

Ecological Reference Worksheet

MT-NRCS

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Contact for lead author: Bozeman, MT Reference site used? No

Date: 04/23/2005 MLRA: 58AC Ecological Site: Very Shallow 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.

<p><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 <b>each</b> 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.</p>	<p><b>Wgt. Factor</b></p>
<p><b>1. Number and extent of rills:</b> Rills are present on slopes &gt;35%. They are generally &lt; 1.5 inches deep, &lt; 3.0 inches wide, and &lt; 10.0 feet long.</p>	<p>1.0</p>
<p><b>2. Presence of water flow patterns:</b> Will generally be rare on this site, but with the steeper slopes (&gt;35%), and 25-50% bare ground, there may be areas which show accumulations of litter due to water movement and soil displacement by water, especially after severe storms.</p>	<p>1.0</p>
<p><b>3. Number and height of erosional pedestals or terracettes:</b> Wind and water erosion occurs, and there may be some plants with pedestals up to 0.5 inches in height. Terracettes are generally not present.</p>	<p>1.0</p>
<p><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 25-50%.</p>	<p>1.0</p>
<p><b>5. Number of gullies and erosion associated with gullies:</b> Gully erosion is possible, but has not been quantified for this site.</p>	<p>1.0</p>
<p><b>6. Extent of wind scoured, blowouts and/or depositional areas:</b> None.</p>	<p>1.0</p>
<p><b>7. Amount of litter movement (describe size and distance expected to travel):</b> Litter movement will be minimal on the gradual slopes, however on the steeper slopes (&gt;35%) there will be evidence of litter movement (i.e. debris dams) which may travel greater than 10 feet.</p>	<p>1.0</p>
<p><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.</p>	<p>1.0</p>
<p><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> Organic matter in the A-horizon is between 0.5–1.5%. A-horizon is 1-2 inches thick. Surface structure should be moderate or strong granular.</p>	<p>1.0</p>
<p><b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b> Bunchgrasses and shrubs dominate this site. Perennial herbaceous plants are spaced 1-4 feet apart. Shrub species are spaced 3-14 feet apart.</p>	<p>1.0</p>
<p><b>11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):</b> None.</p>	<p>1.0</p>
<p><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-height, native perennial bunchgrasses &gt;&gt; native shrubs &gt; warm season, short-height perennial grasses and grasslikes ≥ native perennial and annual forbs.</p>	<p>1.0</p>
<p><b>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):</b> Plant mortality is low; decadence is minimal except in prolonged periods of drought.</p>	<p>1.0</p>
<p><b>14. Average percent litter cover (30-50%) and depth (0.1 to 1.0 inches).</b></p>	<p>1.0</p>
<p><b>15. Expected annual production (this is TOTAL above-ground production, not just forage production):</b> 700 – 850 #/acre.</p>	<p>1.0</p>
<p><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> Wyoming big sagebrush, Rocky Mountain juniper, threadleaf sedge, blue grama, broom snakeweed, thistles, fringed sagewort, plains pricklypear, cheatgrass, Japanese brome, red threeawn.</p>	<p>1.0</p>
<p><b>17. Perennial plant reproductive capability:</b> All species are capable of reproducing.</p>	<p>1.0</p>