

# Rangeland Health—Ecological Reference Worksheet

TECHNICAL GUIDE

Section II

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

Date: 5-20-04 MLRA: 58AE & 60BE Ecological Site: Shale 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 75 to 85%.

**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 20% 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 (8% maximum), slow infiltration rates, 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 but soil surface is typically crusted and hard to very hard when dry.

**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):** Mid stature cool season rhizomatous grasses > shrubs > short stature, warm season rhizomatous 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):** 425 to 500 #/acre (13 to 14 inch precip. Zone) 200 to 350 #/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, slender bush eriogonum, plains prickly pear, broom snakeweed

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