Level 4 Potential Conservation Area (PCA) Report

Name Tributary to Little Navajo River **Site Code** S.USCOHP*25732

IDENTIFIERS

Site ID 2255 **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** 370601N

State Colorado **Longitude** 1064453W

Quad Code	Quad Name
37106-A7	Chromo
37106-A6	Chama Peak

County

Archuleta (CO)

Watershed Code	Watershed Name
14080101	Upper San Juan

SITE DESCRIPTION

Minimum Elevation	9,290.00	**Feet**	2,831.59	**Meters**
Maximum Elevation	10,480.00	**Feet**	3,194.30	**Meters**

Site Description

The Tributary to Little Navajo River site is in the southeastern portion of Archuleta County within the South San Juan Wilderness, lying approximately 2 miles northwest of Navajo Peak. The unnamed tributary drains generally west, turning southwest as it nears its confluence with the Little Navajo River. Navajo Trail, a popular hiking trail, crosses the stream in the lower 1/3 of the site. The headwaters of the stream originate a mile east of the trail on the steep, west-facing slopes of the Chalk Mountains, amidst upland upper montane and subalpine forests dominated by dense to patchy stands of spruce, fir and quaking aspen (*Picea* spp., *Abies* spp., *Pseudotsuga menziesii* and *Populus tremuloides*), and interspersed with open shrublands and meadows. The stream cuts through a cool, steep, narrow V-shaped ravine that eventually widens and flattens below the trail crossing, at the lower extent of a quaking aspen / thinleaf alder (*Populus tremuloides / Alnus incana*) montane riparian plant community. The ravine has a very narrow floodplain and the streambed contains small gravels and sand, with few if any larger rocks or larger woody material. The stream channel is sinuous within its limited floodplain, but the stream course is overall fairly straight. The riparian vegetation is generally vigorous and dense, even lush. The channel and immediate floodplain are dominated by a dense, tall cover of mature thinleaf alder with the adjacent terraces occupied by mature to decadent aspen forests, with little regeneration. The herbaceous layer of mesic forbs and graminoids is diverse and includes cutleaf coneflower (*Rudbeckia laciniata* var. *ampla*), thimbleberry (*Rubacer parviflorus* ssp. *parviflorus*), Fendler's cowbane (*Oxypolis fendleri*), and Porter's licorice root (*Ligusticum porteri*). Adjacent uplands contain open shrublands dominated by roundleaf snowberry (*Symphoricarpos rotundifolius*), and grasslands with a high percentage of needlegrass (*Hesperostipa* sp.). Downstream of where Navajo Trail crosses the creek, a very small, open-water emergent wetland occurs, supporting bluejoint grass (*Calamagrostis canadensis*), beaked sedge (*Carex utriculata*), and a fringe of Canada thistle (*Cirsium arvense*) and cutleaf coneflower. Navajo Trail is popular with hikers and horseback riders, especially during hunting season. The general area is well grazed, with ample evidence of cattle. Near the trail crossing, the channel is shallow-banked and spread out slightly, possibly caused by grazing impacts. Many cattle trails exist within the aspen component of the community, and several cross the creek up and downstream of the hiking trail.

Key Environmental Factors

Mixed landslide materials from quartz latite and igneous rock overlying shale and sandstone comprise the parent material for the soils in the area (USDA 1981). The geology of the lower two-thirds of the site is mapped as Landslide Deposits, including talus, rock-glacier and colluvial depositions. The upper third (the headwaters in the Chalk Mountains) is mapped as Pre-Ash Flow Andesitic Lavas, Breccias, Tuffs and Conglomerates (General Age 30-35 million years old) (Tweto 1979). Soils in this area are mapped as Castelleia loams, with small inclusions of poorly drained Animas loam and Hunchback clay loam in depressions and swales (USDA 1981). Soil samples taken on the streambank had a 10 cm thick layer of

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detritus over 10 cm of loam, then over 35 cm of silt loam; all horizons are a dark 10YR2/2 Munsell color.

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes **Mapped Date** 12/19/2005

Designer Freeman, K.M.

Boundary Justification

The boundary encompasses the element occurrence and a 250 foot buffer to contain the immediate watershed and buffer the hydrologic processes (stream flow) necessary to the viability of the element. The boundary also provides a small buffer from nearby trails and grazing allotments where surface runoff may contribute excess nutrients, sediment and weed invasion. It should be noted that the hydrologic processes necessary to the element are not fully contained by the site boundary.

Primary Area 61.99 **Acres** 25.09 **Hectares**

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site contains a good (B-ranked) occurrence of the globally vulnerable (G3/S3) quaking aspen / thinleaf alder (*Populus tremuloides / Alnus incana*) montane riparian forest. This community typically occurs on steep and narrow ravines where aspen intermix with riparian vegetation (Carsey et al. 2003). As of 2005, this is the only documented occurrence of this community type in Archuleta County.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGMENT ISSUES

Land Use Comments

Dominant land uses in this area include recreation (hiking, horseback riding, wilderness camping), hunting, grazing, and wildlife use.

Natural Hazard Comments

No Data

Exotics Comments

Common dandelion (*Taraxacum officinale*) is found within the riparian area, and adjacent uplands harbor common weeds such as Canada thistle (*Cirsium arvense*), common dandelion, and hay grasses including Kentucky bluegrass (*Poa pratensis*). Canada thistle is especially common at the downstream edge of the site along the fringes of a small emergent wetland, just below the trail crossing.

Offsite

No Data

Information Needs

Some alder along the creek have branches of leaves that appear to be suffering from a disease that turns the leaves rusty before they die. This may be the same as what is causing the branch dieback seen on the alder all along the creek. Alder branch dieback is common across the county, and research into the branch dieback would benefit this species across the county. Monitor grazing impacts on the riparian system, progression of the alder dieback, and lack of regeneration within the aspen portion of the community.

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24911	*Populus tremuloides / Alnus incana* Forest	Montane Riparian Forests	G3	S3	Yes

REFERENCES

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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.
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.
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.
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.
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 12/19/2005

Version Author Freeman, K.M.

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