

Ecological Reference Worksheet

MT-NRCS

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 Contact for lead author: Bozeman, MT Reference site used? No  
 Date: 04/10/2005 MLRA: 58AC Ecological Site: Shale 11-14" 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.

<b>Indicators.</b> 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 <u>each</u> community within the reference state (when appropriate), and (3) cite data. Continue descriptions on separate sheet if needed. <b>Weight factors</b> are either 0.5, 1.0 or 2.0. The default factor is 1.0. A maximum of 8 indicators may be changed to 0.5 or 2.0. The rest remain at 1.0.	<b>Wgt. Factor</b>
<b>1. Number and extent of rills:</b> Minor rills (less than 1.0 to 3.0 inches in depth; less than 10 feet long) may be present in the reference state when slopes are greater than 8%. Plant community 2 has more rills than Plant community 1.	1.0
<b>2. Presence of water flow patterns:</b> Water flow patterns are evident. Following heavy thunderstorms, or on slopes over 8%, flow patterns less than 20 feet long may be apparent.	1.0
<b>3. Number and height of erosional pedestals or terracettes:</b> These are generally not common but may occur. Terracettes less than 2.0-inch depth are apparent on slopes less than 20%.	1.0
<b>4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground):</b> Bare ground is between 60-80%.	1.0
<b>5. Number of gullies and erosion associated with gullies:</b> Gully erosion is not evident.	1.0
<b>6. Extent of wind scoured, blowouts and/or depositional areas:</b> None.	1.0
<b>7. Amount of litter movement (describe size and distance expected to travel):</b> Litter movement varies by size and depth of litter. In the reference state, litter should be coarse and will not move more than a couple of feet from where it originated.	1.0
<b>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):</b> Stability values of 2-3 in plant interspaces. Stability values of 3-4 under plant canopies and at plant bases.	1.0
<b>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):</b> Weak or moderate granular structure. A-horizon is approx 2.0 to 4.0 inches thick. Organic matter in A-horizon approx 1-3%.	1.0
<b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b> Rather “open” plant community with a mix of perennial bunchgrasses, shrubs and some trees, contribute to slow infiltration and a high runoff rate.	1.0
<b>11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):</b> No compaction layer present in the reference state.	1.0
<b>12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: &gt;&gt;, &gt;, = to indicate much greater than, greater than, and equal to):</b> mid- and short-height, native perennial bunchgrasses >> native shrubs >> warm season rhizomatous grasses > native forbs >> trees.	1.0
<b>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):</b> Plant mortality is low (<5-15%); decadence is minimal except in prolonged periods of drought.	1.0
<b>14. Average percent litter cover (15-25%) and depth (0.1 to 0.5 inches).</b>	1.0
<b>15. Expected annual production (this is TOTAL above-ground production, not just forage production):</b> 350 – 500 #/acre.	1.0
<b>16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, “will continue to increase regardless of the management of the site” and may eventually dominate the site:</b> Sandberg bluegrass, longleaf sagebrush, slender eriogonum, greasewood, fringed sagewort, plains pricklypear.	1.0
<b>17. Perennial plant reproductive capability:</b> This is not impaired in the reference state. Except in extended periods of drought, plants are able to reproduce sexually or vegetatively.	1.0