

Level 4 Potential Conservation Area (PCA) Report

Name John's Gulch

Site Code S.USCOHP*28249

IDENTIFIERS

Site ID 2750 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 390502N
State Colorado Longitude 1050311W

Quad Code Quad Name
39105-A1 Mount Deception

County
Teller (CO)

Watershed Code Watershed Name
10190002 Upper South Platte

SITE DESCRIPTION

Minimum Elevation	8,600.00 Feet	2,621.28 Meters
Maximum Elevation	9,300.00 Feet	2,834.64 Meters

Site Description

The John's Gulch site is located in steep foothills on the western slope of the Rampart Range that form the eastern wall of the Trout Creek valley. Several first order streams flow east, out of these foothills to their confluence with Trout Creek which flows to the north. Upland habitat is characterized by a mosaic of dry montane foothill woodlands, shrublands and grasslands. The community mosaic includes ponderosa pine (*Pinus ponderosa*) woodlands, Douglas-fir (*Pseudotsuga menziesii*) forest, mountain mahogany (*Cercocarpus montanus*) shrublands, and graminoid meadows. Streamside riparian habitat is characterized by narrow, bands of tree-dominated riparian communities in a linear mosaic that includes associations of quaking aspen (*Populus tremuloides*) and Douglas-fir with a rich understory of shrubs, forbs and graminoids. Geology is primarily composed of Precambrian age igneous granitic rocks of the Pikes Peak batholith of the 1,000 m.y. age group. Low slopes on the east side of the site are carbonate-dominated sedimentary rocks of Pre-Pennsylvanian Paleozoic age (Tweto 1979). A diversity of foraging and nesting resources and protective cover provides important bird habitat at this site. Observed birds included Sharp-shinned Hawk (*Accipiter striatus*), Red-tailed Hawk (*Buteo jamaicensis*), Dusky Grouse (*Dendragapus obscurus*), Broad-tailed Hummingbird (*Selasphorus platycercus*), Downy Woodpecker (*Picoides pubescens*), Northern Flicker (*Colaptes auratus*), Olive-sided Flycatcher (*Contopus cooperi*), Western Wood-peewee (*Contopus sordidulus*), Steller's Jay (*Cyanocitta stelleri*), Clark's Nutcracker (*Nucifraga columbiana*), Mountain Chickadee (*Poecile gambeli*), Black-capped Chickadee (*Poecile atricapilla*), Pygmy Nuthatch (*Sitta pygmaea*), Red-breasted Nuthatch (*Sitta canadensis*), White-breasted Nuthatch (*Sitta carolinensis*), Townsend's Solitaire (*Myadestes townsendi*), Yellow-rumped Warbler (*Dendroica coronata*), Western Tanager (*Piranga ludoviciana*), Green-tailed Towhee (*Pipilo chlorurus*), Dark-eyed Junco (*Junco hyemalis*) Chipping Sparrow (*Spizella passerina*), Vesper's Sparrow (*Poocetes gramineus*), and House Wren (*Carpodacus mexicanus*). Several of these species are vulnerable to climate-change induced population declines. Of the species observed at this site these include, Broad-tailed Hummingbird, Olive-sided Flycatcher Western Wood-Pewee, and Western Tanager (NABCI 2010).

Key Environmental Factors

Key environmental factors determining site biota include fire and hydrology. Fire plays an important role in the mountain mahogany/Muhlenbergia montana shrublands; fire suppression allows an invasion of trees into shrublands and shrubs in to grasslands (Rondeau 2001). The primary ecological process necessary to maintain quaking aspen/river birch woodlands is hydrology and specifically surface and groundwater flow (Rondeau 2001).

Climate Description

Broad elevational changes and complex topography in the Front Range results in broad variability in the local climate. Due to geography, precipitation in Front Range ecosystems in Teller County comes primarily during summer months. At this west-facing site at an elevation of 8,600 feet, from 1971 to 2000, coldest

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temperatures occurred in January with an average maximum of 35.65 °F and a minimum of 11.12 °F.

Warmest temperatures occurred in July with an average maximum of 73.18 °F and an average minimum of 46.36 °F. Annual average maximum precipitation was 27.20 inches. April through August were the wettest months of the year with an average of 3.35 inches of precipitation per month. Driest months are December and January with 0.96, and 0.82 inches of precipitation respectively. Remaining months have intermediate amounts of precipitation (Prism 2010).

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/28/2010

Designer Malone, D.G.

Boundary Justification

The boundary encompasses the elements, potential habitat and the watershed boundary to the north, south and east, for immediate watershed protection. Mountain mahogany typically occupies south-facing slopes and, in Colorado, quaking aspen / river birch woodlands occur on seasonally flooded bottoms, terraces and benches of narrow, sheltered canyons. The Colorado stand of aspen / river birch is likely an isolated relict of cooler, wetter climates of the early Holocene. If the groundwater that sustains the Colorado stand is eliminated, the stand would likely be converted to a mesic shrub community (NatureServe 2010). Only those sites with written landowner permission were surveyed.

Primary Area 1,614.40 Acres

653.33 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

The site is drawn for a good (B-ranked) occurrence of the state rare (GU/S2) mountain mahogany / mountain muhly (*Cercocarpus montanus* / *Muhlenbergia montana*) shrubland and a good to fair (BC-ranked) occurrence of the globally vulnerable (G3/S2) quaking aspen / river birch (*Populus tremuloides* / *Betula occidentalis*) riparian woodland. The mountain mahogany / mountain muhly shrubland association is currently known to occur only on the east slope of the southern Rocky Mountains in Colorado. The quaking aspen / river birch association is known to occur in eastern Nevada and middle-elevation canyons throughout Colorado and may also occur in southeastern Utah in sheltered canyons with perennial water.

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

Weeds include yellow toadflax (*Linaria vulgaris*), western salsify (*Tragopogon pratensis*), and woolly mullein (*Verbascum thapsus*).

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24611	<i>Populus tremuloides</i> / <i>Betula occidentalis</i> Forest		G3	S2	Yes
40632	<i>Cercocarpus montanus</i> / <i>Muhlenbergia montana</i> Shrubland	Mixed Mountain Shrublands	GU	S2	No

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REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
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. http://www.natureserve.org/explorer .
198649	Prism Climate Group (Web Page). Accessed 2010. Spatial Climate Analysis. http://www.prism.oregonstate.edu/
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.
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.
198652	U.S. Fish and Wildlife Service (Web Page). Accessed 2010. The State of the Birds: 2010 Report on Climate Change. http://www.stateofthebirds.org

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 12/28/2010
Version Author Malone, D.G.

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