USDA Natural Resources
Conservation Service

Ecological site R035XD404AZ
Gypsum Hills 7-11" 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)	Steve Cassady
Contact for lead author	Steve Cassady
Date	09/15/2008
Approved by	Steve Cassady
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:** None

3. **Number and height of erosional pedestals or terracettes:** None

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 51 to 59 percent.

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

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

7. **Amount of litter movement (describe size and distance expected to travel):** Litter moves very little.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** SSI = 5.5 with cover, 2.6 without cover. A lichen crust covers 10 to 13 percent of the soil surface.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** The surface of soils associated with this site is weak fine granular structure, soft, non-sticky and non-plastic. Color is reddish brown (2.5YR 4/4) dry, dark reddish brown (2.5YR 3/4) moist.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Basal gaps are generally greater than 6 feet. About 15 percent of the area is covered by canopy. Canopy gaps of less than 6 feet make up about 23 percent and canopy gaps greater than 6 feet 62 percent.

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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.

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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:

    Sub-dominant:

    Other:

    Additional: Shrubs > Grasses > Forbs

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Dead shrubs are observable, but make up less than 5 percent of the total shrub component. Dead grasses are rarer, rarely making up more than 2 percent of the grass component. Percentages may increase during prolonged and/or severe drought.

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14. **Average percent litter cover (%) and depth (in):** Average percent litter cover (16% to 18%) and depth (1/8” to 1/2”).

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 350 lbs/ac

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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:** Occasionally cheatgrass, Bromus tectorum, is found on this site, but never makes up more than

1 or 2 percent of the plant community.

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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/or rhizomes except during the most severe droughts.
