

STREAM VERIFICATION FORM - STREAMS/RIVERS

Reviewed by (Initial): _____

SITE NAME: Site 3, Marshall Park **DATE:** 0.6.22.2013 **VISIT:** 0 1 2 3

SITE ID: _____ **Don't forget to record Reach Length on back.** **TEAM:** _____

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?

<input checked="" type="checkbox"/> YES If YES, check one below SAMPLEABLE (Choose method used) <input checked="" type="checkbox"/> Wadeable - Continuous water, greater than 50% wadeable <input type="checkbox"/> Boatable <input type="checkbox"/> Partial - Sampled by wading (Explain in comments) <input type="checkbox"/> Partial - Sampled by boat (Explain in comments) <input type="checkbox"/> Wadeable Interrupted - Not continuous water along reach <input type="checkbox"/> Boatable Interrupted - Not continuous water along reach <input type="checkbox"/> Altered - Stream/River Present but not as on Map	<input type="checkbox"/> NO If NO, check one below NON-SAMPLEABLE-PERMANENT <input type="checkbox"/> Dry - Visited <input type="checkbox"/> Dry - Not visited <input type="checkbox"/> Wetland (No Definable Channel) <input type="checkbox"/> Map Error - No evidence channel/waterbody ever present <input type="checkbox"/> Impounded (Underneath Lake or Pond) <input type="checkbox"/> Other (explain in comments) NON-SAMPLEABLE-TEMPORARY <input type="checkbox"/> Not boatable - Need a different crew <input type="checkbox"/> Not wadeable - Need a different crew <input type="checkbox"/> Other (Explain in comments) NO ACCESS <input type="checkbox"/> Access Permission Denied <input type="checkbox"/> Permanently Inaccessible (Unable/Unsafe to Reach Site) <input type="checkbox"/> Temporarily Inaccessible-Fire, etc. (Explain in comments)
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GENERAL COMMENTS:

DIRECTIONS TO STREAM/RIVER SITE:

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: _____ DATE: ___/___/___ VISIT: 0 1 2 3

SITE ID: _____ 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	DUTIES		
	Biomorph	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: 3

DATE: 0.6/2.9/20.1.3

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: 3 ft.

Total Reach Length (m): ~100

STATION	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	0.38	21.5	Y (N)		Y (N)	GL	N	Y (N)	Y (N)		Measured in Leaf
1	0.46		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
2	0.4		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
3	0.3		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
4	0.26		Y (N)		Y (N)	R1	N	Y (N)	Y (N)		
*5	0.38	11.4	Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
6	0.26		Y (N)		Y (N)	R1	N	Y (N)	Y (N)		
*7	0.18		Y (N)		Y (N)	R1	N	Y (N)	Y (N)		
8	0.5		Y (N)		Y (N)	PL	B	Y (N)	Y (N)		
9	0.74		Y (N)		Y (N)	PL	B	Y (N)	Y (N)		
10			Y (N)		Y (N)			Y (N)	Y (N)		
11			Y (N)		Y (N)			Y (N)	Y (N)		
12			Y (N)		Y (N)			Y (N)	Y (N)		
13			Y (N)		Y (N)			Y (N)	Y (N)		
14			Y (N)		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, ≥ 1.5 m length)		CHECK IF UNMARKED BOXES ARE ZERO		FLAG
								DIAMETER	PIECES ALL/PART IN BANKFULL CHANNEL	Length 1.5-5m	>15m	
*5		0.01	0.1	0.3	0.06	0.01		0.1 < 0.3 m				
								0.3-0.6 m				
								0.6-0.8 m				
								>0.8 m				

COMMENTS (for SUBSTRATE and LWD)

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) - (METERSTICK TO CAR)
 SB = SM. BOULDER (250 TO 1000 mm) - (METERSTICK TO CAR)
 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)
 FN = SILT/CLAY/MUCK - (NOT GRITTY)
 HP = HARDPAN - (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 = Rootwad
 B = Boulder or Bedrock
 F = Unknown, fluvial

CHANNEL UNIT CODES
 PP = Pool, Plunge
 PT = Pool, Trench
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 PD = Pool, Impoundment
 GL = Glide
 RI = Riffle
 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: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): _____

SITE ID: 3

DATE: 06/29/2013

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	.01	GC	25
Lctr	5.35	.19	GC	50
Ctr	10.75	.01	GC	40
Rctr	16.0	.38	GF	0
Right	21.5	.01	CB	30

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	Embed. (%)	0
RR = Bedrock (Rough) - (Larger than a car)		0
RC = Concrete/Asphalt		0
XB = Large Boulder (1000 to 4000 mm) - (Meters/tick to car)		0
SB = Small Boulder (250 to 1000 mm) - (Basketball to meters/tick)		0
CB = Cobble (64 to 250 mm) - (Tennis ball to Basketball)		0
GC = Coarse Gravel (16 to 64 mm) - (Marble to Tennis ball)		0
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 - (Firm, Consolidated Fine Substrate)		0
WD = Wood - (Any Size)		0
OT = Other (Write comment below)		

FISH COVER/ OTHER

COVER/ OTHER	Cover in Channel	Flag
Flamentous 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	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CentUp	15	CentR	16
CentL	14	Left	15
CentDwn	14	Right	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	Flag
Left	25	N/A
Right	80	N/A
Wetted Width XXX.X m	21.5	
Bar Width XXX.X m	N/A	
Bankfull Width XXX.X m	216.5	
Bankfull Height XXX.X m	5.8	
Incised Height XXX.X m	4	

Flag

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 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)	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Wall/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/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: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (initial):

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

TRANSECT: F-G G-H H-I I-J J-K

DATE: 06/29/2013

SITE ID: 3

THALWEG PROFILE		For Transect A-B ONLY:										Increment (m) X.X:		Total Reach Length (m):	
STATION	THALWEG DEPTH (cm) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH ¹		SOFT /SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS	Increment (m) X.X:		Total Reach Length (m):	
			Present	XX.X											
0	0.80	12.65	Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
1	1.12		Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
2	0.95		Y (N)		Y (N)	PP	B	Y (N)	Y (N)						
3	0.85		Y (N)		Y (N)	RE	N	Y (N)	Y (N)						
4	0.44		Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
*5	0.85	9.00	Y (N)	5.50	Y (N)	GL	N	Y (N)	Y (N)						
6	0.34		Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
*7	0.60		Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
8	0.75		Y (N)		Y (N)	PP	B	Y (N)	Y (N)						
9	0.95		Y (N)		Y (N)	GL	N	Y (N)	Y (N)						
10			Y (N)		Y (N)			Y (N)	Y (N)						
11			Y (N)		Y (N)			Y (N)	Y (N)						
12			Y (N)		Y (N)			Y (N)	Y (N)						
13			Y (N)		Y (N)			Y (N)	Y (N)						
14			Y (N)		Y (N)			Y (N)	Y (N)						

