Ecological site R013XY062ID
Snowpocket 16+ PZ POTR5/SHRUBS

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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:** rills do not occur on this site.

2. **Presence of water flow patterns:** water-flow patterns are rare on the site.

3. **Number and height of erosional pedestals or terracettes:** neither occurs on the site.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):** data is not available.

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

6. **Extent of wind scoured, blowouts and/or depositional areas:** does not occur on the site.

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

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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):** values should range from 4 to 6 but needs to be tested.

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Structure ranges from weak fine granular to moderate fine granular. Soil organic matter (SOM) needs to be determined. Surface color is generally very dark brown.

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** the shrub overstory intercepts raindrops. Deep rooted perennial grasses, forbs, and shrubs slow run-off and increase infiltration.

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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):** is not present.

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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: shrubs

    Sub-dominant: forbs

    Other: perennial grasses

    Additional:

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13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** some mortality can occur in the shrub and herbaceous layers as different shrub species overtop other shrubs and forbs. Decadence and mortality of aspen can occur with age, insects, and disease.

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14. **Average percent litter cover (%) and depth (in):** additional litter cover data is needed but is expected to be 100 percent to a depth of 0.5-1.5 inches at the end of the growing season.

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15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** is 4000 pounds per acre (4480 Kg/ha) in a year with normal precipitation and temperatures. Perennial grasses and sedges produce 5 percent of the total production, forbs 10-20 percent and shrubs 75-85 percent.

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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:** includes whitetop, leafy spurge, dock, Canadian thistle, scotch thistle, toadflax, knapweed, and teasel. Other invasive species may include meadow foxtail, redtop, and Kentucky bluegrass. Most invasive species are present on the site following a fire. Since many of them are shade intolerant, they decline as the canopy closes.

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17. **Perennial plant reproductive capability:** all functional groups have the potential to reproduce in most years. Shrub reproduction is primarily vegetative. If regeneration is to occur from seedlings, bare mineral soil must be present. This usually exists following a fire.