

# Level 4 Potential Conservation Area (PCA) Report

Name Little Cochetopa Creek

Site Code S.USCOHP\*27776

## IDENTIFIERS

Site ID 2634 Site Class PCA  
Site Alias None

## 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 382557N  
State Colorado Longitude 1061402W

Quad Code Quad Name  
38106-D2 Mount Ouray

## County

Gunnison (CO)  
Saguache (CO)  
Chaffee (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14020003	Tomichi
11020001	Arkansas Headwaters

## SITE DESCRIPTION

<b>Minimum Elevation</b>	11,020.00	<b>Feet</b>	3,358.90	<b>Meters</b>
<b>Maximum Elevation</b>	12,685.00	<b>Feet</b>	3,866.39	<b>Meters</b>

## Site Description

The site encompasses a wide glacial cirque on the northeast side of the Continental Divide in the Sawatch Mountain Range. It extends to the Continental Divide at 12,685 ft and lowers to 11,020 ft where the valley begins to narrow and steepen. Little Cochetopa Creek has its headwaters in this glacial cirque and flows to the northeast until its confluence with the South Arkansas River, approximately two miles west of Poncha Springs. Little Cochetopa Creek begins as snowmelt that gathers into rivulets and alpine tarns and then flow and coalesce into first order streams on the slopes of a glacial cirque around 12,000 ft. At their origins, the streams plunge down through steep talus and scree slopes. Several streams unite at 11,300 ft when they reach the valley bottom. There they meander widely across the broad, gently sloping, and glacially sculpted basin. Basin geology is Pleistocene aged glacial drift from the Pinedale and Bull Lake glaciation (Tweto 1979). Cirque walls are metamorphic rock, aged 1,700 to 1,800 M.Y., of felsic and hornblende gneisses. Soils are saturated to inundated and hummocky with peat formation to a depth greater than 20 inches that occurs as a patchy distribution throughout the site. Copious amounts of snowmelt from the high surrounding peaks and ridges maintain the lush wetland vegetation that characterizes the verdant valley floor habitat. Beaver activity is prolific and is important in conserving and maintaining flows and soil moisture. Stream sinuosity is moderate to high and the stream channel is a characteristic Rosgen type "E" channel. Out-of-bank flows are common and contribute to maintaining soil moisture. Valley bottom habitat is characterized by a mosaic of willow carrs and wet herbaceous meadows. Willow carrs occur as a patchy mosaic of willow species dominated by the planeleaf willow / bluejoint reedgrass - water sedge (*Salix planifolia* / *Calamagrostis canadensis* - *Carex aquatilis*) shrubland association. Other common shrubs include bareground willow (*Salix brachycarpa*) and shrubby cinquefoil (*Dasiphora floribunda*). Herbaceous wet meadows interfinger with the stands of willow forming a complex habitat mosaic. Graminoids and forbs are present but graminoids dominate herbaceous cover. Bluejoint reedgrass and water sedge dominate the herbaceous cover but numerous other graminoids are also present including Rocky Mountain sedge (*Carex scopulorum*), needle spike sedge (*Eleocharis acicularis*), tufted hairgrass (*Deschampsia caespitosa*), kobresia (*Kobresia myosuroides*), alpine timothy (*Poa alpina*), Drummond's rush (*Juncus drummondiana*) and subalpine rush (*Juncus mertensianus*). Forbs are diverse but cover is typically much less than graminoid cover. Typical forb species include elephant head (*Pedicularis groenlandica*), star gentian (*Swertia perennis*), King's crown (*Rhodiola integrifolia*), alpine lousewort (*Pedicularis sudetica*), brook saxifrage (*Saxifraga odontoloma*), and triangular-leaf senecio (*Senecio triangularis*).

## Key Environmental Factors

Hydrology and soils are the key driving factors that exert a major influence on biota at the site.

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## Climate Description

Climate records in the town of Pitkin, located approximately 21 miles to the northwest but on the west side of the Continental Divide, indicate winters are generally cold with abundant snowfall (114.2 inches annual average) and summers are mild and wet. Mean annual precipitation is 16.92 inches; the wettest months are July and August with an average precipitation of 2.17 and 2.05 inches respectively while the driest are November with 1.01 and June with 1.03 inches; the coldest month is January with an average temperature of 12 deg F and the warmest is July at 55 deg F (Western Regional Climate Center 2009).

## Land Use History

No Data

## Cultural Features

No Data

## SITE DESIGN

Site Map Y - Yes

Mapped Date 04/01/2009

Designer Malone, D.G.

## Boundary Justification

The boundary encompasses the occurrence and includes a buffer to protect the ecological processes essential to sustaining the plant community. The primary ecological process essential to long-term community viability is hydrology, specifically shallow groundwater or surface flow with annual episodic flooding (Rondeau 2001 and NatureServe 2009). Snowmelt runoff from the surrounding watershed and/or beaver activity maintains this hydrologic system (Rondeau 2001 and NatureServe 2009) is integral to the sustainability of the site.

Primary Area 1,163.29 Acres

470.77 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

The site supports an excellent (A-ranked) example of a globally secure (G5/S4) *Salix planifolia* / *Carex aquatilis* subalpine riparian willow carr. Although this plant association is known throughout the Rocky Mountains in Wyoming, Colorado and Utah, impacts from improper grazing, road improvements and heavy recreational use threaten its viability (NatureServe 2009).

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>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>
	24850	<i>Salix planifolia</i> / <i>Carex aquatilis</i> Shrubland	Subalpine Riparian Willow Carr	G5	S4	Yes

## REFERENCES

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<u>Reference ID</u>	<u>Full Citation</u>
198290	Culver, D.R., D. Malone, S.L. Neid, and J. Handwerk. 2009. Final Report: Survey of Critical Biological Resources in Chaffee County. Colorado Natural Heritage Program, Fort Collins, CO.
198314	NatureServe Explorer (Web Page). Accessed 2010. An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <a href="http://www.natureserve.org/explorer">http://www.natureserve.org/explorer</a> .
190863	Rondeau, R. 2001. Ecological system viability specifications for Southern Rocky Mountain ecoregion. First Edition. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO. 181 pp.
192747	Tweto, O. 1979. Geologic Map of Colorado, 1:500,000. United States Geological Survey, Department of Interior, and Geologic Survey of Colorado, Denver, CO.
198320	Western Regional Climate Center. 2009. Record Climate Summaries. Accessed in 2009. <a href="http://www.wrcc.dri.edu/">http://www.wrcc.dri.edu/</a>

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

**Version Date** 04/01/2009  
**Version Author** Malone, D.G.

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