

Field Crew: _____ Site Code: _____

Sampling Date: (DD/MM/YYYY) _____

☐ **Occupational Health & Safety: Site Inspection Sheet completed**

PRIMARY SITE DATA

CABIN Study Name: _____ Local Basin Name: _____

River/Stream Name: _____ Stream Order: (map scale 1:50,000) _____

Select one: ☐ Test Site ☐ Potential Reference Site

Geographical Description/Notes:

Surrounding Land Use: (check those present)

☐ Forest ☐ Field/Pasture ☐ Agriculture ☐ Residential/Urban
☐ Logging ☐ Mining ☐ Commercial/Industrial ☐ Other _____

Information Source: _____

Dominant Surrounding Land Use: (check one)

☐ Forest ☐ Field/Pasture ☐ Agriculture ☐ Residential/Urban
☐ Logging ☐ Mining ☐ Commercial/Industrial ☐ Other _____

Information Source: _____

Location Data

Latitude: _____ N Longitude: - _____ W (DMS or DD)

Elevation: _____ (fast or masl) GPS Datum: ☐ GRS80 (NAD83/WGS84) ☐ Other: _____

Site Location Map Drawing

Note: Indicate north

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Photos

- ☐ Field Sheet ☐ Upstream ☐ Downstream ☐ Across Site ☐ Aerial View
☐ Substrate (exposed) ☐ Substrate (aquatic) ☐ Other _____

REACH DATA *(represents 6 times bankfull width)*

1. Habitat Types: *(check those present)*

- ☐ Riffle ☐ Rapids ☐ Straight run ☐ Pool/Back Eddy

2. Canopy Coverage: *(stand in middle of stream and look up, check one)*

- ☐ 0 % ☐ 1-25 % ☐ 26-50 % ☐ 51-75 % ☐ 76-100 %

3. Macrophyte Coverage: *(not algae or moss, check one)*

- ☐ 0 % ☐ 1-25 % ☐ 26-50 % ☐ 51-75 % ☐ 76-100 %

4. Streamside Vegetation: *(check those present)*

- ☐ ferns/grasses ☐ shrubs ☐ deciduous trees ☐ coniferous trees

5. Dominant Streamside Vegetation: *(check one)*

- ☐ ferns/grasses ☐ shrubs ☐ deciduous trees ☐ coniferous trees

6. Periphyton Coverage on Substrate: *(benthic algae, not moss, check one)*

- ☐ 1 - Rocks are not slippery, no obvious colour (thin layer < 0.5 mm thick)
☐ 2 - Rocks are slightly slippery, yellow-brown to light green colour (0.5-1 mm thick)
☐ 3 - Rocks have a noticeable slippery feel (footing is slippery), with patches of thicker green to brown algae (1-5 mm thick)
☐ 4 - Rocks are very slippery (algae can be removed with thumbnail), numerous large clumps of green to dark brown algae (5 mm -20 mm thick)
☐ 5 - Rocks are mostly obscured by algal mat, extensive green, brown to black algal mass may have long strands (> 20 mm thick)

Note: 1 through 5 represent categories entered into the CABIN database.

BENTHIC MACROINVERTEBRATE DATA

Habitat sampled: *(check one)* ☐ riffle ☐ rapids ☐ straight run

400 µm mesh Kick Net	
Person sampling	
Sampling time (i.e. 3 min.)	
No. of sample jars	
Typical depth in kick area (cm)	

Preservative used: _____

Sampled sieved on site using "Bucket Swirling Method":

☐ YES ☐ NO

If YES, debris collected for QAQC ☐

Note: Indicate if a sampling method other than the recommended 400 µm mesh kick net is used.

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WATER CHEMISTRY DATA Time: _____ (24 hr clock) Time zone: _____

Air Temp: _____ (°C) Water Temp: _____ (°C) pH: _____

Specific Conductance: _____ (µs/cm) DO: _____ (mg/L) Turbidity: _____ (NTU)

Check if water samples were collected for the following analyses:

- ☐ TSS (Total Suspended Solids)
- ☐ Nitrogen (i.e. Total, Nitrate, Nitrite, Dissolved, and/or Ammonia)
- ☐ Phosphorus (Total, Ortho, and/or Dissolved)
- ☐ Major Ions (i.e. Alkalinity, Hardness, Chloride, and/or Sulphate) ☐ Other _____

Note: Determining alkalinity is recommended, as are other analyses, but not required for CABIN assessments.

CHANNEL DATA

Slope - Indicate how slope was measured: (check one)

☐ **Calculated from map**

Scale: _____ (Note: small scale map recommended if field measurement is not possible - i.e. 1:20,000).
 contour interval (vertical distance) _____ (m),
 distance between contour intervals (horizontal distance) _____ (m)
 slope = vertical distance/horizontal distance = _____

