

# Level 4 Potential Conservation Area (PCA) Report

Name Upper First Fork Piedra River

Site Code S.USCOHP\*25734

## IDENTIFIERS

Site ID 2257 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 372225N  
State Colorado Longitude 1072411W

<u>Quad Code</u>	<u>Quad Name</u>
37107-C4	Baldy Mountain
37107-D4	Granite Peak

### County

Archuleta (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14080102	Piedra

## SITE DESCRIPTION

Minimum Elevation	7,720.00 Feet	2,353.06 Meters
Maximum Elevation	8,200.00 Feet	2,499.36 Meters

### Site Description

The First Fork Piedra River site is located in the extreme northwest corner of Archuleta County, on the north slope of Baldy Mountain and south of Slide Mountain. The First Fork of the Piedra River flows steeply east-southeast through a steep-walled, narrow V-shaped valley between these two mountains to join with the Piedra River 7 miles downstream. At the canyon floor along the creek, thinleaf alder (*Alnus incana*) and Drummond's willow (*Salix drummondiana*) dominate the shrub layer, with an overstory of mature narrowleaf cottonwood (*Populus angustifolia*), blue spruce (*Picea pungens*), and white fir (*Abies concolor*). Rocky Mountain maple (*Acer glabrum*) occurs on the first terrace above the creek. The stream bank vegetation is sparse due to the large cobble on the creek banks, but where sediment has been deposited in the floodplains and on the benches, there is a healthy understory of mesic graminoids and forbs. This herbaceous understory is dominated by meadowrue (*Thalictrum* sp.), cutleaf coneflower (*Rudbeckia laciniata* var. *ampla*), thimbleberry (*Rubacer parviflorus* ssp. *parviflorus*), fringed brome (*Bromus ciliatus*), fowl bluegrass (*Poa palustris*), and bluejoint grass (*Calamagrostis canadensis*). The creek is slightly sinuous, with a narrow floodplain constricted by the narrow canyon in most places, and a few terraces/benches in wider canyon areas, supporting larger populations of cottonwood, blue spruce, white fir, alder and Drummond's willow. The surrounding forest is comprised of spruce, fir and aspen (*Picea* spp., *Abies* spp. and *Populus tremuloides*), in mosaic with open, weedy meadows with high concentrations of nodding plumeless thistle (*Carduus nutans*) and Canada thistle (*Cirsium arvense*). The surrounding area is USFS land, though it is used by hunters and other non-motorized recreationists. A hunting camp occurs at the upstream end.

### Key Environmental Factors

Seasonal flooding and associated sediment deposition along this active floodplain provides the germination substrate necessary for the persistence of the narrowleaf cottonwood component of the plant community. The geology in this area is mapped as Morrison, Wanakah and Entrada formations (Tweto 1979), and soils at the occurrence are mapped as Sandstone outcrop-Ustorthents complex (USDA 1981). Ustorthents soils occur on the hillsides above the creek, and are fairly coarse textured and well-drained, with rapid precipitation runoff and a high erosion hazard. Soils in the creek bed are alluvial, with angular boulders, rounded cobble, gravel and coarse sand deposits. The banks are shallow mineral soils over rocky alluvium, topped with forest litter (duff).

### 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 12/20/2005

Designer Freeman, K.M.

## Boundary Justification

The boundary incorporates an area that will allow natural hydrological processes such as seasonal flooding and sediment deposition to maintain the riparian forest along First Fork Creek. The adjacent steep slopes that would most likely impact the riparian forest if altered are also included. Given that the riparian forest is dependent on natural hydrological processes associated with First Fork Creek, upstream activities such as logging, water diversions, impoundments, and improper livestock grazing are detrimental to the hydrology of the riparian area. The boundary also includes an approximate 1,000 foot buffer, which includes nearby trails, grazing allotments and campsites where surface runoff may contribute excess nutrients, sediment (Karr and Schlosser 1978), and weed invasion. It should be noted that the hydrological processes necessary to the riparian forest are not fully contained by the site boundaries. This boundary indicates the minimum area that should be considered for any conservation management plan.

Primary Area 450.80 Acres 182.43 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

## Biodiversity Significance Comments

This site contains a fair (C-ranked) occurrence of a plant community considered globally imperiled (G2/S2). As of 2005, there are only 15 known locations of the white fir - (blue spruce) - narrowleaf cottonwood / Rocky Mountain maple (*Abies concolor* - (*Picea pungens*) - *Populus angustifolia* / *Acer glabrum*) montane riparian forest in Colorado, and this occurrence represents one of two known occurrences within Archuleta County.

Other Values Rank No Data

## Other Values Comments

No Data

## LAND MANAGEMENT ISSUES

### Land Use Comments

Current land use is dominated by grazing and wildlife use; the area is also used during hunting season as evidenced by at least one well-established hunting camp along the creek.

### Natural Hazard Comments

Bears were seen in the area during the 2005 visit, and because there is no trail to the site cross-country travel over steep and heavily vegetated terrain can be hazardous.

### Exotics Comments

Several weed-infested meadows occur on the terraces above the creek, and are dominated by large, robust stands of nodding plumeless thistle (*Carduus nutans*) with an understory of Canada thistle (*Cirsium arvense*), Kentucky bluegrass (*Poa pratensis*), common dandelion (*Taraxacum officinale*) and other weedy species. This is notable because this area is not accessible by any designated trail, yet the upland meadows are severely invaded by weeds. No logging in the immediate area was noted, and the closest trail is nearly 2 miles away, and the closest road nearly 4 miles away. A few weeds occur in the understory of the riparian area, but considering the high percentage of weeds in adjacent upland areas, the weed population within the riparian area is very minimal.

### 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>
24810	<i>Abies concolor</i> - <i>Picea pungens</i> - <i>Populus angustifolia</i> / <i>Acer glabrum</i> Forest	Montane Riparian Forests	G2	S2	Yes

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## 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.
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 12/20/2005

Version Author Freeman, K.M.

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