

## Ecological Reference Worksheet

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<p><b>Indicators.</b> 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 &amp; (3) cite data. Continue descriptions on separate sheet.</p>
<p><b>1. Number and extent of rills:</b> None expected on slopes &lt;5%. Few on slopes &gt;5% that should be short and discontinuous. Majada soil series: 1 to 8 % slopes, runoff is medium and the hazard of water erosion is moderate.</p>
<p><b>2. Presence of water flow patterns:</b> Uncommon; probably cover no more than 5% of area; very short and discontinuous, 1-3 feet in length. The soils are well drained and moderately to rapidly permeable.</p>
<p><b>3. Number and height of erosional pedestals or terracettes:</b> None expected. Average slopes are less than 5% and generally not conducive to forming pedestals and terracettes. Few terracettes may be expected on slopes &gt;5%.</p>
<p><b>4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground):</b> Lacking reliable data. Bare ground, in respect to canopy cover ranges from 15 to 25% (estimated). Bare ground in respect to ground cover is approximately 20% (ESD data). Considerations: climatic conditions, past management, invasive plants.</p>
<p><b>5. Number of gullies and erosion associated with gullies:</b> None present on this site.</p>
<p><b>6. Extent of wind scoured, blowouts and/or depositional areas:</b> None expected for this site. Majada soil; hazard for soil blowing is moderate.</p>
<p><b>7. Amount of litter movement (describe size and distance expected to travel):</b> Generally all litter size classes staying in place. Although on slopes &gt;5% small sizes transported in flow paths, occasionally forming litter terracettes.</p>
<p><b>8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values):</b> Surface soil is stabilized by organic matter decomposition products and/or a biological crust. Soil stability test: expect values of 3's to 5's across site.</p>
<p><b>9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness):</b> The surface and underlying layers are either gravelly, or very gravelly loams, sandy loams, or fine sandy loams.  Majada soil: A1 0 to 3 inches; brown (10YR5/3), very cobbly loam, dark brown (10YR3/3) moist; weak medium platy structure pasting to weak fine granular; common fine roots and few very fine roots.</p>
<p><b>10. Effect of plant community composition (relative proportion of different functional groups) &amp; spatial distribution on infiltration &amp; runoff:</b> Plant community cover (distribution and amount) is reflective of the historic plant community. The potential plant community is typically characterized by one seed juniper, pinyon pine, blue grama, western wheatgrass, bottlebrush squirrel tail, and winter fat.</p>
<p><b>11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):</b> There should be None present on this site.</p>
<p><b>12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: &gt;&gt;, &gt;, = to indicate much greater than, greater than, and equal to):</b> Perennial mid grasses &gt;&gt; short grasses &gt; shrubs &gt; perennial forbs &gt; annual forbs;</p>
<p><b>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):</b> These two indicators are expected at low levels. Perennial grasses and shrubs that are ageing will demonstrate these indicators.</p>
<p><b>14. Average percent litter cover ( <u>15</u> %) and depth ( <u>0.8</u> inches). ESD data</b></p>
<p><b>15. Expected annual production (this is TOTAL above-ground production, not just forage production):</b> 325 lbs/acre unfavorable precipitation; 588 lbs/acre normal precipitation; 850 lbs/acre favorable precipitation.</p>
<p><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 the site”:</b> Increase in the following plant species typically indicate a deteriorated state: blue grama, threeawn, rubber rabbitbrush, pinyon, and juniper.</p>
<p><b>17. Perennial plant reproductive capability:</b> Not affected even following several years of prolonged drought period for region.</p>