

# Level 4 Potential Conservation Area (PCA) Report

Name Crystola Creek at Aqueduct

Site Code S.USCOHP\*28222

## IDENTIFIERS

Site ID 2742 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 385736N  
State Colorado Longitude 1050329W

Quad Code Quad Name  
38105-H1 Woodland Park

County  
Teller (CO)

Watershed Code Watershed Name  
11020003 Fountain

## SITE DESCRIPTION

Minimum Elevation	8,200.00 Feet	2,499.36 Meters
Maximum Elevation	9,080.00 Feet	2,767.58 Meters

### Site Description

This site is located in a steep (10% grade) narrow canyon that drains to the east. The geology is primarily composed of Pikes Peak granite. However, the far northwestern portion of the site consists of Ogallala sandstone (Tweto 1979). The site's soil consists of poorly drained Aquolls soil, specifically sandy clay in the riparian zone (USDA NRCS 2008). Fish are present, benefitting from the cover of overhanging woody vegetation. There are intact willow (*Salix* spp.) carrs both above and below a water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland. The south-facing slope hosts ponderosa pine (*Pinus ponderosa*) woodland except on extensive bare rock outcrops. The north-facing slope is a forest of Douglas-fir (*Pseudotsuga menziesii*) and Engelmann spruce (*Picea engelmannii*). The site's forests connect to a patchwork of Pike National Forest, ranches and open space. Subdivisions line Highway 24, which encircles Crystola Creek to the north. Within the site, a subdivision sits above a tributary that flows into Crystola Creek from the south. The hydrology has been altered by small ponds and spillways constructed immediately below and above the water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland. An aqueduct runs parallel to Crystola Creek 0.25 miles to the north of the creek, and its right-of-way has been cleared of trees.

### Key Environmental Factors

There is no encroachment of upland plants into the floodplain, suggesting that the water table is high. A scarcity of non-native grasses (less than 5% redtop) indicates that the riparian zone has not been heavily grazed (NatureServe 2010).

### 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

Many historic wood and wire beverage cases litter the floodplain, probably from the era in which the Civilian Conservation Corp built the ponds.

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## SITE DESIGN

Site Map Y - Yes Mapped Date 12/17/2010

Designer Shaw, A.E.

### Boundary Justification

The site boundary is drawn to incorporate the slopes that drain into the water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland to protect the occurrence from sedimentation associated with development. Areas with roads or residential development are excluded from the site boundaries. The upstream boundary is drawn immediately below a small pond, one of many that interrupt the site's natural hydrology. The ponds immediately below the water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland are included because their close proximity could allow them to affect hydrology upstream within the occurrence. Only private lands for which permission was obtained were visited.

Primary Area 298.17 Acres 120.67 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B5: General Biodiversity Interest

### Biodiversity Significance Comments

The site includes a fair viability (C-ranked) occurrence of water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland. This plant association is rare in Colorado (G4?/S2).

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

Crack willow (*Salix fragilis*), butter-and-eggs (*Linaria vulgaris*), Canada thistle (*Cirsium arvense*), and common mullein (*Verbascum thapsus*) are among the many exotic species in this section of Crystola Creek.

### Offsite

No Data

### Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
24686	<i>Betula occidentalis</i> / <i>Maianthemum stellatum</i> Shrubland	Foothills Riparian Shrubland	G4?	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.
198314	NatureServe Explorer (Web Page). Accessed 2010. An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <a href="http://www.natureserve.org/explorer">http://www.natureserve.org/explorer</a> .
198642	Teller County (Web Page). Accessed 2010. 2008 Teller County Multi-Hazard Mitigation Plan. <a href="http://www.co.teller.co.us/OEM/tellercopdm_plan.pdf">http://www.co.teller.co.us/OEM/tellercopdm_plan.pdf</a>
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 12/17/2010

Version Author Shaw, A.E.

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