

# Level 4 Potential Conservation Area (PCA) Report

Name Rio Blanco at Deadman Canyon

Site Code S.USCOHP\*9480

## IDENTIFIERS

Site ID 848 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 370844N  
 State Colorado Longitude 1065252W

## Quad Code Quad Name

37106-B8 Serviceberry Mountain  
 37106-B7 Harris Lake

## County

Archuleta (CO)

## Watershed Code Watershed Name

14080101 Upper San Juan

## SITE DESCRIPTION

Minimum Elevation	7,100.00 Feet	2,164.08 Meters
Maximum Elevation	7,300.00 Feet	2,225.04 Meters

## Site Description

The Rio Blanco at Deadman Canyon is located in central Archuleta County, twelve miles south of Pagosa Springs and two miles southeast of Serviceberry Mountain. The Rio Blanco is a mid-elevation river flowing in a one half mile wide valley with a broad floodplain and well-defined riparian zone. It is moderately sinuous within its floodplain, depositing cobble on bars within the river and sediment on higher ground, where dense stands of thinleaf alder (*Alnus incana*) and sandbar willow (*Salix exigua*) dominate the riverbanks and are regenerating well. The alder displays some branch dieback as seen in other parts in the county, but is not as widespread as in other county locations. At the upper (east) end of the site, Pacific willow (*Salix lucida* ssp. *lasiandra*) and strapleaf willow (*Salix ligulifolia*) both occur within thinleaf alder / mixed willow community, but in low percentages. On the terraces, the alder decreases and sandbar willow is dominant, with strapleaf willow, Woods' rose (*Rosa woodsii*), redosier dogwood (*Cornus sericea*) and sapling narrowleaf cottonwood (*Populus angustifolia*). The understory is fairly weedy in the higher areas with exotic forb and graminoid species, but a narrow fringe of native hydrophytic plants such as common spikerush (*Eleocharis palustris*) occurs in flat, depositional areas along the river's edge. Blanco River Campground, a popular and heavily used USFS campground, occurs at the downstream end of the documented thinleaf alder / mixed willow community, and human-induced impacts immediately surrounding the campground boundaries can be heavy. The middle stretch of the river, below Blanco River Campground, has relatively low impacts except by cattle grazing. No roads directly access the river here, and dense Douglas-fir (*Pseudotsuga menziesii*) and blue spruce (*Picea pungens*) forests between the road and the river restrict views and limit accessibility. Within this stretch, riparian vegetation is vigorous and regenerating and dominated by a mix of willow species and scattered blue spruce and narrowleaf cottonwood individuals in the floodplain. At the lower end of the site, the banks of the river are occupied by dense stands of alder, mixed willow species and patches of silver buffaloberry (*Shepherdia argentea*), with a somewhat sparse herbaceous understory of mesic forbs and graminoids such as stary false lily of the valley (*Maianthemum stellatum*), cutleaf coneflower (*Rudbeckia laciniata* var. *ampla*), and creeping bentgrass (*Agrostis stolonifera*). Here another thinleaf alder / mixed willow community co-dominates with a Silver Buffaloberry shrubland community. There is a scattered, mature narrowleaf cottonwood component, especially near the downstream end of the occurrence. The forest on the surrounding hillsides consists of Douglas-fir and blue spruce on north-facing slopes, with a ponderosa pine (*Pinus ponderosa*) forest with a hay grass understory on warmer, higher, dryer aspects. The area sees moderately heavy recreational use, particularly fishing and camping. The hydrology of the river has been altered upstream by a large, regional irrigation diversion, and Highway 84 crosses the river several hundred yards downstream of the site.

## Key Environmental Factors

The wide valley floor and old side channels allows the river to spread in the event of a flood. The riverbanks

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are generally low and well vegetated, though some portions of the steeper banks on the north side of the river are eroding, apparently from natural causes, not necessarily from grazing impacts. The soils and streambed substrate are porous and probably provide significant groundwater recharge. The habitat diversity is limited to narrow fringes of emergent habitat and the more dominant scrub-shrub woody riparian vegetation. The canopy cover is dense in the shrub layer, but the tree canopy is open or nonexistent, providing little shade to the river. This, along with a fairly broad and shallow river with few deep pools, detracts from quality fish habitat.

## Climate Description

No Data

## Land Use History

No Data

## Cultural Features

No Data

## SITE DESIGN

Site Map Y - Yes

Mapped Date 12/15/2005

Designer Freeman, K.M.

