Enter the data: Streamkeepers Database,
www.streamkeepers.info

Advanced Stream Habitat Survey Field Data Sheet

(use a new data sheet for each reference site surveyed) **Module 2**

Stream Name/Nearest Town:		Date
		Watershed code
Organization Name:		
Contact Name:		Phone:
Crew Names:		Email:
		Stream Section #
		Length Surveyed

STEP 1. BENCHMARK LOCATION

GPS: (use 'degrees decimal') Latitude Longitude Survey Start time: Survey End Time: **Total Survey Hours** (H.mm)
Location (distance from known stream landmark, directions to benchmark)
Weather ❑ clear ❑ shower (1-2.5 cm in 24 hr.) ❑ snow ❑ overcast ❑ storm (<2.5 cm in 24 hr.) ❑ rain on snow
Water turbidity (cm visibility) _____ Temperature °C (leave thermometer 2 min.) air _____ water _____

STEP 2. CROSS-SECTIONAL SURVEY

Location relative to benchmark	Photos taken: (yes or no)
Bankfull channel width (m)	Average bankfull depth (m)
Wetted channel width (m)	Average Wetted depth (m)
Temperature - Air: Water:	Turbidity:
Measurements taken every_____metres	

Take measurements every 0.5m in streams less than 5m wide, every 1m in streams 5 to 15m

Left Bank	0.10															**Right Bank**
Wetted Depth																Wetted Depth
Bankfull Depth																Bankfull Depth

STEP 3. STREAM DISCHARGE

Cross-sectional area of Wetted stream (m^2) _____ x _____ = _____(m^2)
Wetted width **average Wetted depth**

Average Time (sec)
[_____ + _____ + _____ + _____ + _____] = _____ ÷ 5 = _____
trial 1 trial 2 trial 3 trial 4 trial 5 total trials Average Time (sec)

Average Velocity (m/sec) _____ ÷ _____ = _____
length (m) **average time (sec)** **Average Velocity (m/sec)**

Average Stream Discharge (m3 /sec) _____ x _____ x ___0.8____ = _____
cross sectional area (m2) **average velocity (m/sec)** **correction factor** **Discharge (m3 /sec)**

Advanced Stream Habitat Survey Field Data Sheet

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STEP 4.1 LONGITUDINAL SURVEY, MEASUREMENTS

Length of survey site (minimum 12 times the bankfull width)	Minimum	(m)	Actual	(m)	Photos (yes,no)
Upstream survey boundary (m upstream of benchmark)	Minimum	(m)	Actual	(m)	
Upstream Location Description:					
Downstream boundary (m downstream of benchmark)	Minimum	(m)	Actual	(m)	
Downstream Location Description:					

* distance **upstream (Up)** of benchmark

habitat unit type (pool or riffle)	bottom of habitat unit*	top of habitat unit*	length of habitat unit (m)	% slope	Photo Frame #
	Up	Up			
	Up	Up			
	Up	Up			
	Up	Up			
	Up	Up			
	Up	Up			
	Up	Up			

Left Bank	0.10															**Right Bank**
Wetted Depth																Wetted Depth
Bankfull Depth																Bankfull Depth

* distance **downstream (Dn)** of benchmark in metres

habitat unit type (pool or riffle)	top of habitat unit*	bottom of habitat unit*	length of habitat unit (m)	% slope	Photo Frame #
	Dn	Dn			
	Dn	Dn			
	Dn	Dn			
	Dn	Dn			
	Dn	Dn			
	Dn	Dn			
	Dn	Dn			

Left Bank	0.10															**Right Bank**
Wetted Depth																Wetted Depth
Bankfull Depth																Bankfull Depth

Advanced Stream Habitat Survey Field Data Sheet

(use a new data sheet for each reference site surveyed) **Module 2: (con't)**

STEP 4.2 LONGITUDINAL SURVEYS, HABITAT QUALITY

1. Streambed material

Collect 25 samples

1	8	15	22
2	9	16	23
3	10	17	24
4	11	18	25
5	12	19	
6	13	20	
7	14	21	

% fines (<0-2cm) - ladybug size and smaller

% gravel(0.2-5 cm) - ladybug to tennis ball

% cobble (5·25cm) - tennis ball to basketball

% boulder (>25cm) – bigger than a basketball with definable edges

% bedrock - slab of rock

Fines =_____%
Gravel =_____%
Cobble =_____%
Boulder =_____%
Bedrock =_____%
Cobble + Boulder
Total =_____%

