Ecological site R034AY112WY
Gravelly Green River and Great Divide Basins (Gr)

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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:** Rare to nonexistent. Where present, short and widely spaced.

2. **Presence of water flow patterns:** Some observable.

3. **Number and height of erosional pedestals or terracettes:** Rare to nonexistent.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** Bare ground can range from 25-50%.

5. **Number of gullies and erosion associated with gullies:** Active gullies should not be present.

6. **Extent of wind scoured, blowouts and/or depositional areas:** Minimal to nonexistent.

7. **Amount of litter movement (describe size and distance expected to travel):** Herbaceous litter expected to move in moderate amounts. Large woody debris will show only slight movement down slope.

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** Soil Stability Index ratings range from 2 (interspaces) to 5 (under plant canopy), but average values should be 2.0 or greater.

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Currently no soil series are correlated to this ecological site. Soil OM of less than .5% is expected.

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Plant community consists of 60-70% grasses, 20% forbs, and 10-20% shrubs. Minimal plant canopy (10-40%) and litter plus moderate infiltration rates result in slight to moderate runoff. Basal cover is typically less than 5% and does very little to effect runoff on this site. Surface rock fragments of 20-50% provide site stability from erosion, but decrease infiltration.

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** No compaction layer exists, but large amounts of subsurface coarse fragments may be mistaken for a compaction layer.

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: mid-size, cool season bunchgrasses>> perennial forbs=perennial shrubs>short, cool season bunchgrasses>cool season rhizomatous grasses

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** Minimal decadence, typically associated with shrub component.

14. **Average percent litter cover (%) and depth (in):** Litter ranges from 0-15% of total canopy measurement with total litter (including beneath the plant canopy) from 5-30% expected. Herbaceous litter depth is typically very shallow, ranging from 1-5mm. Woody litter can be up to a couple inches (4-6 cm).

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** English: 200-450 lb/ac (350 lb/ac average); Metric: 224-504 kg/ha (392 kg/ha average).

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: Rabbitbrush, Sandberg bluegrass, and phlox are common increasers. Annual weeds such as cheatgrass, halogeton, kochia, and Russian thistle are common invasive species in disturbed sites.

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17. **Perennial plant reproductive capability:** All species are capable of reproducing, except in drought years.