SUBSTRATE	Station (5 or 7)	LFT	LCR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS (≥ 10cm small end diameter, ≥ 1.5 m length)		CHECK IF UNMARKED BOXES ARE ZERO	FLAG
								DIAMETER LARGE END	PIECES ALL/PART IN BANKFULL CHANNEL		
	* 5	0.42	0.10	0.35	0.14	0.05		0.1-0.3 m	>15m	<input checked="" type="checkbox"/>	>15m
								0.3-0.6 m	>15m		
								0.6-0.8 m	>15m		
								>0.8 m	>15m		

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 XB = LG. BOULDER (1000 TO 4000 mm) - (METERSTICK TO CAR) SB = SM. 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 (0.06 TO 2 mm) - (GRITTY - 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 = Rootwad B = Boulder or Bedrock F = Unrooted, fluvial COMBINATIONS: eg. WR, BR, WRB	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Scour PB = Pool, Backwater PD = Pool, Impoundment GL = Glide 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):

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

DATE: 06/29/2013

TRANSECT:

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB XX.XX m	Depth XXX cm	Size Class Code	Embed. 0-100%	Flag
0	.2	GC	0	
3	.7	FN	100	
6	.7	CB	40	
9	.43	CB	0	
12	.05	GC	50	

SUBSTRATE SIZE CLASS CODES

- RS = Bedrock (Smooth) - (Larger than a car)
- RR = Bedrock (Rough) - (Larger than a car)
- RC = Concrete/Asphalt
- XB = Large Boulder (1000 to 4000 mm) - (Metersstick 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) - (Ladybug to marble)
- SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladybug size)
- FN = Firn / Clay / Muck - (Not Gritty)
- HP = Hardpan - (Firm, Consolidated Fine Substrate)
- WD = Wood - (Any Size)
- OT = Other (Write comment below)

FISH COVER/ OTHER

Cover in Channel (circle one)	Flag				
	0	1	2	3	4
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

RIPARIAN VEGETATION COVER	Left Bank (>5 m high)				Right Bank				Flag	
	D	C	E	M	N	D	C	E		M
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

CANOPY COVER MEASUREMENTS

Densimeter Flag	Flag				
	0	1	2	3	4
CenUp	10				
CenL	15				
CenDwn	17				

BANK MEASUREMENTS

Bank Angle 0-360	Undercut Dist. (m)	Flag
Left 90°		
Right 80°		
Wetted Width XXX.X m	1265	
Bar Width XXX.X m	NA	
Bankfull Width XXX.X m	200	
Bankfull Height XXX.X m	85	
Incised Height XXX.X m		

HUMAN INFLUENCE

HUMAN INFLUENCE	Left Bank				Right Bank				Flag	
	0	1	2	3	4	0	1	2		3
Wall/Dike/Revetment/Riprap/Dam	0	1	2	3	4	0	1	2	3	4
Buildings	0	1	2	3	4	0	1	2	3	4
Pavement/Cleared Lot	0	1	2	3	4	0	1	2	3	4
Road/Railroad	0	1	2	3	4	0	1	2	3	4
Pipes (Inlet/Outlet)	0	1	2	3	4	0	1	2	3	4
Landfill/Trash	0	1	2	3	4	0	1	2	3	4
Park/Lawn	0	1	2	3	4	0	1	2	3	4
Row Crops	0	1	2	3	4	0	1	2	3	4
Pasture/Range/Hay Field	0	1	2	3	4	0	1	2	3	4
Logging Operations	0	1	2	3	4	0	1	2	3	4
Mining Activity	0	1	2	3	4	0	1	2	3	4

Comments

Flag	Comments

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

27657

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (initial):

SITE ID: 2

DATE: 06/20/2011

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 (cm) (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	0.40	11.2	Y (N)	-	Y (N)	GL	N	Y (N)	Y (N)		
1	0.70		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
2	0.50		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
3	0.35		Y (N)		Y (N)	RT	N	Y (N)	Y (N)		
4	0.39		Y (N)		Y (N)	PT	F	Y (N)	Y (N)		
*5	0.39	18.0	Y (N)	-	Y (N)	GL	N	Y (N)	Y (N)		
6	0.69		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
*7	0.35		Y (N)	-	Y (N)	GL	N	Y (N)	Y (N)		
8	0.50		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
9	0.35		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
10			Y (N)		Y (N)			Y (N)	Y (N)		
11			Y (N)		Y (N)			Y (N)	Y (N)		
12			Y (N)		Y (N)			Y (N)	Y (N)		
13			Y (N)		Y (N)			Y (N)	Y (N)		
14			Y (N)		Y (N)			Y (N)	Y (N)		

Station (5 or 7) LFT LCTR CTR RCTR RGT FLAG

DIAMETER	LARGE WOODY DEBRIS			CHECK IF UNMARKED BOXES ARE ZERO			FLAG
	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m	
LARGE END							
0.1-0.3 m							
0.3-0.6 m							
0.6-0.8 m							
>0.8 m							

SUBSTRATE CLASS CODES: 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) - METERSICK TO CAR)
 SB = SML. 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) - LAZYBUG TO MARBLE)
 SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LAZYBUG 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 = Boulder or bedrock
 B = Boulder or bedrock
 F = Unknown, fluvial
 PP = Pool, Plunge
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 PD = Pool, Impoundment
 GL = Glide
 RI = Rapid
 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: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3 DATE: 06/29/2013 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	012	6C	25
Lctr	3	0.05	6C	25
Ctr	6	0.05	CB	50
Rctr	9	0.30	CB	25
Right	12	0.08	6F	0

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	
Bush/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	

