

## **Table of Contents – DO NOT PRINT THIS PAGE**

One field form packet includes all core and contingent (minus MIM) indicators that could be collected at a site. It is compiled such that if it is printed double-sided, each form will print on the back of the appropriate form for ease of field data collection. In addition to printing entire packets, it may also be desirable to just print extra copies of the physical habitat transect forms. The last form (Veg Complexity) should only be printed for Alaska data collection.

- Verification form (pg. 2)
- Photos (pg. 3)
- Failed site form (pg. 4-5)
- WQ and Bugs (pg. 6)
- Physical habitat transect data (pg. 7-27)
  - 11 main transect and 10 mid transect forms Extra transect forms are not provided in each packet but may be needed to record data for side channels. Side channels should be labeled as “XA” etc. and data should be recorded on main transect forms. LWD on side channels can be recorded on mid-transect forms (back side of the main transect form).
- Large Wood (pg 28-29)
  - 2 forms provided will cover all main channel transects, but extra should be printed to collect LW on side channels.
- Floodprone width (pg. 30)
- Slope (pg. 31)
- Thalweg (pg. 32-41)
- Pools (pg. 42)
- Pool tail fines (pg. 43)
- Presence/Absence of Noxious/Native Vegetation and Human Influence (pg. 44-54)
  - 11 main transect forms
    - Veg and Human are not collected on mid transects so only 11 are provided
    - Veg and Human are collected on side channels so extra forms should be printed.
- Veg complexity (pg. 55)
  - Only print for Alaska crews.
  - Only one form provided in case of accidental printing.
  - AK crews should print 11 main channel copies and extra for side channels.

Verification Form								
Reach Information								
PointID		Date		Time				
Stream Name		Project						
Crew								
Crew Lead								
Crew Member 1								
Crew Member 2								
Crew Member 3								
Field Visitors								
Arrival and Status								
Sampled?			Not Sampled? --Fill out Failed Form					
<b>Sampled-Wadeable</b>			<b>Sampling Comments:</b>					
	Full Reach							
	Partial Reach							
	Interrupted Flow							
	Interrupted Flow and Partial Reach							
<b>Sampled-Boatable</b>								
	Full Reach							
	Partial Reach							
Point Coordinates						Reach Set Up		
Did you move the point?	Y	N				#	Bankfull Width	Total Reach Length* (m)
Latitude:			1					
Longitude:			2		Transect Spacing** (m)			
Elevation:			3					
<b>Beaver Flow Modifications:</b>	None	Minor	Major	4	*Reach length= 20*Avg. Bankfull (min. 150m)			
<b>Beaver Signs:</b>	Absent	Rare	Common	5	**Transect spacing= Reach length/10			
<b>Water Withdrawals:</b>	Absent	Present		Avg:				
<b>Weather Conditions:</b>	Clear	Cloudy	Raining			Hailing	Snowing	
Access and Local Contacts:								



<b>PointID</b>		<b>Crew initials</b>	
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**Not Sampled Form (1 of 2)**

<b>Reattempt</b>		<b>Comments</b>
	Boatable crew needed	
	Above bankfull or flow too high	
	Other temporarily inaccessible	
<b>Permanently Inaccessible</b>		
	Private access denied	
	Terrain access denied	
	Not wadeable nor boatable	
<b>Nontarget</b>		
	Dry ephemeral	
	Dry intermittent	
	Reach too short	
	Lentic	
	Map error	
	Boatable (not sampling boatable reaches for this design)	

**Photos**

<b>Camera used:</b>		<b>Date:</b>		<b>Time:</b>	
Photo #	Type*	Direction Facing	Location	Photo description/comments	
		US DS XS	LF RT		
		US DS XS	LF RT		
		US DS XS	LF RT		
		US DS XS	LF RT		
		US DS XS	LF RT		
		US DS XS	LF RT		
		US DS XS	LF RT		

\* BR = Bottom of Reach, TR = Top of Reach, F= F-Transect, OV = overview, OT = Other

<b>PointID</b>		<b>Crew initials</b>	
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**Not Sampled Form (2 of 2)**

**Detailed Directions/ Access Attempts**

**Navigational Coordinates**

Lat/Long:		Description	

**Correspondence Log**

Name:	Date:
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Correspondence:

