

Level 4 Potential Conservation Area (PCA) Report

Name Crystal River

Site Code S.USCOHP*3976

IDENTIFIERS

Site ID 1445 Site Class PCA
Site Alias Lost Trail Creek

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 390503N
State Colorado Longitude 1070856W

Quad Code Quad Name

39107-A2 Marble
39107-A3 Chair Mountain

County

Gunnison (CO)

Watershed Code Watershed Name

14010004 Roaring Fork

SITE DESCRIPTION

| | | |
|-------------------|----------------|-----------------|
| Minimum Elevation | 7,600.00 Feet | 2,316.00 Meters |
| Maximum Elevation | 11,000.00 Feet | 3,353.00 Meters |

Site Description

The Crystal River has eroded mostly through sedimentary rocks, forming a steep, but moderately wide valley through much of the site. Upper portions of the valley are much more narrow and steep. The valley is very dramatic and beautiful. The town of Marble sits in the middle of the site. Downstream of Marble there are numerous homes, roads, and campgrounds in the valley. Upstream of Marble, four-wheel drive roads, foot trails, small reservoirs, and mining operations occur in the landscape. The entire area is a popular recreation area. Mixed conifers and aspen (*Populus tremuloides*) dominate the upland slopes. The riparian area has a mixture of communities from the lower to upper reach. Blue spruce (*Picea pungens*), alder (*Alnus incana* ssp. *tenuifolia*), and mountain willow (*Salix monticola*) are common along the lower reaches of the Crystal River. In some locations of the river, and along some of the smaller tributaries, subalpine fir (*Abies lasiocarpa*) and Engelmann spruce (*Picea engelmannii*) are conspicuously present along with the previously mentioned species. Kentucky bluegrass (*Poa pratensis*) and timothy (*Phleum pratense*) are common in the understory. Up one of the side drainages (Milton Creek) is a large, beautiful waterfall, which supports a population of the globally vulnerable hanging garden sullivania (*Sullivantia hapemanii* var. *purpusii*) and a breeding pair of Black Swifts (*Cypseloides niger*). Near the town of Marble, a large expanse of willows dominated by mountain willow, twinberry honeysuckle (*Lonicera involucrata*), and bluejoint reedgrass (*Calamagrostis canadensis*) occurs. Further upstream Drummond willow (*Salix drummondiana*), bluejoint reedgrass, and heartleaf bittercress (*Cardamine cordifolia*) are common along the riparian zone.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 12/20/2002
Designer Rocchio, F.J.

Boundary Justification

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 elements along the

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Crystal River. The boundaries also provide a small buffer from nearby roads and homes where surface runoff may contribute excess nutrients, toxicants, and sediment. It should be noted that the hydrological processes necessary to the elements are not fully contained by the site boundaries. Given that the elements are dependent on natural hydrological processes associated with the Crystal River and its tributaries, upstream activities such as water diversions, impoundments, improper livestock grazing, and development are detrimental to the hydrology of the riparian area. This boundary indicates the minimum area that should be considered for any conservation management plan.

Primary Area 3,508.27 Acres 1,419.75 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site supports an excellent (AB-ranked) example of the globally vulnerable (G3/S3) blue spruce/thinleaf alder (*Picea pungens*/*Alnus incana*) woodland. This woodland occurs in deep, shaded canyons and narrow valleys along relatively straight stream reaches. It generally forms small patches, but can be continuous for several river miles. This association is known from Wyoming to New Mexico. Fewer than 100 stands exist in Colorado, and very few of these are in pristine condition. This association is threatened by development, road building and maintenance, heavy recreational use, improper livestock grazing, and stream flow alterations. This site also supports a good (B-ranked) example of the globally vulnerable (G3/S3) Drummond willow/bluejoint reedgrass (*Salix drummondiana*/*Calamagrostis canadensis*) shrubland. This association has a wide distribution, although few undisturbed stands have been documented. In Colorado, less than ten stands have been documented, but at least an additional ten to twenty stands are expected to occur. This association may have been reduced from its historic abundance by heavy livestock grazing at the turn of the century. Remaining stands are threatened by continued improper livestock grazing, altered stream flows, and heavy recreational use. Another globally vulnerable (G3/S3) plant community, the Rocky Mountain willow/bluejoint reedgrass (*Salix monticola*/*Calamagrostis canadensis*) shrubland, occurs in the site. This association is known only throughout the mountains of Colorado. There are thirteen documented locations and an additional twenty to thirty more stands are expected to occur. This association is threatened by improper livestock grazing, inappropriate stream flow alterations, and heavy recreation use. The globally vulnerable (G3T3/S3) hanging garden sullivanian (*Sullivaniantha hapemanii* var. *purpusii*) grows on moist cliff faces (hanging gardens). The species is endemic to Colorado, in Garfield, Gunnison, Montrose, Pitkin, and Rio Blanco counties, where there are 45 documented occurrences and approximately 40,000 individuals (NatureServe 2000). The site also supports good examples of globally secure (G5) subalpine fir (*Abies lasiocarpa*) riparian plant associations.

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

Hydrological processes originating outside of the planning boundary, including water quality, quantity, and timing, must be managed to maintain the population viability.

Information Needs

Trout are to be surveyed for downstream in 1996.

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> |
| 24746 | <i>Abies lasiocarpa</i> / <i>Rubus parviflorus</i> Forest | Subalpine Forests | G5 | S2 | No |
| 24684 | <i>Abies lasiocarpa</i> / <i>Alnus incana</i> Forest | Montane Riparian Forests | G5 | S5 | No |

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|-------|--|----------------------------|---------------|-----|-----|
| 24684 | <i>Abies lasiocarpa</i> / <i>Alnus incana</i> Forest | Montane Riparian Forests | G5 | S5 | No |
| 24518 | <i>Picea pungens</i> / <i>Alnus incana</i> Woodland | Montane Riparian Forests | G3 | S3 | Yes |
| 22214 | <i>Sullivantia hapemanii</i> var. <i>purpusii</i> | Hanging Garden sullivantia | G3T3 | S3 | No |
| 23518 | <i>Cypseloides niger</i> | Black Swift | G4 | S3B | No |
| 24514 | <i>Salix monticola</i> / <i>Calamagrostis canadensis</i> Shrubland | Montane Willow Carr | G3 | S3 | Yes |
| 24473 | <i>Salix drummondiana</i> / <i>Calamagrostis canadensis</i> Shrubland | Lower Montane Willow Carrs | G3 | S3 | Yes |

REFERENCES

| Reference ID | Full Citation |
|--------------|--|
| 173839 | Rocchio J., G Doyle, and R. Rondeau. 2003. Final Report: Survey of Critical Wetlands and Riparian Areas in Gunnison County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO. |
| 173182 | Rocchio, J. 2002. Colorado Natural Heritage Program Field Survey of Critical Wetlands in Gunnison County. |

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

| | |
|----------------|---------------|
| Version Date | 12/20/2002 |
| Version Author | Rocchio, F.J. |

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