

Level 4 Potential Conservation Area (PCA) Report

Name Tributary to Rito Blanco

Site Code S.USCOHP*25695

IDENTIFIERS

Site ID 2245 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 371609N
State Colorado Longitude 1065013W

Quad Code Quad Name
37106-C7 Blackhead Peak

County
Archuleta (CO)

Watershed Code Watershed Name
14080101 Upper San Juan

SITE DESCRIPTION

Minimum Elevation	8,900.00 Feet	2,712.72 Meters
Maximum Elevation	9,680.00 Feet	2,950.46 Meters

Site Description

In the northeast corner of Archuleta County, the Rito Blanco drains southwest from the Continental Divide to the San Juan River. Near the headwaters for Rito Blanco, on the northwest flank of Squaretop Mountain and between the Mariposa Creek and Sparks Creek drainages, a small, open, and northwest-facing wet meadow with a slight slope occurs within a mature and dense spruce, fir and quaking aspen (*Abies* spp. - *Picea* spp. - *Populus tremuloides*) forest. Two unnamed intermittent creeks converge at the top of the meadow and flow northwest to the Rito Blanco, passing through the meadow where several historic, nearly hidden 2 to 3-foot berms in disrepair step down the meadow. These berms, though broken, still retain some ponded water and allow soils to remain saturated, supporting sedges (*Carex* spp.) and other native and non-native mesic graminoids and mesic forbs. The vegetative structure in the clearing is mostly herbaceous, dominated by beaked sedge (*Carex utriculata*), retrorse sedge (*Carex retrorsa*), smallwing sedge (*Carex microptera*), mannagrass (*Glyceria* sp.), Colorado false hellebore (*Veratrum tenuipetalum*), bluebells (*Mertensia* sp.), Columbian monkshood (*Aconitum columbianum*), common cowparsnip (*Heracleum maximum*), checkerbloom (*Sidalcea* sp.), and cutleaf coneflower (*Rudbeckia laciniata* var. *ampla*). Sporadic, mature thinleaf alder (*Alnus incana*) stands create an open canopy overstory, mixed with a few scattered young spruce and fir saplings and mature trees. However, the alder in the meadow are experiencing significant branch dieback or decadence and are not in vigorous condition. Weeds and hay grasses are also common, and old stumps/snags, downed wood, and fallen logs are found frequently within the meadow. The retrorse sedge population is well distributed in the wet meadow complex and continues down the drainage, but it is unknown whether there are other populations on the same drainage upstream or further downstream. Subpopulations of retrorse sedge are split up based on hydrologic circumstances, but are connected within the overall soil/hydrology/topographical location.

Key Environmental Factors

In general terms, in Archuleta County, retrorse sedge (*Carex retrorsa*) occurs in slightly higher ground along perennially wet areas, especially preferring banks along small channels, small to mid-size depressional wetlands, open mudflats at pond edges, and surface-drying mud. Retrorse sedge is nearly always found with beaked sedge (*Carex utriculata*), but seems to occupy slightly higher ground or the mudflat niche that beaked sedge doesn't colonize as aggressively. Clusters of retrorse sedge are spread around the basin in small subpopulations depending on the hydrology. The hydrology on site is altered by the historic construction of berms stepping down the hill which creates a wetland mosaic of small, flowing channels, shallow ponded areas, and moist-to-saturated soils with no surface standing water. These berms are in disrepair and well-vegetated by native shrubs and herbaceous plants as well as colonized by weeds such as various species of thistle (*Cirsium* sp. and *Carduus* sp.). However, it is likely this population would not exist without the flow detention and subsequent soil saturation provided by the berms. The stands are vigorous but impacted by hoof disturbances due to heavy grazing in the area; fortunately, the cattle seem to prefer browsing on beaked

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sedge and other plants rather than the retrorse sedge. However, the cattle impacts are otherwise threatening the population by contributing to soil erosion, soil compaction, and disruption of the stream channels.

Climate Description

No Data

Land Use History

Logging has historically occurred within two miles of the site, but it is unknown whether the forest immediately surrounding the population has been logged. Livestock grazing is a historic and current use on this portion of the San Juan National Forest, and is the probable reason that detention berms were once constructed within the meadow, presumably to create watering areas for the cattle on the allotment. Recreational uses such as hunting and hiking are also historic as well as current land uses.

