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Contact for lead author: Bozeman Area Office Reference site used? No

Date: 03/22/2005 MLRA: 44 S Ecological Site: Shallow to Gravel 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.

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 if needed. Weight factors 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.	Wgt. Factor
1. Number and extent of rills: None	1.0
2. Presence of water flow patterns: None	1.0
3. Number and height of erosional pedestals or terracettes: None to very rare (unusual to find).	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground): 5-10%.	1.0
5. Number of gullies and erosion associated with gullies: None	1.0
6. Extent of wind scoured, blowouts and/or depositional areas: None	1.0
7. Amount of litter movement (describe size and distance expected to travel): None	1.0
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): 3-4 at surface and subsurface under vegetation. 2-3 at surface and subsurface in the interspaces.	1.0
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): Approx. 2-3" dark brown, weak subangular blocky structure, with 5 – 15% rock fragments on the surface, 2% Organic Matter.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Plants well distributed & all functional groups present per ESD. The moderately high amount of grass cover and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur.	1.0
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None	1.0
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): Mid-Grass cool season >> Short-grass cool season > Shrubs = Native forbs. Forbs 5-10% depending on the year and cryptograms only a trace.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Slight to moderate on shortgrass, cool seasons	1.0
14. Average percent litter cover (<u>60-65%</u>) and depth (1/8 inches).	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 1,125 – 1,875 pounds/acre.	1.0
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: Curly Dock, Dalmation Toadflax, Common Toadflax, Sulphur Cinquefoil, Spotted Knapweed, Leafy Spurge, Cheatgrass, Japanese Brome.	1.0
17. Perennial plant reproductive capability: Moderate	1.0