass <input type="checkbox"/> Engl Ivy <input type="checkbox"/> Ch Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> CanThis <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Ol <input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> G Reed <input type="checkbox"/> Engl Ivy <input type="checkbox"/> CanThis <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Ch Grass <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Rus Ol							
C	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> 0.1-0.3 <input type="checkbox"/> >2	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	0	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	Fir	<input type="checkbox"/> RC Grass <input type="checkbox"/> Engl Ivy <input type="checkbox"/> Ch Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> CanThis <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Rus Ol <input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> G Reed <input type="checkbox"/> Engl Ivy <input type="checkbox"/> CanThis <input type="checkbox"/> Teasel <input type="checkbox"/> C Burd <input type="checkbox"/> Ch Grass <input type="checkbox"/> M This <input type="checkbox"/> Spurge <input type="checkbox"/> Rus Ol							

INSTRUCTIONS

Potential Legacy trees are defined as the largest tree within your search area, which is as far as you can see, but within maximum limits as follows:
 Wadeable Streams: Confine search to no more than 50 m from left and right bank and extending upstream to next transect (for 'K' look upstream 4 channel widths)
 Non-wadeable Rivers: Confine search to no more than 100 m from left and right bank and extending both upstream and downstream as far as you can see confidently.

Alien Plants: Confine search to riparian plots on left and right bank

Wadeable Streams: 10 m x 10 m

Non-wadeable Rivers: 10 m x 20 m

Not all aliens are to be identified in all states. See Field Manual and Plant Identification Guide.

TAXONOMIC CATEGORIES

Acacia/Mesquite	Unknown or Other Deciduous
Alder/Birch	Unknown or Other Deciduous
Ash	Unknown or Other Deciduous
Maple/Boxelder	Unknown or Other Deciduous
Oak	Unknown or Other Deciduous
Poplar/Cottonwood	Unknown or Other Deciduous
Sycamore	Unknown or Other Deciduous
Willow	Unknown or Other Deciduous
Cedar/Cypress/Sequoia	Unknown or Other Conifer
Fir (including Douglas fir and hemlock)	Unknown or Other Conifer
Juniper	Unknown or Other Conifer
Pine	Unknown or Other Conifer
Spruce	Unknown or Other Conifer
Unknown or Other Conifer	Unknown or Other Conifer
Unknown or Other Broadleaf Evergreen	Unknown or Other Broadleaf Evergreen
Snag (Dead tree of any species)	Unknown or Other Broadleaf Evergreen

ALIEN SPECIES

RC Grass	Reed canarygrass	Phalaris arundinacea
Engl Ivy	English Ivy	Hedera helix
Ch Grass	Cheat grass	Bromus tectorum
Salt Ced	Salt Cedar	Tamarix spp.
Can This	Canada thistle	Cirsium arvense
M This	Musk thistle	Carduus nutans
Hblack	Himalayan blackberry	Rubus discolor
Teasel	Teasel	Dipsacus fullonum
Spurge	Leaty spurge	Euphorbia esula
G Reed	Giant reed	Arundo donax
C Burd	Common burdock	Arcium minus
Rus Ol	Russian olive	Elaeagnus angustifolia

COMMENTS

A: Garlic mustard & herb Robert

B: butter cup

C: 11

Transects D to K continued on other side

STREAM DISCHARGE FORM

Reviewed by (Initials): _____

SITE ID: #10

DATE: 09/24/2013

Velocity Area

Distance Units: ft cm
 Depth Units: ft cm
 Velocity Units: ft/s XX.X m/s X.XX

(Final measurement should be left bank.)

	Dist. from Bank	Depth	Velocity	Flag
1	0	0'	0	A
2	15cm	0'	0	
3	30cm	.21'	0	
4	45cm	.67'	5 counts	.054 m/s
5	60cm	.79'	35 counts	.080 m/s
6	75cm	1.03'	348 counts	.347 m/s .277 m/s
7	90cm	1.27'	505 counts	.481 m/s
8	105cm	1.20'	408 counts	.398 m/s
9	120cm	1.02'	303 counts	.309 m/s
10	135cm	.91'	257 counts	.269 m/s
11	150cm	.77'	182 counts	.205 m/s
12	165cm	.59'	81 counts	.069 m/s
13	180cm	.47'	9 counts	.058 m/s
14	195cm	.25'	0	0
15	210cm	.08'	0	B00
16	225cm	0	0	0
17				
18				
19				
20				

Timed Filling

Repeat	Volume (L)	Time (s)	Flag
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

Neutral Bouyant Object

	Float 1	Float 2	Float 3
Float Dist. <input type="checkbox"/> ft <input type="checkbox"/> m	_____	_____	_____
Float Time (s)	_____	_____	_____
Flag	_____	_____	_____

Cross Sections on Float Reach

	Upper Section	Middle Section	Lower Section
Width <input type="checkbox"/> ft <input type="checkbox"/> m	_____	_____	_____
Depth 1 <input type="checkbox"/> ft <input type="checkbox"/> cm	_____	_____	_____
Depth 2	_____	_____	_____
Depth 3	_____	_____	_____
Depth 4	_____	_____	_____
Depth 5	_____	_____	_____

Q Value

If discharge is determined directly in field, record value here: Q = _____

cfs m³/s

FLAG

Flag	Comments
A	location of discharge measurement is ^{perpendicular} at ^{between} double douglas firs on RL bank.
B.O.D.	High fluctuation in water level due to recent rainstorm

Flag Codes: K = No measurement or observation made; U = Suspect measurement or observation; Q = Unacceptable QC check associated with measurement; Z = Last station measured (if not Station 20); F1, F2, etc. = Miscellaneous flags assigned by each field crew. Explain all flags in comments section.

