

## Ecological site DX035X04B204 Sandstone 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.

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Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

### Indicators

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

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2. **Presence of water flow patterns:** Water flow patterns occur, but are generally short in length (<2') and are broken up by bedrock, rock fragments and vegetation. The average spacing of the water flow patterns across the slope is 20 to 30 feet.

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3. **Number and height of erosional pedestals or terracettes:** Some pedestalling does occur, but it is not common and pedestalls are less than 1 inch in height.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** The expected amount of bare ground is influenced by the amount of bedrock. Bare ground and bedrock combined ranges from 60 to 65 percent.

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

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

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7. **Amount of litter movement (describe size and distance expected to travel):** Larger, more persistent litter, such as twigs and branches, does not move. Smaller, less persistent litter, such as grass, forb and shrub leaves, may move short distances (< 2') in the water flow patterns.
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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):** Soil surface stability values are: Average - 3 to 4; under canopy - 4 to 6; in interspaces - 2 to 3.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Soil surface (0 to 2") is yellowish red (5YR 5/6), fine sand, weak thin platy structure in upper 1/4 inch and single grained below.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Grass/Grasslike (10 - 15% canopy, 2 - 6% basal); Shrub/Tree (6 - 12% canopy, 0 - 2% basal); Forb (0 - 2% canopy, 0 - 1% basal); Biologic Crust (0 - 2%).
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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 expected.
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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: Grass/Grasslikes
- Sub-dominant: Shrub/Vine/Tree
- Other: Forb
- Additional:
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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Mortality of blue grama, galleta, Indian ricegrass, Bigelow sagebrush, Mormon-tea, and other long-lived grasses, forbs and shrubs is < 10% except during prolonged, severe drought events. Expect cyclical higher mortality on shorter lived grasses, shrubs and forbs, such as sand dropseed, squirreltail, broom snakeweed and globemallow.
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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):** The median air-dry production is 150 pounds per acre. Slightly higher production is expected at the highest elevational, highest precipitation areas of the ecological site. Slightly lower production is expected at the lowest elevational, lowest precipitation areas of the ecological site.
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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: Species native to the site that have the potential to increase are broom snakeweed, shadscale and annual forbs. Non-native species like Russian thistle and cheatgrass are the most likely to invade after severe disturbance, but minor amounts of either species (< 1%) is expected to be part of the plant community. Filaree is another invasive species that could occur.
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17. **Perennial plant reproductive capability:** The only natural limitations to reproductive capability are weather related and natural disease or herbivory that reduces reproductive capability.
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