Beta Streamflow Duration Assessment Method – Western Mountains

General site information

Project name or number:		
Site code or identifier:	**Assessor(s):**	
Waterway name:		Visit date:

Current weather conditions (check one): ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☐ Cloudy (___ % cover) ☐ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week):	Coordinates at downstream end (decimal degrees): **Lat (N):** **Long (E):** Datum:

Surrounding land-use within 100 m (check one or two): ☐ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other: _____	Describe reach boundaries:

Mean bankfull channel width (m) (Indicator 5)	**Reach length (m):** 40x width; min 40 m; max 200 m.	**Site photographs**: Enter photo ID or check if completed Top down: _____ Mid down: _____ Mid up: _____ Bottom up: _____

Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☐ Stream modifications (e.g., channelization) ☐ Diversions ☐ Discharges ☐ Drought ☐ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None	Notes on disturbances or difficult site conditions:

Observed hydrology: _____ % of reach with surface flow _____ % of reach with sub-surface or surface flow _____ # of isolated pools	Comments on observed hydrology:

Site sketch:

1. Aquatic invertebrates

Collect aquatic invertebrates from at least 6 locations in the assessment reach. Identify mayflies and perennial indicator families.

Perennial indicator families:

Mollusks	Insects (larvae or pupae only)	
Snails: • Pleuroceridae • Ancylidae • Hydrobiidae Bivalves: • Margaritiferidae • Unionidae	Caddisflies: • Rhyacophilidae • Philopotamidae • Hydropsychidae • Glossosomatidae Stoneflies • Pteronarcyidae • Perlidae	Beetles: • Elmidae • Psephenidae Dobsonflies • Corydalidae Odonates • Gomphidae • Cordulegastridae • Calopterygidae

Taxon	Abundance (up to 10)	Mayfly	Perennial indicator family	Other	Notes	Photo ID
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		
		☐	☐	☐		

Aquatic invertebrate metrics			
1-1. Total abundance		1-3. Abundance of perennial indicator families	
1-2. Abundance of mayflies		1-4. Number of perennial indicator families	

General notes on aquatic invertebrates:

2. Algal cover on the streambed

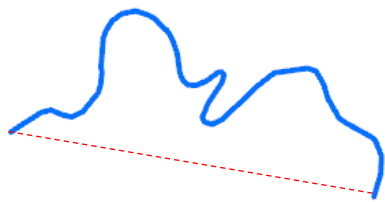| Are algae found on the streambed? ☐ Check if _all_ observed algae appear to be deposited from an upstream source.	☐ Not detected ☐ < 2% ☐ 2 to 10% ☐ 10 to 40% ☐ > 40%	Photo ID:
Notes on algae cover:		

3. Fish abundance

____ Fish abundance score (0-3) ☐ Check if *all* fish are non-native mosquitofish. Half-scores are allowed	Scoring guidance: 　0: None observed 　1: Scarce. Takes 10+ minutes of extensive searching to find. 　2: Found with little difficult, but not consistently throughout reach. 　3: Found easily and consistently throughout the reach.	Photo ID:
Notes:		

4. Differences in vegetation

____ Differences in vegetation score (0-3) Half-scores are allowed	Scoring guidance: 　0: No compositional or density differences in vegetation are present between the streambanks and adjacent uplands 　1: Vegetation growing along the reach may occur in greater densities or grow more vigorously than vegetation in the adjacent uplands, but there are no dramatic compositional differences between the two. 　2: A distinct riparian vegetation corridor exists along part of the reach. Riparian vegetation is interspersed with upland vegetation along the length of the reach. 　3: Dramatic compositional differences in vegetation are present between the stream banks and adjacent uplands. A distinct riparian corridor exists along the entire reach. Riparian, aquatic, or wetland species dominate the length of the reach.	Photo IDs: *Recommended photos:* *1) channel vegetation, and* *2) upland vegetation*
Notes:		

5. Bankfull channel width (copy from first page of field form):

6. Sinuosity

_____ **Sinuosity score (0-3)**
Half-scores are allowed

Stream length: 200 m
Valley length: 107 m

Sinuosity = 200/107 = 1.87

Figure 25. Scoring guidance for the Sinuosity indicator

Scoring guidance:

0: Poor	**1: Weak**	**2: Moderate**	**3: Strong**
1.0 to 1.05	1.05 to 1.2	1.2 to 1.4	Above 1.4

7 and 8. Climatic indicators.

Use the web application (https://sccwrp.shinyapps.io/beta_sdam_wm/) to calculate.

Snow persistence (%)	May precipitation (mm)	October precipitation (mm)	Mean annual max temperature (°C)

☐ **Snow Influenced**   ☐ **Non-Snow Influenced**

Supplemental information

(e.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.)

Photo log

Indicate if any other photographs taken during the assessment:

Photo ID	Description

Additional notes about the assessment:

Model Classification:

☐ Ephemeral

☐ Intermittent

☐ Perennial

☐ At least intermittent

☐ Less than perennial

☐ Needs more information