Author(s)/participant(s): Loretta Metz, Maxine Rasmussen, Jon Siddoway
Contact for lead author: Area Rangeland Management Specialist, Glasgow Area Office, MT **Reference site used?** No
Date: 05/04/05 **MLRA:** 52XC **Ecological Site:** Overflow 10-14" 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.

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 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.	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Bare ground would essentially be nonexistent in HCPC. Bare ground patches should be less than 2" in diameter. If in plant community A, less than 5% of the soil surface can be exposed.	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): Litter movement is not expected with HCPC or plant community A.	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):): Stability class anticipated to be 5 or 6 under plant canopy and 2-3 in plant interspaces (if interspaces occur).	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): The surface layer is 0.1"-12" thick. The color ranges from light brownish gray, brownish gray, to gray as the soil becomes hydric. Surface textures include loam, silt loam, clay loam, silty clay loam or fine sandy loam. Soil organic matter ranges from 1-7%.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: In HCPC, 90-95% plant canopy and 80-85% basal cover with small gaps between plants should 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 to very slow. If in plant community A, 90-95% plant canopy and 70-80% basal cover with small gaps between plants will still reduce raindrop impact and decrease overland flow.	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) :): HCPC: Tall, cool season bunch grasses > mid-stature, cool season bunch grasses > mid-stature cool season rhizomatous grasses > tall warm season rhizomatous grasses > forbs =shrubs. **Plant community A**: Mid-stature, cool season rhizomatous grasses> > mid-stature cool season bunch grasses > tall, cool season bunch grasses > shrubs > forbs.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Plant mortality and decadence very low.	1.0
14. Average percent litter cover (50-60%) and depth (0.5 to 1.0 inches). Litter cover is in contact with soil surface. Litter decreases in Plant community A to 40-50% and depth is reduced to 0.5 inch.	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 2000 - 3000 #/acre from Plant community A to HCPC in the State 1 reference community.	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: Needleandthread, western snowberry, smooth bromegrass, Kentucky bluegrass, Canada bluegrass, silver sagebrush, leafy spurge and Canada thistle.	1.0
17. Perennial plant reproductive capability: All species are capable of reproducing in HCPC. In Plant community A, plant seedlings will be weighed in favor of marginal and undesirable species.	1.0