Ecological site DX035X03G100
Salt Meadow

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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	(1) *Distichlis spicata* (2) *Sporobolus airoides*

Legacy ID

R035XA100NM

Physiographic features

This site is on nearly level to gently sloping floodplains. It commonly forms a narrow band adjacent to a flowing or intermittent stream. Generally slopes are less than 3 percent. Elevations range from 6,400 to 7,200 feet above sea level. This site is dependent on sub-irrigation and overflow for its moist condition.

Table 2. Representative physiographic features

Landforms	(1) Flood plain
Flooding duration	Brief (2 to 7 days)
Flooding frequency	Rare to occasional
Ponding duration	Very brief (4 to 48 hours) to brief (2 to 7 days)
Ponding frequency	Rare to occasional
Elevation	1,950 − 2,200 m

Slope	0 – 10 %
Water table depth	90 – 180 cm
Aspect	Aspect is not a significant factor

Climatic features

Mean annual precipitation varies from 10 to 13 inches. Departures from the average of 3 inches or more are common. June is the driest month. July, August and September are the wettest months, and it is the period when flash floods are to be expected. The vegetation is dependent on sub-irrigation and overflow from the flash floods. In an extended drought period, the water table is affected and results in lowered production of the vegetation.

Temperature varies from a mean annual of 69 degrees F in July to 26 degrees F in January. The maximum is near 100 degrees F and the minimum is near 40 degrees F below zero. The average last killing frost in the fall is the middle of September. Temperatures are usually warm enough to sustain plant growth from April through September.

Wind velocities are relatively light most of the year, and occasionally winds will exceed 25 miles per hour. These stronger winds, which usually occur in the spring and summer, increase transpiration rates of plants and increase evaporation from these moist soils. Soil particles are often displaced from adjacent areas by these strong winds and may cause structural damage to young plants.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

Table 3 Representative climatic features

Frost-free period (average)	120 days
Freeze-free period (average)	150 days
Precipitation total (average)	360 mm

Influencing water features

This site is influenced by water from a wetland or stream.

Soil features

The soils in this site are generally deep and well drained. They are affected by sodium. The pH is about 8.0. Surface textures may be loam, fine sandy loam, clay loam and silty clay loam. The subsoil is usually a clay or clay loam. Water intake rate is slow to very slow. Permeability is moderately slow to very slow. Plant roots may be restricted by the sodium content of the soil. Available water-holding capacity is approximately 7 inches in a five-foot profile.

Table 4. Representative soil features

Surface texture	(1) Loam (2) Sandy loam (3) Clay loam

Family particle size	(1) Loamy
Drainage class	Poorly drained to well drained
Permeability class	Moderately slow
Soil depth	150 – 180 cm
Available water capacity (0-101.6cm)	7.62 – 30.48 cm
Electrical conductivity (0-101.6cm)	0 – 20 mmhos/cm
Sodium adsorption ratio (0-101.6cm)	0 – 30
Soil reaction (1:1 water) (0-101.6cm)	7.4 – 10
Subsurface fragment volume <=3" (Depth not specified)	20 – 40 %

Ecological dynamics

This bottomland site is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbush, the dominant shrub, comprises

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				538-628	
	saltgrass	DISP	*Distichlis spicata*	538-628	–
2				269-359	
	alkali sacaton	SPAI	*Sporobolus airoides*	269-359	–
3				90-179	

	salt sedge	CAHA5	*Carex hassei*	90-179	–
4				54-90	
	foxtail barley	HOJU	*Hordeum jubatum*	54-90	–
5				54-90	
	mat muhly	MURI	*Muhlenbergia richardsonis*	54-90	–
6				90-179	
	western wheatgrass	PASM	*Pascopyrum smithii*	90-179	–
7				90-179	
	Nuttall's alkaligrass	PUNU2	*Puccinellia nuttalliana*	90-179	–
8				269-359	
	alkali cordgrass	SPGR	*Spartina gracilis*	269-359	–
Forb					
9				54-90	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	54-90	–
	iodinebush	ALOC2	*Allenrolfea occidentalis*	54-90	–
	desert seepweed	SUSU	*Suaeda suffrutescens*	54-90	–
Shrub/Vine					
10				54-90	
	Shrub, deciduous	2SD	*Shrub, deciduous*	54-90	–
	fourwing saltbush	ATCA2	*Atriplex canescens*	54-90	–
	pale desert-thorn	LYPA	*Lycium pallidum*	54-90	–

Animal community

Habitat for Wildlife: This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, coyote, striped skunk, black-tailed jackrabbit, Botta’s pocket gopher, deer mouse, banner-tailed kangaroo rat, killdeer, house finch, western spadefoot toad, short-horned lizard and leopard frog. When seasonal shallow ponds occur, these sites are utilized by breeding amphibians, waterfowl and blackbirds.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups. Hydrologic Interpretations Soil Series----------Hydrologic Group Catman----------D Catman Variant----------D Gojiya----------D Sparham----------D Sparham Wet----------D Warm Springs----------C Kardewest----------C

Recreational uses

These sites have low potential for outdoor recreation. In years of higher precipitation, the seasonal shallow ponds improve the opportunity for bird watching.

Wood products

This site has no significant potential for wood production.

Other products

Grazing: This site is well suited for grazing use during all seasons of the year by both small and large animals; however, it is not suited for continuous yearlong grazing by domestic livestock if a balanced, healthy plant community is to be maintained. Periodic summer deferment is needed to maintain the productivity and lessen the probability of wind and water erosion.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month Similarity Index----------Ac/AUM 100 - 76----------2.6 – 3.0 75 – 51----------3.3 – 4.3 50 – 26----------5.3 – 6.0 25 – 0----------6.0+

Type locality

Location 1: Rio Arriba County, NM
Location 2: Sandoval County, NM
Location 3: San Juan County, NM

Other references

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley & Sandoval

Characteristic Soils Are:
Catman----------Catman Variant Gojiya----------Sparham
Sparham,wet----------Warm Springs

Contributors

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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.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

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

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

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

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5. **Number of gullies and erosion associated with gullies:**

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

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

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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):**

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9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

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10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

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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):**

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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:

    Sub-dominant:

    Other:

    Additional:

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

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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):**

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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:**

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17. **Perennial plant reproductive capability:**
