

Ecological Reference Worksheet

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

Date: 12/07/04 **MLRA:** 102A **Ecological Site:** Thin Claypan 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: Barely observable.	1
3. Number and height of erosional pedestals or terracettes: Essentially, non-existent.	1
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant and canopy are <i>not</i> bare ground): Bare ground typically 5-45 percent. Associated slick spots are not a part of this site, and will have considerably more bare ground.	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): Plant litter may be moved during ponding events and small accumulations of litter may be visible.	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 roughly 2-4. Moderate root content. Soil surface is somewhat resistant to erosion. Crusts may be present (e.g., biological and physical crusts).	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: Rhizomatous grasses provide for moderate infiltration, but shallow pan reduces effective infiltration.	1
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. At less than four inches, an extremely dense clay B horizon exists, which has a round-topped columnar structure.	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-cool-season rhizomatous grass > short warm-season grass > short cool-season grass = forb > 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. 30-50 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): 1,400–2,000 lbs./acre air-dry weight, average 1,700 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.	2
17. Perennial plant reproductive capability: All species are capable of reproducing.	1