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) - (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) - (Ladylub to marble)
 SA = Sand (0.06 to 2 mm) - (Grity - up to Ladylub 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	85°	
Right	95°	
Wetted Width XXX.X m	11.2'	
Bar Width XX.X m	NA	
Bankfull Width XXX.X m	21.2'	
Bankfull Height XX.X m	9'	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

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

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	
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 Dirt	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE	Left Bank	Right Bank	Flag
Wait/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/Rangel/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: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial): _____

SITE ID: 3

DATE: 6/6/29 / 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 (cm) (XXX)	WETTED WIDTH (m) (XXX.X)	BAR WIDTH:		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	0.39	16.00	Y	(N)		GL		Y	(N)	Y	
1	0.39		Y	(N)		GL		Y	(N)	Y	
2	0.41		Y	(N)		GL		Y	(N)	Y	
3	0.50		Y	(N)		GL		Y	(N)	Y	
4	0.60		Y	(N)		GL		Y	(N)	Y	
5	0.65	8.6	Y	(N)	11.2	PD	R	Y	(N)	Y	2 BARS (4.6ft and 6.6ft)
6	1.60		Y	(N)		PD	R	Y	(N)	Y	
7	1.40		Y	(N)		PD	B	Y	(N)	Y	
8	0.49		Y	(N)		PD	B	Y	(N)	Y	
9	0.45		Y	(N)		GL		Y	(N)	Y	
10			Y	(N)				Y	(N)	Y	
11			Y	(N)				Y	(N)	Y	
12			Y	(N)				Y	(N)	Y	
13			Y	(N)				Y	(N)	Y	
14			Y	(N)				Y	(N)	Y	

SUBSTRATE

Station (5 or 7) 5 LFT .05 LCTR 0.48 CTR 0.50 RCTR 0.50 RGT 0.05 FLAG

COMMENTS (for SUBSTRATE and LWD)

LARGE WOODY DEBRIS

(≥10cm small end diameter; ≥1.5m length)

DIAMETER	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
LARGE END						
0.1-<0.3 m						
0.3-0.6 m						
0.6-0.8 m						
>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. BOULDER (1000 TO 4000 mm) - (NEAREST TO CAR)

SB = SM. BOULDER (250 TO 1000 mm) - (NEAREST TO METERSTICK)

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

CG = 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) - (SAND 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)

POOL FORM CODES

N = Not a pool

W = Large Woody Debris

B = Boulder or Bedrock

F = Unknown, Fluid

CHANNEL UNIT CODES

PP = Pool, Plunge

PT = Pool, Trench

PL = Pool, Lateral Scour

PB = Pool, Backwater

PD = Pool, Impoundment

GL = Slide

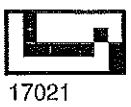
RI = Riffle

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: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3

DATE: 06/29/2013

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.X m	XXX cm	Code	0-100%	
Left	0	0.05	6F	0
Lctr	4	0.02	6F	50
Ctr	8	0.02	6F	0
Rctr	12	0.34	CB	50
Right	16	0.15	6F	0

SUBSTRATE SIZE CLASS CODES

Code	Embed. (%)
RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
RC = Concrete/Asphalt	0
XB = Large Boulder (250 to 1000 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)	100
FN = Silt/Clay/Muck - (Not Gritty)	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	80°	
Right	85°	
Wetted Width XXX.X m	16	
Bar Width XX.X m	N/A	
Bankfull Width XXX.X m	22'	
Bankfull Height XX.X m	9'	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
CanUp	17	CanR	17
CanL	17	Left	
CanDwn	15	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

RIPARIAN VEGETATION COVER

Vegetation Type	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	
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	
Barron, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

Influence	Left Bank	Right Bank	Flag
Wall/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/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: 3

DATE: 06/29/2013

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	0.0	R2	0	
Lctr	1.1	R2	0	
Ctr	2.0	R2	0	
Rctr	3.3	R2	0	
Right	4.4	R2	0	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	Embed. (%)
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 - (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	45	
Right	30	
Wetted Width XXXX m	4.44	
Bar Width XXX m		
Bankfull Width XXXX m	2.94	
Bankfull Height XX.X m	5.4	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

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

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

Left Bank	Right Bank	Flag
D C E M N	D C E M N	
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	

27657

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 3

DATE: / /

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.X

Total Reach Length (m):

STATION	THALWEG DEPTH (cm) (XXX)	WETTED WIDTH (m) (XXX)	BAR WIDTH 1		SOFT / SMALL SEDEMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	0.95	4.4	Y (N)	-	Y (N)	PP	B	Y (N)	Y (N)		
1	0.97		Y (N)		Y (N)	PP	B	Y (N)	Y (N)		
2	1.08		Y (N)		Y (N)	PP	K	Y (N)	Y (N)		
3	1.38		Y (N)		Y (N)	PP	B	Y (N)	Y (N)		
4	1.70		Y (N)		Y (N)	PP	B	Y (N)	Y (N)		
*5	0.90	2.6	Y (N)	-	Y (N)	RA	N	Y (N)	Y (N)		
6	0.85		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
*7	0.85		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
8	0.20		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
9	0.39		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
10			Y (N)		Y (N)			Y (N)	Y (N)		
11			Y (N)		Y (N)			Y (N)	Y (N)		
12			Y (N)		Y (N)			Y (N)	Y (N)		
13			Y (N)		Y (N)			Y (N)	Y (N)		
14			Y (N)		Y (N)			Y (N)	Y (N)		

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS		CHECK IF UNMARKED BOXES ARE ZERO		FLAG		
								DIAMETER	PIECES ALL/PART IN BANK/FULL CHANNEL	Length	PIECES BRIDGE ABOVE BANK/FULL CHANNEL		Length	
	* 5	0.20	0.50	0.95	0.95	0.15		0.1- < 0.3 m	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
								0.3-0.6 m	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
								0.6-0.8 m	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
								>0.8 m	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)	W = Not a pool	PP = Pool, Plunge	PT = Pool, Trench	PL = Pool, Lateral Scour	
RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)	N = Large Woody Debris	PT = Pool, Trench	PL = Pool, Lateral Scour	PB = Pool, Backwater	
RC = CONCRETE/ASPHALT	R = Rockbed	F = Unknown, fluvial	GL = Slide	RI = Riprap	
	B = Boulder or Bedrock	COMBINATIONS:	eg. WR, BR, WRB	RA = Rapid	
	SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LAZYBUG SIZE)			CA = Cascade	
	SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSTICK)			FA = Falls	
	SC = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL)			DR = Dry Channel	
	GC = COARSE GRAVEL (16 TO 64 mm) - (MARBLE TO TENNIS BALL)				
	GF = FINE GRAVEL (2 TO 16 mm) - (LADYBUG TO MARBLE)				
	FN = SILT/CLAY/MUCK - (NOT GRITTY)				
	HP = HARDPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE)				
	WD = WOOD - (ANY SIZE)				
	OT = OTHER (COMMENT ON OTHER SIDE)				



