

# Level 4 Potential Conservation Area (PCA) Report

Name Chattanooga Iron Fen

Site Code S.USCOHP\*23602

## IDENTIFIERS

Site ID 447 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 375209N  
State Colorado Longitude 1074326W

## Quad Code Quad Name

37107-G6 Silverton  
37107-H6 Ironton

## County

San Juan (CO)

## Watershed Code Watershed Name

14080104 Animas

## SITE DESCRIPTION

Minimum Elevation	10,200.00 Feet	3,109.00 Meters
Maximum Elevation	11,300.00 Feet	3,444.00 Meters

## Site Description

Chattanooga Iron Fen lies in the Mineral Creek floodplain of the San Juan Mountains, 3 miles south of Red Mountain Pass and 6.5 miles northwest of the Town of Silverton. Ohio Peak and Anvil Mountain border the iron fen to the east and two unnamed 12,000 plus peaks border to the west. Mineral Creek flows along a fault zone through quaternary glacial deposits at the west edge of the Silverton Caldera. To the north, Mineral Creek follows the trace of the caldera rim faults. The highly altered Henson and Burns Formations make up the valley wall east of the fault zone and lower third of the west valley wall. The upper two-thirds of the west valley wall are the San Juan Formation, derived from ancient volcanoes located northeast of Silverton, and a sequence of rhyolite ash flows, including the Ute, Blue Mesa, and Sapinero Mesa Tuffs. The Chattanooga Iron Fen is fed by groundwater seeping from eastern valley walls under Highway 550 and overflow by Mineral Creek. Highly acidic groundwater, mineralized springs emerging from the lower west wall of the valley feeds the iron fen. A common feature of iron fens is limonite terraces or iron precipitates that have been deposited onto organic matter in layers. These terraces will perch the water table and form an extensive network of pools and ponds, Chattanooga Iron Fen is a good example of this process. Chattanooga Iron Fen is dominated by acid-tolerant shrubs with a thick ground cover of a variety of Sphagnum and other mosses. Engelmann spruce (*Picea engelmannii*) dominates the tree layer. Bog birch (*Betula glandulosa*) and dwarf blueberry (*Vaccinium cespitosum*) dominate the shrub layer. Mosses, bluejoint (*Calamagrostis canadensis*), water sedge (*Carex aquatilis*), and alpine spicy wintergreen (*Gaultheria humifusa*) dominate the herbaceous layer. At Chattanooga there is 25-30% open water documented. Dr. David Cooper of Colorado State University documented several new bryophyte records for Colorado and the United States in Chattanooga Iron Fen. *Sphagnum balticum* is common in the Chattanooga Iron fen. Until its discovery in Colorado, its known range in North America extended southward to approximately 510 degrees latitude. *S. balticum* is the primary moss in shallow pools with the sedges *Carex aquatilis* and *Carex utriculata*. Additionally, a liverwort, *Jungermannia rubra*, was documented at the springs and in the water tracks on the exposed limonite.

## Key Environmental Factors

No Data

## Climate Description

No Data

## Land Use History

No Data

## Cultural Features

No Data

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## SITE DESIGN

Site Map Y - Yes Mapped Date 12/17/2002

Designer Culver, D.R.

### Boundary Justification

The boundary is drawn to include the Mineral Creek floodplain and slopes below the cliffs, which rise on both sides of the river at the base of Red Mountain Pass. The boundaries incorporate an area that will allow natural hydrological processes such as seasonal flooding, sediment deposition, and new channel formation to maintain viable populations of the wetland. It should be noted that the hydrological processes necessary to the riparian elements are not fully contained by the site boundaries. Given that the elements are dependent on natural hydrological processes associated with Mineral Creek, any upstream activities such as water diversions, impoundments, and mining development could potentially be detrimental to the wetland. This boundary indicates the minimum area that should be considered for any conservation management plan.

Primary Area 309.42 Acres 125.22 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

### Biodiversity Significance Comments

This site supports a good (B-ranked) example of a globally imperiled (G2/S2) plant community and multiple occurrences of disjunct *Sphagnum* species known to occur in acidic wetlands at more northerly latitudes. Currently there are only 15 iron fens known globally, five of which occur in San Juan County.

Other Values Rank No Data

### Other Values Comments

No Data

## LAND MANAGEMENT ISSUES

### Land Use Comments

No Data

### Natural Hazard Comments

No Data

### Exotics Comments

No Data

### Offsite

No Data

### Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

Element			Global	State	Driving
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
23433	<i>Sphagnum girgensohnii</i>		G5	S1	No
18455	<i>Sphagnum platyphyllum</i>		G5	SNR	No
19804	<i>Sphagnum angustifolium</i>		G5	S2	No
24847	( <i>Picea engelmannii</i> ) / <i>Betula nana</i> / <i>Carex aquatilis</i> - <i>Sphagnum angustifolium</i> Woodland	Iron Fen	G2	S2	Yes

## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
158301	Culver, D.R. and P. Lyon. 2002. Colorado Natural Heritage Program Field Survey to San Juan County.

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

Version Date 12/17/2002

Version Author Culver, D.R.

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