

Ecological Reference Worksheet*

Author(s)/participant(s): Bruce Call, Luis Garcia, Phil Smith, Bud Starnes, Sheila Richmond, Lane Hauser, Roy Placker

Contact for lead author: Phil Smith **Reference site used?** No

Date: 25 October 2002 **MLRA:** 42 **Ecological Site:** Limy **Applies to** All (write year or AAll@)

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range for poor B good production year and (3) cite data. Continue descriptions on a separate sheet.	ERA Match?
1. Number and extent of rills: There can be a few rills that should be short and discontinuous.	
2. Presence of water flow patterns: There can be a few flow patterns that should be short and discontinuous. There can be some sheet flow.	
3. Number and height of erosional pedestals or terracettes: There can be a few pedestals that should be less than 1inch high. Terracettes can be common and should be discontinuous.	
4. Bare ground from Ecological Site Description or other studies: Bare ground can make up to 67% of the ground cover on this site according to the ESD. Bare patch size should be less than 2 feet in diameter.	
5. Number of gullies and erosion associated with gullies: Gullies and erosion associated with gullies should be rare are infrequent. Typically, gullies if present will only follow the micro topography.	
6. Extent of wind scoured, blowouts and/or depositional areas: There should not be any wind scoured, blowouts and/or depositional areas. However there can be potential for depositional areas.	
7. Amount of litter movement (describe size and distance expected to travel): Litter should be small (less than "1 in diameter) and its movement should be minimal.	
8. Soil surface (top few mm) resistance to erosion (stability values are averages B most sites will show a range of values): This site can be susceptible to alluvial erosion. Stability values are estimated to be 1-2 in interspaces and 3-5 at bases of vegetation.	
9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness): For the Jal Series in Hidalgo County this loam should have an A horizon that is 0-4 inches thick. It should have a weak thin platy to weak fine granular structure and be pinkish gray (7.5 YR 7/2 dry) to brown (7.5 YR 5/4 moist). The SOM should be less than 1%.	
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Infiltration rates should be moderate until it reaches the finer texture soil layer. It should be higher around bases of grasses than in interspaces and around bases of shrubs. Runoff can be slow to medium.	
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): There should not be compaction layers on this site.	
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): black grama >>forbs > bush muhly = C4 midgrasses (threeawns) > sand dropseed > C 4 bunch grasses (Arizona cottontop, cane bluestem, plains bristle grass) >= shrubs (creosote, tarbush, soaptree yucca, ephedra, fourwing saltbush, winterfat.)	
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Black grama and bunchgrasses can show decadence in centers of plants.	
14. Expected litter amount: Average 3% cover and 0.75 inch deep. (As per ESD)	
15. Expected annual production (this is TOTAL above-ground production, not just forage production): The annual production in years with unfavorable precipitation should be approximately 200 lbs/acre and 575 lbs/acre in years with favorable precipitation according to the ESD.	
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, Awill continue to increase regardless of the management of the site@ and may eventually dominate the site: Tarbush, creosote and mesquite can be invaders to this site.	
17. Perennial plant reproductive capability: Black grama reproduces by seed sporadically and reproduction by tiller and stolon can be common. The C4 midgrasses should have high reproductive potential and rapidly recover from drought in the absence of additional stresses (grazing).	

*This sheet can also be used to describe Ecological Reference Areas (ERA=s). For ERA=s, you must also complete the following page and describe status of each indicator. In the far right column, write AYes@ (ERA matches expected for site) or ANo@ (ERA does not match expected for the site). Where the answer is ANo@, explain difference in comments.