

Ecological site R035XF604AZ Clayey Upland 13-17" 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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Approved by	Kendra Moseley
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None. Good grass cover and 0-3% slope equals slow runoff .
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2. **Presence of water flow patterns:** None.
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3. **Number and height of erosional pedestals or terracettes:** Very rare and only visible if there is an area of reduced plant cover.

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4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground ranges from 20-40%.
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5. **Number of gullies and erosion associated with gullies:** None.
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6. **Extent of wind scoured, blowouts and/or depositional areas:** None.
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7. **Amount of litter movement (describe size and distance expected to travel):** Fine litter may be transported by wind and water. Water runoff is slow and with the large amount of plant production the distance traveled would be minimal. Some fine litter might travel a considerable distance by wind force.
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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):** High amounts of vegetation production (mostly grasses) yields moderate to high resistance to water erosion. The soil is up to a moderate risk of wind erosion.
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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Massive to strong thick platy structure that is 4-7" thick. This is a well vegetated grassland, too.
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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** There is a fairly even distribution of grasses with scattered shrubs and a small amount of forbs. This plant community on this site is only slight to moderate in the ability to capture and store moisture.
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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):** Strong thick platy structure at the surface in some areas might be mistaken for a compaction layer.

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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: Grasses >>

Sub-dominant: Shrubs>>

Other: Forbs

Additional:

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 survive in all years except during the most severe droughts.
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14. **Average percent litter cover (%) and depth (in):** 15 to 25%.
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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** The expected annual production for this site in a normal year of precipitation is 575 to 675 pounds per acre total 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:** Wyoming big sagebrush and western wheatgrass will increase with continuous disturbance. Severe disturbance can bring black sagebrush to invade and dominate the site. Annual forbs can invade either of the prior scenarios and cheatgrass is a non-native invader to this site.
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17. **Perennial plant reproductive capability:** All plant species native to this site are adapted to the climate and are capable of producing seeds, stolons and rhizomes in all but the most severe droughts.
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