

Level 4 Potential Conservation Area (PCA) Report

Name Round Meadow Creek

Site Code S.USCOHP*25755

IDENTIFIERS

Site ID 2262 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 370505N
State Colorado Longitude 1071341W

Quad Code Quad Name
37107-A2 Pagosa Junction

County
Archuleta (CO)

Watershed Code Watershed Name
14080101 Upper San Juan

SITE DESCRIPTION

Minimum Elevation	6,540.00 Feet	1,993.39 Meters
Maximum Elevation	6,800.00 Feet	2,072.64 Meters

Site Description

Round Meadow Creek is located in the south-central portion of Archuleta County southwest of Cat Creek Gap, west of Cat Creek, and north of Pagosa Junction. It is a small perennial stream within a moderately broad, lower montane valley augmented by multiple seeps and springs within the river channel and on adjacent slopes. The creek is sinuous with incised banks in many areas and headcuts within the channel, indicating grazing induced impacts. Soils are also naturally erosive, as adjacent steep hillslopes that drop to the creek bed are naturally sloughing soils along some reaches of the stream. The riparian area is characterized as patchy woodland dominated by mature and regenerating narrowleaf cottonwood (*Populus angustifolia*) and Rocky Mountain juniper (*Juniperus scopulorum*), interspersed with wet meadows. The riparian zone has a sparse canopy cover of woody vegetation, but the shrub layer is vigorous and somewhat diverse, and includes sandbar willow, skunkbush sumac, Woods' rose and black chokecherry (*Salix exigua*, *Rhus trilobata*, *Rosa woodsii* and *Prunus virginiana* var. *melanocarpa*). The herbaceous understory contains a mixture of non-native and native graminoids, dominated by Kentucky bluegrass, western wheatgrass, and cheatgrass (*Poa pratensis*, *Pascopyrum smithii*, and *Bromus tectorum*). The floodplain is limited in some reaches and accessible only in patches, especially at the locations of the wet meadows. Where the channel is incised, there are fringes of hydrophytic vegetation along the stream channel including Baltic rush, woolly sedge, clustered field sedge and pale bulrush (*Juncus balticus* var. *montanus*, *Carex pellita*, *C. praegracilis* and *Scirpus pallidus*). Broad wet meadows along the creek display a dense canopy of herbaceous vegetation, dominated by woolly sedge, Kentucky bluegrass, clustered field sedge and Baltic rush, with patches of broadleaf cattail (*Typha latifolia*) and small-fruit bulrush (*Scirpus microcarpus*). Ponderosa pine - juniper (*Pinus ponderosa* - *Juniperus* spp.) forests and Gambel oak (*Quercus gambelii*) shrublands dominate the surrounding hillsides. A dirt road parallels Round Meadow Creek along its length, usually within several hundred feet of the creek. It appears seldom used though it is well maintained.

Key Environmental Factors

The surface geology is primarily the Animas Formation comprised of Arkosic sandstone, shale and conglomerate and contains an abundance of volcanic material (Tweto 1979). The area has not been delineated by the local soil survey (USDA 1981). Soils within the channel are alluvial with silty clay depositions, and soil sampled within the large wet meadow was saturated to the surface at time of the survey. The surface horizon to 15 cm depth is clay loam; the next horizon from 15 cm to 42 cm is gleyed clay, with oxidized root channels present.

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 12/29/2005

Designer Freeman, K.M.

Boundary Justification

The boundary incorporates a 500 foot buffer from the element occurrences that will allow as much of the natural hydrological processes from surrounding drainages as possible to continue contributing to the flows in Round Meadow Creek. Seasonal flooding and sediment deposition will help maintain a viable population of the elements along the creek and within the wet meadow. The boundaries also provide a small buffer from nearby roads and non-irrigated pastures where erosion-causing disturbances may contribute to excessive sediment deposition and elevated nutrient levels in the wet meadow and the creek and invite weed invasion. It should be noted that the hydrological processes necessary to the elements are not fully contained by the site boundaries.

Primary Area

274.34 Acres

111.02 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports a linear occurrence of narrowleaf cottonwood - Rocky Mountain juniper (*Populus angustifolia* - *Juniperus scopulorum*) montane riparian forest, a globally imperiled to vulnerable (G2G3/S2S3) community in fair (C-ranked) condition. A generally open canopy of narrowleaf cottonwood characterizes this community, with juniper in the secondary canopy and a sparse herbaceous understory. This community type is often impacted by grazing and usually exhibits a non-native herbaceous layer dominated by pasture grasses and common weedy species (Carsey et al. 2003). This site also supports the globally vulnerable (G3/S3) woolly sedge (*Carex pellita*) montane wet meadow plant association in fair (C-ranked) condition. This plant association typically occurs on mineral soils subjected to seasonal flooding and runoff, where the soils are saturated seasonally. With improper grazing, Kentucky bluegrass (*Poa pratensis*) becomes a more dominant species, and downcutting of the channel is common, resulting in a permanent change from a wet meadow to a dry meadow (NatureServe 2005).

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

The area is currently used for grazing only. A well maintained dirt road parallels Round Meadow Creek along its length and typically within 400 feet of the creek.

Natural Hazard Comments

No Data

Exotics Comments

Invasive and non-native species are present in moderate to high abundance within the riparian zone and the wet meadow, including dandelion (*Taraxacum officinale*), Canada thistle (*Cirsium arvense*), yellow sweetclover (*Mellilotus officinalis*), and redstem stork's bill (*Erodium cicutarium*) as well as pasture grasses such as smooth brome (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*), and crested wheatgrass (*Agropyron cristatum*). Cheatgrass (*Bromus tectorum*) occurs in high percentages along with tansymustard (*Descurainia* sp.) on the adjacent drier meadows and terraces.

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>

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24963	<i>Populus angustifolia</i> - <i>Juniperus scopulorum</i> Woodland	Montane Riparian Forest	G2G3	S2S3	Yes
21815	<i>Carex pellita</i> Herbaceous Vegetation	Montane Wet Meadows	G3	S3	Yes

REFERENCES

Reference ID	Full Citation
193557	CDNR, Division of Wildlife. 27 Jan 2004. Riparian and Wetland Mapping Project. Fort Collins, CO. << http://ndis1.nrel.colostate.edu/riparian/riparian.htm >>. Accessed 21 Nov 2005.
160903	Carsey, K., D. Cooper, K. Decker, D. Culver, and G. Kittel. 2003. Statewide wetlands classification and characterization: Wetland plant associations of Colorado. Prepared for Colorado Department of Natural Resources, Denver, CO by Colorado Natural Heritage Program, Fort Collins, CO.
193633	Freeman, K.M., March, M.A. and D.R. Culver. 2006. Final Report: Survey of Critical Wetlands and Riparian Areas in Archuleta 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.
193423	USDA, SCS. 1981. Soil Survey of Piedra Area, Colorado; Parts of Archuleta, Hinsdale, La Plata, Mineral, and Rio Grande Counties. In cooperation with the United States Forest Service and the Colorado Agricultural Experiment Station.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	12/29/2005
Version Author	Freeman, K.M.

Disclaimer

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