





# STREAM DISCHARGE FORM

Reviewed by (Initials): \_\_\_\_\_

SITE ID: Tryon creek Mouth to Hwy 43 DATE: 09/25/2013

<input checked="" type="checkbox"/> Velocity Area				
Distance Units		Depth Units		Velocity Units
<input type="checkbox"/> ft <input checked="" type="checkbox"/> m		<input checked="" type="checkbox"/> ft <input type="checkbox"/> cm		<input type="checkbox"/> ft/s XX.X <input checked="" type="checkbox"/> m/s X.XX
(Final measurement should be left bank.)				
Dist. from Bank	Depth	Velocity	Flag	
1	0	0.97'	3 counts	A
2	20 cm	1.06'	4 counts	
3	40 cm	1.13'	6 counts	
4	60 cm	1.27'	10 counts	
5	80 cm	1.3'	31 counts	
6	100 cm	1.29'	14 counts	
7	120 cm	1.33'	22 counts	
8	140 cm	1.42'	44 counts	
9	160 cm	1.43'	91 counts	
10	180 cm	1.65'	145 counts	
11	200 cm	1.63'	157 counts	
12	220 cm	1.75'	153 counts	
13	240 cm	1.96'	161 counts	
14	260 cm	1.97'	135 counts	
15	280 cm	1.96'	147 counts	
16	300 cm	1.82'	63 counts	
17	320 cm	1.63'	10 counts	
18	340 cm	1.24'	0 counts	
19	360 cm	0.98'	3 counts	
20	380 cm	0.86'	0	

<input type="checkbox"/> Timed Filling			
Repeat	Volume (L)	Time (s)	Flag
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

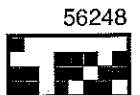
<input type="checkbox"/> Neutral Bouyant Object			
	Float 1	Float 2	Float 3
Float Dist. <input type="checkbox"/> ft <input type="checkbox"/> m	_____	_____	_____
Float Time (s)	_____	_____	_____
Flag	_____	_____	_____

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  m<sup>3</sup>/s FLAG

Flag	Comments
A	measurements taken 15 m downstream from stormwater discharge pipe/Hatch

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.





RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (Initial):

SITE ID: May 43 L.O.

DATE: 05/18/2013

ALIEN PLANT SPECIES PRESENT IN LEFT AND RIGHT RIPARIAN PLOTS

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	Check all that are present											
A	<input type="checkbox"/>	<input checked="" type="checkbox"/> 0-0.1 <input type="checkbox"/> .75-2 <input type="checkbox"/> 1-3 <input type="checkbox"/> >2	<input checked="" type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input checked="" type="checkbox"/> >30	<u>5m</u>	Deciduous Coniferous Broadleaf Evergreen	<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 Oi											
B	<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>10m</u>	Deciduous Coniferous Broadleaf Evergreen	<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 Oi											
C	<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>5m</u>	Deciduous Coniferous 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 Oi											

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	Phalaris arundinacea
Engl Ivy	English ivy	Hedera helix
ChGrass	Cheat grass	Bromus tectorum
Salt Ced	Salt Cedar	Tamarix spp.
Can This	Canada thistle	Cirsium arvense
M This	Musk thistle	Cardus nutans
Hblack	Himalayan blackberry	Rubus discolor
Teasel	Teasel	Dipsacus fullonum
Spurge	Leafy spurge	Euphorbia esula
G Reed	Giant reed	Arundo donax
C Burd	Common burdock	Arctium minus
Rus Oi	Russian-olive	Elaeagnus angustifolia

COMMENTS

A. Clematis  
 B. Clematis Buddler?  
 C. Arundo donax  
 C. Potentilla canadensis  
 C. Ruscus aculeatus

Transects D to K continued on other side

RIPARIAN "LEGACY" TREES AND INVASIVE ALIEN PLANTS

Reviewed by (initial):

