

# Level 4 Potential Conservation Area (PCA) Report

Name Greenhorn Creek

Site Code S.USCOHP\*9942

## IDENTIFIERS

Site ID 69 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 375504N  
 State Colorado Longitude 1050040W

## Quad Code Quad Name

37105-H1 San Isabel  
 37104-H8 Rye

## County

Pueblo (CO)  
 Custer (CO)  
 Huerfano (CO)

## Watershed Code Watershed Name

11020006 Huerfano  
 11020002 Upper Arkansas

## SITE DESCRIPTION

<b>Minimum Elevation</b>	7,200.00	<b>Feet</b>	2,195.00	<b>Meters</b>
<b>Maximum Elevation</b>	12,237.00	<b>Feet</b>	3,730.00	<b>Meters</b>

## Site Description

Greenhorn Creek begins in the Wet Mountains in Custer County and flows east into Pueblo County and eventually to the Saint Charles and Arkansas rivers. The Greenhorn Creek site encompasses the headwaters of the creek and about six miles downstream to Rye Mountain Park. The lower two miles support good examples of two montane riparian forest communities: white fir with narrowleaf cottonwood and Rocky Mountain maple (*Abies concolor* - *Picea pungens* - *Populus angustifolia* / *Acer glabrum*) and narrowleaf cottonwood with alder (*Populus angustifolia* / *Alnus incana*). The diversity of plant species is high within the communities and includes willows (*Salix monticola*, *S. irrorata*, *S. bebbiana*), chokecherry (*Padus virginiana*), red raspberry (*Rubus ideaus*), bush honeysuckle (*Lonicera involucrata*), river birch (*Betula occidentalis*), and beaked hazelnut (*Corylus cornuta*). Greenhorn Creek is a steep gradient, perennial stream with a rocky/bouldery bed and abundant woody debris. The woody debris provides habitat for a variety of aquatic insects including stoneflies, mayflies, and caddisflies. Groundwater seepage in side channels and in the main channel creates marshy areas with dense vegetation. The Colorado Division of Wildlife reintroduced Greenback cutthroat trout (*Oncorhynchus clarkii stomias*) to the upper reach of Greenhorn Creek in 1988 (U.S. Fish and Wildlife Service 1998). The natural reproduction rates are currently being monitored by CDOW and the population is not currently considered stable but may be within the next couple of years (Poliky et al. 1999). The surrounding mountains in the lower reaches are forested with ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) with patches of aspen. The mountains in the higher reaches support spruce - fir forests. There is little evidence of human-caused alteration of the hydrological processes upstream of the occurrence and within the watershed. The stream undergoes flooding as is evidenced by debris in the riparian vegetation. The upstream watershed is forested and managed by the U.S. Forest Service. The southern half is included within the 22,040-acre Greenhorn Mountain Wilderness Area, so designated in 1993. The Wilderness Area includes Greenhorn Mountain, the highest peak in the Wet Mountains (12,347 feet). Downstream, the majority of flow in Greenhorn Creek is diverted to Lake Beckwith to supply the water needs of the town of Colorado City. The diversion occurs near the confluence with Cold Spring Creek (about two miles east of Rye). Lake Beckwith was built in the 1950's and there are currently plans to expand the reservoir (D. Crawford, pers. comm., CDOW).

## Key Environmental Factors

No Data

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## Climate Description

No Data

## Land Use History

No Data

## Cultural Features

No Data

### SITE DESIGN

Site Map Y - Yes

Mapped Date 06/15/2001

Designer Doyle, G.A.

## Boundary Justification

The boundary includes the riparian community and the upstream watershed to encompass the headwaters of the stream and the known extent of the greenback cutthroat trout population. The upstream watershed is included to account for continued surface flow and periodic flooding that are necessary for the maintaining the ecological functions and the viability of the occurrences. The boundary was designated using the hydrologic unit GIS coverage (Natural Resources Conservation Service 2000) and the 1:100,000 scale USGS topographic map. The entire upstream watershed of Greenhorn Creek needs to be considered when developing a plan for the long-term viability of this site.

Primary Area 6,426.49 Acres

2,600.72 Hectares

### SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

## Biodiversity Significance Comments

This site contains a good (B-ranked) occurrence of a globally imperiled (G2/S2) montane riparian forest community, white fir with blue spruce, narrowleaf cottonwood, and rocky mountain maple (*Abies concolor* - *Picea pungens* - *Populus angustifolia* / *Acer glabrum*), and a good (-ranked) of a globally vulnerable (G3/S3) narrowleaf cottonwood / thinleaf alder community (*Populus angustifolia* / *Alnus incana*). Additionally, an extant occurrence of greenback cutthroat trout (*Oncorhynchus clarkii stomias*) (G4T2T3/S2) occurs in Greenhorn Creek.

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, timing and flow must be managed to maintain site viability.

## Information Needs

No Data

### ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24541	<i>Populus angustifolia</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forest	G3	S3	No
24810	<i>Abies concolor</i> - <i>Picea pungens</i> - <i>Populus angustifolia</i> / <i>Acer glabrum</i> Forest	Montane Riparian Forests	G2	S2	Yes
16680	<i>Oncorhynchus clarkii stomias</i>	Greenback Cutthroat Trout	G4T2T3	S2	No

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## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
169760	Melby, J. L. 1999. Fisheries Inventories, Middle Arkansas River Basin and Fron Range. Colorado Division of Wildlife.
161106	Policky, G.A., J.L. Melby and G.S. Dowler. 1999. Greenback cutthroat trout recovery efforts, 1999 Progress report, Southeast Region. Colorado Division of Wildlife.
171988	U.S. Fish and Wildlife Service. 1998. Greenback cutthroat trout recovery plan. U.S. Fish and Wildlife Service, Denver, Colorado.

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

**Version Date** 09/14/2003  
**Version Author** Spackman, S.C.

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