

Level 4 Potential Conservation Area (PCA) Report

Name Brush Creek at Cannibal Point

Site Code S.USCOHP*5107

IDENTIFIERS

Site ID 733 Site Class PCA
Site Alias Brush Creek

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 380225N
State Colorado Longitude 1071102W

Quad Code Quad Name
38107-A2 Cannibal Plateau

County
Hinsdale (CO)

Watershed Code Watershed Name
14020002 Upper Gunnison

SITE DESCRIPTION

Minimum Elevation	9,880.00	Feet	3,011.42	Meters
Maximum Elevation	10,850.00	Feet	3,307.08	Meters

Site Description

The site is situated along the middle reaches of Brush Creek and the upper reaches of Mill Creek, both second order, headwater tributaries of Cebolla Creek. It encompasses highly variable ecosystems and hydrologic regimes along wide, glaciated valley bottoms, and narrow riparian corridors. Bedrock geology includes landslide deposits and glacial drifts of the Quaternary Age and igneous rocks of the Tertiary Age, specifically ash-flow tuffs of the main volcanic sequences and pre-ash-flow andesitic lavas, breccias, tuffs, and conglomerates (Steven 1974, Tweto 1979). Soils consist of organic accumulations over silty clay loams and unconsolidated materials with prominent silt and sand components and iron mottling. Forested uplands consist of Engelmann spruce (*Picea engelmannii*), Douglas-fir (*Pseudotsuga menziesii*), and quaking aspen (*Populus tremuloides*) along middle reaches and Engelmann spruce and subalpine fir (*Abies lasiocarpa*) along higher elevation reaches. Forest openings are dominated by large patches of shrubby cinquefoil (*Dasiphora fruticosa* ssp. *floribunda*) shrublands with mixed xeric graminoids. Predominant land uses include recreational activities and livestock grazing. Hydrology along Mill Creek is compromised by upstream dams and adjacent roadways. Open, wide floodplains support a mosaic of dense tall shrublands and herbaceous wet meadows. Upper Mill Creek is dominated by a park willow (*Salix monticola*), mesic graminoid community. Riparian areas along Mill Creek are characterized by a series of old beaver dams with extensive willow regeneration interspersed with filling ponds and patches of dense herbaceous vegetation. Brush Creek supports a Geyer's willow (*Salix geyeriana*) and park willow shrubland with water sedge (*Carex aquatilis*) herbaceous understory. Other shrubs found along riparian reaches of the site include Drummond's willow (*Salix drummondiana*), shortfruit willow (*Salix brachycarpa*), and diamondleaf willow (*Salix planifolia*). Common graminoids in the herbaceous layer include smallwing sedge (*Carex microptera*), bluejoint (*Calamagrostis canadensis*), Northwest Territory sedge (*Carex utriculata*), water sedge, and bentgrass (*Agrostis* sp.). Common forbs include heartleaf bittercress (*Cardamine cordifolia*), fringed willowherb (*Epilobium ciliatum*), and largeleaf avens (*Geum macrophyllum*). Shrubby cinquefoil (*Dasiphora fruticosa* ssp. *floribunda*), common yarrow (*Achillea millefolium*) and tufted hairgrass (*Deschampsia caespitosa*) are also common along edges indicating drying. Vegetation indicates past and present disturbances and hydrologic alterations with extensive shrub regeneration, presence of exotic and increaser species, and stable native vegetation types in other areas. Mesic and inundated areas support the highest cover of native species, while drying edges and trampled areas support more increaser and exotic species.

Key Environmental Factors

Key environmental factors influencing species composition of the wetland are subalpine elevation, gentle to moderate slope, groundwater recharge, and seasonal flooding.

Climate Description

Climate and weather tend to follow typical patterns of the San Juan Mountains of Colorado being generally xeric throughout the year with warm spring weather causing snowmelt flooding, wet summers, and a late

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summer "monsoon" season.

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Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 10/15/2006

Designer Jones, J.R.

Boundary Justification

Boundaries include 1,000 ft of uplands to buffer from impacts to site condition (Keate 2004). This buffer accounts for natural ecological processes important for the maintenance of wetland elements such as seasonal flooding, groundwater recharge, surface flows, and sediment deposition. However, the boundary does not include all ecological processes necessary to the maintenance of the site and upstream activities such as deforestation, improper livestock grazing or recreational use, development, road maintenance or water diversion could be detrimental to the site. Boundaries do not contain upper reaches of Cebolla drainage due to distance between contained elements, differences in hydrologic regime, ecological functions, and disturbances.

Primary Area 2,379.78 Acres

963.07 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site supports an excellent (A-ranked) and a good (B-ranked) occurrence of the globally vulnerable (G3/S3) park willow / mesic graminoid shrubland (*Salix monticola* / mesic graminoid shrubland), a good to fair (BC-ranked) occurrence of a globally vulnerable (G3/S3) riparian willow carr (*Salix monticola* / mesic graminoids) and a good (B-ranked) occurrence of a globally apparently secure (G4/S4) alpine wetland (*Cardamine cordifolia* - *Mertensia ciliata*).

Other Values Rank V2 - High values

Other Values Comments

This site provides several ecological values to the area in terms of aesthetics and ecosystem health functions including game and wildlife habitat, flood attenuation and storage, erosion control, and aquifer recharge.

LAND MANAGEMENT ISSUES

Land Use Comments

Predominant land uses include livestock grazing and recreation.

Natural Hazard Comments

Natural hazards include spring flooding.

Exotics Comments

Exotic species observed include common dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), timothy (*Phleum pratensis*), curly dock (*Rumex crispus*) and Kentucky bluegrass (*Poa pratensis*). All are present at low cover, but consistent along edges and in disturbed areas.

Offsite

Off-site considerations include livestock grazing, road and road maintenance, watershed diversions, upstream dams, and recreational uses.

Information Needs

Need to determine status of cattle allotment and health of rangeland.

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>
24585	<i>Salix monticola</i> / Mesic Graminoids Shrubland	Montane Riparian Willow Carr	G3	S3	Yes
24585	<i>Salix monticola</i> / Mesic Graminoids Shrubland	Montane Riparian Willow Carr	G3	S3	No
24679	<i>Cardamine cordifolia</i> - <i>Mertensia ciliata</i> Herbaceous Vegetation	Alpine Wetlands	G4	S4	No
24585	<i>Salix monticola</i> / Mesic Graminoids Shrubland	Montane Riparian Willow Carr	G3	S3	No

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REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
192813	Keate, Nancy S. 2004. Bibliography of Impacts to Wetlands II - Draft - revised - Jan 2004. Utah Wetland Outreach, Wildlife Resources, Utah Department of Natural Resources.
194565	Neid, S.L. and J.R. Jones. 2008. Final Report: Survey of Critical Wetlands and Riparian Areas in Hinsdale County. Colorado Natural Heritage Program, Fort Collins, CO.
194566	Steven, T.A. 1974. Geologic Map of the Durango Quadrangle, Southwestern Colorado. United States Geological Survey, Department of Interior, Reston, VA.
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.

ADDITIONAL TOPICS

Additional Topics

Original site design by Grunau, T.L. 1996-08-08.

VERSION

Version Date 10/15/2006
Version Author Jones, J.R.

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