

# Level 4 Potential Conservation Area (PCA) Report

Name Middle and South Cottonwood Creeks

Site Code S.USCOHP3\*2459

## IDENTIFIERS

Site ID 575 Site Class PCA  
Site Alias Denny Creek  
Site Alias Collegiate Peaks Campground

## 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 384709N  
State Colorado Longitude 1061934W

## Quad Code Quad Name

38106-G3	Mount Yale
38106-F4	Cumberland Pass
38106-F3	Saint Elmo
38106-G2	Buena Vista West
38106-G4	Tincup

## County

Chaffee (CO)  
Gunnison (CO)

## Watershed Code Watershed Name

11020001	Arkansas Headwaters
14020001	East-Taylor

## SITE DESCRIPTION

<b>Minimum Elevation</b>	8,755.00	<b>Feet</b>	2,668.52	<b>Meters</b>
<b>Maximum Elevation</b>	12,405.00	<b>Feet</b>	3,781.04	<b>Meters</b>

## Site Description

This site includes about 10 breeding sites for the boreal toad each year. The habitat includes high elevation riparian with cottonwood and willow communities, alpine and subalpine meadows, spruce / fir and aspen forests. Montane riparian forest communities include *Populus angustifolia* / *Alnus incana* woodlands and *Populus tremuloides* / *Acer glabrum* forest. Subalpine riparian shrubland communities include *Betula nana* / mesic forb - mesic graminoid shrubland. Boreal Owls (*Aegolius funereus*) have also been documented in the site.

## Key Environmental Factors

No Data

## Climate Description

The area averages 300 days of sunshine each year. A typical summer day is sunny, in the high 70's to low 80's and evening temperatures in the high 40's and low 50's. Annual rainfall is 10.15" and annual snowfall is 30.4" with most snow occurring from the end of October through April.

## Land Use History

High to medium use recreation (camping, ORV use, fishing, hunting) and historic mining and logging operations.

## Cultural Features

No Data

## SITE DESIGN

Site Map P - Partial Mapped Date 11/02/2005  
Designer Gaughan, C.R.

## Boundary Justification

The site boundary was created by dissolving the Middle and South Cottonwood Creeks drainages from 12 digit hydrological units then clipping it to the digital elevation model at 3,780 meters. This elevation range allowed two hypothesized dispersal corridors, the Ptarmigan Lake area where boreal toads have been observed at high elevation on both sides of watershed divide as well as the confluence where historic toad

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records exist below. Using PIT tags, dispersal between the Middle and South Cottonwood Creeks drainages has been documented. Boreal toad success in these drainages is closely tied to water quality, water level in breeding ponds, winter refugia, beaver activity, and invertebrate populations. Also, little is known about the boreal toad life cycle away from the breeding pond. Thus, much of the watershed is included in the site to encompass possible dispersal corridors and certainly water quality issues. The boundaries also include the immediate ecological processes and watersheds need to support the riparian plant communities.

Primary Area 37,580.04 Acres 15,208.16 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B1: Outstanding Biodiversity Significance

### Biodiversity Significance Comments

The site supports excellent (A-ranked) occurrences of a globally critically imperiled subspecies (G4T1Q/S1), boreal toad (*Bufo boreas* pop. 1). As of 2005, this is one of two viable sites for boreal toads and the best known occurrence in Colorado. It also supports high quality examples of several globally rare riparian communities.

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

Hydrological processes originating outside of the planning boundary, including water quality, quantity, flow and timing must be managed to maintain site viability.

### Information Needs

No Data

## 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>
20351	<i>Bufo boreas</i> pop. 1	Boreal Toad (Southern Rocky Mountain Population)	G4T1Q	S1	Yes
20351	<i>Bufo boreas</i> pop. 1	Boreal Toad (Southern Rocky Mountain Population)	G4T1Q	S1	Yes
24861	<i>Populus tremuloides</i> / <i>Acer glabrum</i> Forest	Montane Riparian Forests	G2	S2	No
24497	<i>Betula nana</i> / Mesic Forbs - Mesic Graminoids Shrubland	Subalpine Riparian Shrubland	G3G4	S3	No
24541	<i>Populus angustifolia</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forest	G3	S3	No
24327	<i>Aegolius funereus</i>	Boreal Owl	G5	S2	No
24473	<i>Salix drummondiana</i> / <i>Calamagrostis canadensis</i> Shrubland	Lower Montane Willow Carrs	G3	S3	No
23148	<i>Boechea crandallii</i>	Crandall's rock-cress	G2	S2	No

## REFERENCES

<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.
193499	Loeffler, C. 1998. Boreal Toad Recovery Team Conservation Plan and Agreement.
193504	Natural Resources Conservation Service (NRCS), Colorado State Office. 2001. Subwatersheds (12 digit hydrological units) digital data.
193505	U.S. Geological Survey (USGS), EROS Data Center. 1999. National Elevation Database. Edition 1. Online: <a href="http://edcnts12.cr.usgs.gov/ned/ned.html">http://edcnts12.cr.usgs.gov/ned/ned.html</a> .

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## ADDITIONAL TOPICS

### Additional Topics

Original site design by Burkhard, D. 1995-04-24.

## VERSION

Version Date 11/02/2005

Version Author Gaughan, C.R.

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