

Ecological site R030XB194CA Rarely Flooded Alluvial Fan/Fan Apron

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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.

Ecological site concept

This ecological site is found on alluvial fans and fan aprons. It occurs at elevations of 3200 to 4200 feet. Slopes range from 2 to 8 percent. Very rare to occasional flooding and no ponding occur on this site. Runoff is very low to low.

Please refer to group concept R030XB192CA to view the provisional STM.

Table 1. Dominant plant species

Tree	Not specified
Shrub	(1) Senna armata(2) Larrea tridentata
Herbaceous	(1) Pleuraphis rigida

Physiographic features

This ecological site is found on alluvial fans and fan aprons. It occurs at elevations of 3200 to 4200 feet. Slopes range from 2 to 8 percent. Very rare to occasional flooding and no ponding occur on this site. Runoff is very low to low.

Table 2. Representative physiographic features

Landforms	(1) Alluvial fan (2) Fan apron
Flooding duration	Extremely brief (0.1 to 4 hours) to very brief (4 to 48 hours)
Flooding frequency	Very rare to occasional

Elevation	3,200–4,200 ft
Slope	4–15%
Water table depth	60 in
Aspect	Aspect is not a significant factor

Climatic features

Influencing water features

Soil features

This ecological site is found on the following map units and soil series: 4245 Yander, 20 PF900, Hypoint, 2

Data below may be wrong, based on Morongo soils, which this ESD is not linked to.

Table 3. Representative soil features

Surface texture	(1) Sand
Family particle size	(1) Sandy
Drainage class	Somewhat excessively drained
Permeability class	Rapid
Soil depth	40–60 in
Surface fragment cover <=3"	65–100%
Surface fragment cover >3"	0–5%
Available water capacity (0-40in)	1.5–3.25 in
Calcium carbonate equivalent (0-40in)	0–1%
Electrical conductivity (0-40in)	0–2 mmhos/cm
Sodium adsorption ratio (0-40in)	0–4
Soil reaction (1:1 water) (0-40in)	6–6.8

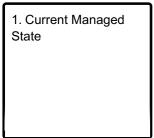
Subsurface fragment volume <=3" (Depth not specified)	5–25%
Subsurface fragment volume >3" (Depth not specified)	0–5%

Ecological dynamics

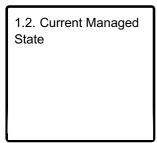
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State and transition model

Ecosystem states



State 1 submodel, plant communities



State 1 Current Managed State

Community 1.1 Current Managed State

Vegetation Canopy Cover: Shrubs: blackbrush (*Coleogyne ramosissima*) 0-1% Wiggins' cholla (*Cylindropuntia echinocarpa*) 0-1% Nevada jointfir (*Ephedra nevadensis*) 1-5% Eastern Mojave buckwheat (*Eriogonum fasciculatum*) 0-1% narrowleaf goldenbush (*Ericameria linearifolia*) 0-1% burrobrush (*Hymenoclea salsola*) 1-2% white ratany (*Krameria grayi*) 0-1% creosote bush (*Larrea tridentata*) 5-15% Mexican bladdersage (*Salazaria mexicana*) 1-2% desertsenna (*Senna armata*) 5-15% jojoba (*Simmondsia chinensis*) 0-1% turpentinebroom (*Thamnosma montana*) 0-1% Mojave woodyaster (*Xylorhiza tortifolia*) 0-1% Joshua tree (*Yucca brevifolia*) 0-1% Mojave yucca (*Yucca schidigera*) 0-1% Grasses: red brome (*Bromus rubens*) 3-5% big galleta (*Pleuraphis rigida*) 5-10% Forbs: bristly fiddleneck (*Amsinckia tessellata*) 3-5% pincushion flower (*Chaenactis fremontii*) 1-3% redstem stork's bill (*Erodium cicutarium*) 1-3% Great Basin

langloisia (*Langloisia setosissima*) 1-2% desert dandelion (*Malacothrix glabrata*) 1-2% small wirelettus (*Stephanomeria exigua*) 1-2%

