

# Level 4 Potential Conservation Area (PCA) Report

Name Snow Spring

Site Code S.USCOHP\*25714

## IDENTIFIERS

Site ID 2252 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 371549N  
State Colorado Longitude 1071417W

| <u>Quad Code</u> | <u>Quad Name</u> |
|------------------|------------------|
| 37107-C2         | Chris Mountain   |
| 37107-C3         | Devil Mountain   |

## County

Archuleta (CO)

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

## SITE DESCRIPTION

|                   |               |                 |
|-------------------|---------------|-----------------|
| Minimum Elevation | 7,040.00 Feet | 2,145.79 Meters |
| Maximum Elevation | 9,000.00 Feet | 2,743.20 Meters |

## Site Description

Snow Spring site is located on the east slope of Devil Mountain, in the western portion of Archuleta County, west and upslope from Devil Creek, a tributary to the Piedra River. Ponderosa pine (*Pinus ponderosa*) and Gambel oak (*Quercus gambelii*) shrublands dominate the shale and sandstone hill slopes of the Devil Creek drainage. Springs discharge in several locations on the slopes west of Devil Creek, supporting ponds and wetlands occurring on broad benches or steps on east-facing slopes. Near Snow Spring, at least two depressional wetlands with very little open water support dense stands of awned sedge (*Carex atherodes*). The wetland supporting the largest stand of awned sedge displays rings of vegetation where hardstem bulrush (*Schoenoplectus acutus* var. *acutus*) dominates the deepest water in the center of the depression and awned sedge occurs in solid stands in standing water. Bebb willow (*Salix bebbiana*) individuals are scattered along the west shoreline and along the rivulet draining from the Snow Spring discharge. Awned sedge mixes with fox sedge (*Carex vulpinoidea*) and Kentucky bluegrass (*Poa pratensis*) along the shoreline. Drier sites on the shoreline also support dense fringes of mountain rush (*Juncus balticus* var. *montanus*) and smooth horsetail (*Equisetum laevigatum*). There are other wetlands in the area dominated by narrowleaf willow (*Salix exigua*) and fringes of emergent vegetation. Narrowleaf cottonwood (*Populus angustifolia*) occupies patches on the benches where several seeps and rivulets from visible springs occur. Weed invasion is common; for example, Canada thistle (*Cirsium arvense*) and pasture grasses such as orchardgrass (*Dactylis glomerata*) and Kentucky bluegrass are abundant adjacent to the wetland. Pasture grasses also dominate an old road through the area, and several of the wetlands and much of the uplands in the area display a high percentage of Canada thistle. Overall, the seeps and springs support productive wetland and riparian vegetation within the otherwise arid ponderosa pine forests. Impacts and potential threats include heavy grazing, ATV use and other recreation including hunting, hiking and camping.

## Key Environmental Factors

The geology of the area is described predominantly as Mancos shale, with portions of the edges of the site mapped as Morrison-Wanakah-Entrada formation and Dakota sandstone-Burro canyon formation, both comprised of sedimentary rocks such as sandstone, shale and conglomerates (Tweto 1979). Soils are generally mapped as Chris stony loam, a sandstone-derived and well drained soil with an underlying sandstone bedrock, with frequent sandstone outcrops and pockets of Hunchback clay loam, a deep and poorly draining soil type (USDA 1981). It is within these pockets of Hunchback clay loam that discharging springs collect on the surface as wetlands. At the site of the element occurrence, the surface horizon displayed 15 cm of muck over a deep horizon of silty clay loam. The soils sampled were saturated to the surface and water collected in the pit.

## Climate Description

No Data

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## Land Use History

No Data

## Cultural Features

No Data

### SITE DESIGN

Site Map Y - Yes

Mapped Date 11/17/2005

Designer Freeman, K.M.

## Boundary Justification

The boundary is drawn to encompass the element occurrence, its soil type (USDA 1981), associated seeps and springs, and to protect the groundwater discharges necessary for the long-term viability of the element. The boundary also identifies a buffer around nearby roads and ATV trails (identified in the field and not necessarily shown on the 1968 USGS topographic quadrangle map) and open range areas where surface runoff may contribute excess nutrients and sediment, and may provide a continuing vector for the spread of weeds. It should be noted that all the hydrologic processes necessary to the element occurrence are not fully contained by the boundary.

Primary Area 682.10 Acres

276.04 Hectares

### SITE SIGNIFICANCE

Biodiversity Significance Rank B5: General Biodiversity Interest

## Biodiversity Significance Comments

The site supports an apparently globally secure (G3G5) and state imperiled (S2?) occurrence of awned sedge (*Carex atherodes*) montane wetland in fair (C-ranked) condition. Awned sedge is an obligate wetland species that is uncommon in Colorado and is listed as Endangered in four eastern states (USDA 2005).

Other Values Rank No Data

## Other Values Comments

No Data

### LAND MANAGEMENT ISSUES

## Land Use Comments

ATV use is popular in the area, especially during the summer and the fall hunting season. A well-used ATV track passes within 1,300 feet of the element occurrence, and an old, faint road leads from the ATV track to the wetland. This access provides a potential threat to the population from off-trail, unauthorized ATV use within the wetland areas, which are attractively muddy for recreational ATV users. This old road has already been accessed by ATV users as evidenced by flagging tape tied on shrubs and trees along the faint road, and by vehicular tracks on the east shoreline of the wetland containing the element occurrence.

## Natural Hazard Comments

No Data

## Exotics Comments

No Data

## Offsite

A small gravel mining operation, horse grazing, and a residence occur on the private property (Snow Angel Ranch) along Devil Creek, to the northeast of the site.

## 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> |
|-------------------------|--|--------------------------|--------------------|-------------------|--------------------------|
| 18076                   | <i>Carex atherodes</i> Herbaceous Vegetation |                          | G3G5               | S2?               | Yes                      |

### REFERENCES

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## Reference ID

## Full Citation

|        |   |
|--------|---|
| 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 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center < <a href="http://npdc.usda.gov/">http://npdc.usda.gov/</a> >, 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** 11/17/2005  
**Version Author** Freeman, K.M.

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