

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

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

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

<p>Date: Rev. June 2014 MLRA: 58AE and 60BE Ecological Site: Coarse Clay 10-14” p.z. 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: Water flow paths are broken and irregular in appearance, discontinuous, with numerous debris dams.</p>
<p>3. Number and height of erosional pedestals or terracettes: Pedestals up to 0.25 inch high are common on slopes > 10%. On slopes greater than 10% Terracettes may be present but should be less than 0.25 inch high.</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 < 50%. Bare ground will occur as large areas of 6-8 inches in diameter.</p>
<p>5. Number of gullies and erosion associated with gullies: Active gullies may be present on steeper slopes.</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): Plant litter movement is expected.</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 3 or greater. Surface Soil Aggregate Stability not under plant canopy should typically be 2 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: Moderate plant canopy and moderate gaps between plants help 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; light soil surface crusting can be expected.</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: Warm season, tall-stature, rhizomatous grasses > Warm season, mid-stature, bunch grasses Sub-dominant: Shrubs and half shrubs = Cool season, short-stature, rhizomatous grasses and sedges = Cool season, mid-stature rhizomatous grasses Minor components: Cool season, short-stature, bunch grasses and sedges = forbs = Warm season, mid-stature, bunch grasses.</p>
<p>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.</p>
<p>14. Average percent litter cover (25% or greater). Litter cover is in contact with soil surface.</p>
<p>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 #/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, Yellow sweetclover.</p>
<p>17. Perennial plant reproductive capability: All species are capable of reproducing.</p>