Table 4. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Shrub/Vine	105	160	210
Forb	50	110	170
Grass/Grasslike	30	50	75
Total	185	320	455

Table 5. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	15-25%
Grass/grasslike foliar cover	5-10%
Forb foliar cover	5-15%
Non-vascular plants	0%
Biological crusts	0%
Litter	5-15%
Surface fragments >0.25" and <=3"	25-35%
Surface fragments >3"	1-2%
Bedrock	0%
Water	0%
Bare ground	20-25%

Table 6. Canopy structure (% cover)

Height Above Ground (Ft)	Tree	Shrub/Vine	Grass/ Grasslike	Forb
<0.5	_	0-1%	3-5%	5-15%
>0.5 <= 1	_	1-5%	5-10%	5-10%
>1 <= 2	_	20-30%	_	_
>2 <= 4.5	_	0-1%	_	_
>4.5 <= 13	_	_	_	_
>13 <= 40	_	_	_	_
>40 <= 80	_	_	_	_
>80 <= 120		_	_	_
>120	_	_	-	

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Shrub	/Vine				
1	Shrubs			105–210	
	desertsenna	SEAR8	Senna armata	75–125	_
	creosote bush	LATR2	Larrea tridentata	15–40	_
	narrowleaf goldenbush	ERLI6	Ericameria linearifolia	3–7	-
	burrobrush	HYSA	Hymenoclea salsola	3–7	_
	Nevada jointfir	EPNE	Ephedra nevadensis	3–7	_
	Mojave yucca	YUSC2	Yucca schidigera	3–7	_
	Mexican bladdersage	SAME	Salazaria mexicana	1–5	_
	white ratany	KRGR	Krameria grayi	1–3	_
	turpentinebroom	THMO	Thamnosma montana	1–3	-
	Mojave woodyaster	XYTO2	Xylorhiza tortifolia	0–2	_
	Joshua tree	YUBR	Yucca brevifolia	0–2	_
	jojoba	SICH	Simmondsia chinensis	0–2	-
	Eastern Mojave buckwheat	ERFA2	Eriogonum fasciculatum	0–2	-
	blackbrush	CORA	Coleogyne	0–1	_

			ramosissima		
	Wiggins' cholla	CYEC3	Cylindropuntia echinocarpa	0–1	_
Gras	ss/Grasslike	-			
2	Grasses			30–75	
	red brome	BRRU2	Bromus rubens	15–35	_
	big galleta	PLRI3	Pleuraphis rigida	15–35	_
Forb)	-			
3	Forbs			50–170	
	redstem stork's bill	ERCI6	Erodium cicutarium	20–60	_
	pincushion flower	CHFR	Chaenactis fremontii	15–35	-
	Forb, annual	2FA	Forb, annual	1–20	_
	bristly fiddleneck	AMTE3	Amsinckia tessellata	0–20	-
	smooth desertdandelion	MAGL3	Malacothrix glabrata	10–20	-
	Great Basin langloisia	LASE3	Langloisia setosissima	3–7	_
	small wirelettuce	STEX	Stephanomeria exigua	1–5	_

Contributors

Allison Tokunaga

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)	
Contact for lead author	
Date	07/13/2025
Approved by	Sarah Quistberg
Approval date	

Indicators

1.	Number and extent of rills:
2.	Presence of water flow patterns:
3.	Number and height of erosional pedestals or terracettes:
4.	Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):
5.	Number of gullies and erosion associated with gullies:
6.	Extent of wind scoured, blowouts and/or depositional areas:
7.	Amount of litter movement (describe size and distance expected to travel):
8.	Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):
9.	Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):
10.	Effect of community phase composition (relative proportion of different functional

groups) and spatial distribution on infiltration and runoff:

11.	Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):					
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:					
13.	Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):					
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):					
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:					
17.	Perennial plant reproductive capability:					