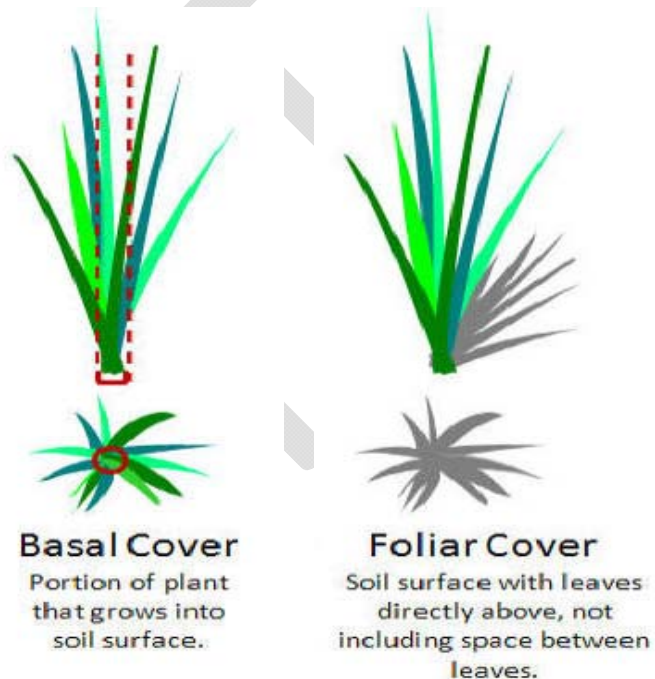


AIM-NAMF: Field Protocol for Wadeable Lotic Systems (TR 1735-2)
Protocol Change for the Measurement of Bank Cover

During both the Grand Junction, CO and Logan, UT AIM trainings, crews were instructed to measure basal cover of perennial vegetation in bank stability and cover plots. The protocol (TR 1735-2) has been changed to assess foliar cover of perennial vegetation and NOT basal cover.

Foliar cover is the percentage of ground covered by a vertical projection of the aerial portion of plants. The cover equals the shadow cast if the sun was directly overhead (Fig. 1). See below for specifics on applying foliar cover to bank cover estimates.

Figure 1. Comparison of basal versus foliar cover. Crews should be estimating foliar cover and not basal cover in bank stability and cover plots. Figure adapted from University of Idaho Principles of Vegetation Measurement & Assessment and Ecological Monitoring & Analysis module.



Section 7.3.1 (p.40) Bank Cover – Changes to the 1735-2 protocol are in bold

Estimate and record the absolute cover of each of the following categories within the plot to the nearest 10% (values for cover classes are added together after the fact to make “covered” or “uncovered” designations following the 50% criteria specified in MIM (Burton et al., 2011))

- **Foliar cover of perennial vegetation**
 - **Observers should view the plot at 90 degrees from the ground surface**
 - **For vegetation to count, it must be perennial and rooted in the plot; stems, leaves, and roots are all included. In contrast, mosses, soil crusts, or dead vegetation are not included**
 - **Only estimate foliar cover for the portion of vegetation < 0.5 m in height**
 - **Where two or more cover categories overlap in a plot (e.g., willow overhanging cobbles 15 cm or larger), separate the cover types into mutually exclusive categories; assign the portion of overlapping cover to the cover type closest to the ground surface – see example in figure 2.**
- Cobbles that are 15 cm or larger

- Bedrock
- Anchored large woody debris with a diameter > 10 cm

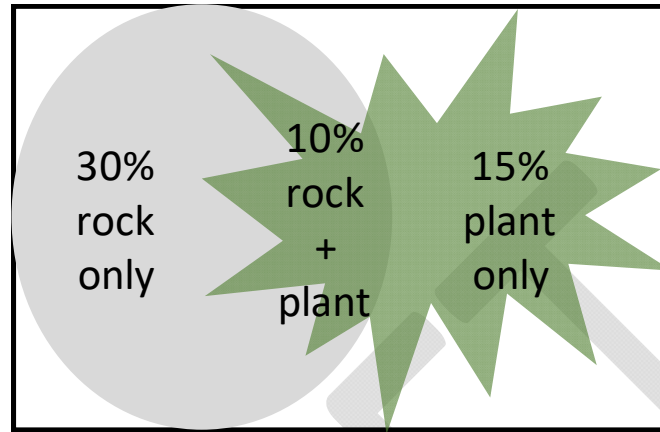


Figure 2. Example of how to treat multiple, overlapping cover types when estimating cover. In this example, the mutually exclusive cover estimates are: only rock (grey circle) = 30% cover; only plant = 15% cover, and rock + plant overlap = 10%. Because rock cover is closest to the ground, the final determination would be 40% rock cover and 15% plant cover. The plot would be classified as covered.

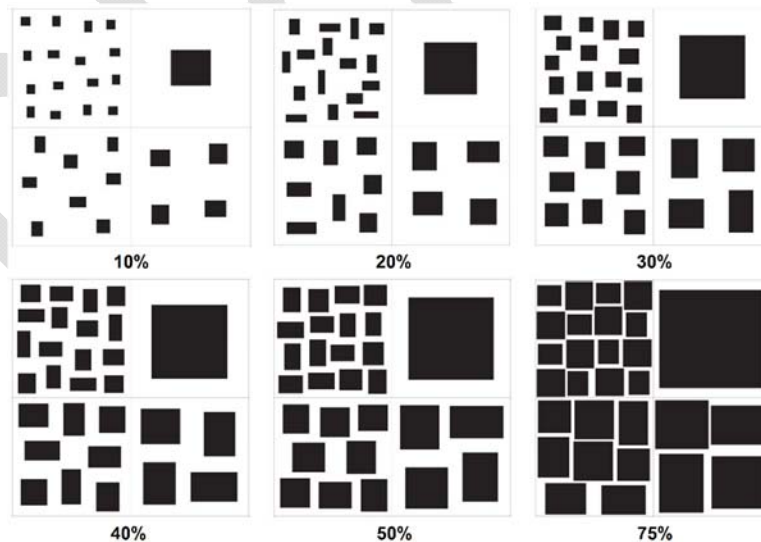


Figure 3. Visual representation of aerial cover percentages to assist with ocular estimates of bank foliar cover. NOTE: Within each larger box, a quadrant contains the same total area covered but contains different object sizes and numbers. (Adapted from NRCS - Schoeneberger et al. 2012).