Rangeland Health—Reference Sheet TECHNICAL GUIDE Section II USDA-NRCS-MT Rev. June 2014

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Date: Rev. June 2014 **MLRA:** 58AE and 60BE **Ecological Site:** Subirrigated 10-14" 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.

1. Number and extent of rills: Rills should not be present.

2. Presence of water flow patterns: Barely observable.

3. Number and height of erosional pedestals or terracettes: Essentially non-existent.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Bare ground is 0-trace.

5. Number of gullies and erosion associated with gullies: Active gullies should not be present. Existing gullies should be "healed" with a good vegetative cover.

6. Extent of wind scoured, blowouts and/or depositional areas: None.

7. Amount of litter movement (describe size and distance expected to travel): Plant litter remains in place and is not moved by erosional forces.

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): Surface Soil Aggregate Stability should typically be 6 with or without plant canopy.

9. Soil surface Loss or Degradation (consider thickness of the surface horizon, soil organic matter and structure): Use soil survey series description.

10. Effect of plant community composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff: High grass canopy and basal cover and small gaps between plants should reduce raindrop impact and slow overland flow, providing increased time for infiltration to occur. Healthy, deep-rooted native grasses enhance infiltration and reduce runoff.

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.

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): Dominant: sedges and rushes **Sub-dominant:** Warm season, tall-stature, rhizomatous grass = Cool season, tall-stature, rhizomatous grasses = shrubs ** > Warm season, mid-stature, bunch grasses **Minor components:** Cool season, tall-stature, bunch grasses; Cool season, mid-stature, bunch grasses; Cool season, mid-stature, rhizomatous grasses; Warm season, tall-stature, rhizomatous grasses; forbs; shrubs **

** Due to the range of characteristics and site variability of the Subirrigated Ecological Site, shrubs may range from a Sub-dominate component (10-40%) to a Minor component (<10%).

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Very low.

14. Average percent litter cover (50 to 60%). Litter cover is in contact with soil surface.

15. Expected annual production (this is TOTAL above-ground production, not just forage production):
4500 to 5000 #/acre (13 to 14 inch precip. Zone) 3000 to 4000+ #/acre (10 to 12 inch precip. Zone).

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": Purple loosestrife, Sulphur cinquefoil, common tansy, oxeye daisy, Leafy spurge, knapweeds, whitetop, Dalmatian toadflax, yellow toadflax, St. Johnswort, perennial pepperweed, Kentucky bluegrass, smooth brome, Russian olive, salt cedar, Reed canarygrass.

17. Perennial plant reproductive capability: All species are capable of reproducing.