

# Level 4 Potential Conservation Area (PCA) Report

Name Fourmile Creek at Dome Rock

Site Code S.USWRO1\*1613

## IDENTIFIERS

Site ID 1617 Site Class PCA  
Site Alias Dome Rock

## 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 384951N  
State Colorado Longitude 1051250W

<u>Quad Code</u>	<u>Quad Name</u>
38105-G2	Cripple Creek North
38105-G3	Wrights Reservoir

County  
Teller (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
11020002	Upper Arkansas

## SITE DESCRIPTION

Minimum Elevation	8,060.00 Feet	2,456.69 Meters
Maximum Elevation	9,680.00 Feet	2,950.46 Meters

### Site Description

Fourmile Creek flows through Dome Rock State Wildlife Area from CO Hwy 67 to CR 1. It follows the natural topography of several large Pikes Peak granite outcrops, e.g., Dome Rock (Tweto 1979). Along flat stretches of Fourmile Creek, the riparian vegetation is dominated by willows, e.g., Geyer willow (*Salix geyeriana*), Rocky Mountain willow (*S. monticola*), Bebb's willow (*S. bebbiana*), and coyote willow (*S. exigua*). The wetter areas within the herbaceous layer contain beaked sedge (*Carex utriculata*), Nebraska sedge (*C. nebrascensis*), analog sedge (*C. simulata*), and wooly sedge (*C. lanuginosa*). Along steeper sections of the creek, the dominant plant community is a water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland, with a large component of Engelmann spruce (*Picea engelmannii*) and Douglas-fir (*Pseudotsuga menziesii*). Each riparian community is profiled in order of appearance from upstream to downstream. Water birch / false Solomon's seal shrublands dominate two sections of the narrow east-west oriented canyon. Spruce and Douglas-fir enter the shrubland from adjacent slopes. The stream channel includes a series of pools and riffles. Stream margins alternate between a narrow bench and giant boulders/rock walls. Stream bed substrate ranges from sand to boulders. A Rocky Mountain willow / mesic graminoid shrubland occurs in a series of beaver ponds. Intensive upstream land use, beaver dams, and the routing of the trail across the pond have led to massive sedimentation and a braided stream channel. Beavers (*Castor canadensis*) and elk (*Cervus canadensis*) are actively consuming aspen. A Geyer willow / Rocky Mountain willow / mesic forb plant association has an understory dominated by hay grasses and non-native forbs due to season-long grazing. The stream channel is highly sinuous. Stream banks are intact except for a few areas where the granitic soils and topography have fallen away. At the downstream edge of this community, it fades into a Rocky Mountain willow carr. The north-facing slope's forest is composed of quaking aspen (*Populus tremuloides*) at low slope, with Douglas-fir, spruce, and mixed pines (*Pinus* spp.) upslope. The rest of the uplands are dominated by ponderosa pine (*Pinus ponderosa*) woodlands. In the canyon running east to west at the upstream end of the site, the woodland also includes limber pine (*Pinus flexilis*) and bristlecone pine (*P. aristata*), while the low slope includes mesic shrubs and grasses.

### Key Environmental Factors

Flooding is evident, as there are areas of overbank storage and sediment deposition. Guffey loamy sand covers the vast majority of the site, so it is well drained. The easternmost half-mile of the site contains Adderton fine-loamy soils (USDA NRCS 2008).

### 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

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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

A chimney from the long-gone Jack Rabbit Lodge is located in the center of the site.

### SITE DESIGN

Site Map Y - Yes

Mapped Date 12/03/2010

Designer Shaw, A.E. and D.R. Culver

## Boundary Justification

Written permission was obtained to survey private lands. The site boundary is drawn to the adjacent ridgetops except that subdivisions are excluded. This boundary was chosen to incorporate the extent of the immediate watershed that can still be conserved to protect the riparian shrublands below by maintaining current stream flows and minimizing erosion.

Primary Area 7,957.26 Acres

3,220.20 Hectares

### SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

## Biodiversity Significance Comments

This site supports a concentration of several species and natural communities. The driving elements include a good (B-ranked) occurrence of the globally vulnerable (G3/S3) Geyer's willow (*Salix geyeriana*) / Rocky Mountain willow (*Salix monticola*) / mesic forbs community and several good (B-ranked) occurrences of the globally vulnerable (G3/S3) jeweled blazingstar (*Nuttalia speciosa*). Other elements include a fair (C-ranked) occurrence of the globally vulnerable (G3/S3) Rocky Mountain willow (*Salix monticola*) / mesic graminoid shrubland, associated with active beaver ponds, a good (B-ranked) occurrence of the state rare (G4?/S2) water birch (*Betula occidentalis*) / false Solomon's seal (*Maianthemum stellatum*) shrubland, and a fair (C-ranked) population of the state imperiled (G5/S1?) birdbill day-flower (*Commelina dianthifolia*). A population of the state rare (G5/S3) northern leopard frog (*Rana pipiens*) was ranked as extant in the absence of a systematic animal survey.

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 invasive species cheatgrass (*Bromus tectorum*), Canada thistle (*Cirsium arvense*), butter-and-eggs (*Linaria vulgaris*), oxeye daisy (*Leucanthemum vulgare*), and common mullein (*Verbascum thapsus*) are present.

## 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
24573	<i>Salix geyeriana</i> - <i>Salix monticola</i> / Mesic Forbs Shrubland	Geyer's Willow-Rocky Mountain Willow/Mesic Forb	G3	S3	Yes

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24686	<i>Betula occidentalis</i> / <i>Maianthemum stellatum</i> Shrubland	Foothills Riparian Shrubland	G4?	S2	No
21549	<i>Nuttallia speciosa</i>	jeweled blazingstar	G3	S3	Yes
18389	<i>Rana pipiens</i>	Northern Leopard Frog	G5	S3	No
24585	<i>Salix monticola</i> / Mesic Graminoids Shrubland	Montane Riparian Willow Carr	G3	S3	No
21549	<i>Nuttallia speciosa</i>	jeweled blazingstar	G3	S3	Yes
22050	<i>Commelina dianthifolia</i>	birdbill day-flower	G5	S1?	No
21549	<i>Nuttallia speciosa</i>	jeweled blazingstar	G3	S3	Yes
21549	<i>Nuttallia speciosa</i>	jeweled blazingstar	G3	S3	No

## REFERENCES

Reference ID	Full Citation
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. <a href="http://www.co.teller.co.us/OEM/tellercopdm_plan.pdf">http://www.co.teller.co.us/OEM/tellercopdm_plan.pdf</a>
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

Original site design by Kittel, G.M. 1997-04-09.

## VERSION

Version Date	12/03/2010
Version Author	Shaw, A.E. and D.R. Culver

## Disclaimer

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