

Level 4 Potential Conservation Area (PCA) Report

Name Big Sandy Creek Sandhills

Site Code S.USCOHP*10203

IDENTIFIERS

Site ID 1503 Site Class PCA
Site Alias Palmer Ranch Surveysite

Network of Conservation Areas (NCA)

<u>NCA Site ID</u>	<u>NCA Site Code</u>	<u>NCA Site Name</u>
-		No Data

LOCATORS

Nation United States Latitude 384854N
State Colorado Longitude 1031536W

Quad Code Quad Name

38103-G2 Aroya
38103-G3 Rock Basin

County

Lincoln (CO)

Watershed Code Watershed Name

11020011 Big Sandy
11020012 Rush

SITE DESCRIPTION

Minimum Elevation 4,620.00 Feet 1,408.00 Meters
Maximum Elevation 4,925.00 Feet 1,501.00 Meters

Site Description

The site is characterized by extensive rolling to gently sloping sandhills on the east and gentle sloping "hardlands" down to Rock Basin to the west. Elevation ranges from 4620 feet along Rock Basin to 4925 feet on the sandhills at the eastern edge of the site. Rock Basin is an intermittent drainage along the western edge of the site that is basically a swale with some small depressions along the "channel". State Highway 94, County Road 43, and numerous two-track roads occur within the site. Several ranch houses as well as an abandoned homestead near the southern boundary are located along County Road 43. Non-native trees are planted around these structures. Sandsage prairie dominates the eastern portion of the site and at least one blowout occurs within the site (T14S R52W, section 29). The sandhills form a northwest to southeast line. To the south and west the landscape is dominated by extensive shortgrass prairie or alkaline flats on finer textured soils. Both the sandhills and shortgrass prairie continue for several miles in all directions. Condition and the exact extent of these communities are unknown. This area supports the best massasauga population in the state.

Key Environmental Factors

herbivory, fire, climate

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial Mapped Date 07/23/1997

Designer Kettler, S.M.

Boundary Justification

The boundary encompasses the high quality sandsage prairie that was surveyed and extends to the east encompassing other sandhills that were not field surveyed but appear to be in fair to good condition (viewed from the fenceline and county roads). Good condition shortgrass prairie to the south and west is also included. Radio tracking of the massasauga has shown that the species uses the sandhills 2-3 miles east of County Road 43 during the summer and the "hardlands" on the west in the winter for den sites (Justin Hobert - personnel communication). The boundary is based on that data and should be sufficient to physically

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protect the vegetation from direct disturbance and to encompass most ecological processes or allow these to be simulated. This boundary should minimize impacts from non-native species, allow natural fire regimes to be simulated and incorporate many animal communities including the massasauga (but not all wide ranging species).

Primary Area 24,609.14 Acres 9,959.00 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site contains an excellent occurrence of a community which is vulnerable on a global scale. The site supports an excellent occurrence of the sandsage/sand bluestem community as well as a good occurrence of the alkali sacaton prairie. The site also encompasses the best known population of the massasauga in Colorado and the ecoregion.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

The sandhills are generally winter grazed (with no additional feed needed) and lightly grazed by about 200 heifers which are rotated through the area in the summer.

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

Extensive shortgrass prairie continues to the west for at least 5 miles. Sandsage prairie continues to the east to Big Sandy Creek and north for many miles. Agricultural lands become more common 4-5 miles southwest of the site.

Information Needs

Fire regimes in the sandsage prairie are unknown but may be important. The effects of fire on the massasauga are not known but should be investigated if prescribed fire is considered.

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global</u>	<u>State</u>	<u>Driving</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
24601	<i>Panicum obtusum</i> - <i>Buchloe dactyloides</i> Herbaceous Vegetation	Vine Mesquite-Buffalo Grass	GNRQ	S1S2	No
24668	<i>Artemisia filifolia</i> / <i>Andropogon hallii</i> Shrubland	Northern Sandhill Prairie	G3?	S2	Yes
19429	<i>Sporobolus airoides</i> Southern Plains Herbaceous Vegetation	Great Plains Salt Meadows	G3Q	S3	No
20145	<i>Pascopyrum smithii</i> Herbaceous Vegetation	Western Slope Grasslands	G3G5Q	S2	No
18783	<i>Eleocharis palustris</i> Herbaceous Vegetation	Emergent Wetland	G5	S4	No

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
159111	Kettler, S.M. 1997. Colorado Natural Heritage Program Field Survey for the Central Shortgrass Prairie Inventory.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 07/23/1997
Version Author Kettler, S.M.

Disclaimer

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