Name:	Date:
-------	-------

Correspondence:

Correspondence:

## Water Quality & Macroinvertebrates

<b>PointID</b>		<b>Crew initials</b>	
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### Water Quality

Date:	Time:	Instrument Model:	Instrument Serial #:
Sonde Measurements	Flag*	Comments	
Calibration Date:			
Temp (C):			
pH:			
Conduct (uS):			
Temp corrected:    Y    N	*Flags: <b>R</b> =Reasonable, <b>S</b> =Suspect, <b>N</b> =Not collected, <b>NC</b> =Not yet confirmed		

Grab sample	Sample Types*	Comments
Date:	O   D   B	
Time:		
		* <b>O</b> =original, <b>D</b> =duplicate, <b>B</b> =blank

### Turbidity (NTU)

Reading 1	Reading 2	Reading 3	Additional	Additional	Average
Flag:	Comments:				
*Flags: <b>R</b> =Reasonable, <b>S</b> =Suspect, <b>N</b> =Not collected					

### Macroinvertebrates

<b>Method:</b>	Reach Wide	Targeted Riffle	Comments:				
<b>Net:</b>	Hess	Kick				Surber	Mini Surber
Date Collected:							
# Loc Sampled:	# of Jars:						

### Additional Comments

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
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Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

Erosion*
E=Erosional
D=Depositional

Cover**
C=Covered
U=Uncovered

Stability#
F=Fracture    S=Slump    L=Slough
E=Eroding    A=Absent

**Comments**

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

**Flags:** N= Not collected, E=estimated

PHAB - Mid											
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>			
Channel			Bank Cover and Stability								
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag
Wetted			<b>Left Bank</b>								
Bar			<b>Right Bank</b>								
Comments			Streambed Particles								
			Not Collected								
			% Dist LB	Size^	Location?						
			5								
			15								
			25								
			35								
			45								
			55								
			65								
			75								
			85								
			95								
					add wet or dry-mid						
		add wet or dry-mid									
		add wet or dry-mid									
		add wet or dry-mid									
			Erosion*								
					D=Depositional E=Erosional						
			Cover**								
					C=Covered U=Uncovered						
			Stability#								
					F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent						
			Substrate Location?								
					wet, dry-mid, dry-edge						
			^Substrate Non-Meas. Size								
					FN=finest      SN=sand HP=hardpan    BR=bedrock						

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

Comments

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid											
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>			
Channel			Bank Cover and Stability								
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag
Wetted			Left Bank								
Bar			Right Bank								
Comments			Streambed Particles								
			Not Collected								
			% Dist LB	Size^	Location?						
			5								
			15								
			25								
			35								
			45								
			55								
			65								
			75								
			85								
			95								
					add wet or dry-mid						
		add wet or dry-mid									
		add wet or dry-mid									
		add wet or dry-mid									
			Erosion*								
			D=Depositional E=Erosional								
			Cover**								
			C=Covered U=Uncovered								
			Stability#								
			F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent								
			Substrate Location?								
			wet, dry-mid, dry-edge								
			^Substrate Non-Meas. Size								
			FN=finest      SN=sand HP=hardpan    BR=bedrock								

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid												
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>				
Channel			Bank Cover and Stability									
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag	
Wetted			<b>Left Bank</b>									
Bar			<b>Right Bank</b>									
Comments			Streambed Particles							Erosion*		
			Not Collected									D=Depositional E=Erosional
			% Dist LB	Size^	Location?							Cover**
			5									C=Covered U=Uncovered
			15									
			25									
			35									
			45									
			55									
			65									
			75									
			85									
			95									
					add wet or dry-mid							Stability#
		add wet or dry-mid							F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent			
		add wet or dry-mid							Substrate Location?			
		add wet or dry-mid							wet, dry-mid, dry-edge			
		add wet or dry-mid							^Substrate Non-Meas. Size			
		add wet or dry-mid							FN=fines      SN=sand HP=hardpan    BR=bedrock			

