



# Great Plains Streamflow Duration Assessment Method: Sediment on plants or debris



*Video Training*

2025



# The GP SDAM is based on 8 indicators:

All eight indicators are measured in the field.

\*Indicators evaluated along the entire length of the assessment reach

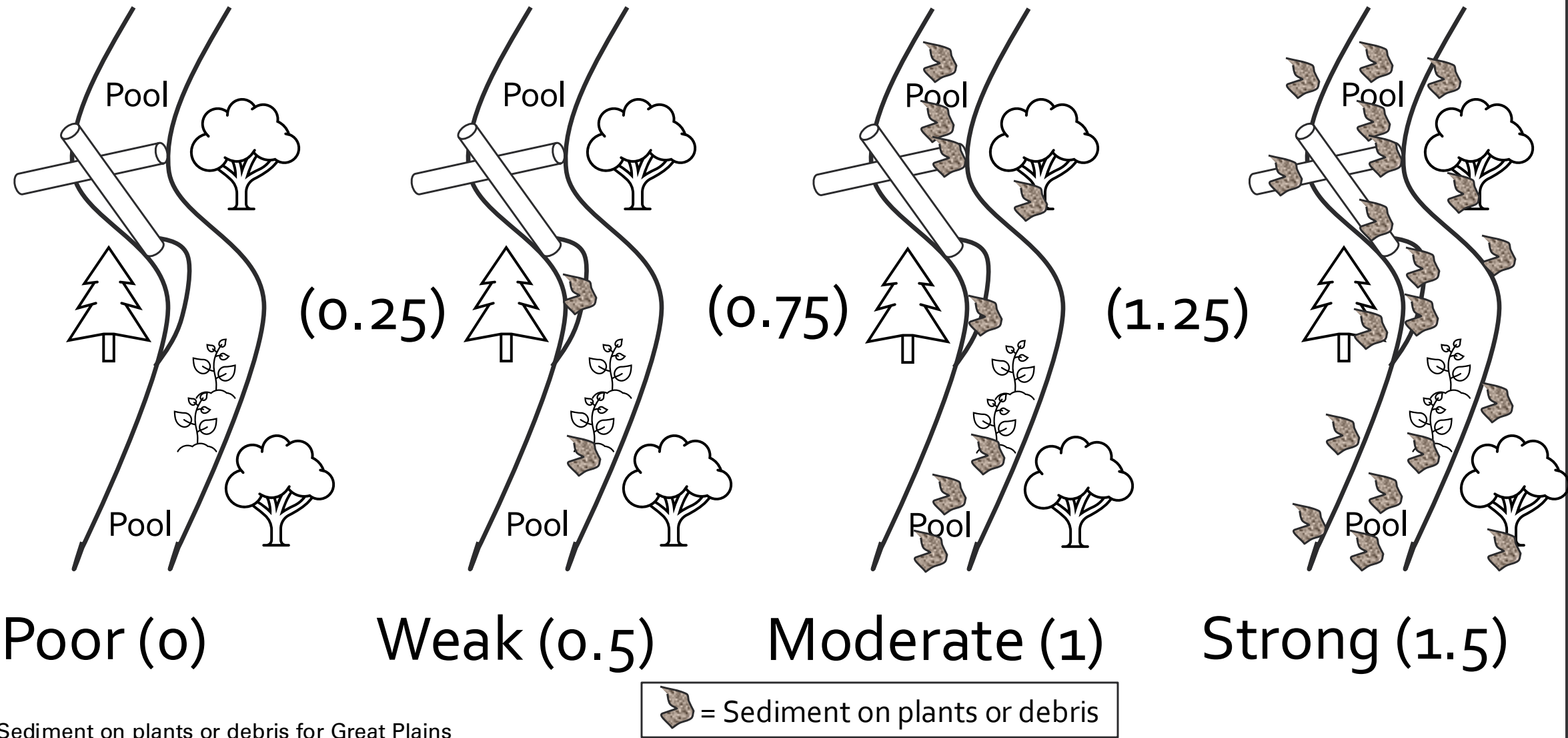
In recommended order of data collection:

