

Ecological Reference Worksheet

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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, when appropriate & (3) cite data. Continue descriptions on separate sheet.

1. Number and extent of rills: None expected on slopes <5%. Few on slopes >5% that should be short and discontinuous. Hubbell soil series: 1 to 9 % slopes, runoff is moderate and the hazard of water erosion is moderate.

2. Presence of water flow patterns: Uncommon; probably cover no more than 5% of area; very short and discontinuous, 1-3 feet in length;

3. Number and height of erosional pedestals or terracettes: None expected. Average slopes are less than 5% and generally not conducive to forming pedestals and terracettes. Few terracettes may be expected on slopes >5%.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground): Lacking reliable data. Bare ground, in respect to canopy cover ranges from 25 to 35% (estimated). Bare ground in respect to ground cover is approximately 69% (ESD data). Considerations: climatic conditions, past management, invasive plants.

5. Number of gullies and erosion associated with gullies: None present on this site.

6. Extent of wind scoured, blowouts and/or depositional areas: None expected for this site, although the site is highly susceptible to wind erosion. Past actions may have resulted in these observable attributes. The key is, Are these attributes continuing to act as a force on the landscape as a result of present management actions?

7. Amount of litter movement (describe size and distance expected to travel): Generally all litter size classes staying in place. Although on slopes >5% small sizes transported in flow paths, occasionally forming litter terracettes.

8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values): Surface soil is stabilized by organic matter decomposition products and/or a biological crust. Soil stability test: expect values of 1's to 4's across site.

Hubbell soil: Hazard for water erosion is high, for soil blowing is very high

Goesling soil: Hazard for water erosion is slight, for soil blowing is very high

9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness): The surface layer is a sandy loam, fine sandy loam, or loamy fine sand at least 5 to 6 inches thick over sandy loam to clay loam subsoils. Refer to county soils publication.

Hubbell soil: A1 0 to 4 inches; gray brown (10YR5/2), very dark grayish brown (10YR3/2) moist, few coarse roots, common fine roots and many very fine roots.

Goesling soil: A1 0 to 4 inches; light yellowish brown (10YR6/4 loamy sand, brown (10YR4/3) moist, many fine and very fine roots.

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Plant community cover (distribution and amount) is reflective of the historic plant community. It is characterized by a mixture of warm and cool season grasses, scattered shrubs, half shrubs and forbs. Sod bound blue grama is an indication of a change in plant community which is indicative of hydrological change.

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): There should be None present 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): Perennial mid grasses >> short grasses > shrubs > perennial forbs = annual forbs > annual grasses;; Blue grama and Western Wheatgrass are co-dominant with Indian ricegrass and dropseeds closely associated.

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): These two indicators are expected at low levels. Perennial grasses and shrubs that are ageing will demonstrate these indicators.

14. Average percent litter cover (12 %) and depth (0.8 inches). ESD data

15. Expected annual production (this is TOTAL above-ground production, not just forage production):

325 lbs/acre unfavorable precipitation; 588 lbs/acre normal precipitation; 850 lbs/acre favorable precipitation.

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”: Increase in the following plant species typically indicate a deteriorated state: Ring muhly, sandhill muhly, threeawns, rabbitbrush; in certain instances Pinyon and Juniper.

17. Perennial plant reproductive capability: Not affected even following several years of prolonged drought period for region.

