Level 4 Potential Conservation Area (PCA) Report

Name Left Hand Park Reservoir **Site Code** S.USCOHP*27218

IDENTIFIERS

Site ID 2492 **Site Class** PCA

Site Alias None

Network of Conservation Areas (NCA)

NCA Site ID	NCA Site Code	NCA Site Name
-		No Data

LOCATORS

Nation United States **Latitude** 400347N

State Colorado **Longitude** 1053354W

Quad Code	Quad Name
40105-A5	Ward

County

Boulder (CO)

Watershed Code	Watershed Name
10190005	St. Vrain

SITE DESCRIPTION

Minimum Elevation	10,500.00	**Feet**	3,200.40	**Meters**
Maximum Elevation	11,470.00	**Feet**	3,496.06	**Meters**

Site Description

The Left Hand Park Reservoir site is located near the western boundary of Boulder County, about 3.5 miles east of the Continental Divide. Niwot Ridge extends eastward from the Continental Divide some 2 mi (6 km) to its terminus at Niwot Mountain. Left Hand Park Reservoir lies on the northern flank of the eastern end of this prominent alpine ridge, in a large, open valley immediately below Niwot Mountain. The site forms the headwaters of Left Hand Creek above the town of Ward. The northern boundary of the basin is formed in glacial till of the Pinedale and Bull Lake glaciations (upper Pleistocene), while the slopes of Niwot Ridge are unglaciated Precambrian gneiss. Slopes immediately southwest of the wetland are covered by solifluction deposits. Loosely consolidated material that has sloughed off the slopes above (Gable and Madole 1976). The lower slopes of the valley are dominated by forests of Engelmann spruce (*Picea engelmannii*), subalpine fir (*Abies lasiocarpa*), and limber pine (*Pinus flexilis*). The trees are robust immediately surrounding the lake, but transition into krummholz and banded strips on the upper slopes. The outlet to the lake is at the east end and was dammed in the late 1950s or early 1960s. The 90-acre reservoir is just below treeline, and covers most of what was probably at one time an extensive peatland. The remaining wetland is a gently sloping fen located on the west end of the reservoir, and wrapping around the south shore. There are small channels through the wetland, but no inlet stream. The remaining fen is dominated by low shrubs, primarily diamondleaf willow (*Salix planifolia*) and bog birch (*Betula glandulosa*), over a moderate cover of water sedge (*Carex aquatilis*) and dense cover of *Sphagnum* moss. The ground surface is very hummocky, providing a mosaic of microtopographic and hydrologic settings for a diverse array of plants. The wetland as a whole is heterogeneous, with dense shrub patches, open water tracks and pools dominated by sedges, and large raised *Sphagnum* hummocks with stunted spruce trees. Several other typical fen species are found throughout the wetlands, including fewflower spikerush (*Eleocharis quinqueflora*), bog sedge (*Carex microglochin*), cottongrass (*Eriophorum angustifolium*), redpod stonecrop (*Rhodiola rhodantha*), elephanthead (*Pedicularis groenlandica*), and white marsh marigold (*Caltha leptosepala*). Beside the *Sphagnum,* additional moss species include *Drepanocladus aduncus, Polytrichum commune, Campyllium stellatum, Climacium dendroides,* and *Tomenthypnum nitens.* There are few non-native species, except in the most disturbed areas, and the primarily dominant species are characteristic of pristine subalpine fens in the Front Range. Soils within the occurrence are mapped at a coarse level as Cryaquolls-Leighcan family, till substratum complex, 0 to 15 percent slope. Cryaquolls occur on floodplains and are derived from gravelly glaciofluvial deposits and/or gravelly till from igneous. Soils from the Leighcan family occur on mountain slopes and are derived from residuum and/or till from igneous and metamorphic rock (USDA 2007). Soils observed within the wetland were primarily hemic Histosols (organic peat), though the edges of the wetland were mineral and likely match the mapped description. The accumulated organic soil likely formed on top of the glacial material over thousand of years. Soil pits throughout the wetland revealed at least 40 cm of partially decomposed organic material.

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Key Environmental Factors

The wetland is fed by groundwater discharge that originates as snowmelt in the high peaks and flows through the surrounding bedrock.

Climate Description

No Data

Land Use History

The site was mined for peat in the early 1900s; patches of exposed peat are visible in the water in the southwest corner of the lake, and bare areas near the lake edge are probably where peat was stripped off to the underlying bedrock. The outlet was dammed to form the reservoir. The hydrology of the surrounding area, however, appears unaltered. The site is currently used for light recreation, and there are a few social trails.

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes **Mapped Date** 06/10/2008

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

Boundary Justification

The boundary is drawn to encompass the local watershed around the reservoir, terminating approximately 3,280 ft (1,000 m) downstream from the outlet. This area should allow the operation of normal hydrological and ecological processes that support the wetland community, and provide a buffer against direct disturbance.

Primary Area 1,304.48 **Acres** 527.91 **Hectares**

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

This site supports a good (B-ranked) occurrence of a globally common (G5/S4) *Salix planifolia / Carex aquatilis* subalpine riparian willow carr. At 35 acres, this occurrence is large for its type. The original community, however, may at one time have been the largest fen in Boulder County before being reduced by peat mining and the formation of the reservoir. What remains of the fen is in excellent condition.

Other Values Rank No Data

Other Values Comments

No Data

LAND MANAGMENT ISSUES

Land Use Comments

Site of a privately owned reservoir, currently also used for recreation such as hiking, fishing, and camping.

Natural Hazard Comments

No Data

Exotics Comments

Very few non-native species are present.

Offsite

To the south and west of the site, the Indian Peaks Wilderness and the Niwot Ridge Biosphere Reserve are managed for native vegetation, light recreation, and research. Dam and access road maintenance both in and near the site are likely to involve heavy machinery. The roads, campgrounds and trails of the rest of the Brainard Lake Recreation Area are heavily used.

Information Needs

Nonbreeding boreal toads (*Bufo boreas* pop 1) were documented in the 1970s but no current sightings have been reported.

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24850	*Salix planifolia / Carex aquatilis* Shrubland	Subalpine Riparian Willow Carr	G5	S4	Yes

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REFERENCES

Reference ID	Full Citation
194967	Gable, D.J., and R.F. Madole. 1976. Geologic Map of the Ward Quadrangle, Boulder County, Colorado. Map GQ-1277. U.S. Geologic Survey, Reston, Virginia.
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.
194850	USDA. 2007a. Soil Survey Geographic (SSURGO) database for Arapaho-Roosevelt National Forest Area, Colorado, Parts of Boulder, Clear Creek, Gilpin, Grand, Park, and Larimer Counties. USDA Natural Resources Conservation Service, Fort Worth, Texas. URL: <http://SoilDataMart.nrcs.usda.gov/>. Downloaded on October 16, 2007.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 06/10/2008

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

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