

Level 4 Potential Conservation Area (PCA) Report

Name Cuates Creek

Site Code S.USCOHP*24970

IDENTIFIERS

Site ID 2139 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 370139N
State Colorado Longitude 1052346W

Quad Code Quad Name

37105-A3 La Valley
37105-A4 Sanchez Reservoir

County

Costilla (CO)

Watershed Code Watershed Name

13010002 Alamosa-Trinchera

SITE DESCRIPTION

Minimum Elevation	8,300.00 Feet	2,529.84 Meters
Maximum Elevation	11,600.00 Feet	3,535.68 Meters

Site Description

This site encompasses most of the Cuates Creek drainage. The site spans from the subalpine to montane zones, flowing through a diversity of riparian plant community types. Cuates Creek supports an excellent, genetically pure, and historic population of the Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*). Alves (2004) estimates that there are approximately 254 fish/mile in the creek. The population is stable and secure. Some artificial barriers (irrigation ditches) occur in the lower portion of the drainage. No other fish have been documented in the creek (Alves 2004).

Key Environmental Factors

Stream flow.

Climate Description

No Data

Land Use History

Much of the forest in the watershed of this creek has been logged, and there is an extensive network of roads associated with the logged areas. Many of the roads are eroding badly and dumping sediments into the stream. Immediate action should be taken to stabilize the roads to reduce the non-point source pollution.

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 05/04/2004
Designer Rocchio, F.J.

Boundary Justification

The boundaries incorporate an area that will allow natural ecological processes such as large woody debris recruitment, adequate canopy cover (to regulate stream temperature), and new channel formation to maintain viable populations of the trout along Cuates Creek. This boundary indicates the minimum area that should be considered for any conservation management plan. Some hillslope areas which may contribute runoff to Cuates Creek are not encompassed in the boundary although any activity in these areas should be considered for any conservation management plan.

Primary Area 2,269.78 Acres 918.55 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

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Biodiversity Significance Comments

Considering that this is a historic and native population (not stocked) this site's Biodiversity Rank was elevated to a B3 as opposed to a B4. The Rio Grande cutthroat trout's range once included the entire Rio Grande and Pecos River watersheds, and possibly the upper Canadian River as well (Trotter 1987). In Colorado, the species occupies less than 1% of its former range (Alves 1996), and wild, genetically pure stock populations are especially imperiled. Artificial habitat including wells, farm ponds, and extensive canal systems as well as human activities including dewatering, fishing and stocking, transbasin diversions, release of domestic sewage, stream channelization, and agricultural chemical applications have greatly modified the original aquatic ecosystem of the San Luis Valley (Zuckerman 1984). These modifications may have contributed directly to the decline in range of the native fishes of the Rio Grande drainage. Free-flowing streams with good quality water, healthy banks, and streamside vegetation within the upper Rio Grande watershed are vital habitat for this subspecies of trout. The site supports an excellent (A-ranked) occurrence of this globally vulnerable (G4T3/S3) subspecies.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGMENT 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>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>
20205	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	G4T3	S3	Yes

REFERENCES

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Reference ID

Full Citation

184652	Alves, J.A. 1996. Fisheries Inventories: Rio Grande River Basin. Unpublished Report to Colorado Department of Natural Resources-Division of Wildlife. Denver, CO 152 pp.
184653	Alves, J. 2004. Personal communication with Jeremy Siemers regarding Rio Grande cutthroat trout populations in Costilla County. Colorado Natural Heritage Programs, Fort Collins, CO.
192655	Amaranthus, M.P., R.M. Rice, N.R. Barr, and R.R. Ziemer. 1985. Logging and forest roads related to increased debris slides in Southwestern Oregon. Journal of Forestry 83:229-233.
192656	Cooper, A. C. 1965. The effect of transported stream sediments on the survival of sockeye and pink salmon eggs and alevins. Bulletin 18, Pacific Salmon Fish Commission, New Westminster, B.C.
192657	Griffith, J. S. 1988. Review of competition between cutthroat trout and other salmonids. American Fisheries Society Symposium 4: 134-140.
192658	Megahan, W.F. and W.J. Kidd. 1972. Effects of logging and logging roads on erosion and sediment deposition from steep terrain. Journal of Forestry 70: 136-141.
184706	Rocchio, J. 2004. Final Report: Survey of Critical Wetlands and Riparian Areas in Southern Alamosa and Costilla Counties, San Luis Valley, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
192614	Sanderson, J.S. 2004. Final Report: Natural Heritage Inventory of the Taylor Ranch. Colorado Natural Heritage Program, Fort Collins, CO.
171604	Trotter, P. C. 1987. Cutthroat: native trout of the west. Colorado Associated Univ. Press, Boulder. 219 pp.
168150	Zuckerman, Larry. 1984. Rio Grande fishes management. Annual report. July 1983 to June 1984.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	11/30/2004
Version Author	Sanderson, J.S.

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