17021

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: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 3

DATE: 06/29/2013

TRANSECT: 3

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

THALWEG PROFILE

STATION	THALWEG DEPTH (m) (XXX)	WETTED WIDTH (m) (XXX)	BAR WIDTH 1		SOFT /SMALL SEDEMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	Comments
			Present	XXX							
0	0.40	6.8	Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
1	0.34		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
2	0.92		Y (N)		Y (N)	GL	N	Y (N)	Y (N)		
3	1.83		Y (N)		Y (N)	PP	R	Y (N)	Y (N)		
4	2.10		Y (N)		Y (N)	PP	R	Y (N)	Y (N)		
*5	2.05	4.9	Y (N)		Y (N)	PP	R	Y (N)	Y (N)		
6	2.20		Y (N)		Y (N)	PP	B	Y (N)	Y (N)		
*7	0.35		Y (N)		Y (N)	PL	F	Y (N)	Y (N)		
8	0.20		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
9	0.45		Y (N)		Y (N)	CA	N	Y (N)	Y (N)		
10			Y (N)		Y (N)			Y (N)	Y (N)		
11			Y (N)		Y (N)			Y (N)	Y (N)		
12			Y (N)		Y (N)			Y (N)	Y (N)		
13			Y (N)		Y (N)			Y (N)	Y (N)		
14			Y (N)		Y (N)			Y (N)	Y (N)		

For Transect A-B ONLY:

Increment (m) X.X:

Total Reach Length (m):

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS (≥10cm small end diameter & 1.5m length)			CHECK IF UNMARKED BOXES ARE ZERO								
								DIAMETER	PIECES ALLPART IN BANKFULL CHANNEL	PIECES ABOVE BANKFULL CHANNEL	PIECES UNMARKED BOXES ARE ZERO	PIECES BRIDGE ABOVE BANKFULL CHANNEL	PIECES UNMARKED BOXES ARE ZERO	PIECES BRIDGE ABOVE BANKFULL CHANNEL					
	* 5	0.55	2.10	2.15	1.05	0.25													
COMMENTS (for SUBSTRATE and LWD)																			

SUBSTRATE 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) - METERTICK TO CAR) SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERTICK) 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) FM = 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 = Boulder B = Boulder or Bedrock F = Unknown, fluvial COMBINATIONS: 69, WR, BR, WRB	PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Scour PB = Pool, Backwater PD = Pool, Impoundment GL = Slide RI = Riffle 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: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3 DATE: 06/26/2013 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	XXX cm	Code	0-100%	
Left	0	0.10	02	0
Lctr	1.7	0.50	RR	0
Ctr	3.4	0.65	RR	0
Rctr	5.1	0.08	RR	0
Right	6.8	0.02	GC	0

SUBSTRATE SIZE CLASS CODES

Embed. (%)
0
100
100
0

RS = Bedrock (Smooth) - (Larger than a car)
 RR = Bedrock (Rough) - (Larger than a car)
 RC = Concrete/Asphalt
 XB = Small Boulder (250 to 1000 mm) - (Meterstick to car)
 SB = Large 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)
 SA = Sand (0.06 to 2 mm) - (Grity - up to Ladylbug 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	30	
Wetted Width XXX.X m	6.84	
Bar Width XXX.X m	21.8	
Bankfull Width XXX.X m	26.4	
Bankfull Height XXX.X m		
Incised Height XXX.X m		

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CentUp	CentL	CentR	CentL
17	17	17	17
17	17	17	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

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

Left Bank	Right Bank	Flag
0 = Not Present P = >10 m C = Within 10 m B = On Bank		
Wald/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/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

27657

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial): _____

SITE ID: 3

DATE: 07/09/2013

TRANSECT:

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

THALWEG PROFILE

STATION	THALWEG DEPTH (cm) (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	7 th	8 th	Y	N	(N)	GL		Y	N	Y	
1	2 nd		Y	N	(N)	R1		Y	N	Y	
2	1 st		Y	N	(N)	R1		Y	N	Y	
3	3 rd		Y	N	(N)	CL		Y	N	Y	
4	1 st		Y	N	(N)	CA		Y	N	Y	
*5	8 th	5 th	Y	N	(N)	CL		Y	N	Y	
6	2 nd		Y	N	(N)	R1		Y	N	Y	
*7	4 th		Y	N	(N)	R1		Y	N	Y	
8	5 th		Y	N	(N)	PB	B	Y	N	Y	
9	1 st		Y	N	(N)	PL	F	Y	N	Y	
10			Y	N				Y	N	Y	
11			Y	N				Y	N	Y	
12			Y	N				Y	N	Y	
13			Y	N				Y	N	Y	
14			Y	N				Y	N	Y	

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCCTR	RGT	FLAG	LARGE WOODY DEBRIS				CHECK IF UNMARKED BOXES ARE ZERO						
								DIAMETER	Length	Length	Length	Length	Length	Length	Length			
* 5		GC	GC	CB	RR	RR		0.1-0.3 m	3									
								0.3-0.6 m										
								0.6-0.8 m										
								>0.8 m										

SUBSTRATE SIZE CLASS 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) - (NETRSTICK TO CAR) SB = SM. BOULDER (250 TO 1000 mm) - (BASKETBALL TO METRSTICK) 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) FN = SILT / CLAY / MUCK - (NOT GRITTY) HP = HARDPAN - (FIRM, CONSOLIDATED FINE SUBSTRATE) WD = WOOD - (ANY SIZE) OT = OTHER (COMMENT ON OTHER SIZE)

POOL FORM CODES: N = Not a pool W = Large Woody Debris R = Rockward B = Boulder or Bedrock F = Unknown, fluvial CONNOTATIONS: eg. WR, BR, WRB PP = Pool, Plunge PT = Pool, Trench PL = Pool, Lateral Scour PB = Pool, Backwater PD = Pool, Impoundment GL = Glide RI = Riffle 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. for flags not specific to one station. Explain all flags in comments. 1 = Measure Bar Width at Station 0 and Mic Station (5 or 7).

