

# **Appendix I**

## **VEGETATION STRUCTURE**

### **Grassland**

Vertical grassland structure provided by residual cover is one of the primary factors influencing the biological diversity that occurs across grasslands. It also influences habitat suitability for many wildlife species, as well as some recreational activities such as upland bird hunting on grasslands.

Visual obstruction readings (VORs) are used to measure the height and density (vertical structure) of residual cover remaining after the growing season and livestock grazing (Robel et al. 1970). VORs represent the height (inches) that grassland vegetation totally obscures a round pole when viewed from a standard distance and height. A high VOR indicates high and dense structure while a low VOR indicates low and sparse grassland structure. Most VOR measurements will be made in the fall or early winter. Because of loss of structure during winter to wind, snowpack and other natural causes, measurements taken in the spring will be considerably less than VORs taken in the same location the previous fall, even in the absence of livestock grazing.

Structure classes are used to facilitate management and monitoring of grassland structure and are defined as follows:

<u>Grassland Structure Class</u>	<u>% of Biological Potential</u>
Very Low	0 to 24
Low	25 to 49
Moderate	50 to 74
High	75 to 100

The biological potential of a geographic area for grassland structure (maximum structure) is defined as the average VOR of a range site or eco-type receiving 2 consecutive years of rest from livestock grazing and fire. Areas used for assessing biological potential should have a relatively high composition, based on site potential, of mid or tall grass species. The VOR values used to define potential grassland structure and the subsequent structural classes will be based on 3 to 5 years of data. A rolling VOR average of the structure in areas rested from livestock grazing for 2 years will be calculated annually. This rolling average may result in VOR values for each class changing yearly, depending on how the 3 to 5 year rolling average changes. When implementing long-term management strategies to meet desired grassland structure levels, the midpoints of each structure class should be the management target. When evaluating and monitoring accomplishment, most data (average transect VORs) should be centrally distributed (near the class midpoint) within each structure class.

The very low structure class (0 to 24% of biological potential) is only used to prescribe management direction for special management objectives. An example of where this structure class would be used is to prescribe habitat management for mountain plover, a species at risk that utilizes recently burned or intensively grazed habitats. This class would likely occur on older prairie dog colonies also.

Monitoring will be designed so that potential grassland structure can be accurately assessed for individual geographic areas.

## **Shrublands**

This section addresses structure for sagebrush and greasewood plant communities. Structure classifications for these types in the planning area are as follows:

### Sagebrush

Low Structure = Less than 12 inches,  
Moderate Structure = 12 to 23 inches,  
High Structure = 24 or more inches.

### Greasewood

Low Structure = Less than 18 inches,  
Moderate Structure = 18 to 35 inches,  
High Structure = 36 or more inches.

## REFERENCES CONSULTED

Robel, R.J., J.N. Briggs, A.D. Dayton, and L.C. Hulbert. 1970. Relationship between visual obstruction measurements and weight of grassland vegetation. *Journal of Range Management*, 23(4): 295-297.