

Level 4 Potential Conservation Area (PCA) Report

Name Trout Creek at Manitou Experimental Forest

Site Code S.USCOHP*28216

IDENTIFIERS

Site ID 2736 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 390617N
State Colorado Longitude 1050549W

Quad Code Quad Name
39105-A1 Mount Deception

County
Teller (CO)

Watershed Code Watershed Name
10190002 Upper South Platte

SITE DESCRIPTION

Minimum Elevation	7,600.00 Feet	2,316.48 Meters
Maximum Elevation	7,735.00 Feet	2,357.63 Meters

Site Description

The Trout Creek at Manitou Experimental Forest site is located immediately below the dam at Manitou Lake. The site is bisected by a road culvert that provides access to Manitou Experimental Forest and housing developments. Trout Creek consists of a low-gradient Rosgen C class stream channel. Beaver dams have been breached, but beavers (*Castor canadensis*) are active. Other wildlife includes elk (*Cervus canadensis*), Broad-tailed Hummingbird (*Selasphorus platycercus*), Mallard (*Anas platyrhynchos*), and Gray Catbird (*Dumetella carolinensis*). A small wet meadow dominated by mountain rush (*Juncus arcticus* ssp. *littoralis*) and shrubby cinquefoil (*Dasiphora floribunda*) appears to augment streamflow, draining into the stream from the East. Point bars and small islands of mud, sand, and gravel are sparsely covered with graminoids, willow (*Salix* spp.) seedlings, and woody debris. The dominant riparian plant community is strapleaf willow (*Salix ligulifolia*) shrubland. Rocky Mountain willow (*S. monticola*) and coyote willow (*S. exigua*) are codominant with strapleaf willow (*S. ligulifolia*). The majority of strapleaf willow (*S. ligulifolia*) and Rocky Mountain willow (*S. monticola*) shrubs are located on a terrace raised approximately 0.5-2 meters above the streambanks in dry soil. Shrub cover on the terrace is patchy, with openings of exposed gravel with sparse cover of upland plants like fringed sage (*Artemisia frigida*) and blue grama (*Bouteloua gracilis*). Terrace soil consists of silty clay over coarse gravel and sand. The stream bank soil profile is similar except that it contains a layer of loamy sand between these two layers. Upland soil is Pendant cobbly loam (USDA NRCS 2008). The site's geology consists of Fountain Formation Arkosic sandstone and conglomerate (Tweto 1979). A grassland surrounds the riparian zone, which is in turn surrounded by ponderosa pine (*Pinus ponderosa*) woodland on modest slopes.

Key Environmental Factors

Strapleaf willow (*Salix ligulifolia*) shrubland is found in saturated soils with beaver (*Castor canadensis*) activity (Carsey et al. 2003). Trout Creek has apparently been downcutting, which might be a result of cattle grazing. Downcutting has lowered the water table such that the majority of the shrubland is on a terrace 0.5-2 meters above bankful, where flood waters no longer reach. Flooding is needed to maintain riparian shrublands (Rondeau 2001), so this strapleaf willow (*Salix ligulifolia*) shrubland may not persist on the terrace.

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

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(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

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/17/2010

Designer Shaw, A.E.

Boundary Justification

The site is drawn to incorporate the floodplain of Trout Creek surrounding a strapleaf willow (*Salix ligulifolia*) shrubland. The Manitou Lake dam serves as a barrier to this plant association's upstream expansion. The downstream boundary is drawn at a comparable distance from the end of the occurrence, where the willow carr becomes increasingly patchy.

Primary Area 189.15 Acres

76.55 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site is drawn for a fair viability (C-ranked) occurrence of strapleaf willow (*Salix ligulifolia*) shrubland, a plant association ranked as globally imperiled (G2G3/S2S3). This montane plant association is currently known from just Colorado, Utah, and Wyoming, but may yet be found in New Mexico (NatureServe 2010).

Other Values Rank No Data

Other Values Comments

Three Veeries (*Catharus fuscescens*) were observed nesting on Trout Creek one mile upstream from the site. This species of bird is considered demonstrably globally secure (G5) but vulnerable in Colorado (S3B). Veeries (*Catharus fuscescens*) nest in dense riparian thickets (Kingery 1998), so they may also be present at this site given the riparian shrubland and proximity to documented nests. The site was not designed to accommodate all potential habitat for the Veery (*Catharus fuscescens*).

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

No Data

Exotics Comments

Weeds observed include cheatgrass (*Bromus tectorum*) and musk thistle (*Carduus nutans*).

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Rank</u>
24155	<i>Salix ligulifolia</i> Shrubland	Montane Willow Carr	G2G3	S2S3	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.
162919	Kingery, H. E., editor. 1998. Colorado Breeding Bird Atlas. Colorado Bird Atlas Partnership and Colorado Division of Wildlife, Denver, CO. 636 pp.
190863	Rondeau, R. 2001. Ecological system viability specifications for Southern Rocky Mountain ecoregion. First Edition. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO. 181 pp.
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 12/17/2010

Version Author Shaw, A.E.

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