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3 DATE: 07/09/2013 TRANSECT: 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	80%	
Lctr	2 ^A	6.5"	RS	
Chr	4	6"	RS	
Rctr	6	7"	RS	
Right	8	0	RS	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)
 RR = Bedrock (Rough) - (Larger than a car)
 RC = Concrete Asphalt
 XB = Large Boulder (1000 to 4000 mm) - (Metersick to car)
 SB = Small 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) - (Ladypug to marble)
 SA = Sand (0.06 to 2 mm) - (Grity - 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
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	

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CenUp	17	CenR	16
CenL	17	Left	17
CenDwn	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	Flag
0-360	Dist. (m)	
Left	45	
Right	20	
Wetted Width XXXX X m	85	
Bar Width XXX X m	2964	
Bankfull Width XXXX X m	4'	
Bankfull Height XX.X m		
Incised Height XX.X m		

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

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

INFLUENCE	Left Bank		Right Bank		Flag
	P	C	B	B	
Wall/Dike/Reverment /Ri/rapp/Dam	0	P	C	B	
Buildings	0	P	C	B	
Pavement/Cleared 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/Range/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):

SITE ID: 3

DATE: 02/09/2013

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	SB		
Lctr	8"	11"	GC	100
Ctr	1'8"	11"	GF	100
Rctr	2'8"	1'	GF	100
Right	3'8"	0	SB	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	Embed. (%)	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)		
SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladypug 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	25	
Right	60	
Wetted Width XXX.X m	3'8"	
Bar Width XXX.X m		
Bankfull Width XXX.X m	19'	
Bankfull Height XX.X m	6'	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
CenUp	CenR	Left	Right
16	16	17	14
17			
15			

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
	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	
Ground Cover (<0.5 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	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

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/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	

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PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (initial):

SITE ID: 3

DATE: 07/09/2013

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)	BAR WIDTH-1		SOFT / SMALL SEEDMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	1'1"	3'8"	Y	N	Y	PL	F	Y	N	Y	
1	1'1"		Y	N	Y	PL	F	Y	N	Y	
2	1'3"		Y	N	Y	PL	F	Y	N	Y	
3	1'3"		Y	N	Y	PL	F	Y	N	Y	
4	1'2"		Y	N	Y	PL	F	Y	N	Y	
*5	1'1"	8"	Y	N	Y	CA		Y	N	Y	
6	2"		Y	N	Y	RI		Y	N	Y	
*7	4"		Y	N	Y	CL		Y	N	Y	
8	2"		Y	N	Y	RI		Y	N	Y	
9	2"		Y	N	Y	CA		Y	N	Y	
10			Y	N	Y			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	

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
	*5	RS	RS	RS	RS	RS	

COMMENTS (for SUBSTRATE and LWD)

DIAMETER	PIECES ALL/PART IN BANK/FULL CHANNEL	CHECK IF UNMARKED BOXES ARE ZERO	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	FLAG
0.1 - <0.3 m	Length 1.5-5m	<input type="checkbox"/>	Length 1.5-5m	<input type="checkbox"/>
0.3-0.6 m	5-15m	<input type="checkbox"/>	5-15m	<input type="checkbox"/>
0.6-0.8 m	>15m	<input type="checkbox"/>	>15m	<input type="checkbox"/>
>0.8 m	Length 1.5-5m	<input checked="" type="checkbox"/>	Length 1.5-5m	<input type="checkbox"/>
	5-15m	<input type="checkbox"/>	5-15m	<input type="checkbox"/>
	>15m	<input type="checkbox"/>	>15m	<input 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 = LG. BOULDER (1000 TO 4000 mm) - METERS/STICK TO CAR) SB = SM. BOULDER (250 TO 1000 mm) - BASKETBALL TO METERS/STICK) 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) 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 = Roundwood B = Boulder or Bedrock F = Unifrown, fluvial 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 FA = Falls CA = Cascade 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: 3

DATE: 07/09/2013

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) (XXXX)	BAR WIDTH ¹		SOFT / SMALL SEDIMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	1"	17	Y	N				Y	N		
1	5"		Y	N				Y	N		
2	7"		Y	N				Y	N		
3	6"		Y	N				Y	N		
4	2"		Y	N				Y	N		
*5	1"	12.5"	Y	N		CA		Y	N		
6	3"		Y	N		R1		Y	N		
*7	2"		Y	N		R1		Y	N		
8	2"		Y	N		R1		Y	N		
9	4"		Y	N		GL		Y	N		
10			Y	N				Y	N		
11			Y	N				Y	N		
12			Y	N				Y	N		
13			Y	N				Y	N		
14			Y	N				Y	N		

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
	*5	RR	RR	RR	RR	RR	

COMMENTS: (for SUBSTRATE and LWD)

SUBSTRATE SIZE CLASS CODES

RR = BEDROCK (SMOOTH) - (LARGER THAN A CAR)
 RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)
 RC = CONCRETE/ASPHALT
 XB = LG. BOULDER (1000 TO 4000 mm) - (NEAREST TO CAR)
 SB = SM. BOULDER (250 TO 1000 mm) - (NEAREST TO METRSTICK)
 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) - (ADYUG TO MARBLE)
 SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LAZYBUG SIZE)
 SL = SILT / CLAY / MUCK - (NOT GRITTY)
 HP = HARDPAN - (FRM, 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 = Rockweid
 B = Boulder or Bedrock
 F = Unknown, fluvial
 eg. WR, BR, WRB

CHANNEL UNIT CODES

PP = Pool, Plunge
 PT = Pool, Trench
 PL = Pool, Lateral Scour
 PB = Pool, Backwater
 PD = Pool, Impoundment
 GL = Glide
 RI = Riffle
 RA = Rapid
 CA = Cascade
 FA = Falls
 DR = Dry Channel

