

Level 4 Potential Conservation Area (PCA) Report

Name Upper Medano Creek

Site Code S.USCOHP1*2090

IDENTIFIERS

Site ID 226 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>
1956	S.USCOHP*5778	Sangre de Cristo

LOCATORS

Nation United States Latitude 375009N
State Colorado Longitude 1052826W

<u>Quad Code</u>	<u>Quad Name</u>
37105-G4	Medano Pass
37105-H4	Beck Mountain
37105-G5	Liberty

County

Saguache (CO)
Huerfano (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
13010003	San Luis
11020006	Huerfano

SITE DESCRIPTION

Minimum Elevation	8,700.00	Feet	2,652.00	Meters
Maximum Elevation	12,600.00	Feet	3,840.00	Meters

Site Description

The Upper Medano Creek Site covers about 11,500 acres and spans an elevational range from 8,700 - 12,600 feet (2,600 - 3,800 meters). This site has some sand dunes at the lowest elevations, and grades through montane forests to subalpine areas at the crest of the Sangre de Cristo Mountains. Upper portions of the Medano Creek site lie in a glaciated cirque basin. Medano Lake, at the upper elevations, is surrounded by subalpine wetlands in excellent condition. These wetlands include shrublands, sedge meadows, and forblands. The dominant plants within these wetlands include short fruit willow (*Salix brachycarpa*), water sedge (*Carex aquatilis*), beaked sedge (*Carex utriculata*), bittercress (*Cardamine cordifolia*), mountain bluebells (*Mertensia ciliata*), and narrowleaf groundsel (*Senecio triangularis*). Medano Creek steepens as it leaves the cirque basin and plunges through subalpine fir - Engelmann spruce forests (*Abies lasiocarpa* - *Picea engelmannii*), followed by aspen forests (*Populus tremuloides*) and finally Douglas-fir (*Pseudotsuga menziesii*) forests in the foothills before reaching the north-eastern edge of the sand dunes. When the stream lessens its gradient at the lower elevations, patches of alders (*Alnus incana*), and Drummond willow (*Salix drummondii*) shrublands dominate the streamside. These shrublands are small in size but provide important nutrient and cover to the aquatic habitat.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial Mapped Date 02/16/1998
Designer Wunder, M.B.

Boundary Justification

This boundary is drawn to include the riparian complex that supports the elements of biodiversity found at the site. It is designed to 1) protect the occurrences from direct impacts such as trampling or other surface

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disturbances; and 2) to include the immediate slopes which contribute surface and groundwater flow to the creek and riparian ecosystem. Any activity within the boundary of this watershed has the potential to negatively affect the fishes and riparian communities by impacting water quality and quantity. The boundary was delineated using 1988 NAPP 1:40,000 aerial photograph and satellite imagery at a scale of approximately 1:125,000.

Primary Area 11,535.34 Acres 4,668.20 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

There are excellent (A-ranked) occurrences of the globally imperiled (G2/S2) Smith whitlow grass (*Draba smithii*) and the globally imperiled (G2G3/S2S3) subalpine riparian / wetland willow carr (*Salix brachycarpa* / *Carex aquatilis*), a good (B-ranked) occurrence of the globally vulnerable (G3/S3) thinleaf alder / mesic forb riparian shrubland (*Alnus incana* / mesic forb), an excellent (A-ranked) occurrence of a globally secure (G4/S4) alpine wetland (*Cardamine cordifolia* - *Mertensia ciliata*) and extant occurrences of the globally vulnerable (G4T3/S3) Rio Grande cutthroat trout (*Oncorhynchus clarkii virginalis*). The populations of Rio Grande cutthroat were introduced following an exotic fish removal project in the 1970's. 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

No Data

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

No Data

Information Needs

Need to verify site boundaries with on-site investigation.

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
20205	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	G4T3	S3	No
20205	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	G4T3	S3	No
24645	<i>Alnus incana</i> / Mesic Forbs Shrubland	Thinleaf Alder/Mesic Forb Riparian Shrubland	G3	S3	No
20205	<i>Oncorhynchus clarkii virginalis</i>	Rio Grande Cutthroat Trout	G4T3	S3	No
24828	<i>Salix brachycarpa</i> / <i>Carex aquatilis</i> Shrubland	Subalpine Riparian/Wetland Carr	G2G3	S2S3	Yes
21624	<i>Draba smithii</i>	Smith whitlow-grass	G2	S2	Yes
24679	<i>Cardamine cordifolia</i> - <i>Mertensia ciliata</i> Herbaceous Vegetation	Alpine Wetlands	G4	S4	No
21624	<i>Draba smithii</i>	Smith whitlow-grass	G2	S2	No

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REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
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.
194590	Metzger, R. 1994. Rio Grande National Forest. Personal communication to the Colorado Natural Heritage Program.
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 02/16/1998

Version Author Wunder, M.B.

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