- Bankfull channel width
- Total aquatic macroinvertebrate abundance
- Number of hydrophytic plant species\*
- Presence/absence of rooted upland plants in the streambed\*
- Differences in vegetation\*
- Riffle-pool sequence\*
- Particle size or stream substrate sorting\*
- **Sediment on plants or debris\***

# Sediment on plants or debris

- Transportation and processing of sediment is a main function of streams.
  - Longer flow duration is associated with larger and frequent peak flow magnitudes, which cause fine sediment deposition on plants and other debris in the channel, on streambanks, and on the floodplain to be more commonly apparent.
- This indicator is based on a visual estimate of degree and location of fine sediment deposition scored on an ordinal scale (poor, weak, moderate, or strong), where half scores are allowed (scoring guidance on next slide)
- Sediment production may be less noticeable in stable, vegetated watersheds.
- Be aware of upstream and adjacent land-disturbing activities that may affect this indicator (e.g., dams, road dust, landslides/talus slope).

# Ordinal levels of sediment on plants or debris





# Examples of sediment on plants & debris



Silt deposited on plant leaves

Sediment on plants or debris for Great Plains



Woody plant regrowth  
through deposited sand



Sediment deposited on  
woody debris



# Example of sediment deposited on banks and floodplain



Abita River in Abita Springs, LA on 1/30/2024 – deposited sand readily observed on adjacent banks and floodplain throughout the reach



# Do not consider sediment deposited from aerial or terrestrial sources

Landslide/talus slope

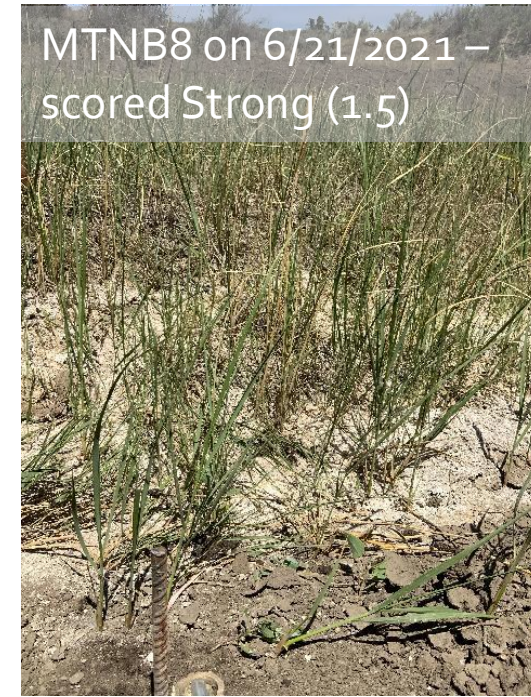


Road dust





# Sediment on plants or debris



Sediment on plants or debris for Great Plains



# Record on the field form

### 8. Sediment on plants or debris

<p>____ (0-1.5)</p> <p><i>Half scores (0.75, 2.25) are allowed.</i></p>	<p>Evaluate the extent of fine sediment on plants or debris within the stream channel, streambank, and floodplain.</p> <ul style="list-style-type: none"> <li>0. (Poor) No fine sediment is present on plants or debris.</li> <li>0.5. (Weak) Fine sediment is isolated in small amounts along the stream.</li> <li>1. (Moderate) Fine sediment found on plants or debris within the stream channel, although it is not prevalent along the stream. Mostly accumulating in pools.</li> <li>1.5. (Strong) Fine sediment found readily on plants and debris within the stream channel, on the streambank, and within the floodplain throughout the length of the stream.</li> </ul>
<p>Notes about sediment on plants or debris:</p>	



# Knowledge check!

Which of these can affect sediment on plants or debris along stream reaches?  
Select all that apply.

- A. Vegetated landcover
- B. Upstream dam
- C. Time since last flood
- D. Adjacent gravel road
- E. Light rainfall during the growing season
- F. All the above



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Vegetation can stabilize sediment limiting the amount transported to the stream.

Upstream dams can trap sediment from being transported downstream.

The longer the time since a flood, the more likely rain has washed fine sediment off plants and debris

Wind can transport road dust onto vegetation along the reach.

Light rainfall can wash away fine sediment deposited on plants and debris.

When scoring this indicator only consider sediment deposited by the stream.



# For more information about SDAMs:

<https://www.epa.gov/streamflow-duration-assessment>

