

# Level 4 Potential Conservation Area (PCA) Report

Name Blue River

Site Code S.USCOHP\*25920

## IDENTIFIERS

Site ID 2305 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 395911N  
State Colorado Longitude 1062205W

## Quad Code Quad Name

39106-H3	King Creek
40106-A3	Junction Butte
39106-H4	Sheephorn Mountain
40106-A4	Kremmling

## County

Grand (CO)

## Watershed Code Watershed Name

14010002 Blue

## SITE DESCRIPTION

Minimum Elevation	7,380.00	Feet	2,249.42	Meters
Maximum Elevation	7,420.00	Feet	2,261.62	Meters

## Site Description

Site occurs along lower portions of the Blue River, a third order, C channel type tributary of the Colorado River. Narrowleaf cottonwood (*Populus angustifolia*) dominates the canopy layer with some blue spruce (*Picea pungens*) mixing. Narrowleaf cottonwood occupies a wide area along the floodplain and backwater sloughs, ponds, and mesic areas. The tall shrub layer is dominated by water birch (*Betula occidentalis*) with codominant species greenleaf willow (*Salix laucida* ssp. *caudata*), strapleaf willow (*Salix ligulifolia*), and thinleaf alder (*Alnus incana*). There is a consistent layer of short shrubs that does not have a dominant component. The herbaceous layer is mainly dominated by graminoids which are commonly invasive species such as smooth brome (*Bromus inermis*) and forbs including Canada thistle (*Cirsium arvense*). Surrounding uplands are dominated by various mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) shrublands except in areas that have been converted for hay production. Hydrology has been heavily altered due to the Dillon Reservoir upstream and subsequent ditches for agricultural use between Silverthorne and the site. As well, multiple backwater sloughs and ponds have been created on the property for wildlife habitat. Hydrologic alterations may have a profound impact on the current species composition which seems to rely on a perennial water source to thrive (Carsey et al. 2003). There is no beaver activity along the Blue River in this area, but there is beaver activity along tributaries and upstream of the stand. Geology consists of unconsolidated surficial deposits and rocks of the Quaternary age, specifically modern alluvium. Soils are sandy loams to loamy sands with a thick top layer of organic material. The river bottom consists of alluvial deposits of rocky beds with large boulders and large cobble providing excellent habitat for aquatic animals.

## Key Environmental Factors

Key environmental factors include soil type, water retention increased by the shape of the valley, and control of hydrology by the Dillon Dam and Green River Reservoir which creates consistent, year-round moderate flows.

## Climate Description

Climate likely follows typical patterns of Colorado weather being dry year round with a wet spring season and late summer "monsoon" season. Temperatures may be moderated by water temperatures.

## Land Use History

Historically the area was split into multiple homesteads which were farmed by early settlers.

## Cultural Features

Uplands surrounding the river still have many old homesteads from early settlers.

## SITE DESIGN

Site Map Y - Yes Mapped Date 11/15/2005

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Designer Jones, J.R.

## Boundary Justification

The boundary encompasses a large section of the lower Blue River that is dominated by narrowleaf cottonwood / mixed tall shrub woodlands. Boundaries include an upland buffer and backwater sloughs and rivulets that contribute to the maintenance of site hydrology. Not all hydrologic processes important to the site are contained within the boundary and activities upstream and along tributaries of the site including water diversions, agriculture, development, and grazing may be detrimental to the quality of the elements.

Primary Area 558.44 Acres 225.99 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

This site is drawn for a fair (C-ranked) occurrence of a globally vulnerable (G3/S2) plant community, narrowleaf cottonwood / water birch (*Populus angustifolia* / *Betula occidentalis*) montane riparian forest.

Other Values Rank V3 - Moderate values

## Other Values Comments

Area is very well maintained, providing excellent fish and wildlife habitat and erosion control along with aesthetic values and recreation for fishing and floating along this stretch of river. In some areas along private stretches, fish are pellet fed creating permanent fish populations of very large trout.

## LAND MANAGEMENT ISSUES

## Land Use Comments

The land is currently used by property owner as a private trout stream which sees very few visitors yearly. There are some 200 head of cattle that are grazed on the 25,000 acres ranch that do not impose much impact to the riparian areas due to intense management.

## Natural Hazard Comments

Natural hazards may include high water during high release flows.

## Exotics Comments

Many areas along the riparian corridor are dominated by non-native species, likely due to past uses of agriculture and livestock cultivation in the area. These species include, but are not limited to, Canada thistle (*Cirsium arvense*), smooth brome (*Bromus inermis*), orchardgrass (*Dactylis glomerata*), Kentucky bluegrass (*Poa pratensis*), and common dandelion (*Taraxacum officinale*).

## Offsite

Off-site considerations include adjacent hay cultivation, control of flows based on winter snow packs and Front Range water needs, and Hwy 9, which runs adjacent to the river and may add additional sediment and toxins to the system.

## 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>
24884	<i>Populus angustifolia</i> / <i>Betula occidentalis</i> Woodland	Montane Riparian Forest	G3	S3	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.
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.
193647	Kosler, John. 2005. Rangeland Manager for Blue Valley Ranch. Personal communication to Jennifer Jones of the Colorado Natural Heritage Program.
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.
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** 11/15/2005

**Version Author** Jones, J.R.

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