DIAMETER	LARGE WOODY DEBRIS			CHECK IF UNMARKED BOXES ARE ZERO			FLAG
	PIECES ALL/PART IN BANKFULL CHANNEL	PIECES ALL/PART IN BANKFULL CHANNEL	PIECES ALL/PART IN BANKFULL CHANNEL	PIECES UNMARKED ABOVE BANKFULL CHANNEL	PIECES UNMARKED ABOVE BANKFULL CHANNEL	PIECES UNMARKED ABOVE BANKFULL 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							

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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: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3

DATE: 07/09/2013

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	CB	100	
Lctr	4'8"	RS		
Chr	8'	RS		
RChr	12'8"	RS		
Right	17'	GC	90	

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	Embed. (%)
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) - (Basketball to meterstick)	
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) - (Grity - up to Ladypug size)	100
FN = Silt / Clay / Muck - (Not Grity)	100
HP = Hardpan - (Firm, Consolidated Fine Substrate)	100
WD = Wood - (Ary Size)	0
OT = Other (Write comment below)	

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left	30	
Right	60	
Wetted Width XXXX.X m	17'	
Bar Width XX.X m		
Bankfull Width XXXX.X m	19'3"	
Bankfull Height XX.X m	25'	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
CenUp	17	CenR	17
CenL	16	Left	16
CenDwn	16	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

RIPARIAN VEGETATION COVER

Vegetation Type	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	
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

Left Bank	Right Bank	Flag
Wall/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/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

27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3 DATE: 07/09/2013 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	0	SB	
Lctr	2.5"	.5"	RR	
Ctr	4.5"	1"	RR	
Rctr	6.5"	1/8"	RR	
Right	9'	0	RR	

SUBSTRATE SIZE CLASS CODES

Embed. (%)

RS = Bedrock (Smooth) - (Larger than a car)
 RR = Bedrock (Rough) - (Larger than a car)
 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)
 SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladylbug size)
 FN = Silt / Clay / Muck - (Not Grity)
 HP = Hardpan - (Firm, Consolidated Fine Substrate)
 WID = Wood - (Any Size)
 0
 OT = Other (Write comment below)

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360		
Left	30	
Right	40	
Wetted Width XXX.X m	9'	
Bar Width XXX.X m		
Bankfull Width XXX.X m	83'	
Bankfull Height XX.X m	27	
Incised Height XX.X m		

CANOPY COVER MEASUREMENTS

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

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	
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 /Riprap/Dam	0 P C B	
Buildings	0 P C B	
Pavement/Cleared 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/Range/Hay Field	0 P C B	
Logging Operations	0 P C B	
Mining Activity	0 P C B	



27657

PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial):

SITE ID: 3

DATE: 07/09/2013

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 (cm) (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"	9'	Y	N		R1		Y	N	Y	
1	1"		Y	N		R1		Y	N	Y	
2	2"		Y	N		R1		Y	N	Y	
3	2"		Y	N		R1		Y	N	Y	
4	2"		Y	N		GL		Y	N	Y	
*5	3"	11.6"	Y	N		R1		Y	N	Y	
6	4"		Y	N		GL		Y	N	Y	
*7	5.5"		Y	N		GL		Y	N	Y	
8	3"		Y	N		R1		Y	N	Y	
9	7"		Y	N		GL		Y	N	Y	
10			Y	N				Y	N	Y	
11			Y	N				Y	N	Y	
12			Y	N				Y	N	Y	
13			Y	N				Y	N	Y	
14			Y	N				Y	N	Y	

STATION	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
	*5	CC	RR	RR	RR	RR	

FLAG	COMMENTS (for SUBSTRATE and LWD)

SUBSTRATE SIZE CLASS CODES		POOL FORM CODES		CHANNEL UNIT CODES	
RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR)	W = Not a pool	PP = Pool, Plunge	PT = Pool, Trench	PL = Pool, Lateral Scour	
RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)	R = Large Woody Debris	PT = Pool, Plunge	PT = Pool, Trench	PL = Pool, Lateral Scour	
RC = CONCRETE/ASPHALT	R = Boulder or Bedrock	PD = Pool, Backwater	PD = Pool, Impoundment	PL = Pool, Lateral Scour	
RE = LG. BOULDER (1000 TO 4000 mm) - (METERSTICK TO CAR)	F = Unknown, Juvval	GI = Glide	GI = Glide	PL = Pool, Backwater	
RF = SBM BOULDER (250 TO 1000 mm) - (BASKETBALL TO METERSTICK)		RI = Riffle	RI = Riffle	PL = Pool, Backwater	
RG = CB = COBBLE (64 TO 250 mm) - (TENNIS BALL TO BASKETBALL)		RA = Rapid	RA = Rapid	PL = Pool, Backwater	
RH = GC = COARSE GRAVEL (16 TO 64 mm) - (MARBLE TO TENNIS BALL)		CA = Cascade	CA = Cascade	PL = Pool, Backwater	
RI = GF = FINE GRAVEL (2 TO 16 mm) - (LADYBUG TO MARBLE)		FA = Falls	FA = Falls	PL = Pool, Backwater	
RJ = SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LADYBUG SIZE)		DR = Dry Channel	DR = Dry Channel	PL = Pool, Backwater	
RK = FN = SILT/CLAY/MUCK - (NOT GRITTY)				PL = Pool, Backwater	
RL = HP = HARDPAN - (FRM, CONSOLIDATED FINE SUBSTRATE)				PL = Pool, Backwater	
RM = W/D = WOOD - (ANY SIZE)				PL = Pool, Backwater	
RO = OT = OTHER (COMMENT ON OTHER SIDE)				PL = Pool, Backwater	

LARGE WOODY DEBRIS: DIAMETER LARGE END Length 1.5-5m 5-15m >15m
 CHECK IF UNMARKED BOXES ARE ZERO FLAG
 PIECES ALL/PART IN BANK/FULL CHANNEL Length 1.5-5m 5-15m >15m
 PIECES BRIDGE ABOVE BANK/FULL CHANNEL Length 1.5-5m 5-15m >15m



17021

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 3 DATE: 07/09/2013 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	XXX cm	Code	0-100%	
Left	0	0	GC	
Lctr	5'3"	1/8"	RR	
Ctr	10'6"	9"	RR	
Rctr	15'6"	1/8"	RR	
Right	21'6"	0	FN	

