

Level 4 Potential Conservation Area (PCA) Report

Name Beaver Creek at Battlement Mesa

Site Code S.USCOHP*21702

IDENTIFIERS

Site ID 460 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 392428N
State Colorado Longitude 1074952W

Quad Code Quad Name
39107-D7 North Mamm Peak

County
Garfield (CO)

Watershed Code Watershed Name
14010005 Colorado headwaters-Plateau

SITE DESCRIPTION

Minimum Elevation	7,400.00 Feet	2,256.00 Meters
Maximum Elevation	10,400.00 Feet	3,170.00 Meters

Site Description

The site spans a wide range in elevation thereby encompassing a variety of riparian plant associations. Thinleaf alder (*Alnus incana*) is persistent along the entire stretch of Beaver Creek that occurs in this site. However, co-dominant species change according to elevation. For example, Colorado blue spruce (*Picea pungens*) occurs with thinleaf alder at higher elevations. Further downstream, aspen (*Populus tremuloides*) becomes the co-dominant species while narrowleaf cottonwood (*Populus angustifolia*) is abundant at lower elevations. Upland slopes are dominated by aspen and Douglas-fir (*Pseudotsuga menziesii*) at high elevations and Gambel's oak (*Quercus gambelii*) and juniper (*Juniperus osteosperma*) at lower elevations. Overall species diversity is high, especially in the upstream portion of the site where blue spruce, aspen, thinleaf alder, gooseberry (*Ribes* sp.), mountain willow (*Salix monticola*), and black twinberry (*Lonicera involucrata*) occur with an understory of monkshood (*Aconitum columbianum*), angelica (*Angelica ampla*), baneberry (*Actaea rubra*), marsh bittercress (*Cardamine cordifolia*), twisted-stalk (*Streptopus fassettii*), arrow-leaf groundsel (*Senecio triangularis*), quackgrass (*Elytrigia repens*), small-winged sedge (*Carex microptera*), and fowl mannagrass (*Glyceria striata*). American speedwell (*Veronica americana*) and brookgrass (*Catabrosa aquatica*) are common on gravel bars in the stream channel and mosses are common on boulders within the channel. Hydrological processes are mostly intact upstream. Near the lower end of the site, the riparian corridor constricts, resulting in a limited buffer between the road and Beaver Creek. Numerous culverts, homes, horse pastures, and cattle grazing have impacted hydrological processes in the creek by altering/restricting flow, loss of floodplain acreage, and deterioration of the streambank. These threats have also impacted species diversity and vegetation structure (i.e. development and diversity of vegetation canopies) within this stretch of the riparian corridor. The soils along the riparian area are mapped as Torrifluvents, which are recently formed soils derived from alluvium. The soils are stratified and vary widely in depth and texture (Soil Conservation Service 1985). A functional assessment was conducted for this site, please see report (Survey of Critical Wetlands and Riparian Areas of Garfield County. Rocchio, J. 2000)

Key Environmental Factors

Hydrological processes are mostly intact upstream. Near the lower end of the site, the riparian corridor constricts, resulting in a limited buffer between the road and Beaver Creek. Numerous culverts, homes, horse pastures, and cattle grazing have impacted hydrological processes in the creek by altering/restricting flow, loss of floodplain acreage, and deterioration of the streambank. These threats have also impacted species diversity and vegetation structure (i.e. development and diversity of vegetation canopies) within this stretch of the riparian corridor.

Climate Description

No Data

Land Use History

No Data

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Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 01/15/2001

Designer Rocchio, F.J.

Boundary Justification

The boundary encompasses the floodplain, surrounding slopes, and upstream drainages to ensure continued surface flow, periodic flooding, and space for the creek's fluvial processes to maintain a dynamic distribution of riparian plant communities. These processes are necessary for the viability of the elements and maintenance of ecological functions.

Primary Area 3,520.81 Acres 1,424.83 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site contains two plant communities that are vulnerable (G3/S3) on a global scale. There is a good (B-ranked) occurrence of the blue spruce/thinleaf alder (*Picea pungens*/*Alnus incana*) montane riparian forest, which is known from Wyoming to New Mexico. There are less than 100 occurrences of this community in Colorado. The aspen/thinleaf alder (*Populus tremuloides*/*Alnus incana*) montane riparian forest has only been documented on the western slope in Colorado but is expected in other Rocky Mountain states. A fair (C-ranked) occurrence of this plant community is located at this site.

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</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>
24911	<i>Populus tremuloides</i> / <i>Alnus incana</i> Forest	Montane Riparian Forests	G3	S3	No
24518	<i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
160919	Lyon, P. 2000. Colorado Natural Heritage Program Biological Assessment of Garfield County.
160810	Rocchio, J. 2000. Colorado Natural Heritage Program Wetland Inventory/Assessment of Garfield County.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 01/15/2001

Version Author Rocchio, F.J.

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