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 11/04/2005

Designer Freeman, K.M.

Boundary Justification

The boundary was drawn to include the known extent of the occurrence of retrorse sedge (*Carex retrorsa*) and an additional area large enough to include the natural hydrologic flows, including surface and groundwater flows, which support the habitat for the species. The boundary represents the immediate watershed for the basin in which the species occurs, with a minimum 1,000 foot buffer except where the watershed boundary is closer to the occurrence than 1,000 feet. The intent of this buffer is to minimize sedimentation, protect the species population and associated wetland and riparian plant communities from direct disturbance such as trampling, and to allow additional individuals to become established over time. Given that this species is dependent on perennially wet or moist soils associated with the drainages within this small basin (Johnston 2001), upstream activities such as water diversions, impoundments, and improper livestock grazing are detrimental to the hydrology of the wetland area. The boundary indicated is the minimum area that should be considered for any conservation management plan.

Primary Area 220.41 Acres

89.20 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site is drawn for a good (B-ranked) occurrence of the globally secure (G5) but statewide critically imperiled (S1) retrorse sedge (*Carex retrorsa*). As of 2005, this site contains the largest known population of retrorse sedge at one site in Archuleta County.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

The site is on USFS land that is open to OHV use; however, the main OHV road from FR 024 is essentially impassible for vehicles due to hillside erosion and large-diameter downed trees. OHV access is possible from the north, from the Mariposa Creek drainage. The closest forest road (FR 024) is 1/2 mile away. The area is used for hunting as evidenced by shell casings along the OHV trail and within the meadow, and past logging in the area is possible since it has occurred elsewhere along FR 024. Intensive cattle grazing on this allotment is the major threat to the rare plant population. It is estimated that these land uses may reduce the viability of the population if the area remains under the current level of management.

Natural Hazard Comments

No Data

Exotics Comments

Canada thistle (*Cirsium arvense*), a Colorado-prioritized and Archuleta County-listed noxious weed species (State of Colorado, no date), occurs frequently in dense patches on the top of the old berms within the wetland complex, and could easily expand its presence to other areas of the wetland. Eradication or control of this species would benefit the retrorse sedge (*Carex retrorsa*) population by reducing competition for resources and providing better opportunities for expanding colonization. Oxeye daisy (*Leucanthemum vulgare*), also a

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Colorado-prioritized noxious weed species, and various haygrasses (*Poa pratensis*, *Phleum pratense*, *Bromus inermis*) are also present. Control of these species would benefit the population by again reducing competition for resources, but would be very difficult due to their widespread distribution and high percentage of canopy cover across the site.

Offsite

No Data

Information Needs

Since retrorse sedge (*Carex retrorsa*) is considered an S1 (critically imperiled) species in Colorado, further research is needed on the distribution and habitat needs for retrorse sedge in the state in order to develop specific and appropriate management plans for sites on private and U.S. Forest Service lands that support retrorse sedge populations.

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
20504	<i>Carex retrorsa</i>	retrorse sedge	G5	S1	Yes

REFERENCES

Reference ID	Full Citation
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.
193556	Johnston, B.C. 2001. Field guide to sedge species of the Rocky Mountain Region. Publication R2-RR-01-03. United States Department of Agriculture Forest Service, Denver, CO.
193472	Sovell, J., P. Lyon, and L. Grunau. 2003. Final Report: Upper San Juan Biological Assessment. Colorado Natural Heritage Program, Fort Collins, CO.
193555	State of Colorado, Department of Agriculture. No date. State Conservation Board Noxious Weed Program: Archuleta County. << http://www.ag.state.co.us/CSD/Weeds/mapping/counties/Archuleta.html >> Accessed 7 Nov 2005.
193553	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center < http://npdc.usda.gov/ >, Baton Rouge, LA 70874-4490 USA. Accessed 2005.
172684	Weber, W.A. and R.C. Wittmann. 2001. Colorado Flora: Western Slope, Third Edition. University Press of Colorado, Niwot, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	11/04/2005
Version Author	Freeman, K.M.

Disclaimer

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