

Level 4 Potential Conservation Area (PCA) Report

Name Silver Creek and Johnny Bull Creek

Site Code S.USCOHP*1644

IDENTIFIERS

Site ID 453 Site Class PCA
Site Alias Silver 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 374330N
State Colorado Longitude 1080824W

Quad Code Quad Name
37108-F2 Clyde Lake

County
Dolores (CO)

Watershed Code Watershed Name
14030002 Upper Dolores

SITE DESCRIPTION

Minimum Elevation	9,140.00	Feet	2,786.00	Meters
Maximum Elevation	9,680.00	Feet	2,950.00	Meters

Site Description

This site is located at the confluence of Silver Creek and Johnny Bull Creek. The site boundary is upstream of where Johnny Bull Creek drains into the West Dolores River. Both creeks descend from steep mountain flanks. The geology is described as follows; Triassic period Dolores Formation (red siltstone, shale, sandstone, and limestone-pellet conglomerate); and Permian period Cutler Formation (arkosic sandstone, siltstone, and conglomerate) (Tweto 1979). Water in Silver Creek is turbid (orange) and tan sediments were observed on the shore. Severe erosion on stream banks is occurring. Several dead trees were observed that have toppled over, likely a result of severe bank destabilization and subsequent lowering of the water table. This impact was previously documented by CNHP ecologists in 1993. An historic mining prospect upstream is likely affecting water quality and sediment loading due to leaching. There is a jeep trail adjacent to the stream channel that is apparently accessed by private property owners downstream, but there is no public access to the road. The jeep trail is not passable in the upper reaches of the site. Colorado blue spruce (*Picea pungens*) dominates the tree layer in the riparian area with a sparse canopy cover of white fir (*Abies concolor*). Many of the Colorado blue spruce are visibly suffering (e.g., leaf mortality (red needles)), likely from spruce bud worm (*Choristoneura occidentalis*) infestation (Leatherman et al. 1999). Thinleaf alder (*Alnus incana*) dominates the shrub layer in dense patches stabilizing stream banks. Associated shrubs in the riparian area include twinberry honeysuckle (*Lonicera involucrata*), red-osier dogwood (*Cornus sericea*), and prickly currant (*Ribes lacustre*). The sparse herbaceous understory is interspersed with scoured bare soils or bedrock. Forbs account for most of the understory and include threepetal bedstraw (*Galium trifidum*), Fendler's meadow rue (*Thalictrum fendleri*), bluntseed sweetroot (*Osmorhiza depauperata*), chiming bells (*Mertensia* sp.) and others. Several thick patches of field horsetail (*Equisetum arvense*) or scouringrush horsetail (*Hippochaete hyemalis* subsp. *affinis*) occur on the floodplain. Exotic plant cover is low, however, there is a sparse canopy cover of common dandelion (*Taraxacum officinale*) in the lower part of the site. Uplands surrounding the site are dominated by spruce-fir (*Picea pungens*-*Abies lasiocarpa*) forests interspersed with quaking aspen (*Populus tremuloides*) woodlands and Thurber's fescue (*Festuca thurberi*) grasslands. Heavy grazing by cattle occurs on private land adjacent to the site. Grazing impacts are moderate within the site. Soils are derived from alluvium and vary with geomorphic position. Soils sampled have a shallow mineral horizon and transported fine sediments over coarse alluvium.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

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Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 11/17/2004

Designer March, M.A.

Boundary Justification

The boundary encompasses the element occurrences and the immediate adjacent area to buffer hydrologic processes necessary to the viability of the elements. The boundaries also provide a small buffer from nearby trails, roads, grazing allotments and campsites where surface runoff may contribute excess nutrients, sediment and weed invasion. It should be noted that the hydrologic processes necessary to the element are not fully contained by the site boundaries.

Primary Area 236.55 Acres 95.73 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

The site supports a fair (C-ranked) occurrence of the globally vulnerable (G3/S3) riparian plant community, Colorado blue spruce/thinleaf alder (*Picea pungens*/*Alnus incana*), and a fair (C-ranked) occurrence of the globally vulnerable (G3/S3) riparian shrubland, thinleaf alder (*Alnus incana*)/mesic forb.

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</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>
24518	<i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	Yes
24645	<i>Alnus incana</i> / Mesic Forbs Shrubland	Thinleaf Alder/Mesic Forb Riparian Shrubland	G3	S3	Yes

REFERENCES

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<u>Reference ID</u>	<u>Full Citation</u>
192763	Fellin, David G. and Jerald E. Dewey, Western Spruce Budworm. USDA Forest Service, Forest insect and Disease Leaflet 53, 1982.
169844	Kittel, G., N. Lederer, M. Condron, and S. Hamer. 1991. Riparian field survey of San Miguel and Dolores River Basins.
192758	Leatherman, D.A., Colorado State Forest Service entomologist; J.W. Brewer, Colorado State University former professor, zoology and entomology; and R.E. Stevens, former Rocky Mountain Forest and Range Experiment Station entomologist. 2/99. Reviewed 1/05. Western Spruce Budworms, No. 5.543. CSU Cooperative Extension website. (http://www.ext.colostate.edu/pubs/insect/05543.html).
192742	March, M.A. 2005. Final Report: Natural Heritage Wetland Inventory of Dolores County. Colorado Natural Heritage Program, Fort Collins, CO.
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

No Data

VERSION

Version Date 11/17/2004

Version Author March, M.A.

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