

Level 4 Potential Conservation Area (PCA) Report

Name Blue Springs

Site Code S.USCOHP*28201

IDENTIFIERS

Site ID 2733 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 385756N
State Colorado Longitude 1050636W

<u>Quad Code</u>	<u>Quad Name</u>
38105-H1	Woodland Park
38105-H2	Divide

County

Teller (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
10190002	Upper South Platte

SITE DESCRIPTION

Minimum Elevation	8,840.00 Feet	2,694.43 Meters
Maximum Elevation	9,190.00 Feet	2,801.11 Meters

Site Description

The Blue Springs site is located in a broad shallow valley among rolling forested hills adjacent to CO Highway 24. The majority of the site is utilized for livestock production. North-facing slopes support blue spruce (*Picea pungens*) / Douglas-fir (*Pseudotsuga menziesii*) forests. A grove of quaking aspen (*Populus tremuloides*) is located on a low hill in the middle of the site. Ponderosa pine (*Pinus ponderosa*) woodlands dominate the south-facing slopes. Upland soils are primarily well drained Adderton fine dark loam (USDA NRCS 2008). The underlying geology is mostly Ogallala formation sandstone, but Pikes Peak granite is found in the north and east ends of the site (Tweto 1979). Upstream there is a small but dense Rocky Mountain willow (*Salix monticola*) / beaked sedge (*Carex utriculata*) shrubland containing autumn willow (*Salix serissima*) in areas of saturated mucky peat soil. The willow carr narrows abruptly into a Bebb's willow (*Salix bebbiana*) shrubland along a straight low-gradient tributary that empties into a stock pond. The soil along the tributary is silty clay loam. In the creek immediately to the south, beaver (*Castor canadensis*) have disappeared and their ponds are filling in with planeleaf willow (*Salix planifolia*) / beaked sedge (*Carex utriculata*) shrubland. Human-made ponds have replaced beaver ponds.

Key Environmental Factors

Willow (*Salix* spp.) twigs exhibit browse pressure from livestock and wildlife. Further subdivision construction and well installation could potentially dry up the water source for both species of willow. Decker (2006) lists hydrological alteration allowing peat (in this case mucky peat) decomposition as the primary threat to autumn willow (*Salix serissima*) in the southern Rocky Mountains.

Climate Description

Teller County is relatively 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 12/13/2010

Designer Shaw, A.E.

Boundary Justification

The site is drawn to include Blue Springs Creek and two intermittent tributaries, to incorporate occurrences of Bebb's willow (*Salix bebbiana*) shrublands, autumn willow (*Salix serissima*), and two other streams that could potentially host these elements in the future. The site boundary is drawn at the ridgelines surrounding the three streams except for exclusion of a subdivision. This boundary incorporates the portion of the catchment area that could still be protected from development to maintain surface and groundwater flows. Only private lands with written permission were visited at this site.

Primary Area 653.09 Acres 264.30 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

This site is drawn for a fair viability (C-ranked) occurrence of autumn willow (*Salix serissima*), which is apparently globally secure (G4) but critically imperiled in Colorado (S1). Colorado is the southernmost extent of the species' range, which is primarily across the northern U.S. and Canada. There is also a fair (C-ranked) occurrence of Bebb's willow (*Salix bebbiana*) shrubland. This plant association is tentatively ranked as globally vulnerable (G3?) but imperiled in Colorado (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

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

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>			
20994	<i>Salix bebbiana</i> Shrubland	Montane Willow Carrs	G3?	S2	Yes
17561	<i>Salix serissima</i>	autumn willow	G4	S1	No

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.
198639	Decker, K. 2006. Salix serissima (Bailey) Fern. (autumn willow): A Technical Conservation Assessment. [Online]. USDA Forest Service, Rocky Mountain Region.
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 12/13/2010

Version Author Shaw, A.E.

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