

Level 4 Potential Conservation Area (PCA) Report

Name Crystal Creek near Cedar Mountain Road

Site Code S.USCOHP*28186

IDENTIFIERS

Site ID 2718 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 390139N
State Colorado Longitude 1051804W

Quad Code Quad Name
39105-A3 Hackett Mountain

County
Teller (CO)

Watershed Code Watershed Name
10190001 South Platte Headwaters

SITE DESCRIPTION

Minimum Elevation	8,170.00 Feet	2,490.22 Meters
Maximum Elevation	9,240.00 Feet	2,816.35 Meters

Site Description

Crystal Creek near Cedar Mountain Road site supports a water birch (*Betula occidentalis*) / mesic graminoid association that creates a narrow corridor of tall shrubs along Crystal Creek within this narrow montane valley. The vegetation of this riparian vegetation was formerly classified as water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*). After the Hayman fire, false Solomon's seal (*Maianthemum stellatum*) appears to have disappeared, so the riparian community must now be classified as a water birch (*Betula occidentalis*) / mesic graminoid shrubland even though it is located in a narrow valley instead of the typical broad floodplain and hosts abundant forbs. Immediately upstream from this shrubland are a series of beaver ponds and a manmade pond. The south-facing slope of the valley is a ponderosa pine (*Pinus ponderosa*) woodland that has undergone 75% mortality, leaving bunchgrasses like mountain muhly (*Muhlenbergia montana*) to fill in the gaps. The north-facing slope, formerly occupied by ponderosa pine (*Pinus ponderosa*) / blue spruce (*Picea pungens*) forest, has also undergone high mortality, with quaking aspen (*Populus tremuloides*) seedlings now taking over. Upland soils are classified as the Garber series, which are loamy-skeletal, mixed Pachic Haploborolls (USDA NRCS 2008), derived from Pikes Peak granite (Tweto 1979).

Key Environmental Factors

Water birch (*Betula occidentalis*) requires moist soil, indicating a relatively high groundwater table and/or a natural flood regime along Crystal Creek. Non-native grasses and forbs are abundant, which would normally indicate overgrazing (Carsey et al. 2003). However in this steep and remote area of Pike National Fire, the Hayman fire is more likely to be responsible for the influx of weeds.

Climate Description

Teller County is cool and dry considering that Pikes Peak has the topographic relief to cool humid air and initiate precipitation. Average annual precipitation is 10.5-16.2 inches (<http://www.worldclimate.com>), depending upon exact location within the county. Snowfall is greatest in April and May. Monsoon rains peak in July. Spring and summer therefore have the greatest precipitation, and sunny fall weather dries out the landscape. Teller County has the second highest rate of lightning strikes nationwide, an annual average of 5,700 strikes that reach the ground. (Precipitation timing and lightning information was taken from Teller County 2008). Average maximum temperature is lowest, 30 °F (-1.1 °C), in January, and highest, 75.4 °F (24.1 °C), in July. Average minimum temperature is lowest, -2.8 °F (-19.4 °C), in January, and highest, 45.9 °F (7.7 °C) in July (<http://www.worldclimate.com>).

Land Use History

No Data

Cultural Features

No Data

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SITE DESIGN

Site Map Y - Yes

Mapped Date 11/30/2010

Designer Shaw, A.E.

Boundary Justification

The site boundary was drawn to the adjacent ridgetops with the exception of developed areas in the southeastern edge of the site. This boundary was chosen to incorporate the extent of the immediate watershed that can still be conserved to protect the riparian shrubland below to maintain current water flows. The private lands within the site were not visited because the plant community of interest was limited to Pike National Forest.

Primary Area 1,845.37 Acres

746.80 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site hosts a good (B-ranked) occurrence of water birch (*Betula occidentalis*) / mesic graminoid shrubland, a plant association that is globally vulnerable (G3) and imperiled in Colorado (S2). The site also contains a good (B-ranked) population of jeweled blazingstar (*Nuttallia speciosa*), a globally vulnerable (G3/S3) plant. This species' taxonomic status as distinct from other blazingstars (e.g. by Weber & Whitman 2001) has been questioned. If this species is combined with similar species by taxonomists, it could no longer warrant classification as globally vulnerable.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

The two tracks traveled to access the site are very steep and require skillful use of 4 Wheel Drive.

Exotics Comments

The site abounds with the weeds butter-and-eggs (*Linaria vulgaris*), Canada thistle (*Cirsium arvensis*), and quackgrass (*Elymus repens*).

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>
21549	<i>Nuttallia speciosa</i>	jeweled blazingstar	G3	S3	Yes
24637	<i>Betula occidentalis</i> / Mesic Graminoids Shrubland	Lower Montane Riparian Shrublands	G3	S2	Yes

REFERENCES

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Reference ID

Full Citation

159854	Carsey, K., G. Kittel, K. Decker, D. Cooper, and D. Culver. 2003. Field guide to the wetland and riparian plant associations of Colorado. Prepared for the Colorado Department of Natural Resources, Denver, CO by the Colorado Natural Heritage Program, Fort Collins, CO.
198660	Culver, D.R., D. Malone, and A. Shaw. 2011. CNHP Final Report: Survey of Critical Biological Resources in Teller County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
198642	Teller County (Web Page). Accessed 2010. 2008 Teller County Multi-Hazard Mitigation Plan. http://www.co.teller.co.us/OEM/tellercopdm_plan.pdf
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.
198640	USDA Natural Resource Conservation Service. 2008. Soil Survey Geographic (SSURGO) Database for Teller-Park Area, Parts of Teller and Park Counties, Colorado. Fort Worth, TX: United States Department of Agriculture, Natural Resource Conservation Service.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 11/30/2010

Version Author Shaw, A.E.

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