

Ecological Reference Worksheet

MT-NRCS

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 Contact for lead author: Bozeman, MT Reference site used? **No**
 Date: 04/11/2005 MLRA: 58AC Ecological Site: Riparian Subirrigated 11-14” 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 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: Minor rills (less than 0.5 to 1.0 inches in depth; less than 2.5 feet long) may be present in the reference state.	1.0
2. Presence of water flow patterns: Water flow patterns may be evident, especially following storms of greater intensity than “normal”.	1.0
3. Number and height of erosional pedestals or terracettes: These should not be evident in the reference state.	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground): Bare ground is less than 5% in the reference state.	1.0
5. Number of gullies and erosion associated with gullies: Gully erosion may be evident in the reference state, but only following storms of greater intensity than “normal”.	1.0
6. Extent of wind scoured, blowouts and/or depositional areas: These are not present in the reference state.	1.0
7. Amount of litter movement (describe size and distance expected to travel): Litter movement varies by size and depth of litter. In the reference state, litter consists of both herbaceous and woody species. Litter will generally not move more than a 8-12 feet from where it originated.	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 values of 4-5 in plant interspaces. Stability values of 5-6 under plant canopies and at plant bases.	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): Granular structure, brown to dark brown color. Organic matter in A-horizon can exceed 8%.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Deep-rooted native perennial grasses and the co-dominant woody species (willow) optimize infiltration and runoff. Grasses should be spaced approx 0.5-1.0 feet apart, and woody species spaced several feet apart in the reference state.	1.0
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 present in the reference state.	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): native perennial sedges > cool season, mid-height, native perennial bunchgrasses >= native shrubs > native forbs.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Plant mortality is very low; decadence is minimal except in prolonged periods of drought (>5-6 years).	1.0
14. Average percent litter cover (55-75%) and depth (0.1 to 1.5 inches).	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 4400 – 4700 #/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: yellow willow, American sloughgrass, brookgrass, creeping spikerush, Kentucky bluegrass, timothy, smooth brome, leafy spurge, spotted knapweed, thistles, etc.	1.0
17. Perennial plant reproductive capability: This is not impaired in the reference state. Except in extended periods of drought, plants are able to reproduce sexually or vegetatively.	1.0