56248



RAPID HABITAT ASSESSMENT FORM - RIFFLE/RUN - STREAM

SITE ID: #10

DATE: 09/24/2013

HABITAT PARAMETER	CONDITION CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1. Epifaunal Substrate/ Available Cover Score: 12	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential; (i.e., logs/snags that are NOT new fall and NOT transient.) 20 19 18 17 16	40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale). 15 14 13 12 11	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed. 10 9 8 7 6	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking. 5 4 3 2 1 0
2. Embeddedness Score: 10	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. 20 19 18 17 16	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment. 15 14 13 12 11	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment. 10 9 8 7 6	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment. 5 4 3 2 1 0
3. Velocity/Depth Regime Score: 10	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is less than 0.3 m/s, deep is greater than 0.5 m.) 20 19 18 17 16	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes). 15 14 13 12 11	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low). 10 9 8 7 6	Dominated by 1 velocity/depth regime (usually slow-deep). 5 4 3 2 1 0
4. Sediment Deposition Score: 11	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition. 20 19 18 17 16	Some new increases in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools. 15 14 13 12 11	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent. 10 9 8 7 6	Heavy deposits of fine material; increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition. 5 4 3 2 1 0
5. Channel Flow Status Score: 9	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed. 20 19 18 17 16	Water fills over 75% of the available channel; or less than 25% of channel substrate is exposed. 15 14 13 12 11	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed. 10 9 8 7 6	Very little water in channel and mostly present as standing pools. 5 4 3 2 1 0
6. Channel Alteration Score: 12	Channelization or dredging absent or minimal; stream with normal pattern. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 14 13 12 11	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted. 10 9 8 7 6	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely. 5 4 3 2 1 0



RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN (continued) - STREAM

SITE ID: H 10

DATE: 09/24/2013

HABITAT PARAMETER	CONDITION CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
7. Frequency of Riffles (or bends) Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream greater than 7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by width of stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by width of stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by width of stream is a ratio of over 25.	
Score: <u>15</u>	20 19 18 17 16	<u>15</u> 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank) NOTE: Determine left or right side by facing downstream.	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. Less than 5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
Left Bank Score: <u>7</u>	Left Bank: 10 9	<u>8</u> <u>7</u> 6	5 4 3	2 1 0
Right Bank Score: <u>7</u>	Right Bank: 10 9	8 <u>7</u> 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% if the streambank surfaces covered by native vegetation; but one class of plants is not well represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruptions obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.	
Left Bank Score: <u>6</u>	Left Bank: 10 9	8 7 <u>6</u>	5 4 3	2 1 0
Right Bank Score: <u>6</u>	Right Bank: 10 9	8 7 <u>6</u>	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank) Width of riparian zone greater than 18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted the zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone less than 6 meters; little or no riparian vegetation due to human activities.	
Left Bank Score: <u>5</u>	Left Bank: 10 9	8 7 6	<u>5</u> 4 3	2 1 0
Right Bank Score: <u>8</u>	Right Bank: 10 9	<u>8</u> 7 6	5 4 3	2 1 0



RAPID HABITAT ASSESSMENT FORM - GLIDE/POOL - STREAMS

SITE ID: _____

DATE: ____/____/____

HABITAT PARAMETER	CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1. Epifaunal Substrate/ Available Cover Score: <input type="text"/>	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e. logs/snags that are NOT new fall and NOT transient.) 20 19 18 17 16	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale). 15 14 13 12 11	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed. 10 9 8 7 6	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking. 5 4 3 2 1 0
2. Pool Substrate Characterization Score: <input type="text"/>	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common. 20 19 18 17 16	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present. 15 14 13 12 11	All mud or clay or sand bottom; little or no root mat; no submerged vegetation. 10 9 8 7 6	Hard-pan clay or bedrock; no root mat or vegetation. 5 4 3 2 1 0
3. Pool Variability Score: <input type="text"/>	Even mix of large-shallow, large-deep, small shallow, small-deep pools present. 20 19 18 17 16	Majority of pools large-deep; very few shallows. 15 14 13 12 11	Shallow pools much more prevalent than deep pools. 10 9 8 7 6	Majority of pools small-shallow or absent. 5 4 3 2 1 0
4. Sediment Deposition Score: <input type="text"/>	Little or no enlargement of islands or point bars and less than 20% of the bottom affected by sediment deposition. 20 19 18 17 16	Some new increases in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools. 15 14 13 12 11	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent. 10 9 8 7 6	Heavy deposits of fine material; increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition. 5 4 3 2 1 0
5. Channel Flow Status Score: <input type="text"/>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed. 20 19 18 17 16	Water fills over 75% of the available channel; or less than 25% of channel substrate is exposed. 15 14 13 12 11	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed. 10 9 8 7 6	Very little water in channel and mostly present as standing pools. 5 4 3 2 1 0
6. Channel Alteration Score: <input type="text"/>	Channelization or dredging absent or minimal; stream with normal pattern. 20 19 18 17 16	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present. 15 14 13 12 11	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted. 10 9 8 7 6	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely. 5 4 3 2 1 0



