

# Level 4 Potential Conservation Area (PCA) Report

Name Purgatoire Prairie

Site Code S.USCOHP\*25152

## IDENTIFIERS

Site ID 2161 Site Class PCA  
 Site Alias Packers Gap South  
 Site Alias Picketwire Canyon  
 Site Alias Timpas  
 Site Alias Shale Hills

## 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 374106N  
 State Colorado Longitude 1035620W

<u>Quad Code</u>	<u>Quad Name</u>
37104-H3	Red Top Ranch
37104-H2	Yellowbank Creek
37104-H1	Apishapa Bridge
38104-B3	Avondale
38104-B2	Nepesta
38104-B1	Fowler
37104-D5	The Hogback
37104-D4	Vega Corral
37104-D3	Seven Lakes Reservoir
37104-D2	Tyrone
37104-D1	Brown Sheep Camp
37103-D8	Rock Crossing
37103-D7	Doss Canyon North
37104-F3	Jones Lake Spring
37104-F2	Sun Valley Ranch
37104-F1	Delhi
37103-F8	Bloom
37103-F7	Sheep Canyon
37103-F6	Packers Gap
37103-F5	Riley Canyon
37103-F4	Corbin Canyon
37103-H8	Timpas NW
37103-H7	Timpas NE
37103-H6	Hawley
37103-H5	La Junta
37103-H4	Thompson Arroyo
37103-H3	Hackamore Ranch
37104-E4	Little Dome
37104-E3	Hidden Valley Ranch
37104-E2	Bates Lake
37104-E1	Thatcher
37103-E8	Lockwood Arroyo
37103-E7	Stage Canyon
37103-E6	O V Mesa
37104-G3	Myers Canyon
37104-G2	Sanford Hills
37104-G1	Snowden Lake
37103-G8	Timpas SW

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37103-G7 Timpas  
 37103-G6 La Junta SW  
 37103-G5 La Junta SE  
 37103-G4 Higbee  
 38104-A3 Chicos Well  
 38104-A2 Flying A Ranch  
 38104-A1 Hardesty Reservoir  
 38103-A7 Manzanola  
 38103-A6 Rocky Ford  
 38103-A4 Hadley  
 37103-G3 Turkey Canyon  
 37104-C5 Ludlow  
 37104-C4 Hoehne  
 37104-C3 Earl  
 37104-C2 Model  
 37104-C1 Lambing Spring  
 37103-C8 Painted Canyon  
 37104-B2 Patterson Crossing  
 37104-B1 Trinchera Cave

## County

Las Animas (CO)  
 Bent (CO)  
 Pueblo (CO)  
 Otero (CO)

## Watershed Code

## Watershed Name

11020010 Purgatoire  
 11020007 Apishapa  
 11020005 Upper Arkansas-Lake Meredith

## SITE DESCRIPTION

<b>Minimum Elevation</b>	4,020.00	<b>Feet</b>	1,225.30	<b>Meters</b>
<b>Maximum Elevation</b>	6,450.00	<b>Feet</b>	1,965.96	<b>Meters</b>

## Site Description

The site is dominated by rolling grasslands with hills of juniper that also contain occasional stands of pinon pine. It is approximately 72% grassland or grass/forb/cacti mix, with moderate amounts of mixed shrubland (roughly 16%), small amounts of pinon - juniper (roughly 5%) and trace amounts of greasewood, riparian/open water and agricultural land. Mountain Plover, Ferruginous Hawk, Cassin's Sparrow, Long-billed Curlew, Burrowing Owl, McCown's Longspur, Lewis's Woodpecker, triploid Colorado checkered whiptail, massasauga, and a maternity colony of Townsends big-eared bats have been observed within the site. Numerous colonies of black-tailed prairie dogs are scattered throughout as are records of swift fox, a predator of prairie dogs. Priority plant communities in the area include alkali sacaton - vine mesquite (*Sporobolus airoides* - *Panicum obtusum*), Great Plains mixed grass prairie (*Bouteloua curtipendula* - *Schizachyrium scoparium* - (*Eriogonum flavum* and *Schizachyrium scoparium* - *Bouteloua curtipendula*) and shortgrass prairie (*Bouteloua gracilis* - *Hilaria jamesii* and *Atriplex canescens* / *Bouteloua gracilis*). Three rare butterflies have been observed and include the Colorado blue, simius roadside skipper, and rhesus skipper. A State rare reptile, the Texas horned lizard, has also been documented.

