

Level 4 Potential Conservation Area (PCA) Report

Name Trout Creek Fen

Site Code S.USCOHP*28217

IDENTIFIERS

Site ID 2737 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 385622N
State Colorado Longitude 1050712W

Quad Code Quad Name

38105-H2 Divide
38105-H1 Woodland Park

County

Teller (CO)

Watershed Code Watershed Name

10190002 Upper South Platte

SITE DESCRIPTION

Minimum Elevation	8,970.00 Feet	2,734.06 Meters
Maximum Elevation	9,600.00 Feet	2,926.08 Meters

Site Description

The Trout Creek Fen site consists of a mosaic of riparian and wetland plant communities that vary with topography and soils. Wetlands range from wide mesic graminoid-dominated meadows to willow carrs in low gradient valleys to narrow, forested communities in steeper gradient gullies. A water sedge (*Carex aquatilis*) / beaked sedge (*Carex utriculata*) fen is located near the convergence of three parallel tributaries that form Trout Creek. The plant community immediately upstream and downstream from the fen is beaked sedge (*Carex utriculata*) herbaceous vegetation, which has filled in a series of abandoned beaver ponds. Surrounding upland habitat is a mosaic of xeric grasslands and woodlands dominated by ponderosa pine (*Pinus ponderosa*) on south-facing slopes and on north-facing slopes by Engelmann spruce (*Picea engelmannii*) and Douglas-fir (*Pseudotsuga menziesii*). A small quaking aspen (*Populus tremuloides*) / Thurber's fescue (*Festuca thurberi*) woodland is located immediately east of the site. An extensive cattle pasture is located immediately northwest of the site. There are no human-made ponds, evidence of livestock grazing, or non-native plants within the fen. Vegetation recruitment and vigor is impacted by livestock grazing and elk (*Cervus canadensis*) browse. Stream hydrology, riparian habitat, upland vegetation structure, and species composition have been altered by livestock grazing. Age classes of dominant woody species are not evenly distributed with younger age classes reduced or missing. Willows (*Salix* spp.) are dying, which may indicate a fluxuating water table. An aqueduct and associated road run through the wetland 0.3 miles downstream of the fen, immediately north of the site. The intact landscape is large and only minimally fragmented by a few ranch roads. The site's geology consists of Pikes Peak granite (Tweto 1979). Soils are deep, poorly drained Aquolls (USDA NRCS 2008). The size of the water sedge (*Carex aquatilis*) / beaked sedge (*Carex utriculata*) fen is small with low plant diversity. It is located in a complex of abandoned beaver ponds that are filling in with vegetation. The fen is fed by seepage from adjacent slopes and snowmelt water from a tributary of Trout Creek. The soils are fibrous peat, formed as a result of permanently saturated conditions. Shrub cover is 3%, with planeleaf willow (*Salix planifolia*) dominant but shrubby cinquefoil (*Dasiphora fruticosa* ssp. *floribunda*) also frequent. Graminoid cover is 90%. Beaked sedge (*Carex utriculata*) is dominant with 55-65% cover. Water sedge (*Carex aquatilis*) is also quite abundant. Tufted hairgrass (*Deschampsia cespitosa*) and bluejoint reedgrass (*Calamagrostis canadensis*) are present in smaller numbers.

Key Environmental Factors

The water sedge (*Carex aquatilis*) / beaked sedge (*Carex utriculata*) plant association may represent a transition zone between beaked sedge (*Carex utriculata*) herbaceous vegetation occupying wet habitats and water sedge (*C. aquatilis*) herbaceous vegetation occupying mesic habitats. It is associated with slow-moving to still water, poorly drained soils, and beaver (*Castor canadensis*) activity in high elevation meadows (Carsey et al. 2003).

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Climate Description

Teller County is cool and dry although 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

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/17/2010

Designer Shaw, A.E. and D.G. Malone

Boundary Justification

The boundary is drawn to protect the immediate watersheds of nearby historic beaver ponds that could potentially support water sedge (*Carex aquatilis*) / beaked sedge (*Carex utriculata*) herbaceous vegetation. The eastern-most two streams in the site were included up to the point where they become intermittent to protect water flows to an old beaver pond downstream. The downstream boundary is drawn where the aqueduct and road serve as barriers to wetland connectivity. Private lands were only visited with written permission.

Primary Area 393.61 Acres

159.29 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B5: General Biodiversity Interest

Biodiversity Significance Comments

The site supports a fair viability (C-ranked) occurrence of an apparently globally secure (G4/S4) plant community, water sedge (*Carex aquatilis*) / beaked sedge (*Carex utriculata*) herbaceous vegetation. The site is also significant hydrologically, as a fen with groundwater supplementing surface water to maintain saturated soils year-round.

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

The weeds butter-and-eggs (*Linaria vulgaris*) and Canada thistle (*Cirsium arvense*) are abundant.

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>			
24955	<i>Carex aquatilis</i> - <i>Carex utriculata</i> Herbaceous Vegetation	Montane Wet Meadows	G4	S4	Yes

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REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
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 12/17/2010

Version Author Shaw, A.E. and D.G. Malone

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