

Level 4 Potential Conservation Area (PCA) Report

Name Quartz Creek

Site Code S.USCOHP*23818

IDENTIFIERS

Site ID 1523 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 383460N
State Colorado Longitude 1063224W

Quad Code Quad Name

38106-E5 Pitkin

County

Gunnison (CO)

Watershed Code Watershed Name

14020003 Tomichi

SITE DESCRIPTION

Minimum Elevation	8,900.00	Feet	2,713.00	Meters
Maximum Elevation	9,600.00	Feet	2,926.00	Meters

Site Description

This site is located along a stretch of Quartz Creek downstream of the town of Pitkin. County Road 76 parallels the creek through the site. Lodgepole pine (*Pinus contorta*) and aspen (*Populus tremuloides*) dominate adjacent slopes. Several old mines and an old railroad grade occur above the riparian area. The riparian community may have changed significantly since these developments. The hydrology has been modified due to upstream diversions (town of Pitkin, fish hatchery, irrigation, etc.). Upstream, private lands are grazed heavily. The riparian area is dotted with beaver ponds where mountain willow (*Salix monticola*), Drummond willow (*S. drummondiana*), and bluejoint reedgrass (*Calamagrostis canadensis*) are dominant. There are numerous alders (*Alnus incana* ssp. *tenuifolia*) that are dying back but the willow, forbs, and graminoids look healthy. Non-natives such as Kentucky bluegrass (*Poa pratensis*), reedcanary grass (*Phalaris arundinacea*), dandelion (*Taraxacum officinale*), and white-Dutch clover (*Trifolium repens*) are abundant near the road. Much of the area has dense vegetation volume with much dead and downed woody debris. Overflow from one beaver dam supports a dense stand of bog birch (*Betula glandulosa*) in highly organic soils covered with mosses. Bluejoint reedgrass and water sedge (*Carex aquatilis*) occur in the wettest patches. This is somewhat of a low elevation for this community type. Very few non-native species were observed.

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 12/30/2002
Designer Rocchio, F.J.

Boundary Justification

The boundaries incorporate an area that will allow natural hydrological processes such as seasonal flooding, sediment deposition, and new channel formation to maintain viable populations of the elements along Quartz Creek. The boundaries also provide a small buffer from nearby pastures and roads where surface runoff may contribute excess nutrients and sediment. It should be noted that the hydrological processes necessary to the elements are not fully contained by the site boundaries. Given that the elements are dependent on natural hydrological processes associated with Porphy Creek and its tributaries upstream activities such as water diversions, impoundments, improper livestock grazing, and development are detrimental to the hydrology of

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the riparian area. This boundary indicates the minimum area that should be considered for any conservation management plan.

Primary Area 744.19 Acres 301.17 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site supports a good (B-ranked) example of the globally vulnerable (G3/S3) Rocky mountain willow/mesic forb (*Salix monticola*/mesic forb) shrubland. This association is only known from Colorado, where over thirty stands have been documented. Many stands of this association may represent grazing induced shifts from other *Salix monticola* dominated plant associations. Stands with a complete native herbaceous understory intact are threatened by improper livestock grazing, inappropriate stream flow alterations, and heavy recreational use. Rocky Mountain willow appears to be the center of its distribution in Colorado, where it frequently forms large thickets with few other willow species present. Literature from Utah, Wyoming, Montana, Idaho, Nevada and Oregon indicate that Rocky Mountain willow loses importance north and west of Colorado, where Rocky Mountain willow mixes with other *Salix* species. For example, in central and eastern Utah, Rocky Mountain willow dominated stands are infrequent and due to structural and ecological similarities are included in Booth willow (*Salix boothii*) associations (Padgett et al. 1989), and in Idaho, Rocky Mountain willow also has a limited distribution and largely associates with other willow species (Brunsfield and Johnson 1985). This site also supports the globally vulnerable (G3G4/S3) bog birch/mesic forb-mesic graminoid (*Betula glandulosa*/mesic forb-mesic graminoid) riparian shrubland. This is a low stature (2-3 ft., 0.3-1 m) open shrubland of subalpine and lower alpine elevations. It occurs intermixed with willow (*Salix*) shrublands and sedge (*Carex*) meadows, forming complex wetland mosaics. This association is documented throughout high mountain ranges of Colorado, and while typically occurring only in small stands, at least fifty to one hundred stands are estimated to occur. The association is threatened by peat mining, stream flow alterations, and heavy recreational use.

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

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>			
24809	<i>Salix monticola</i> / Mesic Forbs Shrubland	Montane Riparian Willow Carr	G4	S3	Yes
24497	<i>Betula nana</i> / Mesic Forbs - Mesic Graminoids Shrubland	Subalpine Riparian Shrubland	G3G4	S3	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
173839	Rocchio J., G Doyle, and R. Rondeau. 2003. Final Report: Survey of Critical Wetlands and Riparian Areas in Gunnison County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
173182	Rocchio, J. 2002. Colorado Natural Heritage Program Field Survey of Critical Wetlands in Gunnison County.

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ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 12/30/2002

Version Author Rocchio, F.J.

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