

Level 4 Potential Conservation Area (PCA) Report

Name North Fork Trinchera Creek

Site Code S.USCOHP*24976

IDENTIFIERS

Site ID 2145 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 372249N
State Colorado Longitude 1051554W

Quad Code Quad Name

37105-D2 McCarty Park
37105-D3 Trinchera Ranch
37105-C3 Ojito Peak

County

Costilla (CO)

Watershed Code Watershed Name

13010002 Alamosa-Trinchera

SITE DESCRIPTION

Minimum Elevation 8,600.00 Feet 2,621.28 Meters
Maximum Elevation 9,500.00 Feet 2,895.60 Meters

Site Description

The site consists of a narrow riparian corridor surrounded by upland slopes dominated by mixed conifer forest on north-facing slopes and pinyon-juniper on south-facing slopes. Upstream, along the most narrow and steep stream reach within the site, white fir (*Abies concolor*), Douglas-fir (*Pseudotsua menziesii*), narrowleaf cottonwood (*Populus angustifolia*), aspen (*P. tremuloides*), and Rocky Mountain maple (*Acer glabrum*) dominate the riparian area. Downstream, as the stream gradient lessens, the channel width somewhat widens, and soils become more fine-textured, narrowleaf cottonwood and thinleaf alder (*Alnus incana*) dominate along with river birch (*Betula occidentalis*). Structural diversity in both plant communities is good with a diverse tree canopy and a thick shrub understory. There are beaver ponds along this lower reach, where graminoids become more dominant. Downstream, the dominance of narrowleaf cottonwood and alder continues along Trinchera Creek, although past disturbances are more apparent in this area. North Fork Trinchera Creek supports a fair, genetically pure, but transplanted (from West Indian Creek) population of the Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*) (Harig and Fausch 1996; Alves 1998). The population is unstable because of competition with non-native fish (CDOW 1986). Harig and Fausch (1996) report both brook trout (*Salvelinus fontinalis*) and rainbow trout (*Oncorhynchus mykiss*) as associated species. From 1998 surveys, the population is estimated at 1,324 individuals (Alves 1998). Anthropogenic barriers (irrigation structures) occur along the stream (Alves 2004).

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 01/04/2004
Designer Rocchio, F.J.

Boundary Justification

The boundary includes a portion of Trinchera and North Fork Trinchera creeks and the surrounding watershed. The boundary represents a preliminary estimate of the area needed to maintain local hydrological

Level 4 Potential Conservation Area (PCA) Report

Name North Fork Trinchera Creek

Site Code S.USCOHP*24976

conditions. It should be noted that the hydrological processes necessary to the elements are not fully contained by the site boundaries. Any activities within the watershed such as water diversions, impoundments, improper livestock grazing, development, and mining could potentially be detrimental to the hydrology of the riparian area. The boundary represents the minimum area that should be considered for any conservation management plan.

Primary Area 1,621.23 Acres 656.09 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

The site supports a good (B-ranked) example of the globally imperiled (G2/S2) montane riparian forest (*Abies concolor*-*Picea pungens*-*Populus angustifolia*/*Acer glabrum*). This plant association is known only from southern Colorado in the San Juan and Sangre de Cristo mountains and but may occur in northern New Mexico. The association is a diverse, mixed conifer-deciduous forest occurring on active floodplains and streambanks of montane valley floors and is a mid- to late-seral community. High elevations and cool, shaded canyon bottoms create an environment for white fir and blue spruce. Here the active channel flooding and sediment deposition allows narrowleaf cottonwood to persist. On higher terraces that no longer experience flooding, the conifers may become the climax tree species. This site also supports a good (B-ranked) example of a globally vulnerable (G3/S3) montane riparian forest (*Populus angustifolia*/*Alnus incana* ssp. *tenuifolia*). This association is known from New Mexico and Colorado. Although not well documented from other states, it is expected to occur throughout the range of narrowleaf cottonwood in the Rocky Mountains. In Colorado, this is a common community along montane streams, but few high quality examples exist. This association is highly threatened by improper livestock grazing, development and stream flow alterations. A fair (C-ranked) occurrence of a globally vulnerable (G4T3/S3) fish subspecies is also within the site. 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.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

[Rocchio 2004:] Area is managed for wildlife hunting.

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>
	20205	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	G4T3	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
	24541	<i>Populus angustifolia</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forest	G3	S3	No

Level 4 Potential Conservation Area (PCA) Report

Name North Fork Trinchera Creek

Site Code S.USCOHP*24976

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
171045	Alves, J. 1998. Status of Rio Grande cutthroat trout in Colorado. Department of Natural Resources, Colorado Division of Wildlife. Denver, Colorado. March 30, 1998.
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.
178755	CDOW. 1986. Colorado Stream Data Bank, Second Edition. December, 1986. Colorado Division of Wildlife, Denver, CO. DOW-R-M-2-86.
173155	Harig, A. L. and K. D. Fausch. 1996. Compilation of data on Colorado waters containing Rio Grande cutthroat trout. Report to Colorado Division of Wildlife. MOU Project No. 904-906.
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.
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 01/04/2004

Version Author Rocchio, F.J.

Disclaimer

Level 4 Potential Conservation Area (PCA) Report

Name North Fork Trinchera Creek

Site Code S.USCOHP*24976

These data are a product and property of Colorado State University, Colorado Natural Heritage Program (CNHP). These data are strictly "on loan" and should be considered "works in progress". Data maintained in the Colorado Natural Heritage Program database are an integral part of ongoing research at CSU and reflect the observations of many scientists, institutions and our current state of knowledge. These data are acquired from various sources, with varying levels of accuracy, and are continually being updated and revised. Many areas have never been surveyed and the absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. These data should not be regarded as a substitute for on-site surveys required for environmental assessments. Absence of evidence is NOT evidence of absence. Absence of any data does not mean that other resources of special concern do not occur, but rather CNHP files do not currently contain information to document this presence. CNHP is not responsible for whether other, non-CNHP data providers have secured landowner permission for data collected.

These data are provided for non-commercial purposes only. Under no circumstances are data to be distributed in any fashion to outside parties. To ensure accurate application of data, tabular and narrative components must be evaluated in conjunction with spatial components. Failure to do so constitutes a misuse of the data. The Colorado Natural Heritage Program shall have no liability or responsibility to the data users, or any other person or entity with respect to liability, loss, or damage caused or alleged to be caused directly or indirectly by the data, including but not limited to any interruption of service, loss of business, anticipatory profits or indirect, special, or consequential damages resulting from the use of operation of the data. Data users hereby agree to hold CNHP, Colorado State University, and the State of Colorado harmless from any claim, demand, cause of action, loss, damage or expense from or related to data users use of or reliance on the data, regardless of the cause or nature thereof, and even in the event that such cause is attributable to the negligence or misconduct of CNHP.

These data are provided on an as-is basis, as-available basis without warranties of any kind, expressed or implied, INCLUDING (BUT NOT LIMITED TO) WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. Although CNHP maintains high standards of data quality control, CNHP, Colorado State University, and the State of Colorado further expressly disclaim any warranty that the data are error-free or current as of the date supplied