

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Don Ashby Jr., D'Laynn Bruce, Jim Norris, John Hartung, Jerry Sparks
Contact for lead author : Don Ashby Jr. **Reference site used? Yes/No** No
Date: 3/15/2005 **MLRA:** 70 **Ecological Site:** Breaks (Southern Expo This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

| Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for each community within the reference state, when appropriate & (3) site data. Continue description on separate sheet. | Indicator Weight |
|--|------------------|
| 1. Number and extent of rills : None | |
| 2. Presence of water flow patterns: May be present between outcrops of sandstone, caliche and red-bed shale. | |
| 3. Number and height of erosional pedestals or terracettes: None | |
| 4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground may be present up to 20%. Bare patches should be less than 8-10 inches in diameter; except around trees and shrubs where bare ground may increase up to 40%. | |
| 5. Number of gullies and erosion associated with gullies: As the percent slope increases to greater than 40% the potential for gullies and erosion associated with gullies could become numerous on these sites. | |
| 6. Extent of wind scoured, blowouts and/or depositional areas: Wind scours, blowouts and depositional areas can be expected around rock inclusions and areas with flat rock present. | |
| 7. Amount of litter movement (describe size and distance expected to travel) : Fine (plant material) litter movement, 1-3 feet, can occur in flow patterns and during high wind occurrences for areas exceeding 30% bare rock. | |
| 8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Anticipated to be 3-4 at the surface and subsurface in the interspaces and 4-5 at the surface and subsurfaces under vegetation. | |
| 9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Soils are shallow and very shallow, light in color with the A horizon 1-3 inches in depth. These soils are well drained, over caliche or sandstone with surface layers medium to fine-textured and stony or gravelly. | |
| 10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Grasses and Forbs account for 90% of the annual herbaceous production for this site and make up 15% of the site composition. Infiltration is best with low intensity rainfall events, because surface runoff is rapid and the available water-holding capacity is low. | |
| 11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None | |
| 12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>), greater than (>), and equal to (=) : Warm Season stolon grasses>Warm Season bunch grasses=Cool Season bunch grasses>Shrubs(Sumac, Oak)>Forbs | |
| 13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : Most of the perennial grasses, forbs, shrubs are long lived. Extended drought periods tend to cause high mortality rates in the grass species, with some mortality in the forbs. Shrub and trees mortality can occur in severe, multiple year droughts. | |
| 14. Average percent litter cover (10 %) and depth (0.79 inches). Percent litter cover on this site will increase with above average year rainfall. | |
| 15. Expected annual production (this is TOTAL above-ground production, not just forage production): 500 lbs/ac low precip. years, 800 lbs/ac in average precip years, 1100 lbs/ac in above average years. Grass/Grasslikes make up to 75% of the total annual production. | |
| 16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": Mesquite will invade this site under heavy grazing pressure. | |
| 17. Perennial plant reproductive capability : Weather related and natural disease can result in reduced reproductive capabilities. If Mesquite species dominate the site it can reduce reproductive capabilities of the native grasses and forbs. | |

Photograph (s)

MLRA : 70

Date :

Ecological Site : Breaks (Southern Exposure) CP-2

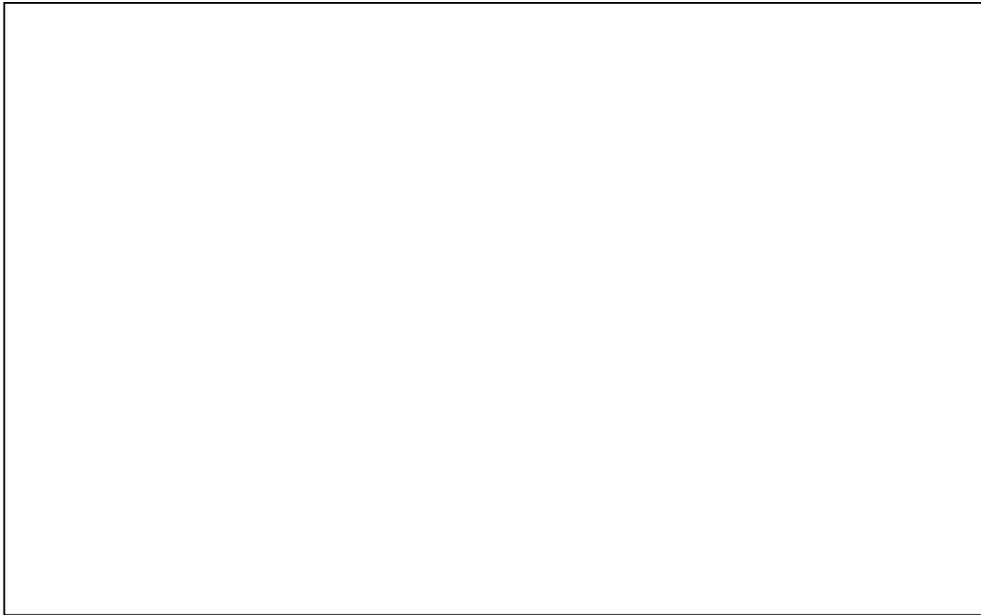


Photo # 1

Comments :

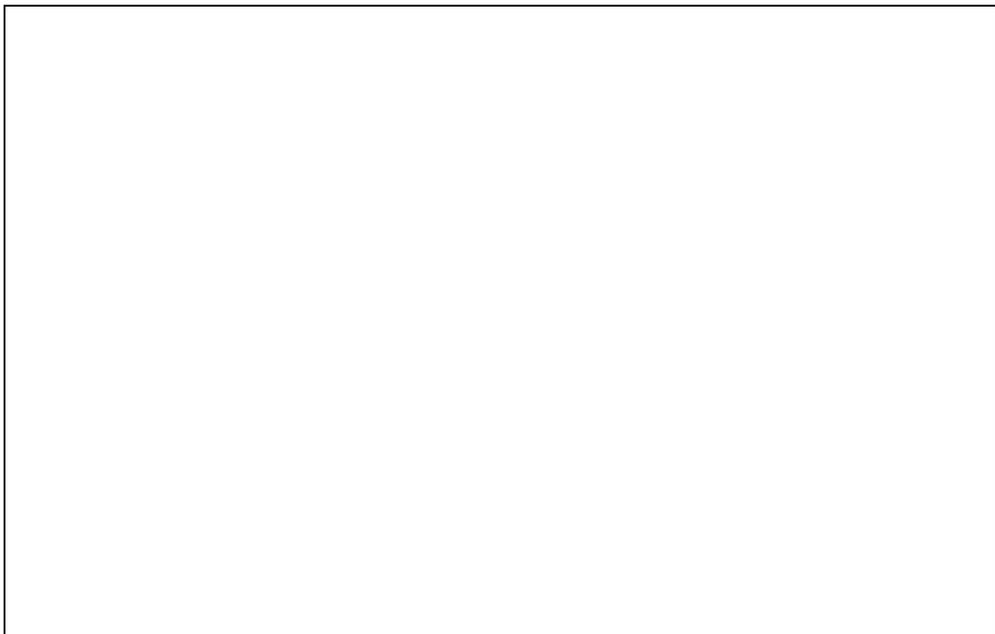


Photo # 2

Comments :

