

Ecological site R010XY015OR

Buckwheat Scabland

9-12 PZ

Last updated: 5/13/2025
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General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on plateaus, benches and gently sloping areas. Slopes range from 0 to 15 percent. Elevations range from 1500 to 3000 feet.

Table 2. Representative physiographic features

Landforms	(1) Plateau
Elevation	460 – 910 m
Slope	0 – 20 %
Aspect	Aspect is not a significant factor

Climatic features

The annual precipitation ranges from 9 to 14 inches which occurs mainly between the months of October and June, mostly in the form of rain. The soil temperature regime is mesic. The average annual air temperature is 48 degrees F with extreme temperatures ranging from -16 to 103 degrees F. The frost free period is 110 to 160 days. The optimum period of plant growth is from late March through early June.

Table 3 Representative climatic features

Frost-free period (average)	160 days
Freeze-free period (average)	

Precipitation total (average)	360 mm
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Influencing water features

Soil features

The soils of this site are very shallow and very stony, well drained and gravelly silt loam over clayey subsoils. They are generally formed in loess and colluvium over sedimentary rock or tuff. Permeability is slow and the available water holding capacity (AWC) is 1 to 2 inches for the profile. The potential for water or wind erosion is low. See appendix II for soils on which this site occurs.

Table 4. Representative soil features

Surface texture	(1) Silty clay loam
Permeability class	Slow
Available water capacity (0-101.6cm)	2.54 – 5.08 cm

Ecological dynamics

Range in Characteristics-
Deeper soils and areas with less gravel have greater amounts of bluebunch wheatgrass.

Response to Disturbance-
Bluebunch wheatgrass and Thurber needlegrass decline or disappear with prolonged overgrazing.

State and transition model

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (t)	Foliar Cover (%)
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Animal community

Wildlife- This site is not heavily used by wildlife. Livestock Grazing- This site is not a key site for livestock use. Trampling damage may occur by grazing in the early spring when soils are saturated.

Hydrological functions

Watershed- The soils of this site have slow infiltration rates and slow to medium runoff potential.

Other information

Seeding recommendations- Not suitable for seeding due to shallow, stony soils.

Contributors

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Approval

Kirt Walstad, 5/13/2025

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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Date	08/08/2012
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. Number and extent of rills: None, slight sheet & rill erosion hazard

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): 0-5%

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

6. Extent of wind scoured, blowouts and/or depositional areas: None, slight wind erosion hazard

7. Amount of litter movement (describe size and distance expected to travel): Fine - limited movement

8. Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):
Moderately resistant to erosion: aggregate stability = 3-4

9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness): Shallow, well drained ,
very stony, with a silt loam surface: Low OM (1-3%)

10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on
infiltration and runoff: Sparse ground cover (30-40%) and gentle to moderate slopes (0-15%) only moderately limit rainfall impact and
overland flow

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for
compaction on this site): None

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: Sandberg bluegrass >

Sub-dominant:

Other:

Additional:

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):
Normal decadence and mortality expected

14. Average percent litter cover (%) and depth (in):

15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):
Favorable: 500, Normal: 400, Unfavorable: 200 lbs/acre/year at high RSI (HCPC)

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: Perennial brush species will increase with deterioration of plant community. Western Juniper readily invades the site. Cheatgrass and Medusahead invade sites that have lost deep rooted perennial grass functional groups.

17. Perennial plant reproductive capability: All species should be capable of reproducing annually
