

# Level 4 Potential Conservation Area (PCA) Report

Name Cheesman Reservoir

Site Code S.USCOHP\*6037

## IDENTIFIERS

Site ID 1672 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>
1666	S.USCOHP1*1992	South Platte Canyon

## LOCATORS

Nation United States Latitude 391118N  
State Colorado Longitude 1051644W

<u>Quad Code</u>	<u>Quad Name</u>
39105-B3	Cheesman Lake
39105-B2	Westcreek

## County

Jefferson (CO)

Douglas (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
10190002	Upper South Platte

## SITE DESCRIPTION

Minimum Elevation	6,600.00	Feet	2,012.00	Meters
Maximum Elevation	7,800.00	Feet	2,377.00	Meters

## Site Description

Probably the largest and best example of Front Range old growth ponderosa pine forest in the state. The west side of the lake on Denver Water Board Property has only a few isolated patches of exotics in the understory. Soils are gravelly coarse sandy loams. Mountainsides and ridges have 15 to 80 percent slopes, ranging from 6,000 to 8,000 feet. Soils are shallow and somewhat excessively drained from weathered Pikes Peak granite parent material. High frequency/low intensity fires still a naturally occurring process. The occurrence is the biggest, least imparted, most protected occurrence of old growth ponderosa pine forest in the Front Range (Dr. P. Robertson pers. comm.). Patches of old growth are mostly on south-facing dry gravelly slopes. It has been protected by the Denver Water Board since the turn of the century. Fishing is the major recreational use, and access to most of the lake is limited by restrictions on motorized vehicles and any boats. The substrate is Pike's Peak granite, with unstable "grapenuts" type of immature soil. It shows a tendency to erode very easily with heavy rainfall. Area is mountainous with rough and sometimes very steep terrain. Community type is open ponderosa pine (*Pinus ponderosa*) forest with Rocky Mountain juniper (*Juniperus scopularum*). Douglas-fir (*Pseudotsuga menziesii*) occurs on north and north-west facing slopes. Many Douglas-firs are very young trees, and a few doghair stands are encountered throughout. Duff in some areas of canopy cover sometimes measured 1 to 2-1/2 inches, and was extremely brittle and dry. Patches of *Cercocarpus montanus* are consistently found throughout the forest in xeric areas away from water courses. Areas along some drainages and water courses contain *Prunus virginiana*, *Pentaphylloides floribunda*, *Ribes*, *Rubus*, *Salix* with *Equisetum* in the understory. Understory grasses in forest canopy are a mixture of *Muhlenbergia montana*, *Schizachryum scoparium* and *Bouteloua gracilis* amongst *Yucca glauca*. Wildflowers are more profuse along areas of disturbance, i.e., eroding sunny slopes, washes, sunny drainages, and roads. Wildflowers consist of: *Rudibeckia*, *Machaeranthera bigelovii*, *Achillea lanulosa*, *Solidago (missouriensis?)*, *Geranium caespitosum*, *Heterotheca villosa*, *Helianthes pumilis*, *Gillea*, *Mentzelia* and very few *Liatris punctata*. Exotics mostly limited to *Linaria vulgaris*, *Verbascum thapsus*, *Cirsium arvense*, *Carduus nutans*, *Rumex* and *Bromopsis inermis*.

## Key Environmental Factors

Fire, high erosion rate of exposed granitic soils, hydrology regime.

## Climate Description

Mean annual precipitation is 15-20 inches per year. The mean annual temperature is 45.6 degrees F. Annual precipitation averages 16 inches, with 65 percent occurring from April to September. Summer thundershowers are common, and sometimes severe. Snow melts rapidly, especially on southern exposures, and rarely lasts more than a day or two on the ground.

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## Land Use History

The site has been owned and managed by the Denver Water Board since the turn of the century. There is evidence in the forest of an old homestead, which has been relegated to decay.

## Cultural Features

No Data

### SITE DESIGN

Site Map Y - Yes

Mapped Date 11/06/1996

Designer Stephens, T. and P. Pineda

## Boundary Justification

Area includes all known occurrences and a reasonable buffer to protect them.

Primary Area 10,447.96 Acres

4,228.16 Hectares

### SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

## Biodiversity Significance Comments

This site contains a good (B-ranked) occurrence of a globally imperiled subspecies of skipper butterfly, the Pawnee montane skipper (*Hesperia leonardus montana*). This subspecies of skipper butterfly is endemic to Colorado, and restricted to the granitic soils of the South Platte Canyon, in an area of about 38 square miles. There are six well-studied occurrences in Colorado, and this site represents the highest quality occurrence. Additionally, a natural fire regime within this site may be responsible for the best example in Colorado of old growth Ponderosa pine savanna (*Pinus ponderosa* / *Muhlenbergia montana*). This community is globally secure, but rare within the state.

Other Values Rank V2 - High values

## Other Values Comments

The reservoir is currently used only for fishing. Roads within the property can be utilized by hikers. At this time, it is off-limits to cyclists, although the potential exists. Potential exists for the use of sail and motor boats, and other types of water recreation, as well as camping within the forest; potential for ORV use within the property. The South Platte Canyon area also has potential for reservoir and dam construction. Potential also exists for the building of cabins, although the soils are unstable. The steepness of some slopes and the unstable nature of the soil may limit timber cutting.

### LAND MANAGEMENT ISSUES

## Land Use Comments

The canyon is used as reservoir site. Forest area surrounding the reservoir is only used by hikers, and roads are used by Denver Water Board and by USFS personnel. There is the occasional tourist bus through the area.

## Natural Hazard Comments

No Data

## Exotics Comments

Exotics are limited to patches of *Linaria dalmatica*, *Verbascum thapsus*, *Cirsium arvense*, *Carduus nutans* and *Rumex*. Also, *Bromopsis inermis* appears somewhat problematic along some waterways, as it appears to be displacing the *Carex* growing in those areas.

## Offsite

Off-site there are other dams (Antero Reservoir), Forest Service campgrounds and private campgrounds. Some building of new housing is apparent in the area.

## Information Needs

Monitor nearby Buffalo Creek burn area (burned in June 1996) for recovery progress. Re-evaluate old growth ponderosa pine occurrence and butterfly populations due to Hayman Fire of 2002.

### 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>
24740	<i>Pinus ponderosa</i> / <i>Muhlenbergia montana</i> Woodland	Foothills Ponderosa Pine Savannas	G4G5	S2S3	No
20843	<i>Hesperia leonardus montana</i>	Pawnee Montane Skipper	G4T1	S1	Yes

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## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
169387	Pineda, Phyllis M. 1996. Field survey for HESPERIA LEONARDUS MONTANA at Cheesman Reservoir, Denver Water Board. August-September 1996.
167041	Stephens, Thomas. 1996. Field survey to Cheesman Reservoir for Denver Water Board Ecological Inventory.

## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

**Version Date** 11/06/1996  
**Version Author** Stephens, T. and P. Pineda

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