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

**Comments**

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

**Flags:** N= Not collected, E=estimated

PHAB - Mid												
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>				
Channel			Bank Cover and Stability									
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag	
Wetted			<b>Left Bank</b>									
Bar			<b>Right Bank</b>									
Comments			Streambed Particles							Erosion*		
			Not Collected									D=Depositional E=Erosional
			% Dist LB	Size^	Location?							Cover**
			5									C=Covered U=Uncovered
			15									
			25									
			35									
			45									
			55									
			65									
			75									
			85									
			95									
					add wet or dry-mid							Stability#
		add wet or dry-mid							F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent			
		add wet or dry-mid										
		add wet or dry-mid							Substrate Location?			
		add wet or dry-mid							wet, dry-mid, dry-edge			
		add wet or dry-mid							^Substrate Non-Meas. Size			
		add wet or dry-mid							FN=fines      SN=sand HP=hardpan    BR=bedrock			

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid												
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>				
Channel			Bank Cover and Stability									
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag	
Wetted			<b>Left Bank</b>									
Bar			<b>Right Bank</b>									
Comments			Streambed Particles							Erosion*		
			Not Collected									D=Depositional E=Erosional
			% Dist LB	Size^	Location?							Cover**
			5									C=Covered U=Uncovered
			15									
			25									
			35									
			45									
			55									
			65									
			75									
			85									
			95									
					add wet or dry-mid							Stability#
		add wet or dry-mid							F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent			
		add wet or dry-mid										
		add wet or dry-mid							Substrate Location?			
		add wet or dry-mid							wet, dry-mid, dry-edge			
		add wet or dry-mid							^Substrate Non-Meas. Size			
		add wet or dry-mid							FN=fines      SN=sand HP=hardpan    BR=bedrock			

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid													
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>					
Channel			Bank Cover and Stability										
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag		
Wetted				Left Bank									
Bar				Right Bank									
Comments			Streambed Particles										
			Not Collected										
			% Dist LB	Size^	Location?								
			5										
			15										
			25										
			35										
			45										
			55										
			65										
			75										
			85										
			95										
					add wet or dry-mid								
		add wet or dry-mid											
		add wet or dry-mid											
		add wet or dry-mid											
			Erosion*										
					D=Depositional E=Erosional								
			Cover**										
					C=Covered U=Uncovered								
			Stability#										
					F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent								
			Substrate Location?										
					wet, dry-mid, dry-edge								
			^Substrate Non-Meas. Size										
					FN=finest      SN=sand HP=hardpan    BR=bedrock								

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid													
Mid Tran			PointID			Crew initials							
Channel			Bank Cover and Stability										
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag		
Wetted			Left Bank										
Bar			Right Bank										
Comments			Streambed Particles										
			Not Collected										
			% Dist LB	Size^	Location?								
			5										
			15										
			25										
			35										
			45										
			55										
			65										
			75										
			85										
			95										
					add wet or dry-mid								
					add wet or dry-mid								
		add wet or dry-mid											
		add wet or dry-mid											

**Erosion\***

D=Depositional  
E=Erosional

**Cover\*\***

C=Covered  
U=Uncovered

**Stability#**

F=Fracture (visible crack)  
S=Slump (separate block)  
L=Slough (accumulated sluff)  
E=Eroding (bare and steep (10°))  
A=Absent

**Substrate Location?**

wet, dry-mid, dry-edge

**^Substrate Non-Meas. Size**

FN=finest      SN=sand  
HP=hardpan    BR=bedrock

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid											
<b>Mid Tran</b>		<b>PointID</b>		<b>Crew initials</b>							
Channel			Bank Cover and Stability								
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag
Wetted			Left Bank								
Bar			Right Bank								
Comments			Streambed Particles								
			Not Collected								
			% Dist LB	Size^	Location?						
			5								
			15								
			25								
			35								
			45								
			55								
			65								
			75								
			85								
			95								
					add wet or dry-mid						
		add wet or dry-mid									
		add wet or dry-mid									
		add wet or dry-mid									
			Erosion*								
					D=Depositional E=Erosional						
			Cover**								
					C=Covered U=Uncovered						
			Stability#								
					F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent						
			Substrate Location?								
					wet, dry-mid, dry-edge						
			^Substrate Non-Meas. Size								
					FN=finnes      SN=sand HP=hardpan    BR=bedrock						

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
E=Erosional
D=Depositional

Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
U=Uncovered	E=Eroding    A=Absent

