Level 4 Potential Conservation Area (PCA) Report

Name Mineral Creek **Site Code** S.USCOHP*26716

IDENTIFIERS

Site ID 2411 **Site Class** PCA

Site Alias None

Network of Conservation Areas (NCA)

NCA Site ID	NCA Site Code	NCA Site Name
-		No Data

LOCATORS

Nation United States **Latitude** 375935N

State Colorado **Longitude** 1070253W

Quad Code	Quad Name
37107-H1	Baldy Cinco

County

Hinsdale (CO)

Watershed Code	Watershed Name
14020002	Upper Gunnison

SITE DESCRIPTION

Minimum Elevation	10,680.00	**Feet**	3,255.26	**Meters**
Maximum Elevation	10,860.00	**Feet**	3,310.13	**Meters**

Site Description

This site is drawn for a small, isolated fen wetland in the La Garita Wilderness. It occurs along the upper reaches of Mineral Creek, a second order tributary of Cebolla Creek. The site is a closed-basin, lake-fill peatland with multiple small inlets and rivulets throughout. It lies along the junction of Quaternary landslide deposits and Tertiary igneous rocks, specifically intra-ash-flow quartz latitic lavas (Steven 1974, Tweto 1979). Wetland and local topography is likely a result of glacial activity during the Quaternary Age. The wetland is a fen, a type of peatland classified by soil development and hydrology. Peatlands are wetlands defined by having organic soils (Histosols) with 40 cm peat accumulations in the upper 80 cm (USDA 2006). Peatlands are dependent on groundwater, with minimal secondary inputs from other hydrologic sources (Cooper and Arp 1998). Specifically, this wetland is a small, lake-fill peatland formed by the expansion of vegetation and peat accumulations over the surface of open water. Site has a large area of floating mat towards the center and grounded peat accumulations along edges. Floating mat is the quaking peat layer over water formed during the lake-fill process. Plant communities on floating mat are considered stable due to the ability to fluctuate with water levels (Chadde et al. 1998). The fen wetland forms a mosaic of two distinct, herbaceous communities. Mud sedge (*Carex limosa*) herbaceous vegetation dominates the central floating mat, covering approximately 35% of the wetland. Characteristic species include mud sedge, Northwest Territory sedge (*Carex utriculata*), and buckbean (*Menyanthes trifoliata*). This area is surrounded by an extensive area of grounded peat mat dominated by a woolly sedge (*Carex pellita*) herbaceous community. Woolly sedge is consistent and dominant throughout this area. Other species found along the anchored peat mat include water sedge (*Carex aquatilis*), Northwest Territory sedge, silvery sedge (*Carex canescens*), bluejoint (*Calamagrostis canadensis*), and threepetal bedstraw (*Galium trifidum*). This community dominates approximately 65% of the wetland as a dense, consistent herbaceous strata grading to a small edge occurrence of water sedge and Northwest Territory sedge. Northwest Territory sedge forms a dense patch along the southwestern edge of the wetland and along small, rivulets with standing water. Kentucky bluegrass (*Poa pratensis*) was observed along upland edges of the wetland, but no exotic species were found in the wetland. Uplands to the west of the wetland grade to steep talus slopes and those to the east have mixed quaking aspen (*Populus tremuloides*) and Engelmann spruce (*Picea engelmannii*) forest that slopes down towards Mineral Creek. Evidence of beaver activity is present along small outlets, but dams are no longer stable. Multiple game trails were observed in adjacent, forested uplands and light grazing was observed in the wetland. Trails in adjacent Mineral and Rough Creek drainages are restricted to foot and horse travel as part of the La Garita Wilderness. There are few anthropogenic disturbances in the surrounding uplands.

Key Environmental Factors

Key environmental factors influencing the species composition of the wetland are subalpine elevation, groundwater discharge, and topography.

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Climate Description

Climate and weather tend to follow typical patterns of the San Juan Mountains of Colorado being generally xeric throughout the year with warm spring weather causing snowmelt flooding, wet summers, and a late summer "monsoon" season.

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes **Mapped Date** 10/15/2006

Designer Jones, J.R.

Boundary Justification

Boundaries include 1,000 ft of uplands to buffer from impacts to site condition (Keate 2004). This buffer accounts for natural ecological processes important for the maintenance of wetland elements such as seasonal flooding, groundwater recharge, surface flows, and sediment deposition. However, the boundary does not include all ecological processes necessary to the maintenance of the site and activities in surrounding uplands such as deforestation, improper livestock grazing, development, or water diversion could be detrimental to the site.

Primary Area 36.62 **Acres** 14.82 **Hectares**

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

This site is drawn for an excellent (A-ranked) occurrence of the globally imperiled (G2/S1S2) mud sedge (*Carex limosa*) montane wetland community. The site also encompasses a good (B-ranked) occurrence of the globally vulnerable (G3/S3) woolly sedge (*Carex pellita*) montane wet meadows community.

Other Values Rank V2 - High values

Other Values Comments

This site provides outstanding ecological values to the area in terms of aesthetics and unique species composition and hydrology along with providing functions to ecosystem health such as game and wildlife habitat and aquifer recharge.

LAND MANAGMENT ISSUES

Land Use Comments

The area is used predominantly for recreation including hunting, hiking, camping, and horseback riding.

Natural Hazard Comments

Avalanche danger is likely high during the fall, winter, and spring seasons due to the severity of western slopes.

Exotics Comments

Kentucky bluegrass (*Poa pratensis*) was observed along upland edges of the wetland, but no exotic species were found in the wetland.

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
21815	*Carex pellita* Herbaceous Vegetation	Montane Wet Meadows	G3	S3	No
24366	*Carex limosa* Herbaceous Vegetation	Montane Wetland	G2	S1S2	Yes

REFERENCES

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Name Mineral Creek **Site Code** S.USCOHP*26716

Reference ID	Full Citation
194562	Chadde, S.W., J.S. Stephen, J.B. Bursick, R.K. Moseley, A.G. Evenden, M. Mantas, F. Rabe, and B. Heidel. 1998. Peatlands on National Forests of the Northern Rocky Mountains: Ecology and Conservation.Gen. Tech. Rep. RMRS-GTR-11. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
194563	Cooper, D.J. and C. D. Arp. 1998. "Colorado's Iron Fens: Geochemistry, Flora, and Vegetation". Unpublished Report submitted to the Colorado Natural Areas Program.
192813	Keate, Nancy S. 2004. Bibliography of Impacts to Wetlands II - Draft - revised - Jan 2004. Utah Wetland Outreach, Wildlife Resources, Utah Department of Natural Resources.
194565	Neid, S.L. and J.R. Jones. 2008. Final Report: Survey of Critical Wetlands and Riparian Areas in Hinsdale County. Colorado Natural Heritage Program, Fort Collins, CO.
194564	USDA, Natural Resources Conservation Service. 2006. Keys to Soil Taxonomy, 6th ed. Soil Survey Staff, Soil Conservation Services. Washington, DC. 12 p.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 10/15/2006

Version Author Jones, J.R.

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