

Ecological Reference Worksheet

Author(s)/participant(s): David Schmidt, Tim Nordquist, Stan Boltz

Contact for lead author: david.schmidt@sd.usda.gov 605-352-1236 **Reference site used?** Yes No

Date: 12/07/04 **MLRA:** 55C **Ecological Site:** Shallow 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 <u>each</u> community within the reference state, when appropriate, and (3) site data. Continue descriptions on separate sheet.	Indicator Weight
1. Number and extent of rills: Rills should not be present.	1
2. Presence of water flow patterns: Typically not observable, but sometimes present after heavy storms.	1
3. Number and height of erosional pedestals or terracettes: Some slight pedestalling of bunch grasses.	1
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, and plant canopy are <i>not</i> bare ground): Bare ground less than 10 percent and less than 2 inches in diameter.	1
5. Number of gullies and erosion associated with gullies: Active gullies should not be present.	1
6. Extent of wind scoured, blowouts and/or depositional areas: None.	1
7. Amount of litter movement (describe size and distance expected to travel): Little to no plant litter movement. Some accumulations (small litter dams) may be present after storm events.	1
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 usually 6. Typically high root content, organic matter, and granular structure. Soil surface is very resistant to erosion.	1
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): Use soil series description for depth and color of A-horizon.	1
10. Effect of plant community composition (relative proportion of different functional groups) and spatial distribution on infiltration, and runoff: Healthy, deep rooted native grasses enhance infiltration and reduce runoff.	2
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): No compaction layer should be evident.	1
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-warm-season bunch grass > mid-warm-season rhizomatous grass > tall warm-season rhizomatous grass = tall cool-season bunch grass > mid-cool-season rhizomatous grass = short warm-season grass = short cool-season grass = forbs = shrubs.	2
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Very little to no evidence of decadence or mortality.	1
14. Average percent litter cover. 70-80 percent, roughly 0.5 inches thick or less. Litter cover is in contact with soil surface.	1
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 2,200–3,000 lbs./acre air-dry weight, average 2,600 lbs./acre air-dry weight.	1
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.” Refer to State and Local Noxious Weed List, also Kentucky bluegrass, smooth brome grass.	2
17. Perennial plant reproductive capability: All species are capable of reproducing.	1