

Level 4 Potential Conservation Area (PCA) Report

Name Beaver Creek at Willow Spring

Site Code S.USCOHP*9388

IDENTIFIERS

Site ID 705 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 373930N
 State Colorado Longitude 1082407W

Quad Code Quad Name
 37108-F4 Willow Spring

County
 Dolores (CO)

Watershed Code Watershed Name
 14030002 Upper Dolores

SITE DESCRIPTION

Minimum Elevation	7,970.00 Feet	2,429.00 Meters
Maximum Elevation	8,130.00 Feet	2,478.00 Meters

Site Description

Beaver Creek is a small perennial stream that flows through rolling hills in a montane setting. The stream channel is deeply incised in some areas, as well as braided, due to loose (crumb structure) and clayey soils derived in part from Mancos Shale. Trees and shrubs form a dense canopy cover (totaling 75%), protecting bank erosion in some areas. The site is bisected by a well-used road (Dolores - Norwood Road). In summer of 2004, a temporary mud dam was installed to trap water in Beaver Creek for road construction/maintenance purposes. Water was pumped from the creek, into trucks and used for road construction in the vicinity. This affected water turbidity downstream of the small dam, creating a visible brownish milky color. Narrowleaf cottonwood (*Populus angustifolia*) occurs in an open canopy, associated with river hawthorn (*Crataegus rivularis*). This plant community is located in a willow mosaic dominated by strapleaf willow (*Salix ligulifolia*) and mountain willow (*Salix monticola*) with sparse herbaceous understory. River hawthorn also forms dense shrublands above the willow carr on drier soils. The riparian zone also exhibits areas devoid of vegetation where bedrock is exposed within the stream channel from seasonal flooding. Coyote willow (*Salix exigua*), an early successional willow, commonly forms narrow thickets on point bars. Associated species in the riparian area include shining willow (*Salix lasiandra*), Wood's rose (*Rosa woodsii*), serviceberry (*Amelanchier alnifolia*), snowberry (*Symphoricarpos rotundifolius*), gooseberry (*Ribes inerme*), beaked sedge (*Carex utriculata*), wooly sedge (*Carex lanuginosa*), arctic rush (*Juncus balticus*), common spikerush (*Eleocharis palustris*), rush species (*Juncus* sp), western wheat (*Pascopyrum smithii*), smooth brome (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*), and a trace amount of forbs (e.g., false Solomon's seal (*Maianthemum stellatum*), iris (*Iris missouriensis*), black medic (*Medicago lupulinus*), common plantain (*Plantago major*), blue flax (*Linum lewisii*), red clover (*Trifolium pratense*), golden banner (*Thermopsis montana*), wild licorice (*Glycyrrhiza lepidota*), common dandelion (*Taraxacum officinale*), Canada thistle (*Cirsium arvense*), and fleabane (*Erigeron* sp.)). Beaver have naturalized an historic, destroyed impoundment by creating dams in the opening, resulting in a large pond. The beaver activity has flooded substantial areas, throughout the site, creating extensive wildlife habitat. Willow regeneration is vigorous on old beaver dams where soil is building and cut twigs have sprouted. Several bird species were observed utilizing the habitat such as Black Crowned Night Heron, a nesting pair of Mountain Bluebirds, a Yellow Warbler, a Red Wing Black Bird, a Killdeer, a Spotted Sandpiper, a Kestrel and others. An occurrence of the Southwest Willow Flycatcher was documented in 1996, in the immediate surrounding area, however it was not relocated in 2004. Pinyon pine (*Pinus edulis*)-Rocky Mountain juniper-Utah juniper (*Juniperus scopulorum*-*Juniperus osteosperma*) and ponderosa pine (*Pinus ponderosa*) forests dominate the uplands interspersed with scrub oak (*Quercus gambelii*) woodlands and open rangelands. Upland vegetation is encroaching on the riparian area in places with species such as ponderosa pine, shrubby cinquefoil (*Dasiphora fruticosa* subsp. *floribunda*), broom snakeweed (*Gutierrezia sarothrae*), several forb species (see above list), and pasture grasses (*Bromus inermis*; *Poa pratensis*). Soils in the area are clay, gleyed in some areas, but vary according with the geomorphic position. Mapped soil units within the site are classified primarily as Bradfield - Narraguinnep complex: Bradfield is fine, smectitic, frigid

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Udic Haplusterts; and Narraguinnep is fine, smectitic, frigid, Vertic Haplustolls. (USDA, NRCS 2002).

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial

Mapped Date 06/09/1997

Designer Kettler, S.M.

Boundary Justification

The boundary encompasses the element occurrences and buffer or immediate watershed that are essential for the viability of the riparian plant associations. Natural fluvial activity such as flooding events and sediment deposition contribute to the perpetuity of riparian systems, such as the cottonwood system (Hansen et al. 1995; TNC 1996). The boundaries also provide a small buffer from nearby roads and rangeland where runoff may contribute excess nutrients, sediment and weed invasion. It should be noted that the hydrological processes necessary to the element are not fully contained by the site boundaries.

Primary Area 455.65 Acres

184.40 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports a fair (BC-ranked) occurrence of a globally imperiled (G2?S2) *Populus angustifolia* / *Crataegus rivularis* woodland; a fair (C-ranked) occurrence of globally imperiled (G2G3S2S3) *Salix ligulifolia* shrubland, and; a fair (C-ranked) occurrence of the globally imperiled (G2S2) *Crataegus rivularis* shrubland.

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

No Data

Offsite

Hydrological processes originating outside of the planning boundary, including water quality, quantity, timing and flow must be managed to maintain site viability.

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
24727	<i>Populus angustifolia</i> / <i>Crataegus rivularis</i> Woodland	Narrowleaf Cottonwood Riparian Forests	G2?	S2	Yes
24755	<i>Crataegus rivularis</i> Shrubland	Foothills Riparian Shrubland	G2Q	S2	No
24155	<i>Salix ligulifolia</i> Shrubland	Montane Willow Carr	G2G3	S2S3	Yes

REFERENCES

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Reference ID

Full Citation

159567	Carsey, K. and M. Aitken. 1993. Colorado Natural Heritage Program San Juan National Forest Riparian Site Survey.
191166	Hansen, P. L., R. D. Pfister, K. Boggs, B. J. Cook, J. Joy, and D. K. Hinkley. 1995. Classification and management of Montana's riparian and wetland sites. Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Miscellaneous Publication No. 54. 646 pp. + posters.
192742	March, M.A. 2005. Final Report: Natural Heritage Wetland Inventory of Dolores County. Colorado Natural Heritage Program, Fort Collins, CO.
171753	The Nature Conservancy of Colorado. 1996. Yampa River Site Conservation Plan. The Nature Conservancy, Boulder, CO.
192746	United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2002. Animas-Dolores Area, Colorado, Parts of Archuleta, Dolores, Hinsdale, La Plata, Montezuma, San Juan, and San Miguel Counties. Soil Survey Area Version 1, established 11/9/2004 for digital formats. Retrieved from Soil Data Mart: www.nrcs.usda.gov < http://www.nrcs.usda.gov >.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 11/10/2004

Version Author March, M.A.

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