BANK MEASUREMENTS

Bank Angle	Undercut	Dist. (m)	Flag
0 - 360			
Left	30		
Right	80		
Wetted Width XXX.X m		216"	
Bar Width XX.X m			
Bankfull Width XXX.X m		296"	
Bankfull Height XX.X m		≈ 6'	
Inclined Height XX.X m			

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
CenUp	CenR	Left	Right
16	17		
17	17		
17	17		

Comments

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

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	0 C E M N	0 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

HUMAN INFLUENCE	Left Bank		Right Bank		Flag
	Left Bank	Right Bank	Left Bank	Right Bank	
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/Cleaned 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/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): _____

SITE ID: _____ DATE: ____/____/____ 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				
Lctr				
Ctr				
Rctr				
Right				

SUBSTRATE SIZE CLASS CODES

RS = Bedrock (Smooth) - (Larger than a car)	0
RR = Bedrock (Rough) - (Larger than a car)	0
HC = Concrete/Asphalt	
XB = Large Boulder (1000 to 4000 mm) - (Metersstick to car)	
SB = Small Boulder (250 to 1000 mm) - (Basketball to metersstick)	
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 = Handpan - (Firm, Consolidated Fine Substrate)	0
WD = Wood - (Any Size)	
OT = Other (Write comment below)	

FISH COVER/ OTHER

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

CANOPY COVER MEASUREMENTS

DENSIMETER (0-17Max)		Flag	
Left	Right	CentR	CentL

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		
Left		
Right		
Wetted Width XXX.X m		
Bar Width XX.X m		
Bankfull Width XXX.X m		
Bankfull Height XX.X m		
Incised Height XX.X m		

Comments

Flag

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

HUMAN INFLUENCE

INFLUENCE	Left Bank		Right Bank		Flag
	0 = Not Present P = >10 m C = Within 10 m B = On Bank				
Wall/Dike/Revetment /Riprap/Dam	0	P	C	B	
Buildings	0	P	C	B	
Pavement/Cleared 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

RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (initial): _____

SITE ID: _____

DATE: _____ / _____ / _____

LARGEST POTENTIAL LEGACY TREE VISIBLE FROM THIS STATION						ALIEN PLANT SPECIES PRESENT IN LEFT AND RIGHT RIPARIAN PLOTS												
Tran	Trees not visible	DBH (m)	Height (m)	Dist. from wetted margin (m)	Type	Taxonomic Category	Check all that are present											
D	<input type="checkbox"/>	<input checked="" type="checkbox"/> 0-0.1 <input type="checkbox"/> 0.1-1.3 <input checked="" type="checkbox"/> 1.3-3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input checked="" type="checkbox"/> 15-30 <input type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	? <i>Bur oak</i>	<input type="checkbox"/> NONE	<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 checked="" type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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"/> 1.3 <input checked="" type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	" "	<input checked="" type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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 type="checkbox"/> 1.3 <input checked="" type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	name (say leaf?)	<input type="checkbox"/> NONE	<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 checked="" type="checkbox"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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 type="checkbox"/> 1.3 <input type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	"	<input type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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 type="checkbox"/> 1.3 <input checked="" type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	?	<input checked="" type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus OI							
I	<input type="checkbox"/>	<input checked="" type="checkbox"/> 0-0.1 <input type="checkbox"/> 0.1-1.3 <input type="checkbox"/> 1.3-3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<i>3/4 leaf maple</i>	<input type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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 type="checkbox"/> 1.3 <input checked="" type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	_____	<input type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<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"/> 1.3 <input checked="" type="checkbox"/> 3.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	_____	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<i>Big leaf maple</i>	<input type="checkbox"/> NONE	<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"/> Hblack <input type="checkbox"/> Teasel <input type="checkbox"/> Spurge	<input type="checkbox"/> G Reed <input type="checkbox"/> C Burd <input type="checkbox"/> Rus OI							



RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (initial):

SITE ID: _____

DATE: _____

LARGEST POTENTIAL LEGACY TREE VISIBLE FROM THIS STATION

Transect	Trees not Visible	DBH (m)	Height (m)	Dist. from wetted margin (m)	Type	Taxonomic Category	ALIEN PLANT SPECIES PRESENT IN LEFT AND RIGHT RIPARIAN PLOTS
A	<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	20	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	Fir	Check all that are present <input type="checkbox"/> RC Grass <input type="checkbox"/> Salt Ced <input type="checkbox"/> Hblack <input type="checkbox"/> G Reed <input checked="" 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"/> RC Grass <input checked="" 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"/> .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	Dom	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	?	<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 checked="" type="checkbox"/> 3-75 <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	2m	<input type="checkbox"/> Deciduous <input checked="" type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	Broadleaf Evergreen	<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
- Alder/Birch
- Ash
- Maple/Boxelder
- Oak
- Poplar/Cottonwood
- Sycamore
- Willow
- Unknown or Other Deciduous
- Cedar/Cypress/Sequoia
- Fir (including Douglas fir and hemlock)
- Juniper
- Pine
- Spruce
- Unknown or Other Conifer
- Unknown or Other Broadleaf Evergreen
- Snag (Dead tree of any species)

ALIEN SPECIES

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

COMMENTS

Transects D to K continued on other side

TORRENT EVIDENCE ASSESSMENT FORM - STREAMSSITE ID: 3DATE: 0.7/09/2013**TORRENT EVIDENCE**

Please X any of the following that are evident.

EVIDENCE OF TORRENT SCOURING:

- 01 - Stream channel has a recently devegetated corridor two or more times the width of the low flow channel. This corridor lacks riparian vegetation with possible exception of fireweed, even-aged alder or cottonwood seedlings, grasses, or other herbaceous plants.
- 02 - Stream substrate cobbles or large gravel particles are NOT IMBRICATED. (Imbricated means that they lie with flat sides horizontal and that they are stacked like roof shingles -- imagine the upstream direction as the top of the "roof.") In a torrent scour or deposition channel, the stones are laying in unorganized patterns, lying "every which way." In addition many of the substrate particles are angular (not "water-worn.")
- 03 - Channel has little evidence of pool-riffle structure. (For example, could you ride a mountain bike down the channel?)
- 04 - The stream channel is scoured down to bedrock for substantial portion of reach.
- 05 - There are gravel or cobble berms (little levees) above bankfull level.
- 06 - Downstream of the scoured reach (possibly several miles), there are massive deposits of sediment, logs, and other debris.
- 07 - Riparian trees have fresh bark scars at many points along the stream at seemingly unbelievable heights above the channel bed.
- 08 - Riparian trees have fallen into the channel as a result of scouring near their roots.