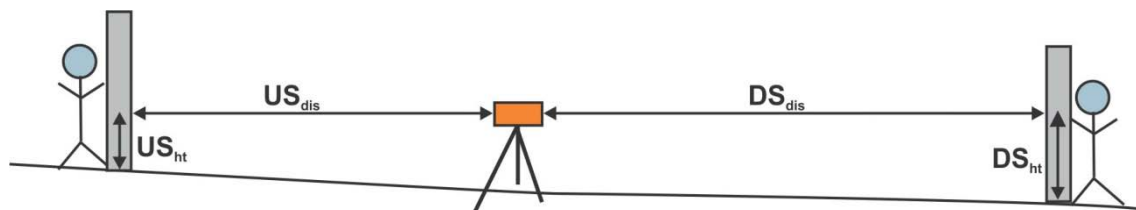
OR

☐ **Measured in field**

Circle device used and fill out table according to device:

a. Survey Equipment b. Hand Level & Measuring Tape

Measurements	Upstream (U/S)	Downstream(D/S)	Calculation
^a Top Hairline (T)			
^a Mid Hairline (ht) OR ^b Height of rod			
^a Bottom Hairline (B)			
^b Distance (dis) OR ^a T-B x 100	^a US _{dis} =T-B	^a DS _{dis} =T-B	US _{dis} +DS _{dis} =
Change in height (Δht)			DS _{ht} -US _{ht} =
Slope (Δht/total dis)			



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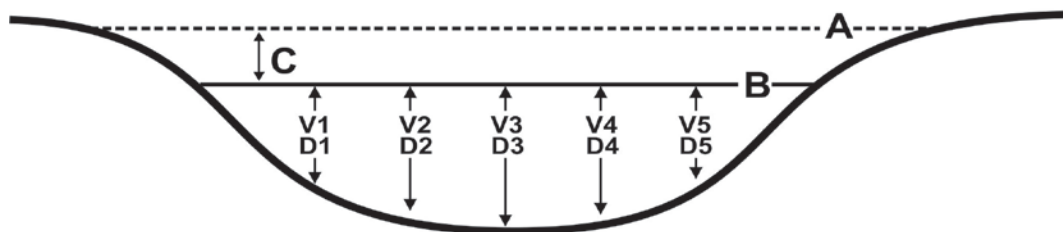
Widths and Depth

Location at site: _____ (Indicate where in sample reach, ex. d/s of kick area)

A - Bankfull Width: _____ (m)

B - Wetted Stream Width: _____ (m)

C - Bankfull–Wetted Depth (height from water surface to Bankfull): _____ (cm)



Note:

Wetted widths > 5 m, measure a minimum of 5-6 equidistant locations;

Wetted widths < 5 m, measure 3-4 equidistant locations.

Velocity and Depth

Check appropriate velocity measuring device and fill out the appropriate section in chart below. Distance from shore and depth are required regardless of method:

☐ **Velocity Head Rod (or ruler):** Velocity Equation (m/s) = $\sqrt{2(\Delta D/100) * 9.81}$

☐ **Rotary meters:** Gurley/Price/Mini-Price/Propeller (Refer to specific meter conversion chart for calculation)

☐ **Direct velocity measurements:** ☐ Marsh-McBirney ☐ Sontek or ☐ Other _____

	1	2	3	4	5	6	AVG
Distance from Shore (m)							
Depth (D) (cm)							
Velocity Head Rod (ruler)							
Flowing water Depth (D ₁) (cm)							
Depth of Stagnation (D ₂) (cm)							
Change in depth (ΔD=D ₂ -D ₁) (cm)							
Rotary meter							
Revolutions							
Time (minimum 40 seconds)							
Direct Measurement or calculation							
Velocity (V) (m/s)							

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SUBSTRATE DATA

Surrounding/Interstitial Material

Circle the substrate size category for the surrounding material.

Substrate Size Class	Category
Organic Cover	0
< 0.1 cm (fine sand, silt or clay)	1
0.1-0.2 cm (coarse sand)	2
0.2-1.6 cm (gravel)	3
1.6-3.2 cm (small pebble)	4
3.2-6.4 cm (large pebble)	5
6.4-12.8 cm (small cobble)	6
12.8-25.6 cm (cobble)	7
> 25.6 cm (boulder)	8
Bedrock	9

100 Pebble Count & Substrate Embeddedness

- Measure the intermediate axis (100 rocks) and embeddedness (10 rocks) of substrate in the stream bed.
- Indicate B for bedrock, S for sand/silt/clay (particles < 0.2 cm) and O for organic material.
- Embeddedness categories (E): Completely embedded = 1, 3/4 embedded, 1/2 embedded, 1/4 embedded, unembedded = 0

Diameter (cm)	E	Diameter (cm)	E	Diameter (cm)	E	Diameter (cm)	E
1		26		51		76	
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

Note: The Wolman D50 (i.e. median diameter), Wolman Dg (i.e. geometric mean diameter) and the % composition of the substrate classes will be calculated automatically in the CABIN database using the 100 pebble data. All 100 pebbles must be measured in order for the CABIN database tool to perform substrate calculations.

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SITE INSPECTION

Site Inspected by: _____

Communication Information

☐ Itinerary left with contact person (include contact numbers)

Contact Person: _____ Time checked-in: _____

Form of communication: ☐ radio ☐ cell ☐ satellite ☐ hotel/pay phone ☐ SPOT

Phone number: () _____

Vehicle Safety

☐ Safety equipment (first aid, fire extinguisher, blanket, emergency kit in vehicle)

☐ Equipment and chemicals safely secured for transport

☐ Vehicle parked in safe location; pylons, hazard light, reflective vests if necessary

Notes:

Shore & Wading Safety

☐ Wading Task Hazard Analysis read by all field staff

☐ Wading Safe Work Procedures read by all field staff

☐ Instream hazards identified (i.e. log jams, deep pools, slippery rocks)

☐ PFD worn

☐ Appropriate footwear, waders, wading belt

☐ Belay used

Notes: