

Appendix 2.

**Ecological Reference Worksheet**

**Author(s) / participant(s):** Marcus Miller, Luis King, Darreal Resner & Kenneth Alcon

**Contact for lead author :** Chavez **Reference site used? Yes/No** No

**Date:** 8/6/2004 **MLRA:** 70A **Ecological Site:** Meadow 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 & (3) site data. Continue description on separate sheet.

<b>1. Number and extent of rills :</b>	None
<b>2. Presence of water flow patterns:</b>	None
<b>3. Number and height of erosional pedestals or terracettes:</b>	None
<b>4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) :</b>	10 to 15%
<b>5. Number of gullies and erosion associated with gullies:</b>	None
<b>6. Extent of wind scoured, blowouts and/or depositional areas:</b>	None
<b>7. Amount of litter movement (describe size and distance expected to travel) :</b>	None
<b>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) :</b>	Range from none to very little
<b>9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) :</b>	
<b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b>	Generally 85% canopy cover with 10-15% bare ground high infiltration rate
<b>11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction or</b>	None
<b>12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (&gt;&gt;), greater than (&gt;), and equal to (=) :</b>	warm season bunch>Perennial cool season>Tall warm season>mid warm season>Forbs>=Shrubs
<b>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) :</b>	Very little depending on disturbance.
<b>14. Average percent litter cover ( <u>30-35</u> % ) and depth ( <u>2</u> inches).</b>	
<b>15. Expected annual production (this is <u>TOTAL</u> above-ground production, not just forage production):</b>	2,300 RV
<b>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</b>	† Salt Cedar and Russian Olive
<b>17. Perennial plant reproductive capability :</b>	All plants should be vigorous, healthy and reproductive depending on disturbances. All should be capable of reproducing.

**Ecological Site :**

[Redacted]

[Empty box for photo #1]

**Photo # 1**

**Comments :**

[Redacted]

[Empty box for photo #2]

**Photo # 2**

**Comments :**

[Redacted]

Appendix 4.

**Functional / Structural Groups Worksheet**

State     New Mexico     Office     Clayton     Ecological Site     Meadow      
 Observers     Marcus Miller, Luis King, Darreal Resner & Kenneth Alcon     Date     8/6/04    

Functional / Structural Groups			Species List for Functional / Structural Groups
Name	Potential <sup>1</sup>	Actual <sup>2</sup>	Plant Names
Warm Season Bunchgrasses	D		Bluegrama, Switchgrass
Perennial Cool Season Grasses	D		Western Wheatgrass
Tall Warm Season Grasses	S		Little & Big Bluestem and Indian Grass
Warm Season Mid Grasses	S		Vine Mequite, Galleta, and Alkali Sacaton
Perennial/Annual Forbs	T		Globe mallow, pursulane, aster spp. Sedges
Shrubs	T		Fourwing Saltbush
Biological Crust <sup>3</sup>			

Indicate whether each "structural/functional group" is a **Dominant (D)**(roughly 40-100% composition), a**Sub-dominant (S)** ( roughly 10-40%) composition) a**Minor Component (M)** (roughly 205% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual <sup>2</sup> column) relative to the "Potential <sup>2</sup> column derived from information found in the ecological site/description and/or at the ecological reference area.

**Biological Crust <sup>3</sup>** dominance is evaluated solely on **cover** not composition by weight