

SITE NAME: \_\_\_\_\_ DATE: \_\_\_/\_\_\_/\_\_\_ VISIT\_ID (office): \_\_\_\_\_

**STREAMKEEPERS OF CLALLAM COUNTY - Flow-only data sheet, rev. Dec 2014**

**Protocol source:** Streamkeepers \_\_\_ Other: \_\_\_\_\_ **Primary sample / Replicate**  
**Method:** Wade-across \_\_\_ Bucket \_\_\_ Single-point \_\_\_ Floating-object \_\_\_ ← (use for zero flows)  
**Time** (military--to nearest min.): Start: \_\_\_\_\_ End: \_\_\_\_\_ ; starting at **LB / RB** (left/right bank facing downstream)  
 Problems noted: \_\_\_\_\_

<b>For Swiffer meter:</b>	Rotor #: <input type="text"/>	Rotor calibration # (on bag): <input type="text"/>	Calibration date: <input type="text"/>
	Hand-spin test (circle one): <b>pass / fail</b>		Meter calibration # (switch on "calibrate"): <input type="text"/>
	Count test (circle one): <b>pass / fail</b>		Blow-spin test (circle one): <b>pass / fail</b>

- = **LBWE:** Left Bank (facing downstream) wetted edge of dry land (tape measurement to 0.1 ft.)
- = **RBWE:** Right Bank (facing downstream) wetted edge of dry land (tape measurement to 0.1 ft.)
- =  = **WW:** Wetted width; the difference between the above wetted edges (to 0.1 ft.)
- ÷ 10 = **MaxΔ: MAXIMUM INTERVAL;** the wetted width above divided by 10 (to 0.1 ft.)

**MAXIMUM INTERVAL APPLIES EVEN OUTSIDE OF THE "MEASURABLE FLOW" AREA!**

*If wetted width is < 6.8 ft., use 0.3 ft. (the minimum interval) as the distance between flow measurements.*

- = **LBME:** Tape measurement at **LB** "measurable flow" edge
- = **RBME:** Tape measurement at **RB** "measurable flow" edge
- =  = **MFW:** "Measurable flow" width; the difference between "measurable flow" edges
- ÷ 20 = **NomΔ: NOMINAL INTERVAL;** "measurable" width divided by 20 (round **UP** to nearest 0.1 ft.)

*However, use smaller intervals in areas where velocity or depth is large or changing rapidly.*

**BUT PLEASE NOTE: MINIMUM INTERVAL = 0.3 ft.**

Include zero velocity readings 0.3 ft. to the outside of the "measurable edges" where possible.  
 When velocity is zero, indicate why: insufficient depth (*insf/d*) insufficient velocity (*insf/v*) or both (*insf/dv*)

Tape to nearest 0.1'	Depth to 0.01 ft.	Velocity* to 0.01 ft. per sec	Angle** to nearest 10°	Tape to nearest 0.1'	Depth to 0.01 ft.	Velocity* to 0.01 ft. per sec	Angle** to nearest 10°
	0	(wetted edge @ dry land)					
					0	(wetted edge @ dry land)	

**Sampler's initials:**

(\* For depths >2 ft., record velocity readings at both 2/10 and 8/10 depths, and record both to be averaged.)  
 (\*\* Estimate the tell-tail's deviation from straight downstream, then face the prop in the direction of the current.)

**Stream stage:** Before measuring flow: \_\_\_\_\_ ft / m; After: \_\_\_\_\_ **Sampler's initials:** \_\_\_\_\_

**Stage Benchmark:** stream gage / water-level at fixed point / top-down from fixed point (*mark as neg. #*)

**Describe fixed point:** \_\_\_\_\_

**Floating-Object Flow:** \_\_\_\_\_ (circle:) Primary sample / Field replicate **Sampler's initials:** \_\_\_\_\_

Mark Start & Finish lines across a stretch of the stream (≥ 10 ft.) with fairly uniform width, depth, and flow.

Length of course (to 0.1 ft)  Avg width (to 0.1 ft.):  Avg depth (to 0.1 ft):

Time trials (# of seconds)--do at intervals all the way across the creek: Avg:

1)      2)      3)      4)      5)      6)      7)      8)      9)      10)

**Calculations (can be done later):** Average velocity = Length of course / Avg. time =  ft/sec

Friction factor (circle one) = 0.8 for a gravel/cobble-bottomed stream, 0.9 for a smooth-bottomed stream

Flow (est.) = Avg. depth \* Avg. width \* Avg. velocity \* Friction factor =  ft<sup>3</sup>/sec (cfs) (round to 0.1 )