EVIDENCE OF TORRENT DEPOSITS:

- 09 - There are massive deposits of sediment, logs, and other debris in the reach. They may contain wood and boulders that, in your judgement, could not have been moved by the stream at even extreme flood stage.
- 10 - If the stream has begun to erode newly laid deposits, it is evident that these deposits are "MATRIX SUPPORTED." This means that the large particles, like boulders and cobbles, are often not touching each other, but have silt, sand, and other fine particles between them (their weight is supported by these fine particles -- in contrast to a normal stream deposit, where fines, if present, normally "fill-in" the interstices between coarser particles.)

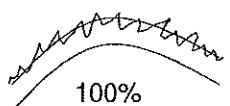
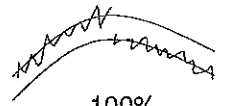
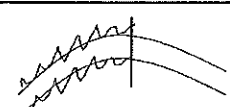
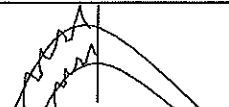
NO EVIDENCE:

- 11 - No evidence of torrent scouring or torrent deposits.

COMMENTS

CHANNEL CONSTRAINT AND FIELD CHEMISTRY - STREAMS/RIVERS

Reviewed by (Initial): _____

SITE ID: <u>3</u>	DATE: <u>07/04/2013</u>
IN SITU MEASUREMENTS	
Station ID: _____	(Assume X-site unless marked)
Comments	
STREAM/RIVER DO mg/l: (optional) _____	
STREAM RIVER TEMP. (°C): _____	
TIME OF DAY: _____	
CHANNEL CONSTRAINT	
CHANNEL PATTERN (Check One) <input checked="" type="checkbox"/> One channel <input type="checkbox"/> Anastomosing (complex) channel - (Relatively long major and minor channels branching and rejoining.) <input type="checkbox"/> Braided channel - (Multiple short channels branching and rejoining - mainly one channel broken up by numerous mid-channel bars.)	
CHANNEL CONSTRAINT (Check One) <input type="checkbox"/> Channel very constrained in V-shaped valley (i.e. it is very unlikely to spread out over valley or erode a new channel during flood) <input type="checkbox"/> Channel is in Broad Valley but channel movement by erosion during floods is constrained by Incision (Flood flows do not commonly spread over valley floor or into multiple channels.) <input checked="" type="checkbox"/> Channel is in Narrow Valley but is not very constrained , but limited in movement by relatively narrow valley floor (< ~10 x bankfull width) <input type="checkbox"/> Channel is Unconstrained in Broad Valley (i.e. during flood it can fill off-channel areas and side channels, spread out over flood plain, or easily cut new channels by erosion)	
CONSTRAINING FEATURES (Check One) <input checked="" type="checkbox"/> Bedrock (i.e. channel is a bedrock-dominated gorge) <input type="checkbox"/> Hillslope (i.e. channel constrained in narrow V-shaped valley) <input type="checkbox"/> Terrace (i.e. channel is constrained by its own incision into river/stream gravel/soil deposits) <input type="checkbox"/> Human Bank Alterations (i.e. constrained by rip-rap, landfill, dike, road, etc.) <input type="checkbox"/> No constraining features	
Percent of channel length with margin in contact with constraining feature: <u>10.0</u> % (0-100%)	Percent of Channel Margin Examples
Bankfull width: <u>Average</u> _____ (m)	
Valley width (Visual Estimated Average): <u>70</u> ft (m) <small>Note: Be sure to include distances between both sides of valley border for valley width. If you cannot see the valley borders, record the distance you can see and mark this box. <input type="checkbox"/></small>	
	
	
Comments	

38480



RAPID HABITAT ASSESSMENT FORM: RIFFLE/RUN - STREAM

SITE ID: _____

DATE: ____/____/____

HABITAT PARAMETER	CONDITION CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
1. Epifaunal Substrate/ Available Cover 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.) Score: <u>12</u>	20 19 18 17 16 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.)	15 14 13 <u>12</u> 11 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 new fall, but not yet prepared for colonization (may rate at high end of scale).	10 9 8 7 6 20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	5 4 3 2 1 0 Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
2. Embeddedness Score: <u>7</u>	20 19 18 17 16 Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	15 14 13 12 11 Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	10 9 8 <u>7</u> 6 Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	5 4 3 2 1 0 Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
3. Velocity/Depth Regime Score: <u>16</u>	20 19 18 17 <u>16</u> 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.)	15 14 13 12 11 Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	10 9 8 7 6 Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	5 4 3 2 1 0 Dominated by 1 velocity/depth regime (usually slow-deep).
4. Sediment Deposition Score: <u>20</u>	<u>20</u> 19 18 17 16 Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	15 14 13 12 11 Some new increases in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	10 9 8 7 6 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.	5 4 3 2 1 0 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. Channel Flow Status Score: <u>14</u>	20 19 18 17 16 Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	15 <u>14</u> 13 12 11 Water fills over 75% of the available channel; or less than 25% of channel substrate is exposed.	10 9 8 7 6 Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	5 4 3 2 1 0 Very little water in channel and mostly present as standing pools.
6. Channel Alteration Score: <u>18</u>	20 19 <u>18</u> 17 16 Channelization or dredging absent or minimal; stream with normal pattern.	15 14 13 12 11 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.	10 9 8 7 6 Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	5 4 3 2 1 0 Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.



SITE ID: _____

DATE: ____/____/____

GENERAL ASSESSMENT (continued)

RAPID HABITAT ASSESSMENT FORM: GLIDE POOL (continued) - STREAMS

SITE ID: 3

DATE: 07/09/2013

HABITAT PARAMETER	CATEGORY																			
	OPTIMAL					SUB-OPTIMAL					MARGINAL					POOR				
7. Channel Sinuosity The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note- channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
	Score: <u>8</u>																			
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>9</u>	Left Bank: 10 <u>9</u>					8 7 6					5 4 3					2 1 0			
Right Bank Score: <u>9</u>	Right Bank: 10 <u>9</u>					8 7 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>7</u>	Left Bank: 10 9					8 <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				
10. Riparian Vegetation 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>7</u>	Left Bank: 10 9					8 <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				

