

# Level 4 Potential Conservation Area (PCA) Report

Name McGee Gulch

Site Code S.USCOHP\*27835

## IDENTIFIERS

Site ID 2644 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 385135N  
 State Colorado Longitude 1060144W

<u>Quad Code</u>	<u>Quad Name</u>
38106-G1	Buena Vista East
38106-H1	Marmot Peak

County  
 Chaffee (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
11020001	Arkansas Headwaters

## SITE DESCRIPTION

Minimum Elevation	-	Feet	-	Meters
Maximum Elevation	-	Feet	-	Meters

### Site Description

The site is located on the west slope of the Mosquito Range in the montane zone of the Southern Rockies. McGee Gulch is a moderately wide, gently to moderately sloping valley that trends southeast. The sandy, valley bottom of McGee Gulch is drained by an ephemeral stream that has its confluence with Trout Creek approximately six miles upstream of Johnson Village. The landscape here is characterized by rounded ridges punctuated by granite outcrops that are weathered and smooth. Geology of adjacent surrounding hillslopes is Precambrian igneous granitic rocks of 1,700 M.Y. age group. Ridge tops on the western hillslopes are capped with sedimentary limestone rocks of pre-Pennsylvanian age (Tweto 1979). Surrounding uplands are well drained and support drought-tolerant plant communities. Habitat is characterized by a mosaic of mesic to dry woodlands, shrublands and herbaceous meadows. Drier sites support a mosaic of pinon - juniper (*Pinus edulis* - *Juniperus scopulorum*) and ponderosa (*Pinus ponderosa*) woodlands, herbaceous meadows and sage - rabbitbrush (*Artemisia tridentata* - *Chrysothamnus nauseosus*) shrublands. Herbaceous meadows are dominated by graminoids including blue gramma (*Chondrosom gracilis*), junegrass (*Koeleria macrantha*) and mountain muhly (*Muhlenbergia montana*). Douglas-fir (*Pseudotsuga menziesii*) forests inhabit moister, north-facing slopes. In moist ravines aspen (*Populus tremuloides*) forests dominate while at lower elevations moist valley bottoms are dominated by narrowleaf cottonwood (*Populus angustifolia*) forests. Riparian habitat has seasonally saturated soils and is characterized by a linear mosaic of shrublands, herbaceous wet meadows and woodlands. Shrublands occur as a patchy mosaic of stands of shrubs, herbaceous meadows and open water. Willow shrubland associations in the valley bottom include the Geyer willow (*Salix geyeriana*) / mesic graminoids association. Geyer willow dominates the shrub canopy in this association but other shrub species are also present including shrubby cinquefoil (*Dasiphora floribunda*), Drummond's willow (*Salix drummondiana*) and shining willow (*Salix lasiandra*). The herbaceous layer is dominated by a diverse mix of graminoid species with a high cover. Common graminoids include wooly sedge (*Carex pellita*), beaked sedge (*Carex utriculata*), bluejoint reedgrass (*Calamagrostis canadensis*), Kentucky bluegrass (*Poa pratensis*) and arctic rush (*Juncus balticus*). Common forbs include stinging nettle (*Urtica gracilis*), leafy polemonium (*Polemonium foliosissimum*) and checker mallow (*Sidalcea candida*). Other common shrubland communities in the valley bottom include mixed stands of mountain willow (*Salix monticola*), coyote willow (*Salix exigua*), shining willow, Geyer willow, shrubby cinquefoil and Wood's rose (*Rosa woodsii*). The herbaceous understory is typically a patchy mosaic of forbs and graminoids with neither dominant over large areas. Common forbs include bee balm (*Monarda* spp.), willow herb (*Epilobium* spp.), geranium (*Geranium richardsonii*) and tall fringed bluebells (*Mertensia ciliata*). Common graminoids include arctic rush, Kentucky bluegrass, and fowl mannagrass (*Glyceria striata*). In the valley bottom aspen woodlands intervene between willow carrs and stands of shrubs creating a linear mosaic. The aspen shrub understory here is dominated by a mix of shrubby cinquefoil and Wood's rose with an herbaceous layer dominated by graminoids. Other shrub species include wax currant (*Ribes cereum*), gooseberry (*Ribes inerme*), and snowberry (*Symphoricarpos oreophilus*).

