

**Author(s)/participant(s):** Loretta Metz  
**Contact for lead author:** Bozeman, MT **Reference site used?** No  
**Date:** 04/23/2005 **MLRA:** 46XS **Ecological Site:** Shallow Clay 13-16" p.z. (formerly Shallow Clay 15-19" 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 <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.	<b>Wgt. Factor</b>
<b>1. Number and extent of rills:</b> Small rills occur on slopes >35%. They are typically narrow and less than 10 feet long.	1.0
<b>2. Presence of water flow patterns:</b> Water flow patterns may be noticeable following heavy storms. They should be no longer than 6-8 feet long, discontinuous, with multiple debris dams.	1.0
<b>3. Number and height of erosional pedestals or terracettes:</b> Pedestals less than 0.5 inches in height may occur. No terracettes.	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 less than 20%. In the HCPC, bare ground does not exceed 12%.	1.0
<b>5. Number of gullies and erosion associated with gullies:</b> Gully erosion is possible on slopes > 25%, but their size and frequency have not been quantified.	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 is coarse, from 1.5 inches up to 4 inches in length, and will not move more than a couple of inches 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 4-5 in plant interspaces. Stability values of 5-6 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> Soil surface structure is moderate or strong granular, A-Horizon is approx 2 to 4 inches thick. Organic matter is between 2-5%.	1.0
<b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b> Deep-rooted native perennial grasses optimize infiltration and runoff. Bunchgrasses should be spaced approx 1.5-2.5 feet apart.	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> None.	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> cool season, mid-height, native perennial bunchgrasses >> warm and cool season native perennial rhizomatous grasses = native perennial and annual forbs > native shrubs.	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 very low; decadence is minimal except in prolonged periods of drought.	1.0
<b>14. Average percent litter cover (50-60%) 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> 1100 – 1400 #/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> broom snakeweed, fringed sagewort, plains pricklypear, miscellaneous annual/biennial weedy forbs, cheatgrass, Japanese brome, sixweeks fescue, plains reedgrass.	1.0
<b>17. Perennial plant reproductive capability:</b> All plants are capable of reproducing.	1.0