SITE ID: AWY 4th 810

DATE: 05/18/2013

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 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 checked="" type="checkbox"/> 15-30 <input type="checkbox"/> >30	<u>81</u> <u>1414</u>	<input checked="" type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Willow</u>	<input type="checkbox"/> NONE <input checked="" 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
E	<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 type="checkbox"/> >30	<u>25'</u>	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Dead?</u> <u>Cottonwood</u>	<input type="checkbox"/> NONE <input checked="" 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
F	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/> >30	<u>20'</u>	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Cottonwood</u>	<input type="checkbox"/> NONE <input checked="" 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
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 type="checkbox"/> >30	<u>30'</u>	<input type="checkbox"/> Deciduous <input type="checkbox"/> Coniferous <input type="checkbox"/> Broadleaf <input type="checkbox"/> Evergreen	<u>Cottonwood</u>	<input type="checkbox"/> NONE <input checked="" 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
H	<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 type="checkbox"/> >30		<input 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
I	<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 type="checkbox"/> >30		<input 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
J	<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 type="checkbox"/> >30		<input 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
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 type="checkbox"/> >30		<input 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



*Handwritten notes:*  
 clear  
 Clematis  
 Forsythia  
 Holly  
 Laurel  
 Buddleia

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 type="checkbox"/> 0-0.1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-75	<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 type="checkbox"/> >30	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input type="checkbox"/> >30	<input 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 Ol	<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 Ol			
E	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-75	<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 type="checkbox"/> >30	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input type="checkbox"/> >30	<input 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 Ol	<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 Ol			
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K	<input type="checkbox"/>	<input type="checkbox"/> 0-0.1 <input type="checkbox"/> 1-3 <input type="checkbox"/> 3-75	<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 type="checkbox"/> >30	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input type="checkbox"/> >30	<input 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 Ol	<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 Ol			

see sheet in office.

Cottonwood

Cottonwood

MAPLE

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

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 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 type="checkbox"/> Deciduous <input 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
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		<input type="checkbox"/> Deciduous <input 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 type="checkbox"/> 0-0.1 <input type="checkbox"/> .75-2 <input type="checkbox"/> .1-.3 <input type="checkbox"/> >2 <input type="checkbox"/> .3-.75	<input type="checkbox"/> <5 <input type="checkbox"/> 5-15 <input type="checkbox"/> 15-30 <input type="checkbox"/> >30		<input type="checkbox"/> Deciduous <input 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

INSTRUCTIONS

TAXONOMIC CATEGORIES

ALIEN SPECIES

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.

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)	

RC Grass	Reed canarygrass	Phalaris arundinacea
Engl Ivy	English ivy	Hedera helix
ChGrass	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 fulvorum
Spurge	Leaty spurge	Euphorbia esula
G Reed	Giant reed	Arundo donax
C Burd	Common burdock	Arcium minus
Rus Ol	Russian-olive	Elaeagnus angustifolia

COMMENTS

Transects D to K continued on other side



**RAPID HABITAT ASSESSMENT FORM RIFFLE/RUN - STREAM**

SITE ID: Taylor Creek mouth to Hwy 43 culvert DATE: 09/25/2013

HABITAT PARAMETER	CONDITION CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
<b>1. Epifaunal Substrate/ Available Cover</b>  Score: <input type="text"/>	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.)	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).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>2. Embeddedness</b>  Score: <input type="text"/>	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>3. Velocity/Depth Regime</b>  Score: <input type="text"/>	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.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime (usually slow-deep).
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>4. Sediment Deposition</b>  Score: <input type="text"/>	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increases in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	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.	Heavy deposits of fine material; increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>5. Channel Flow Status</b>  Score: <input type="text"/>	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills over 75% of the available channel; or less than 25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>6. Channel Alteration</b>  Score: <input type="text"/>	Channelization or dredging absent or minimal; stream with normal pattern.	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.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0



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

SITE ID:  Hwy 43

DATE:  09/24/2013

HABITAT PARAMETER	CONDITION CATEGORY			
	OPTIMAL	SUB-OPTIMAL	MARGINAL	POOR
<b>7. Frequency of Riffles (or bends)</b>  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:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>8. Bank Stability (score each bank)</b>  Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. Less than 5% of bank affected.  NOTE: Determine left or right side by facing downstream.	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:	Left Bank: 10 9	8 7 6	5 4 3	2 1 0
Right Bank Score:	Right Bank: 10 9	8 7 6	5 4 3	2 1 0
<b>9. Vegetative Protection (score each bank)</b>  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:	Left Bank: 10 9	8 7 6	5 4 3	2 1 0
Right Bank Score:	Right Bank: 10 9	8 7 6	5 4 3	2 1 0
<b>10. Riparian Vegetative Zone Width (score each bank)</b>  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:	Left Bank: 10 9	8 7 6	5 4 3	2 1 0
Right Bank Score:	Right Bank: 10 9	8 7 6	5 4 3	2 1 0



# \* Removal of 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: 05/18/2013

SITE ID: Hwy 43 L.O.