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Dominant graminoids include arctic rush, western wheatgrass (*Pascopyrum smithii*), fowl mannagrass, fringed brome (*Bromus ciliatus*) and Kentucky bluegrass. Common forbs include geranium, yarrow (*Achillea millefolium*), harebell (*Campanula rotundifolia*) and mountain lupine (*Lupinus argenteus*). Aspen forests also dominate along the ridge top and down into moist swales. Here small patches of willows, dominated by Drummond's willow, occur where the slope gradient lessens and groundwater discharges to the surface. Herbaceous cover in these small wetland patches is characterized by a mix of forbs and graminoids. Common forbs include fireweed (*Epilobium angustifolium*), golden banner (*Thermopsis montana*), geranium, harebell, and yarrow. Common graminoids include arctic rush, small-winged sedge (*Carex microptera*), fringed brome and orchard grass (*Dactylis glomerata*).

## Key Environmental Factors

Hydrology, climate and disturbance are key driving factors that exert a major influence on biota at the site.

## Climate Description

Climate records for Buena Vista, which is on the valley floor and approximately six miles to the west, indicate a mean annual precipitation 9.79 inches; the wettest months are July and August with 1.7 and 1.65 inches of precipitation per month respectively; the driest month is January with 0.34 inches; the warmest month is July at 64oF and the coldest month is January at 24 deg F (Western Regional Climate Center 2009). At Antero Reservoir, approximately 12 miles to the northeast, Climate Center records indicate that the wettest months are July and August with a mean precipitation of 2.30 inches, the driest is January at 0.21 inches; the warmest month is July at 76.2 deg F and the coldest is January at 32.5 deg F (Western Regional Climate Center 2009).

## Land Use History

Mining was common as indicated by the numerous mine sites that are present on hillslopes. Domestic livestock grazing was also likely common as indicated by changes in the composition of native plant communities.

## Cultural Features

No Data

## SITE DESIGN

Site Map Y - Yes

Mapped Date 04/17/2009

Designer Malone, D.G.

## Boundary Justification

The boundary was drawn to encompass the element occurrence and the ecological and hydrological processes that are essential to maintain viability. Hydrology, and specifically surface flow, is essential to maintain the ecological system (Rondeau 2001). Shallow groundwater and surface flow has been dramatically altered by roads that occur in the riparian zone and stream channel as well as by the numerous roads that fragment upland habitats. Additionally, historic overgrazing by livestock likely occurred, as indicated by the ubiquitous and abundant presence of non-native plant species and by plant community composition.

Primary Area 2,033.19 Acres

822.80 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

The site supports a fair (C-ranked) occurrence of the globally vulnerable (G3?/S3) Geyer's willow (*Salix geyeriana*) / mesic graminoids shrubland. Although this association is widely distributed at mid to high elevations from the Great Basin to the Central Rockies and north to Idaho and Wyoming, the total occurrence of stands with a native understory is probably less than 100 (NatureServe 2009).

Other Values Rank No Data

## Other Values Comments

No Data

## LAND MANAGEMENT ISSUES

## Land Use Comments

No Data

## Natural Hazard Comments

No Data

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## Exotics Comments

Non-native weeds are ubiquitous throughout and include Kentucky bluegrass, orchard grass, plumeless thistle (*Carduus acanthoides*), yellow sweetclover (*Melilotus officinale*), squirrel tail (*Elymus elymoides*), goosefoot (*Chenopodium* spp.), field pepperweed (*Lepidium campestre*), Canada thistle (*Cirsium arvense*), and common burdock (*Arctium minus*).

## Offsite

No Data

## Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global</u>	<u>State</u>	<u>Driving</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
24890	<i>Salix geyeriana</i> / Mesic Graminoids Shrubland	Geyer's Willow/Mesic Graminoid	G3?	S3	Yes

## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
198290	Culver, D.R., D. Malone, S.L. Neid, and J. Handwerk. 2009. Final Report: Survey of Critical Biological Resources in Chaffee County. 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> .
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.
198320	Western Regional Climate Center. 2009. Record Climate Summaries. Accessed in 2009. <a href="http://www.wrcc.dri.edu/">http://www.wrcc.dri.edu/</a>

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

<b>Version Date</b>	04/17/2009
<b>Version Author</b>	Malone, D.G

## Disclaimer

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