

Level 4 Potential Conservation Area (PCA) Report

Name Southern Purgatoire

Site Code S.USCOHP*25151

IDENTIFIERS

Site ID 2160 Site Class PCA
 Site Alias Southern Purgatoire Shortgrass Prairie

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 371240N
 State Colorado Longitude 1035620W

<u>Quad Code</u>	<u>Quad Name</u>
37103-A7	Branson SE
37104-B2	Patterson Crossing
37103-C7	Doss Canyon South
36104-H1	Trinchera Pass
37103-D6	Johnson Canyon
37103-C8	Painted Canyon
37103-D7	Doss Canyon North
37103-B7	Box Ranch
37103-A6	Pine Canyon
37103-C6	Humbar Spring
37104-B1	Trinchera Cave
37103-A8	Branson
37104-A1	Trinchera
37104-A2	Abeyta
37103-B6	Miners Peak
36103-H8	Alps Mesa
36103-H7	Emery Peak
37103-B8	Trementina Canyon

County

Union (NM)
 Las Animas (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
11040001	Cimarron headwaters
11020010	Purgatoire

SITE DESCRIPTION

Minimum Elevation	5,120.00	Feet	1,560.58	Meters
Maximum Elevation	6,400.00	Feet	1,950.72	Meters

Site Description

Southern Purgatoire includes the escarpment that lies between two major canyons, the Chacuaco Canyon and the Purgatoire Canyon. Shortgrass prairie dominates the area. Vegetation consists of approximately 56% grassland or mixed grasses/forbs/cacti and 41% mixed shrubland. The remainder of the site includes trace amounts of pinon - juniper, greasewood, water, bare land and agricultural land. Multiple grassland birds inhabit the site. Mountain Plover, Ferruginous Hawk, swift fox, Long-billed Curlew, Burrowing Owl, and Texas horned lizards have all been documented. Black-tailed prairie dogs, an important food source for Ferruginous Hawks, have also been observed.

Key Environmental Factors

The rich diversity of species and plant communities is mostly attributable to the presence of an unfragmented native shortgrass prairie that has experienced minimal disturbance.

Climate Description

The climate is semi-arid with precipitation averaging about 14 inches per year. About half of the yearly precipitation is received during the months of May through August. Winter average minimum temperatures are

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in the range of 16-20 °F, and summer average maximum temperatures in July and August are near or above 90 °F (HPRCC 2008).

Land Use History

Much of the following information regarding land use history is from Friedman 1985. The area of the Purgatoire Canyon is believed to have been inhabited by people for as long as 5,000 years, and many native tribes lived in or visited the area. The first people of European descent to enter the area were with the Coronado expedition of 1540. Although considered part of Spain, the area remained sparsely populated by Euro-Americans until about 1821 when Mexico received independence from Spain and trade began between Santa Fe and Missouri. Soon thereafter, Spanish émigrés began to colonize the larger canyons. They built small settlements and ranches and raised herds of goats and sheep. The Purgatoire Canyon itself became an alternate trade route, and European settlement increased to a peak of about 400 people in the canyon by the late 1880s. Cattle and sheep ranching dominated the area until around 1909 when dry-land-farming homesteaders fenced the land. In the 1920s and 1930s, the Purgatoire Canyon area was affected by the Dust Bowl and many abandoned their homes, leaving the area to sheep and cattle ranchers. While sheep grazing was mostly discontinued in the 1950s, cattle grazing continued on most private lands. The creation of the Department of the Army's Pinon Canyon Maneuver Site in the 1980s removed grazing from that site, however, cattle grazing continues as the primary land use on adjacent private lands.

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial

Mapped Date 10/18/2004

Designer Sovell, J.R.

Boundary Justification

The site was drawn primarily for grassland species, especially Mountain Plover and swift fox, and includes a mosaic of mixed grassland and mixed shrubland. Pinon - juniper woodland to the west, north and east were excluded as well as irrigated agriculture to the south. The eastern boundary ends at Chacuaco Canyon and Mesa de Maya which act as sufficient barriers to the dispersal of swift fox. There is an area of open landscape between the canyon and mesa along Highway 160 that may allow for some movement of swift fox between this site and the Comanche Grassland site, which adjoins this site to the east. Movement of fox between these two sites, however, is probably infrequent. The western boundary is defined by the Purgatoire Canyon, which acts as an effective barrier to swift fox dispersal. Boundary was drawn using Landsat ETM+ satellite imagery and 25m Colorado Vegetation Classification data (CDOW).

Primary Area 248,108.27 Acres

100,406.25 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site supports extant occurrences of the globally imperiled (G2/S2B) Mountain Plover (*Charadrius montanus*), an extant occurrence of the globally vulnerable (G3/S3) swift fox (*Vulpes velox*), a fair (C-ranked) occurrence of the state rare (G4/S3) black-tailed prairie dog (*Cynomys ludovicianus*), and good (B-ranked) and fair (C-ranked) occurrences of the state rare (G5/S2B) Long-billed Curlew (*Numenius americanus*).

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

Currently and historically the site was grazed, especially by cattle.

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

No Data

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Information Needs

Ferruginous Hawk may be nesting within the site. More information is needed to verify breeding and develop element occurrences.

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
21012	<i>Vulpes velox</i>	Swift Fox	G3	S3	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	Yes
22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No
22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
192546	Central Shortgrass Prairie Bird Working Group. 2004. Meeting held on July 29, 2004 at CSU. Participants included personnel from CNHP, Rocky Mountain Bird Observatory, Colorado Division of Wildlife and Playa Lakes Joint Venture.
193570	Colorado Division of Wildlife. 2001-2003. Basinwide Vegetation Classification. Online at http://www.ndis.nrel.colostate.edu .
195120	Friedman, Paul D. 1985. Final Report of History and Oral History Studies of the Fort Carson Pinon Canyon Maneuver Area, Las Animas, Colorado. USDI. National Park Service, Interagency Archaeological Services Branch, Rocky Mountain Regional Office, Denver, CO.
195121	HPRCC. 2008. High Plains Regional Climate Center Web Page. Based on data from automated weather stations operated by Colorado for southeastern Colorado area. High Plains Regional Climate Center Web Page: < http://www.hprcc.unl.edu >
195097	Stevens, J., J. Sovell, D. Culver, K. Decker, L. Grunau, A. Lavender, and C. Gaughan. 2008. Final Report: Southeastern Colorado Survey of Critical Biological Resources 2007. Colorado Natural Heritage Program, Fort Collins, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 04/17/2008

Version Author Sovell, J.R.

Disclaimer

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