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

PHAB - Mid											
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>			
Channel			Bank Cover and Stability								
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag
Wetted			<b>Left Bank</b>								
Bar			<b>Right Bank</b>								
Comments			Streambed Particles								
			Not Collected								
			% Dist LB	Size^	Location?						
			5								
			15								
			25								
			35								
			45								
			55								
			65								
			75								
			85								
			95								
					add wet or dry-mid						
		add wet or dry-mid									
		add wet or dry-mid									
		add wet or dry-mid									
			Erosion*								
					D=Depositional E=Erosional						
			Cover**								
					C=Covered U=Uncovered						
			Stability#								
					F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent						
			Substrate Location?								
					wet, dry-mid, dry-edge						
			^Substrate Non-Meas. Size								
					FN=fines      SN=sand HP=hardpan    BR=bedrock						

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

Erosion*
E=Erosional
D=Depositional

Cover**
C=Covered
U=Uncovered

Stability#
F=Fracture    S=Slump    L=Slough
E=Eroding    A=Absent

**Comments**

Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
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**Flags:** N= Not collected, E=estimated

PHAB - Mid													
<b>Mid Tran</b>				<b>PointID</b>				<b>Crew initials</b>					
Channel			Bank Cover and Stability										
Width (m)		Flag		Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Flag		
Wetted				Left Bank									
Bar				Right Bank									
Comments			Streambed Particles										
			Not Collected										
			% Dist LB	Size^	Location?								
			5										
			15										
			25										
			35										
			45										
			55										
			65										
			75										
			85										
			95										
					add wet or dry-mid								
		add wet or dry-mid											
		add wet or dry-mid											
		add wet or dry-mid											
			Erosion*										
					D=Depositional E=Erosional								
			Cover**										
					C=Covered U=Uncovered								
			Stability#										
					F=Fracture (visible crack) S=Slump (separate block) L=Slough (accumulated sluff) E=Eroding (bare and steep (10°)) A=Absent								
			Substrate Location?										
					wet, dry-mid, dry-edge								
			^Substrate Non-Meas. Size										
					FN=fines      SN=sand HP=hardpan    BR=bedrock								

**PHAB - Main**

<b>Transect</b>		<b>PointID</b>		<b>Crew initials</b>	
-----------------	--	----------------	--	----------------------	--

Channel		
Width (m)	Flag	
Wetted		
Bar		
Bankfull		
Height (cm)	Flag	
Bankfull		
Bench		

Bank Cover, Stability, and Angle										
	Erosion*	Cover**	Veg	Cobble	Lg Wood	Bedrock	Stable#	Obt/Acu	Angle	Flag
<b>Left Bank</b>										
<b>Right Bank</b>										

Streambed Particles		
% Dist LB	Size^	Location <sup>?</sup>
5		
15		
25		
35		
45		
55		
65		
75		
85		
95		
		add wet or dry-mid

**Comments**

Canopy	
Left	
Center Up	
Center Left	
Center Down	
Center Right	
Right	

Dry transect?
Y    N
Side Channel?
Y    N
Major    Minor    Dry
Left of main    Right of main

**Flags:** N= Not collected, E=estimated

Erosion*
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Cover**	Stability#
C=Covered	F=Fracture    S=Slump    L=Slough
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Substrate Location <sup>?</sup>
wet, dry-mid, dry-edge

Substrate Non-Meas. Size^
FN=finest    SN=sand
HP=hardpan    BR=bedrock

## Large Wood

**PointID**

**Crew initials**

**\*Remember to survey side channels**

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
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Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

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Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

## Large Wood

**PointID**

**Crew initials**

**\*Remember to survey side channels**

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
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0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
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0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				
Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
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0.1 < .3m				
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0.6 < 0.8m				
> 0.8m				

**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
Diameter	Pieces All/Part In Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
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Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
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**Transect:**

Large Wood				
Fill in if unmarked boxes are zero				
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Diameter	Pieces Above Bankfull			
	1.5 < 3m	3 < 5m	5 < 15m	> 15m
0.1 < .3m				
0.3 < 0.6m				
0.6 < 0.8m				
> 0.8m				

