

Level 4 Potential Conservation Area (PCA) Report

Name West Antelope Creek

Site Code S.USCOHP*23638

IDENTIFIERS

Site ID 1679 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 383714N
State Colorado Longitude 1070235W

<u>Quad Code</u>	<u>Quad Name</u>
38107-F1	Squirrel Creek
38107-E1	McIntosh Mountain
38106-E8	Gunnison

County

Gunnison (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14020002	Upper Gunnison

SITE DESCRIPTION

Minimum Elevation	8,000.00	Feet	2,438.00	Meters
Maximum Elevation	10,800.00	Feet	3,292.00	Meters

Site Description

West Antelope Creek flows through a U-shaped valley between rolling hills of sagebrush uplands in the lower elevations and grading into spruce forest at the higher elevations. At the middle elevations, the creek supports a riparian shrubland of alder and mixed willow species (*Alnus incana* ssp. *tenuifolia*/mixed *Salix*). Willows include Bebb (*Salix bebbiana*), Geyer's (*S. geyeriana*), mountain (*S. monticola*), Drummond's (*S. drummondiana*), and whiplash (*S. lasiantha* ssp. *caudata*). In some areas, aspen (*Populus tremuloides*) from the upper slopes continue down into the riparian area and are the dominant overstory. The understory is primarily native grasses and sedges with non-native pasture grasses abundant in some areas. Much of the creek was dry during the 2002 season due to extended drought conditions but minimal beaver activity had created a few shallow ponds. Some channel entrenchment has occurred, especially in the downstream reach. The only known historic remnant (not reintroduced) population of Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) in the Upper Gunnison River Basin (upstream of Blue Mesa Reservoir) occurs in West Antelope Creek (pers. comm. D. Brauch, CDOW). Testing of the fish population in 1997 indicates that they are genetically pure (pers. comm. D. Brauch, CDOW). In 1997, Colorado Division of Wildlife estimated that the cutthroat trout occupied at least six miles of the creek (CDOW, 1991) with no other fish species present. However, due to drought conditions in 2002, most of the creek was dry and fish die-offs occurred. About 50 fish were collected by CDOW in late summer 2002 in an attempt to preserve the population off-site. CDOW documented survival of some of the fish in the creek following the summer's drought, but the drought resulted in the death of the great majority of the cutthroat population (pers. comm. D. Brauch, CDOW). The potential for long-term survival of this population is not known. Historically, the cutthroat trout could reestablish themselves from the Gunnison River following drought years. A wide variety of land management practices have been suggested to affect Colorado River cutthroat trout including overgrazing (Binns 1977) and water depletion and diversion (Jespersen 1981). These practices may have served to isolate this population of trout and protect them from invasion by non-native salmonids (CRCT Task Force 2001). These practices also fragment streams, restrict movement between formerly connected populations, and create small, isolated populations that may be more likely to go extinct (CRCT Task Force 2001). The lower elevation portion of the site is within the overall habitat range for the globally critically imperiled Gunnison Sage Grouse (*Centrocercus minimus*) and within two miles of a documented lek site. Wet meadows and riparian areas are important habitat for the Gunnison Sage Grouse as they use these areas for brood rearing (Colorado Sage Grouse Working Group 1997).

Key Environmental Factors

No Data

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Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 12/20/2002

Designer Doyle, G.A.

Boundary Justification

The boundary includes the entire watershed of West Antelope Creek except for the most downstream portion. The boundary represents an estimate of the area needed to maintain local hydrological conditions. Any activities within the watershed such as water diversions, impoundments, improper livestock grazing, development, and mining could potentially be detrimental to the hydrology of riparian area. This boundary indicates the minimum area that should be considered for any conservation management plan.

Primary Area 2,143.03 Acres

867.26 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports a good (B-ranked) example of the globally vulnerable (G3/S3) alder / mixed willow (*Alnus incana* - *Salix (monticola, lucida, ligulifolia)*) riparian shrubland. This association is widespread in Colorado and is expected to occur in other Rocky Mountain states. This association is a more general type than other alder types. It has a high diversity of associated shrub species, unlike the nearly pure stands of alder found in other alder-dominated plant associations. The abundance of other shrubs may represent a transition in the physical setting, for example, from a broad floodplain dominated by willows to a narrow valley bottom and channel lined with only alder. This site also supports the only known population of Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in the Upper Gunnison Basin. The globally vulnerable (G4T3/S3) Colorado River cutthroat trout is a sensitive species, which is native to the Colorado River basin, and has recently been in decline. Remnant populations still remain in Colorado, Wyoming, and Utah.

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

No Data

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>
24912	<i>Alnus incana</i> - <i>Salix (monticola, lucida, ligulifolia)</i> Shrubland	Thinlineaf Alder-Mixed Willow Species	G3	S3	Yes
21796	<i>Oncorhynchus clarkii pleuriticus</i>	Colorado River Cutthroat Trout	G4T3	S3	Yes

REFERENCES

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Reference ID

Full Citation

164036

Doyle, G.A. 2002. Colorado Natural Heritage Program Field Survey of Critical Wetlands in Gunnison County.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 12/20/2002

Version Author Doyle, G.A.

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