

Level 4 Potential Conservation Area (PCA) Report

Name East Fork of the Williams Fork

Site Code S.USCOFO*150

IDENTIFIERS

Site ID 643 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 401443N
State Colorado Longitude 1071720W

<u>Quad Code</u>	<u>Quad Name</u>
40107-B2	Dunckley Pass
40107-C3	Hayden Gulch
40107-B3	Pagoda Peak

County

Rio Blanco (CO)
Routt (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14050001	Upper Yampa

SITE DESCRIPTION

Minimum Elevation	6,900.00	Feet	2,103.00	Meters
Maximum Elevation	7,900.00	Feet	2,408.00	Meters

Site Description

The site consists of approximately 11 river miles of the East Fork Williams Fork River, which migrates across a narrow to broad montane valley bottom, ranging in elevation from approximately 6,900 to 7,900 feet. The headwaters of the East Fork lie within the Flat Tops Wilderness Area. The East Fork flows into the Williams Fork River, a major tributary of the Yampa River. The geology consists primarily of the Cretaceous Mancos Shale Formation, with western side slopes consisting of landslide deposits from the Holocene and Pleistocene (Tweto 1981). The river channel is 10-15 meters wide and cobble-lined. The site harbors one of the largest known high-quality examples of a montane deciduous riparian forest, narrowleaf cottonwood - (Colorado blue spruce) / thinleaf alder (*Populus angustifolia* (*Picea pungens*) / *Alnus incana*). The surrounding uplands consist of montane shrublands dominated by Gambel's oak (*Quercus gambelli*), sagebrush (*Artemisia tridentata*), serviceberry (*Amelanchier alnifolia*), and aspen forests (*Populus tremuloides*). Mixed conifers occupy the steep side slopes of the upstream end of the site. Irrigated hay meadows and pastures are concentrated on the upstream and downstream ends of the site.

Key Environmental Factors

Deciduous riparian forests of the Upper Colorado Basin rely heavily on natural hydrology and geomorphology. A significant process supporting regeneration of these communities is the migration of river channels caused by spring runoff of snowmelt. Lateral meandering of stream channels cause the stream to cut into older riparian stands along the outer edge of a meander and create depositional surfaces for development of younger cottonwood stands along the inner margin of meanders. Young cottonwoods and willows become established on point bars in the absence of large floods in subsequent years. Over several years, terraces are formed by sediment trapping. Frequent flooding within this zone discourages establishment of vegetation. These cottonwood stands eventually grow into mature riparian forests, assuming the absence of excessive grazing and agricultural conversion. Conifers, such as Colorado blue spruce, become established on higher terraces.

Climate Description

Semi-arid to arid shrublands.

Land Use History

No Data

Cultural Features

No Data

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SITE DESIGN

Site Map Y - Yes

Mapped Date 03/21/2008

Designer Culver, D.R.

Boundary Justification

The primary boundary encompasses 3.6 river miles of the best examples of the high-quality occurrences of the riparian plant communities. A fenceline at the upstream end delineates the primary boundary, as agricultural use is more intense. The gravel bars in the river channel within the primary boundary support good to excellent examples of cottonwood and willow regeneration. The secondary boundary includes an additional 5.4 river miles on the downstream end, and 2 river miles on the upstream end. While this area supports lower quality occurrences of the targeted plant associations, it contains important buffer to the high quality occurrences. Additionally, the riparian vegetation has high potential to be restored with proper management. County Road 55 forms a practical, though unnatural, eastern boundary, providing easy access to the site. The western boundary follows the contour lines between the uplands and the floodplain and includes a buffer zone for the riparian communities. A tertiary boundary is proposed that encompasses the immediate watershed, expanding the east and west boundaries to the top of the watershed's ridgeline. While we are not proposing fee title acquisition of lands within this boundary, we should monitor all activities within this boundary that may impact the site.

Primary Area 1,099.19 Acres

444.83 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

This site supports a fair (C-ranked) occurrence of a globally vulnerable (G3/S3) continuous stretch of the narrowleaf cottonwood (Colorado blue spruce) / thinleaf alder (*Populus angustifolia* (*Picea pungens*) / *Alnus incana*) riparian forest. This site is one of several identified core sites in the Colorado Program's Upper Colorado River Basin Bioserve and is the best known example of a montane deciduous riparian forest system within the Upper Colorado River Basin. Deciduous riparian forests are one of the most threatened systems within the basin. The occurrence along the East Fork is in fair condition with a well developed shrub layer and a low percentage of exotic species.