## 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 in the range of 16-20 °F, and summer average maximum temperatures in July and August are near or above

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90 °F (HPRCC 2008).

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## 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 04/16/2008  
Designer Sovell, J.R.

## Boundary Justification

The boundary is drawn with a number of species in mind including Mountain Plover, swift fox, Ferruginous Hawk, Long-billed Curlew, and triploid Colorado checkered whiptail. Prairie dog towns in the grasslands and hills of sparse juniper are included, as well as swift fox, a predator of the prairie dogs. To the east and south the boundary is defined by the Purgatoire Canyon, which acts as sufficient barrier to the dispersal of swift fox. Boundary was drawn using Landsat ETM+ satellite imagery and 25m Colorado Vegetation Classification data (CDOW).

Primary Area 1,244,449.41 Acres 503,612.81 Hectares

### SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

## Biodiversity Significance Comments

The biodiversity rank is based on excellent to good (AB-ranked) and good (B-ranked) occurrences of the triploid Colorado checkered whiptail (*Aspidoscelis neotesselata*), a globally imperiled (G2G3/S2) lizard. The site also supports good to fair (BC-ranked) and extant occurrences of the globally imperiled (G2/S2) Mountain Plover (*Charadrius montanus*), good (B-ranked) and extant occurrences of the globally vulnerable (G3/S3) swift fox (*Vulpes velox*), excellent (A-ranked) and good (B-ranked) occurrences of the state rare (G4/S3) black-tailed prairie dog (*Cynomys ludovicianus*), excellent (A-ranked) and good (B-ranked) occurrences of the state rare (G4/S3B) Ferruginous Hawk (*Buteo regalis*), and good (B-ranked) and extant 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

Historically the area was grazed, especially by cattle, but some sheep grazing previously occurred. Part of this site is currently a U.S. Army training area.

## Natural Hazard Comments

No Data

## Exotics Comments

No Data

## Offsite

No Data

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## 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>
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No
16720	<i>Sistrurus catenatus</i>	Massasauga	G3G4	S2	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
16720	<i>Sistrurus catenatus</i>	Massasauga	G3G4	S2	No
22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No
20191	<i>Aspidoscelis neotesselata</i>	Triploid Colorado Checkered Whiptail	G2G3	S2	No
16720	<i>Sistrurus catenatus</i>	Massasauga	G3G4	S2	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
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19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
24512	<i>Bouteloua gracilis</i> Herbaceous Vegetation	Blue Grama Short Grass Prairie	G4Q	S4	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
19973	<i>Buteo regalis</i>	Ferruginous Hawk	G4	S3B,S4N	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
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22686	<i>Phrynosoma cornutum</i>	Texas Horned Lizard	G4G5	S3	No
21012	<i>Vulpes velox</i>	Swift Fox	G3	S3	No
18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
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18609	<i>Charadrius montanus</i>	Mountain Plover	G2	S2B	No
20191	<i>Aspidoscelis neotesselata</i>	Triploid Colorado Checkered Whiptail	G2G3	S2	Yes
18461	<i>Calcarius mccownii</i>	McCown's Longspur	G4	S2B	No
18461	<i>Calcarius mccownii</i>	McCown's Longspur	G4	S2B	No
17796	<i>Cynomys ludovicianus</i>	Black-tailed Prairie Dog	G4	S3	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
17214	<i>Numenius americanus</i>	Long-billed Curlew	G5	S2B	No
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## REFERENCES

Reference ID	Full Citation
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 <a href="http://www.ndis.nrel.colostate.edu">http://www.ndis.nrel.colostate.edu</a> .
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: < <a href="http://www.hprcc.unl.edu">http://www.hprcc.unl.edu</a> >
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	04/16/2008
Version Author	Sovell, J.R.

## Disclaimer

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