THALWEG PROFILE										For Transect A-B ONLY:		Increment (m) X.X:		Total Reach Length (m):	
STA-TION	THALWEG DEPTH (cm) (XXX)	WETTED WIDTH (m) (XXX.X)		BAR WIDTH 1 Present	SOFT /SMALL SED. MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS				
		XX.X	XX.X												
0	2.2ft	17.2		Y (N)	(Y) N	GL		Y (N)	Y (N)						
1	2.8ft			Y (N)	(Y) N	GL		Y (N)	Y (N)			Support tidal influence			
2	2.4ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
3	1.90ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
4	1.90ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
*5	1.80ft	16.8		Y (N)	(Y) N	GL		Y (N)	Y (N)						
6	1.80ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
*7	1.86ft	17.0		Y (N)	(Y) N	GL		Y (N)	Y (N)						
8	2.0ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
9	2.0ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
10	1.99ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
11	2.10ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
12	2.7ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
13	3.6ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						
14	3.6ft			Y (N)	(Y) N	GL		Y (N)	Y (N)						

\* next transect B-C

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 LARGE END	PIECES ALL/PART IN BANKFULL CHANNEL	PIECES BRIDGE ABOVE BANKFULL CHANNEL	PIECES BRIDGE ABOVE BANKFULL CHANNEL	
	* 7	FN	SB	GL	GL	GA	FN	0.1 - < 0.3 m	Length 1.5-5m	Length 1.5-5m	Length 1.5-5m	> 15m
								0.3-0.6 m				
								0.6-0.8 m				
								> 0.8 m				

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 (250 TO 1000 mm) - BASKETBALL TO METERSTICK SB = SM BOULDER (100 TO 250 mm) - (TENNIS BALL TO BASKETBALL) CB = COBBLE (64 TO 250 mm) - (MARBLE TO TENNIS BALL) 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) FP = 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, 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 = Rida 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: May 4/3/10 05/18/2013

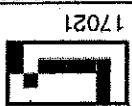
SITE ID: Phab 4310

THALWEG PROFILE				For Transect A-B ONLY:				Increment (m) X.X:				Total Reach Length (m):	
STA-TION	THALWEG DEPTH (cm) (XXX)	BAR WIDTH <sup>1</sup>		SOFT /SMALL SEDE-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	Increment (m) X.X:			COMMENTS
		Present	XX.X							1.5-5m	5-15m	>15m	
0	1.06	Y	N	Y	PP		Y	N					
1	1.26	Y	N	Y	CA		Y	N					
2	1.06	Y	N	Y			Y	N					
3	1.66	Y	N	Y			Y	N					
4	1.8	Y	N	Y			Y	N					
*5	2.21	Y	N	Y			Y	N					
6	1.6	Y	N	Y			Y	N					
*7	1.12	Y	N	Y			Y	N					
8	1.52	Y	N	Y			Y	N					
9	1.36	Y	N	Y			Y	N					
10	1.16	Y	N	Y			Y	N					
11	1.2	Y	N	Y			Y	N					
12	1.54	Y	N	Y			Y	N					
13	1.68	Y	N	Y			Y	N					
14	1.9	Y	N	Y			Y	N					

*Added woody debris*  
*Small woody debris*

SUBSTRATE	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS (>10 cm small and diameter > 1.5 m length)			CHECK IF UNMARKED BOXES ARE ZERO	FLAG
								DIAMETER LARGE END	PIECES ALL PART IN BANKFULL CHANNEL	PIECES BRIDGE ABOVE BANKFULL CHANNEL		
	5	CB	CB	CB	CB	CB		0.1-0.3 m	>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	POOL FORM CODES	CHANNEL UNIT CODES
RS = BEDROCK (SMOOTH) - (LARGER THAN CAR) RR = BEDROCK (ROUGH) - (LARGER THAN CAR) RG = CONCRETE/ASPHALT XB = LG BOULDER (1000 TO 4000 mm) - METERSTICK TO CAR) SB = SM BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSTICK) CB = COBBLE (63 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 = 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 W = Large Woody 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 = Slide RI = Riffle RA = Rapid CA = Cascade FA = Falls DR = Dry Channel



