

# Level 4 Potential Conservation Area (PCA) Report

Name Big Sandy Creek at Matheson

Site Code S.USCOHP\*10202

## IDENTIFIERS

Site ID 1188 Site Class PCA  
Site Alias Lasater 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 391223N  
State Colorado Longitude 1035523W

<u>Quad Code</u>	<u>Quad Name</u>
39103-B7	Matheson NE
39103-B8	Matheson
39103-C7	River Bend
39104-B1	Simla
39103-C8	Beuck Draw

## County

Elbert (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
11020012	Rush
11020011	Big Sandy
10190011	Bijou

## SITE DESCRIPTION

<b>Minimum Elevation</b>	5,600.00 Feet	1,707.00 Meters
<b>Maximum Elevation</b>	6,067.00 Feet	1,849.00 Meters

## Site Description

The site is characterized by rolling shortgrass and midgrass prairie above the wide floodplain of Big Sandy Creek. Different soil types help to create a diverse assemblage of good condition grassland communities on the uplands. A blue grama - buffalograss community occurs on relatively flat topography at the eastern end of the ranch and intermixed with other grasslands over the entire ranch. Several playas occur within this area. These playas were dry during the first visit to the ranch on July 18 but contained water on August 14. Tadpoles were present in several of the playas (collected and awaiting identification) on August 14 and a swift fox and three Mountain Plovers were observed near the playas at this time. A little bluestem - sideoats grama community occurs on rocky outcrops and steep slopes at the highest elevations of the ranch. A needle-and-threadgrass - sand bluestem community occurs along the old floodplain of the creek at the northeast end of the ranch. This community occurs in a mosaic with a sand dropseed - blue grama community on the floodplain. The needle-and-threadgrass - sand bluestem community occurs on slightly higher elevations (small ridges and lower slopes to the uplands) than the sand dropseed - blue grama community. A prairie sandreed - sand bluestem community occurs on ridges and slopes at the western edge of the blue grama - buffalograss community sloping down to the river floodplain. No permanent water occurs in the creek on this ranch although the creek has been running for about 18 consecutive days at the time of the August 14 survey. The floodplain is dominated by plains cottonwood with a few small wetlands dominated by sedges and rushes. Much of the woodland has been invaded by leafy spurge, smooth brome, Kochia, and Kentucky bluegrass

## Key Environmental Factors

fire, flooding, herbivory

## Climate Description

No Data

## Land Use History

No Data

## Cultural Features

No Data

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## SITE DESIGN

Site Map P - Partial

Mapped Date 09/23/1997

Designer Kettler, S.M.

### Boundary Justification

The boundaries encompass the best condition plants communities mainly on the Lasater Ranch. Several of the communities undoubtedly continue onto adjacent parcels, possibly for several miles, but condition and exact extent of these is unknown. Most of the northern boundary line is roughly based on watershed boundaries. The floodplain at the northeast edge of the ranch where the needle-and-threadgrass - sand bluestem community and Red-headed Woodpecker nests occur is included. Other parts of the floodplain are invaded by non-native species which would probably require intense management to remove. This boundary would protect the plant communities from direct disturbance and allow most ecological processes to function or be simulated. This would probably support most native animal communities except those which are wide ranging (such as pronghorn). Boundaries encompass the Big Sandy floodplain and a 1,000 foot buffer to protect the meandering and flashiness of this wide ephemeral stream.

Primary Area 36,161.11 Acres 14,633.94 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

### Biodiversity Significance Comments

This site contains a good (B-ranked) occurrence of a *Populus deltoides* / *Panicum virgatum* - *Schizachyrium scoparium* natural community which is imperiled (G2/S2) on a global scale and a good to fair (BC-ranked) occurrence of the globally imperiled (G1G2Q/S1S2) *Populus deltoides* / *Sporobolus cryptandrus* natural community. The site also supports good quality occurrences of several globally rare and state rare communities.

Other Values Rank No Data

### Other Values Comments

The Lasater ranch, included in this site, is very well managed which has allowed a diverse assemblage of good condition natural plant communities to thrive. A swift fox and three Mountain Plovers were observed on the shortgrass prairie at the east edge of the ranch. The Arkansas darter was searched for during the August 14 visit but no minnows were seen even though numerous pool and riffle complexes existed. Several playas occur within the bluegrama-buffalograss community at the eastern edge of the ranch. Several other plant communities occur on the ranch but are relatively small and were not mapped, but add to the overall diversity of the site.

## LAND MANAGEMENT ISSUES

### Land Use Comments

The Lasaters have had the ranch since the 1940s and have been using Holistic Resource Management for about 10 years. The HRM regime appears to have allowed a very diverse assemblage of plant communities to thrive. Livestock are rotated to allow 80 days of rest between grazing periods. Pesticides have not been used since 1970 and hunting and trapping are not allowed.

### Natural Hazard Comments

No Data

### Exotics Comments

Several non-native species are common in the riparian area including leafy spurge, Kentucky bluegrass, smooth brome, and hounds tongue. Cheatgrass and/or Japanese brome are present in small areas on the uplands but are a minor problem at this time.

### Offsite

Off-site activities could alter the hydrologic regime and affect the riparian plant communities and associated fauna. A few agricultural fields with center pivot irrigation occur upstream. This site is near another large grassland site to the northeast.

### Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

Element	Global Rank	State Rank	Driving Site Rank
State ID	State Scientific Name	State Common Name	

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Name	Big Sandy Creek at Matheson	Site Code	S.USCOHP*10202		
24982	<i>Pascopyrum smithii</i> - <i>Nassella viridula</i> Herbaceous Vegetation	Great Plains Mixed Grass Prairie	G3G4	S2	No
24879	<i>Populus deltoides</i> / <i>Panicum virgatum</i> - <i>Schizachyrium scoparium</i> Woodland	Plains Cottonwood Riparian Forests	G2	S2	Yes
24979	<i>Bouteloua gracilis</i> - <i>Buchloe dactyloides</i> Herbaceous Vegetation	Shortgrass Prairie	G4	S2?	No
24602	<i>Andropogon hallii</i> - <i>Carex inops</i> ssp. <i>heliophila</i> Herbaceous Vegetation	Great Plains Mixed Grass Prairie	G3	S1	No
21637	<i>Rana blairi</i>	Plains Leopard Frog	G5	S3	No
24967	<i>Schizachyrium scoparium</i> - <i>Bouteloua</i> <i>curtipendula</i> Western Great Plains Herbaceous Vegetation	Great Plains Mixed Grass Prairies (Sandstone/Gravel Breaks)	G3	S2	No
44140	<i>Populus deltoides</i> ssp. <i>wislizeni</i> / Disturbed Understory Woodland		GNR	SNR	No
24742	<i>Andropogon hallii</i> - <i>Calamovilfa longifolia</i> Herbaceous Vegetation	Northern Sandhill Prairie	G4G5	S2	No

## REFERENCES

Reference ID	Full Citation
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	02/15/1999
Version Author	Kittel, G.M.

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