2. % embeddedness - cover of gravel and cobble by fine sediment _____%

3. Instream cover

	LWD	Rooted cutbank
Left Bank	_____	_____
Right Bank	_____	_____

_____# pieces LWD
+_____# rooted cutbanks
=_____÷ _____ =_____
total cover (length of reference site ÷bankfull width) instream cover

4. Percent pool habitat

survey site slope _____

total length of reference site (m) _____

total length of pools (m) _____

% pool habitat _____

5. Off channel habitat (if present, describe habitat type, size, and whether it is seasonal or year-round)	description	PRESENT ABSENT

6. Bank stability (left or right bank facing downstream)

# of sites and length of bank affected (m)

	# ON LEFT BANK	# ON RIGHT BANK	LENGTH AFFECTED
# active bank erosion	_____	_____	_____
bank stabilization	_____	_____	_____
# slides reaching the channel	_____	_____	_____

7. Length of bank with no vegetation (m)	LEFT BANK	RIGHT BANK
8. Overhead canopy	% bankfull channel covered by overhanging branches	

9. Riparian zone

type and amount of vegetation

# of channel widths _____

coniferous trees	none ❑	few ❑	many ❑
deciduous trees	none ❑	few ❑	many ❑
shrubs	none ❑	few ❑	many ❑
grasses	none ❑	few ❑	many ❑

Adjacent land use and impacts

Advanced Stream Habitat Survey Field Data Sheet
(use a new data sheet for each reference site surveyed) **Module 2 (con't)**

STEP 5 HABITAT ASSESSMENT ***(the score in bold, estimate a value within the range listed)***

Characteristic	Results	Good	Acceptable	Marginal	Poor	Score
1: Streambed material:		**15 - 20**	**10 - 15**	**5 - 10**	**0 - 5**	
% boulder and cobble		50%	30-50%	10-30%	<10%	
2: Embeddedness:		**15 - 20**	**10 - 15**	**5 - 10**	**0 - 5**	
		25–0%	50-25%	75-50%	>75%	
3: Instream cover:		**15 - 20**	**10 - 15**	**5 - 10**	**0 - 5**	
		>3	2 to 3	1 to 2	<1	
4: % Pool Habitat		**11 - 15**	**7 - 11**	**3 - 7**	**0 - 3**	
<2% stream slope		>60% pool	50-60%	40-50%	<40%	
2-5% stream slope		>50% pool	40-50%	30-40%	<30%	
>5% stream slope		>40% pool	30-40%	20-30%	<20%	
5: Off-channel habitat: ponds, side channels with protection from flood flows		**11 - 15** year round, good protection	**7 - 11** seasonal, good protection	**3 - 7** seasonal, minimal protection	**0 - 3** little or none, no protection	
6: Bank stability		**11 - 15** stable	**7 - 11** moderately stable	**3 - 7** moderately unstable	**0 - 3** unstable	
evidence of erosion or bank failure ***(see note 1)***		none	some	some	lots	
7. Bank vegetation: % stream bank covered by vegetation		**8 - 10** >90%	**5 - 8** 70-90%	**2 - 5** 50-70%	**0 - 2** and <50%	
8. Overhead canopy: % bankfull channel overhung by trees and shrubs		**8 - 10** >30%	**5 - 8** 20-30%	**2 - 5** 10-20%	**0 - 2** 0-10%	
9. Riparian zone:		**8 - 10**	**5 - 8**	**2 - 5**	**0 - 2**	
# bankfull channels wide		2 or more	1 to 2	<1	0	
trees and shrubs		abundant on whole floodplain	good species mix	common, few species	sparse or absent	
TOTAL SCORE		**102 - 135**	**66 - 102**	**30 - 66**	**0 - 30**	

Note 1: The evidence of erosion or bank failure changes from **Good** (intact banks) to **Acceptable** (healed or banks stabilized) to **Marginal** (active erosion or extensive bank stabilization) to Poor (many actively eroding areas or upslope slides reaching channel).