

## Beta Streamflow Duration Assessment Method – Great Plains

### General site information

<b>Project name or number:</b>		
<b>Site code or identifier:</b>	<b>Assessor(s):</b>	
Waterway name:		Visit date:
Current weather conditions (check one): <input type="checkbox"/> Storm/heavy rain <input type="checkbox"/> Steady rain <input type="checkbox"/> Intermittent rain <input type="checkbox"/> Snowing <input type="checkbox"/> Cloudy (___ % cover) <input type="checkbox"/> Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week):	Coordinates at downstream end (decimal degrees):  <b>Lat (N):</b>  <b>Long (E):</b>  Datum:
<b>Surrounding land-use within 100 m (check one or two):</b> <input type="checkbox"/> Urban/industrial/residential <input type="checkbox"/> Agricultural (farmland, crops, vineyards, pasture) <input type="checkbox"/> Developed open-space (e.g., golf course) <input type="checkbox"/> Forested <input type="checkbox"/> Other natural <input type="checkbox"/> Other: _____		Describe reach boundaries:
<b>Mean bankfull channel width (m)</b> (Indicator 5)	<b>Reach length (m):</b> 40x width; min 40 m; max 200 m.	<b>Site photographs:</b> Enter photo ID or check if completed  Top down: _____ Mid down: _____ Mid up: _____ Bottom up: _____
Disturbed or difficult conditions (check all that apply): <input type="checkbox"/> Recent flood or debris flow <input type="checkbox"/> Stream modifications (e.g., channelization) <input type="checkbox"/> Diversions <input type="checkbox"/> Discharges <input type="checkbox"/> Drought <input type="checkbox"/> Vegetation removal/limitations <input type="checkbox"/> Other (explain in notes) <input type="checkbox"/> 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. EPT Family Richness

Collect aquatic invertebrates from at least 6 locations in the assessment reach and determine if any specimens of EPT (Ephemeroptera, Plecoptera, Trichoptera) are present. Identify EPT to family and enumerate up to 5 taxa.

Taxon	Check one			Notes	Photo ID
	Mayfly (E)	Stonefly (P)	Caddisfly (T)		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Number of EPT families identified from the assessment reach (Enter zero if none were found).

General notes on aquatic invertebrates:

### 2. Percent Shading

Densiometer readings Record # points covered (out of 17)		
Upper	Middle	Lower
____ Upstream	____ Upstream	____ Upstream
____ Left	____ Left	____ Left
____ Right	____ Right	____ Right
____ Downstream	____ Downstream	____ Downstream
Sum of all readings: _____		
Percent Shading = Sum of readings/204 x 100: _____ %		

### 3. Number of Hydrophytic Plant Species

Record up to 5 hydrophytic plant species (FACW or OBL in the **Great Plains, Midwest, or Northeast-Northcentral** regional wetland plant lists, depending on location) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable:  No vegetation in assessment area

Species	Odd distribution?	Notes	Photo ID

Number of hydrophytic plant species identified from the assessment reach without odd distribution (Enter zero if none were found).

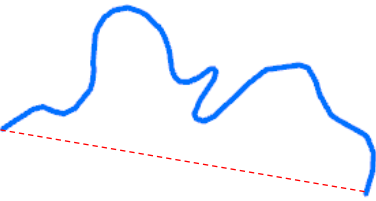












Notes on hydrophytic vegetation:

### 4. Absence of Rooted Upland Plants in Streambed

<p><b>Absence of Rooted Upland Plants in Streambed score (0-3)</b></p> <p>Half-scores are allowed</p>	<p>Scoring guidance:</p> <p>0: (Poor) Rooted upland plants are prevalent within the streambed/thalweg.</p> <p>1: (Weak) Rooted upland plants are consistently dispersed throughout the streambed/thalweg.</p> <p>2: (Moderate) Few rooted upland plants are present within the streambed/thalweg.</p> <p>3: (Strong) Rooted upland plants are absent within the streambed/thalweg.</p> <p><i>Recommended photos (record in photolog, below):</i></p> <p>1) channel vegetation, and</p> <p>2) upland vegetation</p>
<p>Notes:</p>	

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

### 6. Sinuosity

<p>____ Sinuosity score (0-3)</p>		<p>Stream length: 200 m                  Valley length: 107 m                  Sinuosity = <math>200/107 = 1.87</math></p>								
<p>Scoring guidance:</p> <table style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;"><b>0: Poor</b> 1.0 to 1.05</td> <td style="width: 25%;"><b>1: Weak</b> 1.05 to 1.2</td> <td style="width: 25%;"><b>2: Moderate</b> 1.2 to 1.4</td> <td style="width: 25%;"><b>3: Strong</b> Above 1.4</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>			<b>0: Poor</b> 1.0 to 1.05	<b>1: Weak</b> 1.05 to 1.2	<b>2: Moderate</b> 1.2 to 1.4	<b>3: Strong</b> Above 1.4				
<b>0: Poor</b> 1.0 to 1.05	<b>1: Weak</b> 1.05 to 1.2	<b>2: Moderate</b> 1.2 to 1.4	<b>3: Strong</b> Above 1.4							
										

### 7. Floodplain and Channel Dimensions

<p>____ Floodplain and Channel Dimensions score (0-3)</p>	<p>____ 2x Maximum Bankfull Depth                  ____ Flood-prone Width @ 2x Max Bankfull Depth                  ____ Entrenchment Ratio (Flood-prone Width/Bankfull Width)</p> <p>Scoring guidance:                  0: (Poor) Ratio of flood-prone width to bankfull width &lt; 1.2.                  1.5: (Moderate) Ratio between 1.2 and 2.5. Stream is moderately confined. Floodplain is present but may only be active during larger floods. Stream is incised, with a noticeably confined channel. Floodplain is narrow or absent, and typically disconnected from the channel                  3: (Strong) Ratio &gt; 2.5. Stream is minimally confined, with a wide, active floodplain.</p>
<p>Notes:</p>	

### 8. Particle Size or Stream Substrate Sorting

<p style="text-align: center;"><b>Particle Size or Stream Substrate Sorting score (0-3)</b></p> <p>Half-scores are allowed</p>	<p>Scoring guidance:</p> <p>0: (Poor) Particle sizes in the channel are similar or comparable to particle sizes in areas close to but not in the channel. Substrate sorting is not readily observed in the channel.</p> <p>1.5: (Moderate) Particle sizes in the channel are moderately similar to particle sizes in areas close to but not in the channel. Various sized substrates are present in the channel and are represented by a higher ratio of larger particles (gravel/cobble).</p> <p>3: (Strong) Particle sizes in the channel are noticeably different from particle sizes in areas close to but not in the channel. There is a clear distribution of various sized substrates in the channel with finer particles accumulating in the pools, and larger particles accumulating in the riffles/runs.</p>
<p>Notes:</p>	

**9. Northern or Southern Plains**

If the project is within CO, IA, IL, KS, MN, MO, MT, ND, NE, SD, WI, or WY, it is within the Northern Plains. NM, OK, and TX lie in both regions; check map in Figure 2 in user manual, or input latitude and longitude from page 1 of the field form into the [web application](#) to calculate for these states.

- Northern Plains**       **Southern Plains**

**Photo log**

Indicate if any other photographs taken during the assessment:

Photo ID	Description

**Additional notes about the assessment:**

**Model Classification:**

- Ephemeral
- Intermittent
- Perennial
- Less than perennial
- At least intermittent
- Needs more information