

# Level 4 Potential Conservation Area (PCA) Report

Name Chico Basin Shortgrass Prairie

Site Code S.USCOHP\*22708

## IDENTIFIERS

Site ID 441 Site Class PCA  
 Site Alias Edison Road  
 Site Alias Squirrel Creek Road  
 Site Alias Truckton Edison

## 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 383152N  
 State Colorado Longitude 1041026W

<u>Quad Code</u>	<u>Quad Name</u>
38104-G3	Big Springs Ranch
38104-C2	Boone Hill
38104-C4	Devine
38104-E2	Edison School
38104-F3	Hanover NE
38104-F4	Hanover NW
38104-E3	Hanover SE
38104-D2	Highlands Church
38104-C3	North Avondale
38104-D3	North Avondale NE
38104-F2	Truckton
38104-G2	Yoder
38104-E4	Hanover
38104-G1	Rush
38104-F1	Truckton NE
38104-E1	Truckton SE
38104-D4	Bar JH Ranch

## County

El Paso (CO)  
 Pueblo (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
11020004	Chico
11020005	Upper Arkansas-Lake Meredith
11020008	Horse

## SITE DESCRIPTION

<b>Minimum Elevation</b>	4,480.00 Feet	1,366.00 Meters
<b>Maximum Elevation</b>	6,245.00 Feet	1,903.00 Meters

## Site Description

The Chico Basin Shortgrass Prairie site encompasses over 250 square miles of shortgrass prairie in northern Pueblo and southern El Paso counties. The site is characterized by a mixture of open, flat areas and gently rolling terrain that drains into mostly ephemeral streams and swales, or in the northeast section, closed-basin depressions (playas). The site includes extensive tracts of native shortgrass prairie with ground cover that consists primarily of closely-grazed stands of blue grama (*Bouteloua gracilis*). Cholla (*Opuntia imbricata*) and yucca (*Yucca glauca*) occur in scattered to moderately-dense stands on some portions of the site. Plant species diversity generally is low throughout the site with dominant species including blue grama, three-awn grass (*Aristida spp.*), galleta grass (*Hilaria jamesii*), sand dropseed (*Sporobolus cryptandrus*), rabbitbrush (*Chrysothamnus nauseosus*), yucca, cholla, and prickly pear (*Opuntia spp.*). Many large black-tailed prairie dog (*Cynomys ludovicianus*) complexes occur scattered throughout the site. Prairie dogs are thought to be a keystone species (Kotliar et al. 1999) and their presence increases the diversity of plant and animal

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communities within the site. Burrowing Owl (*Athene cunicularia*) are commonly seen within prairie dog colonies within the site. Many breeding locations for Mountain Plover (*Charadrius montanus*), a declining shortgrass prairie species, are documented within the site. Mountain Plover are known to inhabit areas with low vegetation and a high percentage of bare ground such as prairie dog towns and heavily grazed shortgrass prairie (Knopf 1996). The PCA is covered by a mosaic of soil types (Larsen 1981). Most of the observed prairie dog towns, Burrowing Owls, and Mountain Plovers, however, occurred on a single soil type: Bijou sandy loam. This deep, well-drained soil is characterized by rapid permeability, moderate available water capacity, low organic matter in its surface layer, and slow surface runoff. The hazards of erosion and soil blowing are moderate, and the effective rooting depth for plants is 60 inches (150 centimeters) or more (Larsen 1981). Other shortgrass prairie wildlife species known within the site include swift fox (*Vulpes velox*), McCown's Longspur (*Calcarius mccownii*), Long-billed Curlew (*Numenius americanus*), and massasauga (*Sistrurus catenatus*). In addition, ongoing monitoring at the Pueblo Chemical Depot in the southern portion of the site has documented 21 mammal species, 52 orthopteran species, 65 additional arthropod species from five orders, five species of herpatofauna, and numerous species of songbirds and hawks. The Depot supports a large and healthy population of black-tailed prairie dogs that is recovering from a plague epizootic of 1999. Grazing of domestic livestock occurred historically on most of the site and continues today. Portions of Pueblo Chemical Depot have not been grazed since 1942. Small portions of the site, especially on private property, were converted to agricultural croplands during the past 100 years. The cultivation of some of these areas was subsequently abandoned, producing "old-field" (weedy, early-successional) habitats. Small areas of the site remain under cultivation. On the private land portions, some areas have been developed for rural housing. Development pressure is increasing and land is being subdivided, usually into 35-acre parcels.

## Key Environmental Factors

No Data

## Climate Description

No Data

## Land Use History

No Data

## Cultural Features

No Data

## SITE DESIGN

Site Map P - Partial

Mapped Date 04/15/2003

Designer Doyle, G.A. and S.M. Kettler

## Boundary Justification

The boundary encompasses the numerous locations at which breeding Mountain Plovers were observed and adjacent areas of suitable breeding habitat. The site is bisected throughout its length by a five-mile wide zone of relatively rolling terrain covered by aeolian (wind-deposited) sands and by vegetation (especially sandsage (*Artemisia filifolia*)) that render the land unsuitable for use by Mountain Plovers. Mountain Plovers prefer flat, open areas with very low-growing or closely-cropped vegetation. This vast expanse of very loose, sandy soil is also unsuitable for burrow construction and therefore is unoccupied by prairie dogs (and Burrowing Owls). The borders include the best known high quality shortgrass prairie habitat. The northeast border may expand as additional information becomes available.

Primary Area 185,366.57 Acres

75,015.49 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

## Biodiversity Significance Comments

The Chico Basin Shortgrass Prairie site supports several excellent and good (A- and B-ranked) occurrences of Mountain Plover (*Charadrius montanus*), a globally imperiled (G2/S2) species listed as sensitive by the BLM and Forest Service, and a species of special concern by the State of Colorado. The site also supports an excellent (A-ranked) occurrence of swift fox (*Vulpes velox*), a globally vulnerable (G3/S3) species designated a candidate for federal listing as threatened, sensitive by the Forest Service, and a species of special concern by the State of Colorado. There are also several excellent to fair (A- to C-ranked) occurrences of black-tailed prairie dog (*Cynomys ludovicianus*) (G4/S4), a species petitioned for federal listing as threatened and a species of special concern in Colorado, good (B-ranked) occurrences of the state rare (G4/S2B) Long-billed Curlew (*Numenius americanus*) and several occurrences of the state rare (G3G4/S2) massasauga (*Sistrurus catenatus*).

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Other Values Rank No Data

**Other Values Comments**

No Data

**LAND MANAGEMENT ISSUES**

**Land Use Comments**

No Data

**Natural Hazard Comments**

No Data

**Exotics Comments**

No Data

**Offsite**

No Data

**Information Needs**

No Data

**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>
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
16720	<i>Sistrurus catenatus</i>	Massasauga	G3G4	S2	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
18461	<i>Calcarius mccownii</i>	McCown's Longspur	G4	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
21012	<i>Vulpes velox</i>	Swift Fox	G3	S3	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
18461	<i>Calcarius mccownii</i>	McCown's Longspur	G4	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
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17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No

## REFERENCES

Reference ID	Full Citation
-	No Data

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

Version Date	04/15/2003
Version Author	Doyle, G.A. and S.M. Kettler

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