

Level 4 Potential Conservation Area (PCA) Report

Name Sparks Creek

Site Code S.USCOHP*25694

IDENTIFIERS

Site ID 2244 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 371538N
 State Colorado Longitude 1065017W

Quad Code Quad Name
 37106-C7 Blackhead Peak

County
 Archuleta (CO)

Watershed Code Watershed Name
 14080101 Upper San Juan

SITE DESCRIPTION

Minimum Elevation	8,400.00 Feet	2,560.32 Meters
Maximum Elevation	9,800.00 Feet	2,987.04 Meters

Site Description

In the northeast corner of Archuleta County, Sparks Creek is a small, perennial creek with a moderate grade flowing westward off the flanks of Squaretop Mountain in a small, narrow and shallow draw. It eventually joins the Rito Blanco about one mile below the site. The creek sinuosity is good, and the creek has a narrow floodplain and is not incised. A narrow and mature blue spruce / thinleaf alder (*Picea pungens* / *Alnus incana*) riparian woodland dominates the immediate floodplain and this overstory provides even shade to most of the creek. Both mature and sapling alder and blue spruce occur throughout the community and are vigorous and healthy. The thinleaf alder (*Alnus incana*) are not displaying the extent of branch dieback seen in other parts of the county, although some dieback is occurring downstream of the occurrence. The understory is fairly open and comprised of mesic forbs such as common cow parsnip (*Heracleum maximum*) and cutleaf coneflower (*Rudbeckia laciniata* var. *ampla*), graminoids such as fowl mannagrass (*Glyceria striata*) and bluejoint grass (*Calamagrostis canadensis*), and riparian shrubs such as twinberry honeysuckle (*Lonicera involucrata* var. *involucrata*) mixed with open areas of litter, fallen logs, and duff. Hydrophytic vegetation, including small stands of retrorse sedge (*Carex retrorsa*) and smallwing sedge (*Carex microptera*), occurs in flat, seepy areas, usually within the floodplain or near the creek. The surrounding forest and adjacent uplands have mature corkbark fir (*Abies lasiocarpa* var. *arizonica*), blue spruce (*Picea pungens*), Rocky Mountain maple (*Acer glabrum*), and quaking aspen (*Populus tremuloides*) growing on short, steep hillsides with a forb and graminoid understory. Few weeds were found in the understory, although the presence of hay grasses such as orchardgrass (*Dactylis glomerata*), Kentucky bluegrass (*Poa pratensis*), and timothy (*Phleum pratense*) increases downstream. Weeds seem to be localized along forest roads and OHV trails, although oxeye daisy (*Leucanthemum vulgare*) and common dandelion (*Taraxacum officinale*) were seen in a few places near the creek as well. The site is within the San Juan National Forest, and the surrounding forest is mature with a few signs of long-past logging. The hydrologic regime is mostly intact except for twin culverts at the Forest Road 024 crossing, and culverts at two downstream OHV trail crossings. In the middle of the site an old jeep trail, which is signed prohibiting vehicular travel, crosses the bed of Sparks Creek without culverts just upstream from FR 024. There is no evidence of recent vehicular travel on this jeep trail. Trampling and soil disturbance by cattle occurs mostly above the culverts at any road or OHV crossings, otherwise grazing impacts to the creek are not frequent. However, a salt lick placed near the midpoint of the site concentrates the cattle on the allotment, and the creek in that location is heavily impacted by the cattle as evidenced by severely eroding banks, broken branches, pushed-over trees and shrubs, and denuded soils, especially within 200 feet of the salt lick and along the creek banks.

Key Environmental Factors

Field ecologists in 2005 found that retrorse sedge appears to occupy clayey soils on muddy shorelines or creek banks, and sometimes within shallow standing water roughly between 8,000 and 9,500 feet elevation. In this site, the soils in which the retrorse sedge was growing were determined to be silty clay loams, with a

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higher component of sandy soils within the creek bed.

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 11/17/2005

Designer Freeman, K.M. and M.A. March

Boundary Justification

The boundary was drawn to include the known extent of the element occurrences and an additional area large enough to include the natural hydrologic flows, including surface and groundwater flows, which support the habitat for the element occurrences. The boundary represents the immediate watershed for the riparian system in which the elements occur, with a minimum 500-foot buffer. The boundary indicated is the minimum area that should be considered for any conservation management plan.

Primary Area 559.85 Acres 226.56 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

The site is drawn for a fair (C-ranked) occurrence of the globally vulnerable (G3) and state vulnerable (S3) blue spruce / thinleaf alder (*Picea pungens* / *Alnus incana*) montane riparian forest plant community, which typically occurs in shady canyons and narrow valleys subject to infrequent flood events. A fair (C-ranked) occurrence of the globally secure (G5) but statewide critically imperiled (S1) retrorse sedge (*Carex retrorsa*) also occurs within the site.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

An old jeep track follows Sparks Creek above where the creek crosses FR 024. Signs on the track at its junction with FR 024 state that vehicular travel is prohibited, but no gates or other physical barriers prevent unauthorized use. Several active four-wheel drive or OHV trails criss-cross the slope below FR 024, and cross the creek in several places. These are most likely used most frequently during hunting season. Logging has occurred in the past on this part of the San Juan National Forest, and the tree stumps do not appear to be recent (at least 10 years old).

Natural Hazard Comments

No Data

Exotics Comments

Exotic or invasive plant species, notably oxeye daisy and common dandelion, are infrequent within this site and appear to be localized mostly near the Forest Road and OHV trails, as well as the area near the existing salt lick where cattle tend to congregate.

Offsite

A large privately owned parcel occurs 1,000 feet down slope of the site. Ocular reconnaissance from USFS lands and aerial photos (USDA 2002) indicate that it currently has a road that crosses Sparks Creek below the site, but otherwise the parcel appears undeveloped and utilized only for grazing. Sparks Creek's blue spruce / thinleaf alder riparian community is in much better shape than the same community on the adjacent Porcupine Creek drainage (to the south). Porcupine Creek is much more utilized by cattle and is more impacted, and the alder on that riparian system is exhibiting significant branch dieback.

Information Needs

A survey to determine the full extent of the population of retrorse sedge and the blue spruce/thinleaf alder community would be beneficial for management of the area.

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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>
24518	<i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	Yes
20504	<i>Carex retrorsa</i>	retorse sedge	G5	S1	No

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
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.
193472	Sovell, J., P. Lyon, and L. Grunau. 2003. Final Report: Upper San Juan Biological Assessment. Colorado Natural Heritage Program, Fort Collins, CO.
193554	USDA, NRCS. 2002. Orthophoto Mosaic for Archuleta County, CO. USDA-NRCS, National Cartography and Geospatial Center, Geospatial Data Branch, Fort Worth, TX.
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	11/17/2005
Version Author	Freeman, K.M. and M.A. March

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