**Flood-Prone Width**

<b>PointID</b>		<b>Crew initials</b>	
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Measurement	Location 1	Location 2
Longitude		
Latitude		
Bankfull width (m)		
Bankfull height (cm)		
Max water depth (cm)		
<b>Flood-prone height (cm)</b> = (Bankfull Height + Max Water Depth) * 2		
<b>Flood-prone width (m)<sup>#</sup></b>		

<sup>#</sup>Max floodprone width= 3\*Bankfull width

**Flood-Prone Width Photos**

Camera used:		Date:		Time:
Photo #	Closest Transect	Direction Facing	Location	Photo description/comments
		US DS XS	LF RT	
		US DS XS	LF RT	
		US DS XS	LF RT	
		US DS XS	LF RT	

**Comments**



## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y N	>5m taken at angle			
2		Y N	>5m taken at angle			
3		Y N	>5m taken at angle			
4		Y N	>5m taken at angle			
5		Y N	>5m taken at angle			
6		Y N	>5m taken at angle			
7		Y N	>5m taken at angle			
8		Y N	>5m taken at angle			
9		Y N	>5m taken at angle			
10		Y N	>5m taken at angle			
11		Y N	>5m taken at angle			
12		Y N	>5m taken at angle			
13		Y N	>5m taken at angle			
14		Y N	>5m taken at angle			
15		Y N	>5m taken at angle			
16		Y N	>5m taken at angle			

**Flags:** N= Not collected, E=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y N	>5m taken at angle			
2		Y N	>5m taken at angle			
3		Y N	>5m taken at angle			
4		Y N	>5m taken at angle			
5		Y N	>5m taken at angle			
6		Y N	>5m taken at angle			
7		Y N	>5m taken at angle			
8		Y N	>5m taken at angle			
9		Y N	>5m taken at angle			
10		Y N	>5m taken at angle			
11		Y N	>5m taken at angle			
12		Y N	>5m taken at angle			
13		Y N	>5m taken at angle			
14		Y N	>5m taken at angle			
15		Y N	>5m taken at angle			
16		Y N	>5m taken at angle			

**Flags:** N= Not collected, E=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y   N	>5m   taken at angle			
2		Y   N	>5m   taken at angle			
3		Y   N	>5m   taken at angle			
4		Y   N	>5m   taken at angle			
5		Y   N	>5m   taken at angle			
6		Y   N	>5m   taken at angle			
7		Y   N	>5m   taken at angle			
8		Y   N	>5m   taken at angle			
9		Y   N	>5m   taken at angle			
10		Y   N	>5m   taken at angle			
11		Y   N	>5m   taken at angle			
12		Y   N	>5m   taken at angle			
13		Y   N	>5m   taken at angle			
14		Y   N	>5m   taken at angle			
15		Y   N	>5m   taken at angle			
16		Y   N	>5m   taken at angle			

**Flags:** **N**= Not collected, **E**=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y N	>5m taken at angle			
2		Y N	>5m taken at angle			
3		Y N	>5m taken at angle			
4		Y N	>5m taken at angle			
5		Y N	>5m taken at angle			
6		Y N	>5m taken at angle			
7		Y N	>5m taken at angle			
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10		Y N	>5m taken at angle			
11		Y N	>5m taken at angle			
12		Y N	>5m taken at angle			
13		Y N	>5m taken at angle			
14		Y N	>5m taken at angle			
15		Y N	>5m taken at angle			
16		Y N	>5m taken at angle			

**Flags:** **N**= Not collected, **E**=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y   N	>5m   taken at angle			
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5		Y   N	>5m   taken at angle			
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7		Y   N	>5m   taken at angle			
8		Y   N	>5m   taken at angle			
9		Y   N	>5m   taken at angle			
10		Y   N	>5m   taken at angle			
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14		Y   N	>5m   taken at angle			
15		Y   N	>5m   taken at angle			
16		Y   N	>5m   taken at angle			

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## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y   N	>5m   taken at angle			
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3		Y   N	>5m   taken at angle			
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5		Y   N	>5m   taken at angle			
6		Y   N	>5m   taken at angle			
7		Y   N	>5m   taken at angle			
8		Y   N	>5m   taken at angle			
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## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y   N	>5m   taken at angle			
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11		Y   N	>5m   taken at angle			
12		Y   N	>5m   taken at angle			
13		Y   N	>5m   taken at angle			
14		Y   N	>5m   taken at angle			
15		Y   N	>5m   taken at angle			
16		Y   N	>5m   taken at angle			