## Boundary Justification

The boundary incorporates an area that will allow natural hydrological processes such as seasonal flooding, channel migration, and sediment deposition to continue, maintaining a viable population of the riparian shrubland along the Rio Blanco. However, it is unclear if the linear gravel mounds present alongside the river channel in its lower reach prevent natural flooding of the terrace. The adjacent steep slopes that would most likely impact the riparian shrubland if altered are also included. The boundary also provides a small buffer from nearby roads where surface runoff may contribute excess nutrients, pollutants, and sediment. Eliminating disturbance within this buffer would also aid in reducing impacts from sedimentation (Karr and Schlosser 1978), and assist in maintaining the integrity of the occurrence and its associated avian, macroinvertebrate and periphyton communities (Noel et al. 1986, Spackman and Hughes 1995).

Primary Area 393.77 Acres

159.35 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

This site supports a fair (C-ranked) occurrence of thinleaf alder - mixed willow (*Alnus incana* - *Salix monticola*, *lucida*, *ligulifolia*) shrubland, a plant community that is globally vulnerable (G3/S3). This community type is often associated with beaver ponds and grazing disturbances, and may indicate a shift in physical setting, such as from a steep narrow valley to a broader, gentler valley (Carsey et al. 2003). The site also supports a fair (C-ranked) occurrence of silver buffaloberry (*Shepherdia argentea*) foothills riparian shrubland, a globally vulnerable (G3G4) plant community that is extremely rare (S1) in Colorado. This mesic community typically occurs in mosaic with other riparian plant communities such as willows or cottonwoods, and often occurs along broad river floodplains that, in Colorado, are typically impacted by improper grazing practices and altered hydrology. As of 2005, this community type is known from only 11 locations in the state, and the majority of these are located in southwestern Colorado.

Other Values Rank No Data

## Other Values Comments

No Data

## LAND MANAGEMENT ISSUES

## Land Use Comments

The site occurs on USFS land, and is surrounded by USFS land. Forest Road 656 parallels the river for 2.5 miles on the south side, but is not immediately adjacent to the river. This road dead-ends at the popular Blanco Campground upstream. Downstream of the campground, near the highway, dispersed camping occurs on the broad floodplain as evidenced by short access roads, fire rings and litter. Grazing also occurs within the site, contributing to streambank erosion and the spread of weeds.

## Natural Hazard Comments

No Data

## Exotics Comments

The herbaceous understory of the riparian zone contains some invasive species including Canada thistle (*Cirsium arvense*), American licorice (*Glycyrrhiza lepidota*), and smooth brome (*Bromus inermis*). However,

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the uplands adjacent to the riparian zone are dominated by weeds in the herbaceous layer, with patches of bare soil.

## Offsite

A busy road, Highway 84 between Pagosa Springs and Chama, New Mexico, is located immediately downstream of the communities, and the river runs under a large bridge at the highway and enters private land. Upstream of the site on the Blanco River, there are large ranches, stock ponds, small diversions and a large irrigation diversion at the Blanco Dam, though no reservoir exists at this location. A large, lightning-caused fire burned in the watershed on the north side of the river on the Winter Hills in 2005. Impacts to the community are not noticeable at this time, but increased sediment loading to the river for several years would not be unexpected.

## Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
17439	<i>Shepherdia argentea</i> Shrubland	Foothills Riparian Shrubland	G3G4	S1	Yes
24912	<i>Alnus incana</i> - <i>Salix</i> ( <i>monticola</i> , <i>lucida</i> , <i>ligulifolia</i> ) Shrubland	Thinleaf Alder-Mixed Willow Species	G3	S3	Yes
24912	<i>Alnus incana</i> - <i>Salix</i> ( <i>monticola</i> , <i>lucida</i> , <i>ligulifolia</i> ) Shrubland	Thinleaf Alder-Mixed Willow Species	G3	S3	Yes

## 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.
172808	J. R. Karr and I. J. Schlosser. 1978. Water resources and the land-water interface. Science 201: 229-234.
165959	Noel, D.S., C.W. Martin and C.A. Federer. 1986. Effects of Forest Clearcutting in New England on Stream Macroinvertebrates and Periphyton. Environmental Management 10: 661-670.
170844	Randolph, D., Smith, Kettler, Redders, Roy, and Aitken. 1994. San Juan National Forest Riparian Site Survey.
193472	Sovell, J., P. Lyon, and L. Grunau. 2003. Final Report: Upper San Juan Biological Assessment. Colorado Natural Heritage Program, Fort Collins, CO.
159511	Spackman, S. C. and J. W. Hughes. 1995. Assessment of Minimum Stream Corridor Width for Biological Conservation: Species Richness and Distribution Along Mid-Order Streams in Vermont, USA. Biological Conservation 71:325-332.

## ADDITIONAL TOPICS

### Additional Topics

Original site design by Kettler, S.M. 1997-06-10.

## VERSION

<b>Version Date</b>	12/15/2005
<b>Version Author</b>	Freeman, K.M.

## Disclaimer

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