Flag Codes: K = no measurement; 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: May 4<sup>th</sup> 2013

SITE ID: Phab 43 10

THALWEG PROFILE		For Transect A-B ONLY:										Total Reach Length (m):	
STA-TION	THALWEG DEPTH (m) (XXX.X)	BAR WIDTH <sup>1</sup>		WETTED WIDTH (m) (XXX.X)	SOFT /SMALL SEDE-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	INCREMENT (m) X.X:	COMMENTS	
		Present	XX.X										
0	2.1	Y	N	20.9	Y	SI	-	Y	N				
1	2.91	Y	N		Y	PD	W	Y	N			Restoration by covering F550 pool the bottom 5m	
2	2.43	Y	N		Y	R1	-	Y	N				
3	1.61	Y	N		Y	R1	-	Y	N				
4	0.58	Y	N		Y	R1	-	Y	N				
*5	1.11	Y	N	13.8	Y	R1	-	Y	N				
6	1.28	Y	N		Y	R1	-	Y	N				
*7	1.87	Y	N	20.3	Y	R1	-	Y	N				
8	1.00	Y	N		Y	PD	B	Y	N			Restoration Boulder placed to cause expanded pool	
9	1.91	Y	N		Y	PD	B	Y	N				
10	2.79	Y	N		Y	PD	B	Y	N				
11		Y	N		Y			Y	N				
12		Y	N		Y			Y	N				
13		Y	N		Y			Y	N				
14		Y	N		Y			Y	N				

SUBSTRATE	Station (5 or 7)	LFT	LCCTR	CTR	RCTR	RGT	FLAG	LARGE WOODY DEBRIS (>10 cm small end diameter, > 1.5 m length)			CHECK IF UNMARKED BOXES ARE ZERO	FLAG	
								DIAMETER LARGE END	PIECES ALL/PART IN BANKFULL CHANNEL Length 1.5-5m	PIECES BRIDGE ABOVE BANKFULL CHANNEL Length 1.5-5m			PIECES BRIDGE ABOVE BANKFULL CHANNEL Length >15m
	* 7	SB	FN	GC	CB	GC		0.1-<0.3 m	11	7			
								0.3-0.6 m	1	7			
								0.6-0.8 m	111	3			
								>0.8 m	1	1			

**SUBSTRATE SIZE CLASS CODES:**  
 RS = BEDROCK (SMOOTH) - (LARGER THAN A CAR)  
 RR = BEDROCK (ROUGH) - (LARGER THAN A CAR)  
 RC = CONCRETE/ASPHALT  
 RB = L.G. BOULDER (1000 TO 4000 mm) - (METERSTICK 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)  
 GP = FINE GRAVEL (2 TO 16 mm) - (LADYBUG TO MARBLE)  
 SA = SAND (0.06 TO 2 mm) - (FRITTY - UP TO LADYBUG SIZE)  
 FN = SILT/CLAY/MUCK - (NOT GRITTY)  
 HP = HARDPAH - (FRIM, 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 w/ body debris  
 R = Roofwad  
 B = Boulder or Bedrock  
 F = Unknown, flum  
 COMBINATIONS:  
 eg. WR, BR, WRB  
 RA = Rapid  
 CA = Cascade  
 FA = Falls  
 DR = Dry Channel

**CHANNEL UNIT CODES:**  
 PP = Pool, Flunge  
 PT = Pool, Trench  
 PL = Pool, Lateral Scour  
 PB = Boulder or Bedrock  
 PD = Pool, Backwater  
 GL = GLEP  
 RI = Riffle  
 RA = Rapid  
 CA = Cascade  
 FA = Falls  
 DR = Dry Channel

Flag Codes: K = no measurement made; U = suspect measurement; F1, F2, ect. = 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: Hwy 43

DATE: 09/25/2013

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:

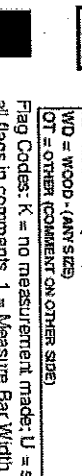
Total Reach Length (m):

