

## Ecological site R035XB219AZ Sandy Loam Upland 6-10" p.z.

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### Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	Ken Gishi, Dan Carroll, Dean Schlichting
Contact for lead author	State Rangeland Management Specialist, NRCS-Arizona State Office
Date	07/01/2008
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

1. **Number and extent of rills:** None

2. **Presence of water flow patterns:** Very few expected. Some indistinct short water flow patterns may occur on soils with steeper slopes. These soils have moderate to rapid permeability and moderate runoff.

3. **Number and height of erosional pedestals or terracettes:** None, but some mounding (about 1-2 inches) around long-lived perennial grasses and large shrubs is common.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground averages about 30 to 50 percent.

5. **Number of gullies and erosion associated with gullies:** None

6. **Extent of wind scoured, blowouts and/or depositional areas:** Uncommon, Some deposition may occur when site is adjacent to Sandy Uplands and/or Sandy washes. There should be no wind scoured areas or blowouts.

7. **Amount of litter movement (describe size and distance expected to travel):** Majority of herbaceous and fine woody litter will be transported by wind with a smaller percentage moving in water flow pathways. Coarse woody litter will remain under shrub canopies.
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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Surface textures are loamy fine sand, fine sandy loam and sandy loam with thickness ranging from 3-10 inches. Soil aggregate stability ratings should average 3-4 under plant canopies and 2-3 in the interspaces. A thin crust (biological or physical) may occur on this site and can provide some surface protection.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soil surface structure is weakly granular. Surface textures are loamy fine sand, fine sandy loam and sandy loam with thickness ranging from 3-10 inches. Surface color can be variable depending of parent material.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** This site is characterized by a mixed of short and midgrasses with a small percentage of scattered shrubs and forbs. The plant community by weight consists of about 80% grasses, 15% shrubs, 5% forbs. Basal cover range from 10-20% (Grasses,80-90% >> Shrubs,5-10% > forbs,1-5%). Due to the slope, soil texture and plant community composition, this site is moderately effective at storing precipitation.
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11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None. Most of the soils are not easily compacted, due to granular structure. Some of the soils may have a thin platy structure.
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12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**
- Dominant: warm season colonizing grasses > cool season bunch grasses >
- Sub-dominant: warm season bunch grasses > shrubs
- Other: forbs > cacti and other succulents
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** All plant functional groups are adapted to survival in all but the most severe droughts. Severe winter droughts affect shrubs most. Severe summer droughts affect grasses the most
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14. **Average percent litter cover (%) and depth ( in):**
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** Average annual production on this site is expected to be 575 to 675 lbs/ac in a year of average annual

production.

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16. **Potential invasive (including noxious) species (native and non-native).** List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site: Broom snakeweed, Mormon tea, and burro grass are native to the site, but have the potential to increase and dominate after heavy grazing. Cheatgrass and red brome are exotic annual grasses that have the potential to invade and dominate, with or without disturbance. Russian thistle and redstem storks bill are exotic forbs that have the potential to invade and dominate the site after heavy grazing and/or disturbance, especially if the site is near farm fields or disturbed lands.
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17. **Perennial plant reproductive capability:** All plants native to this site are adapted to the climate and are capable of producing seeds, stolons and rhizomes except during the most severe droughts.
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