Other Values Rank V2 - High values

Other Values Comments

The East Fork of the Williams Fork is primarily a free-flowing tributary (there are several small dams on tributaries) to Williams Fork, a major tributary of the Yampa River. The riparian vegetation provides good habitat to wildlife species, such as the Great Blue Heron (*Adea herodias*), beaver (*Castor canadensis*), mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus elaphus*), and red fox (*Vulpes vulpes*), etc. This section of the river is surrounded by lands managed by the Routt National Forest, thus preservation would add to existing undeveloped land. The site is highly scenic, with views of the Flat Tops in the distance. The upper watershed of the East Fork of the Williams Fork lies in the Flat Tops Wilderness Area.

LAND MANAGEMENT ISSUES

Land Use Comments

Several homes and a few fishing ponds are interspersed within the proposed boundary. A campground with some trash and signs of trampling is located where a private access road crosses the river. County Road 55 on the eastern boundary of the site was recently improved with gravel. Several irrigated hay meadows exist along the river. This site is currently grazed by sheep, cattle, and horses. Most of the vegetation within the site is in good condition, although there is some impact from cattle grazing, particularly at the upstream end. Sheep tend not to congregate in bottomlands, but a sheep herders camp lies along the river. Sheep graze the surrounding high country and sites within the proposed preserve are used as sheep landing areas. There are many signs of current beaver activity along much of the East Fork of the Williams Fork River.

Natural Hazard Comments

No Data

Exotics Comments

There is a low percentage of exotic species, concentrated along dirt roadsides and hay meadows. Exotics include Canada thistle (*Cirsium arvense*), dandelion (*Taraxacum officinale*), yellow sweet clover (*Melilotus officinale*), smooth brome (*Bromus inermis*), orchard grass (*Dactylis glomerata*), Timothy (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), and white top (*Cardaria* spp.)

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Offsite

Lands to the east, west, and south of the proposed preserve are managed by Routt National Forest. The headwaters of the East Fork lie within the Flat Tops Wilderness Area. The current management of the immediately adjacent USFS lands appears to be compatible with the protection of this portion of the river. Much of the area west of the site is in the Pagoda Roadless Area, managed (3A) for semi-primitive non-motorized recreation. There has not been much timber harvest, as the soils are very unstable, making an environmentally sound timber road very costly. However, an area near Vaughn Lake (ca. 5 road miles south of the upstream boundary) is designated timber emphasis (7c,d,e), and has potential to be logged (T2N R88W, parts of Sections 9, 10, 14, 15, 16, 17, 19, 20, 21, 22, 23, 27, 28, 29). The USFS lands due east of the site are managed for wildlife habitat management emphasis.

Information Needs

We need to gather information on past and present grazing use of the site. Understanding the interactions between groundwater, flood flows, and riparian plant communities is a critical information need. The affects of close downstream impoundments on river and ground water hydrology should be determined before dam construction. Also an investigation of the water rights and current status of the dam proposal by Robert Wigington (Western Regional Water Attorney for The Nature Conservancy) is needed. The Colorado Dept. of Health has been contacted regarding water quality issues. Investigation is needed on the water use and rights of the minor reservoirs. The counties responsible for maintaining the road should be contacted and made aware of the high-quality occurrences of the riparian plant associations along Routt Co. Rd. 55. Future road improvements such as road widening should be closely monitored for impacts. A breeding bird survey should be conducted. Further documentation is needed on the wildlife use of this area. Community characterization abstracts are needed for the riparian plant communities.

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>			
24823	<i>Populus angustifolia</i> - <i>Picea pungens</i> / <i>Alnus incana</i> Woodland	Montane Riparian Forests	G3	S3	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
168083	Culver, D.R. and J. Sanderson. 1996. Final Report: A Natural Heritage Assessment of Wetlands and Riparian Areas in Routt County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
161556	Tweto, O. 1981. Geologic Map of the Craig 1 degree x 2 degree Quadrangle, Northwestern Colorado 1:250,000. USGS Misc. Investigations Series.
195079	Wigington, R. ND. Western Regional Water Attorney for TNC. Personal Communication to CNHP.

ADDITIONAL TOPICS

Additional Topics

Original site design by Kittel, G.M. and B.E. Neely 1997-04-08.

VERSION

Version Date	04/08/1997
Version Author	Kittel, G.M. and B.E. Neely

Disclaimer

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