STATION	THALWEG DEPTH (cm) (XXXX)	WETTED WIDTH (m) (XXXX)	BAR WIDTH 1		SOFT / SMALL SEED-MENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XX.X							
0	2.12	19.1	Y	(N)	(N)	PD	WR	Y	(N)	Y	
1	<del>1.8</del> 2.1		Y	(N)	(N)	RI		Y	(N)	Y	
2	1.55		Y	(N)	(N)	RI		Y	(N)	Y	
3	1.16		Y	(N)	(N)	RI		Y	(N)	Y	
4	1.48		Y	(N)	(N)	RI		Y	(N)	Y	
5	1.74	9.9 ft	Y	(N)	(N)	RI		Y	(N)	Y	
6	1.8		Y	(N)	(N)	RS		Y	(N)	Y	
7	0.69	15.4 ft	Y	(N)	(N)	CA		Y	(N)	Y	
8	1.48		Y	(N)	(N)	CA		Y	(N)	Y	
9	1.02		Y	(N)	(N)	CA		Y	(N)	Y	
10	0.85		Y	(N)	(N)	CA		Y	(N)	Y	
11			Y	(N)	(N)			Y	(N)	Y	
12			Y	(N)	(N)			Y	(N)	Y	
13			Y	(N)	(N)			Y	(N)	Y	
14			Y	(N)	(N)			Y	(N)	Y	

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	PIECES ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	
*7	S5	S5	S5	CB	CB	CB		<10 cm small end diameter, >1.5 m length	PIECES ALL/PART IN BANK/FULL CHANNEL	PIECES ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	
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		FLAG
								DIAMETER	PIECES ALL/PART IN BANK/FULL CHANNEL	PIECES ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	
								>0.8 m	PIECES ALL/PART IN BANK/FULL CHANNEL	PIECES ABOVE BANK/FULL CHANNEL	PIECES BRIDGE ABOVE BANK/FULL CHANNEL	

17021



04/03/2002 Phab Thalweg Stream

# PHAB: THALWEG PROFILE & WOODY DEBRIS FORM STREAMS

Reviewed by (Initial): \_\_\_\_\_

SITE ID:  Hwy 43 Riprap creek       DATE:  09/25/2013       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 (mm) (XXX)	WETTED WIDTH (mm) (XXX)	BAR WIDTH		SOFT / SMALL SEDEMENT	CHANNEL UNIT CODE	POOL FORM CODE	SIDE CHANNEL	BACK WATER	FLAG	COMMENTS
			Present	XXX							
0	0.78	25.04	<input checked="" type="checkbox"/> N	2A	<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		*only inside channel unit because of lateral logs placed across stream in retention effect.
1	0.81		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		* riprap sides on left bank
2	1.15		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		edges lined with boulders
3	1.25		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		* riprap caused by culvert and lateral restoration
4	1.95		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		measured to the
*5	1.19	33.14	<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	CA	-	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		about 15 meters
6	1.52		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N	PD	W	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		from the mouth of the culvert to the end of the pipe
*7	**		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
8	**		<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
9			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
10			<input checked="" type="checkbox"/> N		<input checked="" type="checkbox"/> N			<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> N		
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		

## SUBSTRATE

STATION	Station (5 or 7)	LFT	LCTR	CTR	RCTR	RGT	FLAG
0	7	61	61	61	61	61	

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 = SILT BOULDER (250 TO 1000 mm) - BASKETBALL TO METERSTICK; 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) - (LABRUG TO MARBLE); SA = SAND (0.06 TO 2 mm) - (GRITTY - UP TO LABRUG SIZE); FN = SILT / CLAY / MUCK - (NOT GRITTY); HP = HARDPAN - (HARD CONSOLIDATED FINE SUBSTRATE); WD = WOOD - (ANY SIZE); OT = OTHER (COMMENT ON OTHER SIDE)

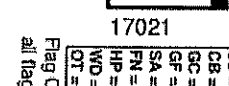
Pool Form Codes: N = Not a pool; W = Large Woody Debris; R = Rooted; B = Boulder or Bedrock; F = Unknown, Detail

Channel Unit Codes: PP = Pool, Plunge; PT = Pool, Trench; PL = Pool, Lateral Scour; PB = Pool, Backwater; PD = Pool, Impoundment; CL = Girdle; RI = Rife; RA = Rapid; CA = Cascade; FA = Falls; DR = Dry Channel

