

Level 4 Potential Conservation Area (PCA) Report

Name Tumblesom Lake

Site Code S.USCOHP*27216

IDENTIFIERS

Site ID 2490 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 400602N
State Colorado Longitude 1053029W

Quad Code Quad Name

40105-A5 Ward
40105-A4 Gold Hill

County

Boulder (CO)

Watershed Code Watershed Name

10190005 St. Vrain

SITE DESCRIPTION

Minimum Elevation	8,800.00 Feet	2,682.24 Meters
Maximum Elevation	9,200.00 Feet	2,804.16 Meters

Site Description

The Tumblesom Lake site is located in west-central Boulder County, about 6 miles east of the Continental Divide, north of the town of Ward. The lake occupies a small basin at the foot of the long slope of glacial drift deposited around the foot of Mount Audubon. This gently sloping basin is perched above the adjacent South St. Vrain Creek drainage, and the outlet stream from Tumblesom Lake joins the creek several hundred yards below the site boundary. Slopes above the lake are forested, and generally dominated by lodgepole pine (*Pinus contorta*), with ponderosa pine (*Pinus ponderosa*), limber pine (*Pinus flexilis*), Engelmann spruce (*Picea engelmannii*), and subalpine fir (*Abies lasiocarpa*). Stands of quaking aspen (*Populus tremuloides*) are also interspersed. The lake has no clear inlet, but a series of small seeps and springs discharge groundwater into the lake and adjacent wetland from the slopes above. The west side of Tumblesom Lake supports a dense tall-willow carr. The stand contains a diverse array of shrub species, dominated primarily by park willow (*Salix monticola*) and thinlinealder (*Alnus incana*). Willow (*Salix* spp) individuals range from 6.5-13 ft (2-4 m) tall and form a closed canopy over the diverse understory. Within the *Salix* matrix, alder reach over 13-16.5 ft (4-5 m) high and extend above the main canopy. A few old beaver ponds occur within the wetland, creating a mosaic of microtopographic positions. The understory vegetation changes based on the hydrologic differences between moist and saturated soil. At the far northwest corner of the lake in the wetland is dominated by low (4 ft/1 m) shrubs, notably diamondleaf willow (*Salix planifolia*) and short park willow. Here the understory is typical of fen vegetation, including water sedge (*Carex aquatilis*), redpod stonecrop (*Rhodiola [Clementsia] rhodantha*), and elephanthead (*Pedicularis groenlandica*) with very dense moss cover including *Climacium dendroides*, *Drepanocladus aduncus*, *Aulacomnum palustre*, *Helodium blandowii*, *Bryum pseudotriquitrum*, and *Plagiomnium* spp. Immediately on the lake edge, the ground is very soft and may even be a floating mat extending over the lake. This area supports a small population of the state-rare lesser panicked sedge (*Carex diandra*). The upslope side of the wetland transitions from saturated peat soil to drier mineral soil and the vegetation composition changes as well. There is more Bebb willow (*Salix bebbiana*) in this area and the understory contains high cover of nonnative pasture grasses.

Key Environmental Factors

Geology is mapped as glacial drift of Pinedale and Bull Lake glaciations (Tweto 1979). Soils are predominantly Leighcan family till, with moderate to high permeability and low run-off, providing groundwater recharge for the wetland area downslope. The center of the wetland appears to have a stable groundwater table at or near the ground surface, which maintains saturated soil, slowing decomposition and allowing the accumulation of a thick layer of organic matter over hundreds and thousands of years.

Climate Description

No Data

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Land Use History

The area has been grazed in the past. The lake has been dredged and raised by a small outlet dam to enhance recreation. A Boy Scout camp is located on the lake at the eastern edge of the site.

Cultural Features

No Data

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 lake and its immediate drainage basin, allowing for the operation of normal hydrological and ecological processes that support the wetland community, and providing a buffer against direct disturbance. These natural processes are not completely contained within the boundary, and off-site activities within the watershed have the potential to impact the elements of biodiversity present in the area.

Primary Area 1,039.04 Acres 420.49 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 and a good (B-ranked) occurrence of the state critically imperiled (G5/S1) lesser panicled sedge (*Carex diandra*).

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

Non-native plants include: redtop (*Agrostis gigantea*), Canada thistle (*Cirsium arvense*), timothy (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), dandelion (*Taraxacum officinale*), and clovers (*Trifolium hybridum*, *T. 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
21581	<i>Carex diandra</i>	lesser panicled sedge	G5	S1	No

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
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.
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.

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ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 06/11/2008

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

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