

Level 4 Potential Conservation Area (PCA) Report

Name Miller Gulch

Site Code S.USCOHP*25956

IDENTIFIERS

Site ID 2317 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 395600N
State Colorado Longitude 1062046W

Quad Code Quad Name

39106-H3 King Creek
39106-H4 Sheephorn Mountain

County

Summit (CO)
Grand (CO)

Watershed Code Watershed Name

14010002 Blue

SITE DESCRIPTION

Minimum Elevation	7,783.00	Feet	2,372.26	Meters
Maximum Elevation	8,200.00	Feet	2,499.36	Meters

Site Description

Miller Gulch is located in southern Grand County, west of the Williams Fork Mountains. Vegetation is somewhat heterogeneous, dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) that occupies loamy soils derived from Pierre and Niobrara shale, sedimentary rocks from the Cretaceous (Tweto 1979). Grayish-brown soils are deep, well drained soils that have formed in local alluvial material as it weathered from the shale. Soils are classified as Leavitt and Tine series (USDA NRCS 1994). Other associated plants found are Sandberg bluegrass (*Poa secunda*), snakeweed (*Gutierrezia sarothrae*), prairie sagewort (*Artemisia frigida*), blue grama (*Bouteloua gracilis*), and June grass (*Koeleria macrantha*). Vegetation within the ravines and ephemeral drainages is characterized by a moderately dense shrub layer and is dominated by Utah serviceberry (*Amelanchier utahensis*) with mountain snowberry (*Symphoricarpos oreophilus*), and bluebunch wheatgrass (*Pseudoroegneria spicata*) present in the herbaceous layer. Other shrubs include antelope bitterbrush (*Purshia tridentata*), skunkbrush (*Rhus trilobata*), and wax currant (*Ribes cereum*). The herbaceous layer includes ricegrass (*Achnatherum hymenoides*) with larkspur, upland larkspur (*Delphinium nuttallianum*), and prairie flax (*Linum lewisii*). Beaked and Nebraska sedge (*Carex utriculata* and *C. nebrascensis*) dominate a small, calcareous wetland located along a lateral seep. Hydrology is dependent on mineral-rich, groundwater. Calcium deposits are present within the rills between hummocked areas. Little green sedge (*Carex viridula*) is found on the hummocks the wetland with seaside arrowgrass (*Triglochin maritimum*). Associated plants surrounding the wetland are analogue sedge (*Carex simulata*), few-flower spikerush (*Eleocharis quinqueflora*), and Baltic rush (*Juncus balticus*). The upper soil profile consists of fine textured alluvium soils that are mottled near the surface because of the high water table most of the growing season. The B Horizon is composed of fibric peat for up to 40 cm, below 40 cm soils are about 50% mineral, 50% organic, becoming more mineral with depth with a very strong metallic smell. Hydrology is basic with pH around 7.5, but highly conductive at 2900 micromhos. Disturbances include roads along the sides of drainage and highway below the drainage, OHV use within drainage above county road, and livestock grazing. Exotic species are present in drier areas and are very prominent along the road and may be attributed to past land uses, intense grazing, and proximity to roads.

Key Environmental Factors

Pierre and shale soils dictate where Harrington beardtongue (*Penstemon harringtonii*) occurs. Wetland is dependent on unaltered groundwater flow.

Climate Description

Typical high mountain park weather with very cold, windy winters and dry summers with late summer rains.

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Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/28/2005

Designer Culver, D.R.

Boundary Justification

Boundaries are drawn to capture the elements and potential habitat. The east boundary extends from the Grand/Summit county line, along the foothills to Junction Butte. The majority of western boundary is located between the Blue River and Spring Creek subdivision.

Primary Area 1,900.54 Acres 769.13 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The Miller Gulch site supports a good (B-ranked) occurrence of the globally imperiled Utah serviceberry / blue bunch wheatgrass (*Amelanchier utahensis* / *Pseudoeegneria spicata* shrubland) (G2G3/S2S3). This shrubland is currently known only from Middle Park (NatureServe 2005). However, with additional surveys, this plant association is likely much more common. The wetland supports a good (B-ranked) occurrence of the state rare little green sedge (*Carex viridula*) (G5/S1). Noteworthy is its occurrence in a peat-accumulating wetland that is uncommon in Colorado and especially in seemingly arid shrublands. The globally vulnerable Harrington beardtongue (*Penstemon harringtonii*) (G3/S3) was documented to be in fair (C-ranked) condition due to the fragmentation and threats of roads and residential development.

Other Values Rank V3 - Moderate values

Other Values Comments

Uncommon occurrence of a fen.

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

Walking within the fen can be challenging without proper footwear.

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>
24865	<i>Amelanchier utahensis</i> / <i>Pseudoroegneria spicata</i> Shrubland	Mixed Mountain Shrublands	G2G3	S2S3	Yes
19662	<i>Penstemon harringtonii</i>	Harrington beardtongue	G3	S3	No
21103	<i>Carex viridula</i>	green sedge	G5	S1	No

REFERENCES

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<u>Reference ID</u>	<u>Full Citation</u>
193632	Culver, D.R. and Jones, J.R. 2006. Final Report: Survey of Critical Biological Resources in Grand County. Colorado Natural Heritage Program, Fort Collins, CO.
193578	NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.6. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer . (Accessed: December 8, 2005).
192747	Tweto, O. 1979. Geologic Map of Colorado, 1:500,000. United States Geological Survey, Department of Interior, and Geologic Survey of Colorado, Denver, CO.
193653	U.S. Department of Agriculture, Soil Conservation Service. 1994. State Soil Geographic (STATSGO) database for Colorado. Fort Worth, TX.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 12/28/2005

Version Author Culver, D.R.

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