

### Ecological Reference Worksheet

**Author(s)/participant(s):** USDA-NRCS

**Contact for lead author:** jeff.printz@nd.usda.gov

**Reference site used? Yes/No** No

**Date:** 7-16-08    **MLRA:** 55A    **Ecological Site:** Loamy    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 &amp; (3) cite data. Continue descriptions on separate sheet.</p>
<p><b>1. Number and extent of rills:</b> Rills should not be present.</p>
<p><b>2. Presence of water flow patterns:</b> Barely observable.</p>
<p><b>3. Number and height of erosional pedestals or terracettes:</b> Essentially, non-existent.</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 less than 5% and less than 2 inches in diameter.</p>
<p><b>5. Number of gullies and erosion associated with gullies:</b> Active gullies should not be present. Existing gullies should be “healed” with good vegetative cover.</p>
<p><b>6. Extent of wind scoured, blowouts and/or depositional areas:</b> None.</p>
<p><b>7. Amount of litter movement (describe size and distance expected to travel):</b> Little to no plant litter movement. Plant litter remains in place and is not moved by erosional forces.</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> Plant cover and litter is at 90% or greater of soil surface and maintains soil surface integrity. Stability class 6.</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> Use soil series description for depth and color of A-horizon.</p>
<p><b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b> 95% canopy and basal cover, and small gaps between plants reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Healthy, deep rooted native grasses enhance infiltration and reduce runoff. Infiltration rate is moderate.</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> No compaction layer or soil surface crusting should be evident.</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-stature, cool season bunch grasses &gt; mid-stature, cool season rhizomatous grasses = forbs = shrubs &gt; warm season grasses = grass-likes</p>
<p><b>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):</b> None to slight.</p>
<p><b>14. Average percent litter cover.</b> 70 -80%, 0.5-1.0 inches thick. Litter cover is in contact with soil surface.</p>
<p><b>15. Expected annual production (this is TOTAL above-ground production, not just forage production):</b> 2450 lbs/ac.</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, “can, and often do, continue to increase regardless of the management of the site and may eventually dominate the site”:</b> State/local noxious, Kentucky bluegrass, Smooth brome</p>
<p><b>17. Perennial plant reproductive capability:</b> All species are capable of reproducing.</p>