

Sage-Grouse Forb Diversity Data and Summary Form Directions

Equipment:

Tape, 50 m	Stakes for tape (at least two spikes; old, medium to large screwdrivers work well)
Meter stick (for delineating 180-degree arc)	GPS unit
Pencils, clipboard, and plant identification guide; a local plant species list may be helpful	Calculator

Protocol:

- This worksheet should be used to collect forb availability and diversity information at various breeding and summer habitat sites.
 - Forb availability should be evaluated as close to the end of nesting as possible (May-June) to allow for easier identification of plant species, as well as more relevant application to the evaluation of breeding habitat. For low elevation areas, this will be May; for higher elevation areas, it will be June.
 - Seasonal habitat has been stratified by land cover types prior to field evaluation (see chapter II for additional discussion).
 - Conduct an appropriate number of transects in each seasonal habitat by each land cover type, in association with the LPI transects, as appropriate. Repeat all steps for each transect.
 - If a more in-depth, quantitative data collection method (e.g., density or other) is desired by the interdisciplinary team, use the Daubenmire method, by species.
1. Fill out all location information at the top of the sheet (transfer information from the LPI or LIDF data form if used on the same transect line). Be sure to list UTM coordinates or other identifying features of the site. Most of the information should be self-explanatory except the following:

Population: Identify the population with which the habitat is associated. This definition also includes small populations. Population names can be found in figure 3.

Home Range Name: Identify the home range area using a major drainage area or other distinguishing land feature (e.g., Little Lost River home range).

Land Cover Type: Identify the cover type of the data collected:

Upland Communities: Use plant alliances or associations (Reid et al. 2002) for sagebrush or grassland communities; use www.natureserve.org/explorer (International Classification of Ecological Communities) or other sampling strata used to describe the habitat (e.g., percent sagebrush categories). Use the species symbol for dominant species in the overstory and understory (table B-1), for example, ARTRW8 (alliance level – Wyoming big sagebrush) or ARTRW8/FEID (association level – Wyoming big sagebrush/Idaho fescue).

Riparian or Wetland Communities: Use site type (riparian areas, wet meadows, springs) or more detailed classification using Cowardin et al. (1979), or riparian type (regional classification systems) to which the data pertain.

Ecological Site: Refer to soil maps, range site guides, and ecological site descriptions where available, and record the appropriate ecological site. Use the species symbol for dominant species in the overstory and understory.

Associated Leaks: List the two largest occupied leaks to which the breeding habitat is associated. Use identification numbers or names that are used in the statewide database.

Seasonal Habitat: List one of the following: lek, nesting/early brood-rearing, summer/late brood-rearing, or winter.

Transect #: Assign a unique number to each transect within the land cover type (use the same transect number as for the LPI or LIDF data form).

Site Info:

Arid Site: Applies to sagebrush ecological sites generally in the 25-30 cm (10-12 in) precipitation zone. Wyoming big sagebrush is a common big sagebrush subspecies for this type of site.

Mesic Site: Term applies to sagebrush ecological sites generally in a >30 cm (>12 in) precipitation zone. Mountain big sagebrush is a common big sagebrush subspecies for this type of site.

2. At every 2 meters, record the presence of forbs, by species (in the species column on the form), which are rooted within a 1-meter radius, 180-degree arc, centering on the respective 2-meter mark. Place a check in the box on the form for the appropriate plot if the species is present. See figure B-8 for transect layout.
3. In the office later, or via automated means, annotate the type of forbs encountered as to whether they are preferred (by sage-grouse), noxious, invasive, or other. Invasive forbs are considered of low palatability and ecologically undesirable. Noxious weeds are limited to listed state weeds. Other forbs are any forbs that are not considered to be preferred, noxious, or invasive (e.g., ecologically desirable, but unpalatable forbs such as *Lupinus* spp.) Other forbs may not be preferred by sage-grouse as forage, but may still provide substrate for insects important to young sage-grouse. For preferred forbs, see table B-1.
 - a. Calculate the total occurrences by species and sum by forb type (preferred, noxious, invasive, and other) on the "Sage-Grouse Forb Diversity Summary Form." In the comments section of the form, describe, relative to site potential, the general availability, diversity (number of species), and relative abundance of preferred forb species, based on the number of species encountered on the transect and number of plots with preferred forbs. Also discuss other, noxious, and invasive forbs as appropriate. Use professional judgment and augment with other forb information that may have been collected from point intercept or Daubenmire transects.
 - b. Use this information to help describe preferred forb availability for breeding and summer habitat evaluations.
4. Provide any additional pertinent information that describes the site in the comments section.
5. Attach this form to the other field data sheet(s) (LPI or LIDF) used for this transect.

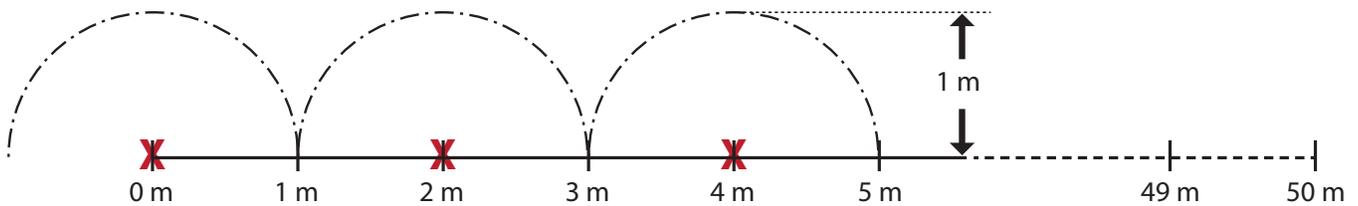


Figure B-8. Forb diversity transect layout. At each 2-m increment, use a 1-m stick to scribe a 180-degree arc. On the "Sage-Grouse Forb Diversity Data Form," record forb species that are rooted within the arc for a total of 25 plots along each transect.