

Rangeland Health—Reference Sheet TECHNICAL GUIDE Section II USDA-NRCS-MT Rev. June 2014

Author(s)/participant(s): T. DeCock / R. Kilian

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

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| <p>Date: <u>Rev. June 2014</u> MLRA: <u>58AE and 60BE</u> Ecological Site: <u>Claypan 10-14” p.z.</u> This <i>must</i> be verified based on soils and climate (see Ecological Site Description). Current plant community <i>cannot</i> be used to identify the ecological site.</p> |
| <p>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 and (3) cite data. Continue descriptions on separate sheet.</p> |
| <p>1. Number and extent of rills: Rills should not be present.</p> |
| <p>2. Presence of water flow patterns: Barely observable.</p> |
| <p>3. Number and height of erosional pedestals or terracettes: Essentially non-existent.</p> |
| <p>4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground): Bare ground is < 40%. Bare ground will occur as small areas less than 2 inches in diameter.</p> |
| <p>5. Number of gullies and erosion associated with gullies: Active gullies should not be present. Existing gullies should be “healed” with a good vegetative cover.</p> |
| <p>6. Extent of wind scoured, blowouts and/or depositional areas: None.</p> |
| <p>7. Amount of litter movement (describe size and distance expected to travel): Little to no plant litter movement. Plant litter remains in place and is not moved by erosional forces.</p> |
| <p>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): Surface Soil Aggregate Stability under plant canopy should typically be 5 or greater. Surface Soil Aggregate Stability not under plant canopy should typically be 5 or slightly less.</p> |
| <p>9. Soil surface Loss or Degradation (consider thickness of the surface horizon, soil organic matter and structure): Use soil survey series description.</p> |
| <p>10. Effect of plant community composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff: High grass canopy and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. A combination of shallow and deep-rooted species has a positive effect on infiltration.</p> |
| <p>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 or soil surface crusting should be evident. Do not mistake the natural occurring clay pan (abrupt horizon change to columnar or prismatic structure) in the soil profile for a compaction layer.</p> |
| <p>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): Dominant: Cool season, mid-stature rhizomatous grasses = Cool season, mid-stature, bunch grasses Sub-dominant: Warm season, mid-stature, bunch grasses > shrubs and half shrubs = Cool season, short-stature, bunch grasses and sedges Minor components: Cool season, short-stature, rhizomatous grasses and sedges = Warm season, short-stature, bunch grasses = Warm season, short-stature, rhizomatous grasses and sedges = Warm season, mid-stature, rhizomatous grasses = forbs (<i>Blue grama should be grouped with warm season, short-stature, rhizomatous grasses due to its growth form</i>).</p> |
| <p>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Very low.</p> |
| <p>14. Average percent litter cover (10 to 35%). Litter cover is in contact with soil surface.</p> |
| <p>15. Expected annual production (this is TOTAL above-ground production, not just forage production): 1000 to 1100 #/acre (13 to 14 inch precip. Zone) 500 to 900 #/acre (10 to 12 inch precip. Zone).</p> |
| <p>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”: Halogeton, Leafy spurge, knapweeds, whitetop, Dalmatian toadflax, yellow toadflax, St. Johnswort, perennial pepperweed. Kentucky bluegrass and smooth brome can be invasive on the eastern border of Montana for these MLRAs.</p> |
| <p>17. Perennial plant reproductive capability: All species are capable of reproducing.</p> |