

Rangeland Health—Ecological Reference Worksheet

TECHNICAL GUIDE

Section II

Author(s)/participant(s): M. Rasmussen

Contact for lead author: _____ Reference site used? Yes/No

Date: 5-20-04 MLRA: 58AE & 60BE Ecological Site: Coarse clay 10-14" p.z. 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) cite data. Continue descriptions on separate sheet.

1. **Number and extent of rills:** Rills will be continuous.

2. **Presence of water flow patterns:** Water flow paths will be obvious, regular and continuous with debris dams occurring only on lesser slopes.

3. **Number and height of erosional pedestals or terracettes:** Erosional pedestals present with terracettes present at debris dams.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground):** Bare ground is 60 to 80%.

5. **Number of gullies and erosion associated with gullies:** Active gullies may be present on steeper slopes.

6. **Extent of wind scoured, blowouts and/or depositional areas:** None.

7. **Amount of litter movement (describe size and distance expected to travel):** Plant litter movement is expected.

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):** Plant cover and litter is at 35% or greater of soil surface. Stability class anticipated to be 3 or greater.

9. **Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different):** Use soil series description for depth and color of A-horizon.

10. **Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff:** Sparse plant canopy (11% maximum), surface infiltration rates are moderate and decrease as approaches shale subsurface layer, and the high amount of bare ground contribute to a naturally high runoff rate even in HCPC.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** No compaction layer would be expected.

12. **Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: >>, >, = to indicate much greater than, greater than, and equal to):** Tall, warm season rhizomatous grass > Mid stature warm season bunch grasses > grass likes = mid-stature, cool season rhizomatous grasses > shrubs > short stature, cool season bunch grasses > forbs.

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Some plant mortality and decadence (10 to 15%) is expected on this site.

14. **Average percent litter cover (5 to 10 %) and depth (0.0 to 0.25_ inches).** Litter cover is in contact with soil surface with little evidence of biological activity.

15. **Expected annual production (this is TOTAL above-ground production, not just forage production):**
750 to 900 #/acre (13 to 14 inch precip. Zone) 250 to 600 #/ac (10 to 12 inch precip. Zone).

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”:** Long leaf sagebrush, yucca, prairie rose, prairie thermopsis, rubber rabbit brush, plains prickly pear, broom snakeweed.

17. **Perennial plant reproductive capability:** Limited ability to reproduce.