

Level 4 Potential Conservation Area (PCA) Report

Name Wilson Creek

Site Code S.USCOHP*28221

IDENTIFIERS

Site ID 2741 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 384024N
State Colorado Longitude 1051110W

Quad Code Quad Name

38105-F2 Cripple Creek South

County

Teller (CO)

Fremont (CO)

Watershed Code Watershed Name

11020002 Upper Arkansas

SITE DESCRIPTION

Minimum Elevation	6,650.00	Feet	2,026.92	Meters
Maximum Elevation	9,930.00	Feet	3,026.66	Meters

Site Description

Within this site, Wilson Creek is braided and has an average gradient of 8%. The combination of a moderately steep slope and braided channels is unusual, but can be explained by this steep narrow canyon's occasional massive floods that drop boulders in the middle of the creek. Islands of boulders colonized by upland vegetation separate the two channels. In the downstream third of the site, the channels are widely spaced and the riparian community and adjacent upland pasture and are dominated by non-native plants. The canyon walls in the downstream portion of the site are dominated by Gambel oak (*Quercus gambelii*) shrubland and pinon pine (*Pinus edulis*) / Rocky Mountain juniper (*Juniperus scopulorum*) woodland. Canyon walls in the upstream portion of the site are dominated by limber pine (*Pinus flexilis*) with Engelmann spruce (*Picea engelmannii*) and typical montane grasses e.g., mountain muhly (*Muhlenbergia montana*), Thurber's fescue (*Festuca thurberi*), Arizona fescue (*F. arizonica*), and blue grama (*Bouteloua gracilis*). Animals inhabiting Wilson Creek canyon include plateau lizard (*Sceloporus undulatus*), bighorn sheep (*Ovis canadensis*), and a high density of black bear (*Ursus americanus*). Beaver (*Castor canadensis*) is no longer present. Wilson Creek goes dry in September, perhaps due to upstream diversions. The headwaters of Wilson Creek are grazed, contain stock ponds, and drain the massive Cresson Gold Mine and Valley Leach Facility and the town of Victor. AngloGold has much smaller mining operations both in the middle of the site and next to Cripple Creek 1.4 miles above its junction with Wilson Creek. The site's geology is dominated by Pikes Peak granite. High elevations within the northern section of the site contain intra-ash-flow quartz latitic lavas, breccias, tuffs, and/or conglomerates, early ash-flow Wall Mountain tuff, and pre-ash-flow andesitic lavas. The southwestern corner of the site includes Harding sandstone (Tweto 1979). The far southwestern tip of the site within the Fourmile Creek floodplain contains deep well-drained Nunn clay loam. Soils below 7,960 feet consist of shallow Tolex very gravelly sandy loam. Soils above 9,380 feet consist of moderately deep Guffey very gravelly sandy loam. The elevational range between 7,960 and 9,380 feet includes both Tolex and Guffey soils (all soil information taken from USDA NRCS 2008).

Key Environmental Factors

Narrowleaf cottonwood (*Populus angustifolia*) / bluestem willow (*Salix irrorata*) woodland is an early successional plant association that develops after flooding (Carsey et al. 2003). The floodplain is narrow upstream and wide downstream. Where it is narrow, an impenetrable thicket of willows (*Salix* spp.) covers the creek, indicating frequent flooding (Carsey et al. 2003). Where it is wider, weeds dominate the understory because the water dries up, leaving bare sand they can quickly colonize. As more floods deposit sediment over the years, the vegetation will shift to a later successional plant association (Carsey et al. 2003). Degener beardtongue (*Penstemon degeneri*) occurs in montane grasslands and pinon pine (*Pinus edulis*) / Rocky Mountain juniper (*Juniperus scopulorum*) woodlands. It grows in rocky soils over igneous bedrock near canyon rims or in cracks of rock slabs (Peterson and Harmon 1981).

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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

Mining within the canyon has a long history, based on artifacts found in the creek and tributaries. Homestead buildings and corrals remain in the wide floodplain. A few homestead remnants are scattered in the creek, e.g. rusting car chassies.

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/17/2010

Designer Shaw, A.E.

Boundary Justification

The boundary is drawn at the ridgeline surrounding the occurrence of narrowleaf cottonwood (*Populus angustifolia*) / bluestem willow (*Salix irrorata*) woodland to protect it from additional mining operations that could alter the creek's geomorphology, water quality, and vegetation. The upstream boundary is drawn to incorporate the previously documented extent of the narrowleaf cottonwood (*Populus angustifolia*) / bluestem willow (*Salix irrorata*) woodland occurrence, which the community may no longer inhabit. The downstream boundary is drawn where Wilson Creek ends at its convergence with Cripple Creek. Private lands were only visited with written permission from landowners.

Primary Area 3,973.24 Acres

1,607.92 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports a fair (C-ranked) occurrence of a globally imperiled (G2/S2) plant association, narrowleaf cottonwood (*Populus angustifolia*) / bluestem willow (*Salix irrorata*) woodland. This plant association is endemic to the southern Rocky Mountains (NatureServe 2010). The site also contains a fair (C-ranked) population of the globally imperiled (G2/S2) plant, Degener beardtongue (*Penstemon degeneri*), a species endemic to south-central Colorado (Spackman et al. 1997).

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

There is a risk of falling into abandoned mine shafts. The active gold mining operation could pose risk of exposure to toxic chemicals.

Exotics Comments

The exotic species black medic (*Medicago lupulina*), butter-and-eggs (*Linaria vulgaris*), Dalmatian toadflax (*L. dalmatica*), Canada thistle (*Cirsium arvense*), bull thistle (*C. vulgare*), red clover (*Trifolium pratense*), white clover (*T. repens*), common mullein (*Verbascum thapsus*), Russian thistle (*Salsola australis*), cheatgrass (*Bromus tectorum*), Kentucky bluegrass (*Poa pratensis*), redtop (*Agrostis gigantea*), and quackgrass (*Elymus repens*) are the dominant herbaceous plants on the canyon floor.

Offsite

No Data

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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>
24827	<i>Populus angustifolia</i> / <i>Salix irrorata</i> Woodland	Foothills Riparian Woodland	G2	S2	Yes
21773	<i>Penstemon degeneri</i>	Degener beardtongue	G2	S2	Yes

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.
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 .
163245	Peterson, J.S. and W. Harmon. 1981 g. Status report on <i>Penstemon degeneri</i> . Unpublished report prepared for the Colorado Natural Areas Program, Denver, CO.
162471	Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado rare plant field guide. Prepared for Bureau of Land Management, U.S. Forest Service and U.S. Fish and Wildlife Service by Colorado Natural Heritage Program.
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.

Disclaimer

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