Large Woody Debris: (3 to 5 cm small end diameter, x 1.5 m length)

Diameter	Length 1.5-5m	5-15m	>15m	Length 1.5-5m	5-15m	>15m
0.1-0.3 m	0	0	0	0	0	0
0.3-0.6 m	0	0	1	0	0	0
0.6-0.8 m	0	0	1	0	0	0
>0.8 m	0	0	0	0	0	0

Check if unmarked boxes are zero:  FLAG:





Phab: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: 4444 48 10 DATE: 05/18/2013 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
XXXX m	XXX cm	Code	0-100%	
Left				
Lcfr				
Cfr				
Rcfr				
Right				

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) - (Waterstick 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) - (Grity - up to Ladbug size)		
FI = Silt / Clay / Muck - (Not Grity)		
HP = Handpan - (Firm. Consolidated Fine Substrate)		
WD = Wood - (Any Size)		
OT = Other (Write comment below)		

FISH COVER/ OTHER

Flamnetous 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

DENSIMETER (0-17Max)

Flag	CanUp	CanL	CanDwn

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 <td></td> <td></td>		
Left		
Right		
Wetted Width XXX.X m		
Bar Width XX.X m		
Bankfull Width XXX.X m		
Bankfull Height XX.X m		
Inclined Height XX.X m		

Comments

Flag	Comments
	50% estimate Post bank
	Wetted bank grading
	*In stream proceed

VISUAL RIPARIAN ESTIMATES

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	
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

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	
Pasture/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	





Phab: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: Hwy 43 DATE: 05/18/2013 TRANSECT:  A  B  C  D  E  F  X-tra Side Channel  G  H  I  J  K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist L/B	Depth	Size Class	Embed	Flag
XX.XX m	XXX cm	Code	0-100%	
Left		CB	70%	
Lctr		CB	70%	
Cr		CB	50%	
Rctr		CB	50%	
Right		SB	10%	

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)	
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 - (Any Size)	0
OT = Other (Write comment below)	

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360 <td>Dist. (m) <td></td> </td>	Dist. (m) <td></td>	
Left	45°	
Right	80°	
Wetted Width XXX.X m	144	
Bar Width XX.X m	8	OK side
Bankfull Width XXX.X m	21	
Bankfull Height XX.X m	1M	
Inclined Height XX.X m	3M	

FISH COVER/ OTHER

Flamentous 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

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

Flag	* ~60% canopy cover est.
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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	
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	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

Original trees

27657

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: PHV 43 DATE: 05/18/2013 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%	
			90	
			95	
			90	
			90	
			90	
			95	

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

Flamentous Algae	Macrophytes	Woody Debris >0.3 m (BIG)	Bush/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

DENSIMETER (0-17Max) Flag

CanUp	CanR	CanL	CanDwn

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	
Understory (0.5 to 5 m high)	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

Influence	Left Bank	Right Bank	Flag
Walk/Drive/Recreation /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	
Part/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	

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left 75	221	
Right 30		
Wetted Width XXX.X m	1481	
Bar Width XX.X m		
Bankfull Width XXX.X m	251	
Bankfull Height XX.X m	31	
Inclined Height XX.X m	121	

27657

Phab: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: HWY48 DATE: 05/18/2013 TRANSECT:  A  B  C  D  E  F X-tra Side Channel

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	Depth	Size Class	Embed.	Flag
XXX.X m	XXX cm	Code	0-100%	
		AP		
		CB		
		CB		
		WD		

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
FI = 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 in Channel	Flag
Flamemuous Algae	0 1 2 3 4	
Macrophytes	0 1 2 3 4	
Woody Debris >0.3 m (8IG)	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		CenR	
CenL		Left	
CenDwn		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.