**Flags:** **N**= Not collected, **E**=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
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**Flags:** N= Not collected, E=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
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16		Y N	>5m taken at angle			

**Flags:** N= Not collected, E=estimated

## Thalweg

**Transect**

**PointID**

**Crew initials**

**Reach Length:**

**Number of Thalwegs: 16**

**Thalweg Spacing:**

Station	Depth (cm)	Flow	Too Deep?	Rod Angle	Flag	Comments
1		Y N	>5m taken at angle			
2		Y N	>5m taken at angle			
3		Y N	>5m taken at angle			
4		Y N	>5m taken at angle			
5		Y N	>5m taken at angle			
6		Y N	>5m taken at angle			
7		Y N	>5m taken at angle			
8		Y N	>5m taken at angle			
9		Y N	>5m taken at angle			
10		Y N	>5m taken at angle			
11		Y N	>5m taken at angle			
12		Y N	>5m taken at angle			
13		Y N	>5m taken at angle			
14		Y N	>5m taken at angle			
15		Y N	>5m taken at angle			
16		Y N	>5m taken at angle			

**Flags:** **N**= Not collected, **E**=estimated

**Pool Habitat**

<b>PointID</b>		<b>Crew initials</b>	
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<b>Survey Status*:</b>		<b>Length Surveyed:</b>	
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Unit #	Habitat Type**	Pool Tail Depth (cm)	Max Depth (cm)	Angle if too deep	Length (m)	Flag†	Which main transects does pool overlap?
1	F P						
2	F P						
3	F P						
4	F P						
5	F P						
6	F P						
7	F P						
8	F P						
9	F P						
10	F P						
11	F P						
12	F P						
13	F P						
14	F P						
15	F P						
16	F P						
17	F P						
18	F P						
19	F P						
20	F P						
21	F P						
22	F P						
23	F P						
24	F P						
25	F P						
26	F P						
27	F P						
28	F P						
29	F P						
30	F P						

\*Survey Status: **C** = Collected, **P** = Partial Collected/Partial Flow, **NF** = No Flow, **NP** = No Pools, **NC** = Not Collected

\*\*Habitat Types: **F** = Full pool, **P** = Partial pool

† Pool Flags: **MDE** = Max depth estimated, **LE** = Pool length estimated, **TDE** = Tail depth estimated

**Pool Tail Fines**

<b>PointID</b>		<b>Crew initials</b>	
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Pool#	Grid#	Fines ≤2mm	Fines ≤6mm	OM or Boulder	> 6mm <512 mm
1	1				
1	2				
1	3				
2	1				
2	2				
2	3				
3	1				
3	2				
3	3				
4	1				
4	2				
4	3				
5	1				
5	2				
5	3				
6	1				
6	2				
6	3				
7	1				
7	2				
7	3				
8	1				
8	2				
8	3				
9	1				
9	2				
9	3				
10	1				
10	2				
10	3				























## Vegetation Complexity

<b>Transect</b>		<b>Point ID</b>		<b>Crew Initials</b>	
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Canopy >5m high	Left Bank					Flag	Right Bank					Flag
Woody Veg Type	D	C	E	M	N		D	C	E	M	N	
Big Trees	0	1	2	3	4		0	1	2	3	4	
Small Trees	0	1	2	3	4		0	1	2	3	4	
<b>Understory 0.5 to 5 m high</b>												
Woody Veg Type	D	C	E	M	N		D	C	E	M	N	
Woody	0	1	2	3	4		0	1	2	3	4	
Non-woody	0	1	2	3	4		0	1	2	3	4	
<b>Ground Cover &lt;0.5 m high</b>												
Woody	0	1	2	3	4		0	1	2	3	4	
Non-woody	0	1	2	3	4		0	1	2	3	4	
Bare	0	1	2	3	4		0	1	2	3	4	

**Woody Veg Type:** D=Deciduous, C=Coniferous, E= Broadleaved Evergreen, M=Mixed, N=None

**Complexity Categories:** 0=Absent, 1= <10%, 2= 10-40%, 3= 41-75%, 4= greater than 75%

**Flags:** N= Not collected, E=estimated

**Comments**