

Ecological site R008XY120OR

Loamy 12-14 PZ

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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.

Associated sites

R008XY200OR	South 10-14 PZ
R008XY210OR	Shallow South 10-14 PZ
R008XY220OR	North 10-14 PZ

Similar sites

R008XY110OR	Loamy 10-12 PZ Lower precipitation
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Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on the tops of ridges and plateaus underlain by basalt bedrock.

Table 2. Representative physiographic features

Landforms	(1) Ridge (2) Plateau
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Elevation	310 – 910 m
Slope	0 – 10 %
Water table depth	10 – 40 cm
Aspect	N, S

Climatic features

The annual precipitation ranges from 12 to 14 inches which occurs mostly as snow during the months of October through May. Spring and fall rains are common. The temperature regime is mesic with extreme temperatures ranging from 100 degrees F. to -20 degrees F. The frost-free period is 100 to 180 days, and the optimum period for plant growth is from mid-April through June.

Table 3 Representative climatic features

Frost-free period (average)	180 days
Freeze-free period (average)	
Precipitation total (average)	360 mm

Influencing water features

Soil features

The soils of this site are moderately deep to very deep, well drained silt loams formed in loess over basalt bedrock. The permeability is moderate and the available water holding capacity is 4 to 15 inches for the profile. The erosion hazard is moderate for water and slight for wind.

Table 4. Representative soil features

Surface texture	(1) Silt loam
Family particle size	(1) Loamy
Drainage class	Well drained
Permeability class	Moderate
Soil depth	150 cm

Available water capacity (0-101.6cm)	10.16 – 38.1 cm
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Ecological dynamics

If heavy grazing causes site deterioration, Idaho fescue will decline in vigor and be lost from the stand. Continued abuse will weaken and eventually remove the bluebunch wheatgrass. Gray rabbitbrush will increase, cheagrass, China lettuce, salsify, and other weeds will invade the site.

As slopes dip to the south, the amount of bluebunch wheatgrass will increase. North-trending slopes will favor and increase in Idaho fescue.

State and transition model

Additional community tables

Table 5. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production ()	Foliar Cover (%)
Grass/Grasslike					
1	Dominant deep rooted perennial grasses			740-1233	
	Idaho fescue	FEID	<i>Festuca idahoensis</i>	493-740	–
	bluebunch wheatgrass	PSSP6	<i>Pseudoroegneria spicata</i>	247-493	–
4	Sub-dominant deep rooted perennial grasses			25-99	
	Sandberg bluegrass	POSE	<i>Poa secunda</i>	12-49	–
	prairie Junegrass	KOMA	<i>Koeleria macrantha</i>	12-49	–
5	Other perennial grasses			0-25	
	squirreltail	ELEL5	<i>Elymus elymoides</i>	0-12	–
	needle and thread	HECO26	<i>Hesperostipa comata</i>	0-12	–
Forb					
7	Dominant perennial forbs			62-123	
	common yarrow	ACMI2	<i>Achillea millefolium</i>	12-25	–
	milkvetch	ASTRA	<i>Astragalus</i>	12-25	–
	arrowleaf balsamroot	BASA3	<i>Balsamorhiza sagittata</i>	12-25	–
	phlox	PHLOX	<i>Phlox</i>	12-25	–
	desertparsley	LOMAT	<i>Lomatium</i>	12-25	–
9	Other perennial forbs			0-25	
	agoseris	AGOSE	<i>Agoseris</i>	0-12	–
	brodiaea	BRODI	<i>Brodiaea</i>	0-12	–
	fleabane	ERIGE2	<i>Erigeron</i>	0-12	–
	beardtongue	PENST	<i>Penstemon</i>	0-12	–
	deathcamas	ZIGAD	<i>Zigadenus</i>	0-12	–
Shrub/Vine					
11	Dominant shrubs			25-49	
	rubber rabbitbrush	ERNA10	<i>Ericameria nauseosa</i>	12-25	–
7	Other shrubs			0-25	
	broom snakeweed	GUSA2	<i>Gutierrezia sarothrae</i>	0-12	–

	yellow rabbitbrush	CHV18	<i>Chrysothamnus viscidiflorus</i>	0-12	–
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Animal community

Mule deer, Pronghorn antelope, Elk This site offers forage for deer.

Hydrological functions

The soils of this site have moderate infiltration rates and low runoff potential. The hydrologic soil groups are B and C.

Wood products

None

Other products

This site is suited for livestock use during spring, summer, and fall. Snow may prevent winter use in some years. A planned grazing system is needed.

Contributors

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Approval

Kirt Walstad, 5/02/2025

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.

Author(s)/participant(s)	Jeff Repp
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Date	07/26/2012
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. Number and extent of rills: None, moderate 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): 10-15%

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): Significant resistant to erosion; aggregate stability = 4-5

9. Soil surface structure and SOM content (include type of structure and A-horizon color and thickness): Moderately deep to very deep well drained silt loams; Low OM (2-3)

10. Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff: Significant ground cover (50-70%) limits 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: Idaho fescue > Bluebunch wheatgrass > Sandberg bluegrass and Prairie junegrass > other grasses = forbs = shrubs

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
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14. Average percent litter cover (%) and depth (in):
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15. Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):
Favorable; 1400, Normal: 1100, Unfavorable: 700 lbs/acre/year at high RSI (HCPC)
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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: 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
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17. Perennial plant reproductive capability: All species should be capable of reproducing annually
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