

Level 4 Potential Conservation Area (PCA) Report

Name South Slope

Site Code S.USCOHP*28190

IDENTIFIERS

Site ID 2722 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 384715N
State Colorado Longitude 1050054W

| <u>Quad Code</u> | <u>Quad Name</u> |
|------------------|------------------|
| 38105-G1 | Pikes Peak |
| 38104-G8 | Manitou Springs |

County

Teller (CO)
El Paso (CO)

| <u>Watershed Code</u> | <u>Watershed Name</u> |
|-----------------------|-----------------------|
| 11020002 | Upper Arkansas |
| 11020003 | Fountain |

SITE DESCRIPTION

| | | | | |
|--------------------------|-----------|-------------|----------|---------------|
| Minimum Elevation | 10,700.00 | Feet | 3,261.36 | Meters |
| Maximum Elevation | 12,000.00 | Feet | 3,657.60 | Meters |

Site Description

The South Slope site consists of numerous lakes and wetlands carved by glacial erosion during the Pleistocene Ice Age (Chronic and Williams 2002). The surface geology of the site consists of the ubiquitous Pikes Peak granite in the uplands. Glacial drift of Pinedale and Bull Lake glaciations dominates the wetlands (Tweto 1979). The majority of soils of the site are Aquolls, poorly drained soils high in organic matter derived from alluvium (USDA NRCS 2008). Other soils in the vicinity include well-drained very gravelly sandy loam and very gravelly loamy coarse sand. Above 11,000 feet, the site contains alpine tundra with shallow black soil above the permafrost subsoil. The tundra is dominated by planeleaf willow (*Salix planifolia*), Wolf's willow (*Salix wolfii*), Rocky Mountain willow (*Salix monticola*), tufted hairgrass (*Deschampsia caespitosa*), and marsh marigold (*Caltha leptosepala*). Upper subalpine forest includes Engelmann spruce (*Picea engelmannii*), bristlecone pine (*Pinus aristata*), and limber pine (*P. flexilis*). The lower subalpine zone consists of Engelmann spruce forest with quaking aspen (*Populus tremuloides*) in patches. Willow carrs and fens are abundant along streams in the South Slope area. The landscape is in a relatively natural state except for the reservoirs that inundate some of the naturally occurring lakes and wetlands to store water for nearby Colorado Springs. Roads onsite are used by utility and heavy equipment for the maintenance of the reservoirs.

Key Environmental Factors

Analog sedge (*Carex simulata*) fens occur in deep quaking saturated peat soils in low-gradient moderate to wide valleys (Carsey et al. 2003). Mud sedge (*Carex limosa*) occurs in subalpine Sphagnum fens and wet meadows (Weber and Wittmann 2001). Spiny-spore quillwort (*Isoetes setacea* ssp. *muricata*) is found in cool, shallow lakes that are slightly acidic and low in nutrients (FNA Ed. Comm. 1993). The occurrences of planeleaf willow (*Salix planifolia*) / water sedge (*Carex aquatilis*) shrubland and Wolf's willow (*Salix wolfii*) / mesic forb occur on peat soils that are present due to undisturbed and saturated soils.

Climate Description

Teller County is 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>).

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Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 11/30/2010

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

Boundary Justification

The western boundary is drawn to encompass the headwaters of Middle Beaver Creek that host the occurrences of Wolf's willow (*Salix wolfii*) / mesic forbs and planeleaf willow (*Salix planifolia*) / water sedge (*Carex aquatilis*). The northern boundary is drawn to incorporate the intermittent stream that feeds into the analog sedge (*Carex simulata*) fen as well as the steep slopes on either side that provide groundwater to maintain the fen. The ridgeline surrounding McReynolds Reservoir serves as the eastern boundary. This small and steep watershed maintains water levels in the reservoir, which in turn feeds into the pond that supports spiny-spore quillwort (*Isoetes setacea* ssp. *muricata*). Permission from Colorado Springs Utilities was obtained for access to the site.

Primary Area 2,488.28 Acres

1,006.98 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The element driving the site is a good (B-ranked) occurrence of a globally vulnerable (G3/S3) plant association, Wolf's willow (*Salix wolfii*) / mesic forb shrubland. There is also an excellent (A-ranked) occurrence of the globally common (G5/S4) planeleaf willow (*Salix planifolia*) / water sedge (*Carex aquatilis*) shrubland and a good (B-ranked) occurrence of the state rare (G4/S3) analog sedge (*Carex simulata*) herbaceous vegetation. In addition, the site supports rare plants including a good (B-ranked) occurrence of the state rare (G5/S2) mud sedge (*Carex limosa*) and a good (B-ranked) population of spiny-spored quillwort (*Isoetes setacea* ssp. *muricata*), a plant tentatively ranked as globally demonstrably secure (G5?/T5?) but imperiled in Colorado (S2). The scientific name *Isoetes setacea* ssp. *muricata* is synonymous with *Isoetes echinospora* and *I. tenella* (www.plants.usda.gov), which are also globally demonstrably secure, so a change in taxonomy should not affect the biodiversity significance of this site.

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

No exotic plants were observed.

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 |
|------------------|---|--------------------------------|-------------|------------|-------------------|
| 16887 | <i>Carex simulata</i> Herbaceous Vegetation | Wet Meadow | G4 | S3 | No |
| 24572 | <i>Salix wolfii</i> / Mesic Forbs Shrubland | Subalpine Riparian Willow Carr | G3 | S3 | Yes |
| 16921 | <i>Isoetes setacea</i> ssp. <i>muricata</i> | spiny-spored quillwort | G5?T5? | S2 | No |
| 22458 | <i>Carex limosa</i> | mud sedge | G5 | S2 | No |

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Name South Slope Site Code S.USCOHP*28190
24850 *Salix planifolia* / *Carex aquatilis* Shrubland Subalpine Riparian Willow Carr G5 S4 No

REFERENCES

| <u>Reference ID</u> | <u>Full Citation</u> |
|---------------------|---|
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| 198295 | Chronic, H. and F. Williams. 2002. Roadside Geology of Colorado. Second Edition. Mountain Press Publishing Company. Missoula, MT. |
| 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. |
| 132991 | Flora of North America Editorial Committee. 1993. Flora of North America north of Mexico. Vol. 2. Pteridophytes and gymnosperms. Oxford Univ. Press, New York. xvi + 475 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 |
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| 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. |
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ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 11/30/2010
Version Author Shaw, A.E., D.R. Culver and D.G. Malone

Disclaimer

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