

Level 4 Potential Conservation Area (PCA) Report

Name Carter Fen

Site Code S.USCOHP*25914

IDENTIFIERS

Site ID 2299 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 401220N
State Colorado Longitude 1055656W

Quad Code Quad Name
40105-B8 Trail Mountain

County
Grand (CO)

Watershed Code Watershed Name
14010001 Colorado headwaters

SITE DESCRIPTION

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

Site Description

Community occurs in a small opening below the outlet of a mineral spring within a larger willow (*Salix*) dominated shrubland. Surrounding *Salix* shrubland is a mixture of diamondleaf willow (*Salix planifolia*), shortfruit willow (*Salix brachycarpa*), Wolf's willow (*Salix wolfii*), and mountain willow (*Salix monticola*) as well as dwarf birch (*Betula nana*). Surrounding uplands are dominated by quaking aspen (*Populus tremuloides*). Species composition within the fen is unique for the county being fed by warm, alkaline, mineral groundwater. Soils consist of a light colored mineral layer on top of rich, dark fibric peats with some mottling in the upper layers. Dominant species include seaside arrowgrass (*Triglochin maritimum*), alpine meadow-rue (*Thalictrum alpinum*), fewflower spikerush (*Eleocharis quinqueflora*), and false uncinia sedge (*Carex microglochin*). Common species include diamondleaf willow (*Salix planifolia*), northern bog sedge (*Carex gynocrates*), analogue sedge (*Carex simulata*), silvery primrose (*Primula incana*), smallflower grass of Parnassus (*Parnassia parviflora*), and shrubby cinquefoil (*Dasiphora floribunda*). Marsh arrowgrass (*Triglochin palustre*) is also present in sparse cover throughout. Disturbances in the area include housing development and roadways. An area just upstream of the site across the adjacent drainage has been filled and bridged for a homesite. Following the discovery of this unique fen, the area has been designated for protection as a mitigation bank and the previously filled areas are being restored. The site has been described as more saline (EC > 1500 uS/cm², pH > 8.0) than calcareous, being on shale, not limestone, (Cooper 2004). Geology consists of sedimentary, Mesozoic rocks, mainly lower Cretaceous, Jurassic, and Triassic formations.

Key Environmental Factors

Key environmental factors contributing to site hydrology and biota include a perennial groundwater source, mineral rich substrate and hydrology, peat soils, and slope. Site has been characterized as an extreme rich fen due to high pH and a high concentration of calcium.

Climate Description

Climate likely follows patterns typical of this region of Colorado, being generally xeric throughout the year, with wet spring seasons and late summer "monsoons".

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 01/04/2006
Designer Jones, J.R.

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Boundary Justification

The site contains approximately .06 acre of spring fed fen along Trail Creek. Boundaries include adjacent buffered wetlands and uplands and encompass those ecological processes necessary to maintain site hydrology including perennial groundwater and perennial surface flows along adjacent drainage. However, boundaries do not include all ecological processes influencing the site and activities upstream and along adjacent slopes such as improper grazing, water diversion, and development may impact site hydrology and biota.

Primary Area 51.04 Acres 20.65 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site is drawn for a good (B-ranked) occurrence of a plant community, fewflower spikerush (*Eleocharis quinqueflora*) - arrowgrass (*Triglochin* sp.) herbaceous vegetation, whose global distribution is unknown at this time (GU/S2). Although the GU ranking is typically defaulted to globally apparently secure when assigning biodiversity significance ranks, this occurrence is very unique to the area due to its hydrology and soil type and merits a higher rank.

Other Values Rank V3 - Moderate values

Other Values Comments

This site provides moderate other values including aquifer recharge, wildlife habitat and mineral source, habitat diversity, and uniqueness.

LAND MANAGEMENT ISSUES

Land Use Comments

Surrounding properties are all privately owned and slated for development.

Natural Hazard Comments

No Data

Exotics Comments

There were no exotic species observed. Adjacent road may support exotic species and may act as a conduit for exotics in the future.

Offsite

Off-site considerations include road proximity and maintenance, development, dewatering, and water diversion.

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>
23155	<i>Eleocharis quinqueflora</i> Herbaceous Vegetation	Alpine Wetlands	G4	S3S4	Yes

REFERENCES

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Reference ID

Full Citation

160903	Carsey, K., D. Cooper, K. Decker, D. Culver, and G. Kittel. 2003. Statewide wetlands classification and characterization: Wetland plant associations of Colorado. Prepared for Colorado Department of Natural Resources, Denver, CO by Colorado Natural Heritage Program, Fort Collins, CO.
193664	Cooper, D. and S. Popovich. 2004. Grand County Wetland Visit: Aslund-Carter Extreme Rich Fen.
193632	Culver, D.R. and Jones, J.R. 2006. Final Report: Survey of Critical Biological Resources in Grand County. Colorado Natural Heritage Program, Fort Collins, CO.
160140	Dorn, R. D. 1997. Rocky Mountain Region Willow Identification Field Guide. Renewable Resources R2-RR-97-01. Denver, CO: USDA, Forest Service, Rocky Mountain Region. 107p.
167224	Hurd, E.G., N.L. Shaw, J. Mastroguiseppe, L.C. Smithman, and S. Goodrich. 1998. Field Guide to Intermountain Sedges. U.S. Department of Agriculture, Rocky Mountain Research Station, Ogden, UT.
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.
193553	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center < http://npdc.usda.gov/ >, Baton Rouge, LA 70874-4490 USA. Accessed 2005.
172684	Weber, W.A. and R.C. Wittmann. 2001. Colorado Flora: Western Slope, Third Edition. University Press of Colorado, Niwot, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 01/04/2006

Version Author Jones, J.R.

Disclaimer

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