BANK MEASUREMENTS

Bank Angle	Undercut	Flag
0 - 360	Dist. (m)	
Left		
Right		
Wetted Width XXX.X m		
Bar Width XXX.X m		
Bankfull Width XXX.X m		
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	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	
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	

HUMAN INFLUENCE

HUMAN INFLUENCE	Left Bank		Right Bank		Flag
	Canopy (<5 m high)				
Wa/D/Ker/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	

27657



PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: Kung 43 DATE: 03/08/2013 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		SB	10	
Lctr		SB	10	
Ctr		SB	10	
Rctr		SB	0	
Right		SB	10	

SUBSTRATE SIZE CLASS CODES

Embed. (%)

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)  
 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) - (Ladypug to marble)  
 SA = Sand (0.06 to 2 mm) - (Gritty - up to Ladypug size)  
 FN = Silt / Clay / Mud - (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	30	0
Right	15	0
Wetted Width XXX.X m	14.4'	
Bar Width XX.X m		
Bankfull Width XXX.X m	22.6'	
Bankfull Height XX.X m	8'	
Inclosed Height XX.X m	10'	

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)

Flag ~ 20% Flag

CentUp	CentR	CentL	CentDwn
		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

Entered here @ water line on R Bank

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 INFLUENCE

Vegetation Type	Left Bank	Right Bank	Flag
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	
Barren, Bare Dirt or Duff	0 1 2 3 4	0 1 2 3 4	

HUMAN INFLUENCE

Influence	Left Bank	Right Bank	Flag
Wald/Deer/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/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

Water meter 155

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials):

SITE ID: Hwy 43 DATE: 9/125/2013 TRANSECT:  A  B  C  D  E  F  X-tra Side Channel  G  H  I  J  K

SUBSTRATE CROSS-SECTIONAL INFORMATION

Dist LB	H	Depth	F	Size Class	Embed.	Flag
XXX'X'	gr	XXX	gr	Code	0-100%	
Left	0	0.03	GC	10		
Lctr	5	1.43	GC	10		
Ctr	10	1.25	SB	20		
Rctr	15	1.89	SB	20		
Right	20.7	1.5	SB	10		

SUBSTRATE SIZE CLASS CODES

Code	Description	Embed. (%)
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) - (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) - (Ladypng to marble)	100
SA	Sand (0.06 to 2 mm) - (Grity - up to Ladypng size)	100
FI	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

Category	Count	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

Category	Count	Flag
CenUp	10	
CenL	2	
CenDwn	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

Wetted with because of sewer opening

lots of human interaction; large amount of steep and sandy pipe opening; also evidence of restoration efforts; logs layed across stream with boulders

VISUAL RIPARIAN ESTIMATES

Category	Count	Flag
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	

RIPARIAN VEGETATION COVER

Category	Count	Flag
Vegetation Type	D C E M N	
Ground Cover (<0.5 m high)	0 1 2 3 4	

HUMAN INFLUENCE

Category	Count	Flag
Waldike/Reverent/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/Play Field	0 P C B	
Logging Operations	0 P C B	
Mining Activity	0 P C B	

boulders stacked on them; constructed log jam

BANK MEASUREMENTS

Bank Angle	Undercut	Dist. (m)	Flag
0 - 360			
Left	75°	0	
Right	165°	0	
Wetted Width XXX.X m		2.09	A
Bar Width XXX.X m			
Bankfull Width XXX.X m		25.5	
Bankfull Height XX.X m		4.78	
Inclined Height XX.X m			

PHAB: CHANNEL/RIPARIAN CROSS-SECTION FORM - STREAMS

Reviewed by (Initials): \_\_\_\_\_

SITE ID:  Hwy 43  DATE:  D. 9 / 2.5 / 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	D.03	FN	100
Lctr	A	0.62	GC	60
Ctr	B	1.39	CB	20
Rctr	12	1.87	CB	60
Right	15.2	0.19	GC	35

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) - (Metalstick to car)	0
SB = Small Boulder (250 to 1000 mm) - (Basketball to meterstick)	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)	

BANK MEASUREMENTS

Bank Angle	Undercut	Dist. (m)	Flag
0 - 360			
Left	350	—	
Right	135	0.5 ft	B
Wetted Width XXX.X m	15.2 ft		
Bar Width XX.X m	—		
Bankfull Width XXX.X m	24 ft		
Bankfull Height XX.X m	4.5 ft		
Incised Height XX.X m	0.5 ft		

CANOPY COVER MEASUREMENTS

DENSITOMETER (0-17Max)		Flag	
CentUp	CentR	CentL	CentDwn
3	5	5	9

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

B Undercut because of slope  
C Channels of concrete in bar

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	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

	Left Bank	Right Bank	Flag
Wall/Dike/Retriment/Retrap/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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