

Level 4 Potential Conservation Area (PCA) Report

Name Duck Lake above Ward

Site Code S.USCOHP*27223

IDENTIFIERS

Site ID 2497 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 400456N
State Colorado Longitude 1053108W

Quad Code Quad Name

40105-A5 Ward

County

Watershed Code Watershed Name

10190005 St. Vrain

SITE DESCRIPTION

Minimum Elevation	9,400.00 Feet	2,865.12 Meters
Maximum Elevation	10,040.00 Feet	3,060.19 Meters

Site Description

The site is located in west-central Boulder County, about six miles east of the Continental Divide. Duck Lake itself is about half a mile northwest of the town of Ward, at the head of a small, east-facing drainage forming the head of Chipmunk Gulch. Chipmunk Gulch flows into James Creek some 1.5 miles below the lake. Surrounding north-facing slopes contain mixed conifers, including Engelmann spruce (*Picea engelmannii*), lodgepole pine (*Pinus contorta*), limber pine (*Pinus flexilis*), and subalpine fir (*Abies lasiocarpa*). South-facing slopes are covered by a large stand of quaking aspen (*Populus tremuloides*). The lake is set within a depression formed by glacial lateral moraines and drains to the east. There is no clear inlet, but a series of small seeps form small inflow channels through the adjoining wetland, which supports a large willow carr fen on the southwestern edge of the lake. There is also likely considerable groundwater discharging into the wetland from the slopes above, which are primarily glacial till. The wetland appears to have a stable groundwater table at or near the ground surface. This stable water table maintains saturated soil, slowing decomposition and allowing the accumulation of a thick layer of organic matter over hundreds and thousands of years. There was no clear evidence of beaver in the wetland currently, but the hummocky topography and mixed bands of vegetation may have been caused by beaver activity in the past. The majority of the willow carr is dominated by tall (2-5 m) willows, primarily park willow (*Salix monticola*) and Drummond's willow (*Salix drummondiana*) with occasional thinlinef alder (*Alnus incana*) and Engelmann spruce interspersed. At the lake edge, however, low (3.28-6.6 ft/1-2 m) willows dominate, notably diamondleaf willow (*Salix planifolia*), before the vegetation transitions into open beaked sedge (*Carex utriculata*) on the border of the lake. The understory contains high species diversity of herbaceous vascular plants and a lush carpet of moss. The most dominant understory graminoid is bluejoint reedgrass (*Calamagrostis canadensis*) with 30% cover overall, but beaked sedge is also present with high cover in many spots. Moss species observed within the wetland include *Climacium dendroides*, *Drepanocladus aduncus*, *Aulacomnium palustre*, and species in the genera *Staminergon*, *Calliargon*, *Plagiomnium*, and *Polytrichum*. A minor boardwalk cuts through the tall willows, providing access to two small cabins on the north shore of the lake. The lake itself is filled with pond lily (*Nuphar lutea* spp. *polysepala*).

Key Environmental Factors

The willow carr is a groundwater-fed fen formed at a toeslope and not along a linear stream.

Climate Description

No Data

Land Use History

There is evidence of extensive historic mining activity to the southeast around Ward.

Cultural Features

No Data

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SITE DESIGN

Site Map Y - Yes

Mapped Date 06/11/2008

Designer Decker, K.L. and J.M. Lemly

Boundary Justification

The boundary includes the entire local catchment of Duck Lake, allowing for the operation of normal hydrological and ecological processes that support the wetland community, and providing a buffer against direct disturbance. Some natural processes are not completely contained in the boundary, and off-site activities within the watershed have the potential to impact the elements of biodiversity present in the area.

Primary Area 209.56 Acres 84.81 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site supports a good (B-ranked) occurrence of a globally vulnerable (G3/S3) *Salix monticola* / *Calamagrostis canadensis* montane willow carr.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGEMENT ISSUES

Land Use Comments

There are two small cabins around the lake and a boardwalk through the wetland, but these appear to have little impact on the wetland.

Natural Hazard Comments

No Data

Exotics Comments

There are only a few non-native species present in the wetland and they represent very little cover. Exotics include Canada thistle (*Cirsium arvense*), timothy (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), and clover (*Trifolium repens*).

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>
24514	<i>Salix monticola</i> / <i>Calamagrostis canadensis</i> Shrubland	Montane Willow Carr	G3	S3	Yes

REFERENCES

Reference ID

Full Citation

195190

Neid, S., J. Lemly, K. Decker and D. Culver. 2009. Final Report: Survey of Critical Biological Resources in Boulder County 2007-2008. Colorado Natural Heritage Program, Fort Collins, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 06/11/2008

Version Author Decker, K.L. and J.M. Lemly

Disclaimer

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