

Level 4 Potential Conservation Area (PCA) Report

Name Apishapa River and Tributaries

Site Code S.USCOHP*28116

IDENTIFIERS

Site ID 2694 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 373454N
State Colorado Longitude 1041525W

Quad Code Quad Name

37104-D4	Vega Corral
37104-E3	Hidden Valley Ranch
37104-F3	Jones Lake Spring
37104-D3	Seven Lakes Reservoir
37104-F2	Sun Valley Ranch
37104-E2	Bates Lake

County

Las Animas (CO)

Watershed Code Watershed Name

11020010	Purgatoire
11020007	Apishapa

SITE DESCRIPTION

Minimum Elevation	4,880.00	Feet	1,487.42	Meters
Maximum Elevation	5,920.00	Feet	1,804.42	Meters

Site Description

The Apishapa River and Tributaries site includes the main channel of the Apishapa and its larger tributaries within the center reach of the river. Parts of the northern portion of the site include some of the extensive canyon system within the Apishapa State Wildlife Area and the views into the network of red sandstone canyons of the wildlife area are often magnificent. Rising from the canyon floor to the top of the surrounding plateaus are river terraces of various size and steep rocky canyon walls and cliff faces. Within this setting are a series of mesas and inter-fluvial plateaus ranging from small to large. Numerous narrow side canyons dissect the mesas and plateaus and extend out away from the main canyons. While the main valley of the Apishapa River has long seen human habitation, and now contains a number of non-native species, the deep side canyons are more inaccessible and typically contain communities of mostly native vegetation. The bottoms of the smaller side canyons often consist of exposed sandstone bedrock that support seasonally flooded pools that house populations of the plains leopard frog. Surrounding the pools are open juniper woodlands with an abundance of bedrock and bare ground, cactus, yucca, and various native grasses. In the southern portion of the site the Apishapa River flows through a landscape of less relief that is dominated by shortgrass prairie. In this portion of the site some of the flats above the Apishapa contain large areas of greasewood and shadscale shrubland. Here the main channel of the Apishapa and its tributaries are at the same elevation as the surrounding landscape and yet the drainage still supports seasonally flooded pools and spring fed ponds that also house populations of the plains leopard frog.

Key Environmental Factors

The main environmental factor sustaining the plains leopard frog is the natural flows of surface and ground waters. These flows are fairly intact, although there are some developed cattle ponds within the area and there are, scattered throughout the area, cattle tanks that are pumping ground water for livestock use. However, the pools and springs of the Apishapa River and its canyons are still receiving substantial amounts of water, but during periods of drought water use might influence viability of the plains leopards frogs at this site.

Climate Description

The climate is semi-arid with precipitation averaging about 14 inches per year. About half of the yearly precipitation is received during the months of May through August. Winter average minimum temperatures are in the range of 16-20 °F, and summer average maximum temperatures in July and August are near or above

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90 °F (HPRCC 2008).

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Land Use History

Much of the following information regarding land use history is from Friedman 1985. The area of this site is believed to have been inhabited by people for as long as 5,000 years, and many native tribes lived in or visited the area. The first people of European descent to enter the area were with the Coronado expedition of 1540. Although considered part of Spain, the area remained sparsely populated by Euro-Americans until about 1821 when Mexico received independence from Spain and trade began between Santa Fe and Missouri. Soon thereafter, Spanish émigrés began to colonize the larger canyons. They built small settlements and ranches and raised herds of goats and sheep. Cattle and sheep ranching dominated the area until around 1909 when homesteaders engaged in dryland farming fenced the land. In the 1920s and 1930s, the area was affected by the Dust Bowl and many abandoned their homes, leaving the area to sheep and cattle ranchers. While sheep grazing was mostly discontinued in the 1950s, cattle grazing continued on most private lands. The creation of the Department of the Army's Pinon Canyon Maneuver Site in the 1980s removed grazing from that site, however, cattle grazing continues as the primary land use on the private lands of this site.

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial Mapped Date 01/26/2010
Designer Sovell, J.R.

Boundary Justification

The site contains the middle reach of the Apishapa River, its major tributaries, and their associated canyons. It uses a buffer of 300m on each side of the canyon to ensure inclusion of the river channel, the floodplain, and the walls and bottoms of the canyons. The buffer is intended to protect the physical structure of the floodplain and canyons, as well as their associated surface and groundwater flows that the population of plains leopard frogs are dependent upon. Protection of the river and its flows is also necessary for sustaining the frog population.

Primary Area 13,398.06 Acres 5,422.02 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B5: General Biodiversity Interest

Biodiversity Significance Comments

The site supports two extant occurrences of the state rare (G5/S3) plains leopard frog (*Rana blairi*).

Other Values Rank V2 - High values

Other Values Comments

There are archeological sites within the boundary.

LAND MANAGEMENT ISSUES

Land Use Comments

The area was historically grazed, especially by cattle, but some sheep grazing also occurred. Some of the side canyons are inaccessible to cattle grazing and disturbance, as seen in the quality of the natural communities in these areas.

Natural Hazard Comments

The canyon system of the Apishapa State Wildlife Area include steep slopes and cliffs and safety should be considered when hiking within these areas.

Exotics Comments

The introduction of exotic animals (e.g., fishes, bullfrogs) should be prohibited to prevent unnatural levels of predation and competition. Management also needs to consider the expansion of exotic plants, especially cheatgrass (*Bromus tectorum*) and tamarisk (*Tamarix ramosissima*), which occur in the floodplain, valley bottoms, and along the stream banks. Short duration, intensive grazing in the floodplain and canyon bottoms may be used as a management tool for control of cheatgrass and other weedy species (Johnston and Reed 1991). The existence of tamarisk in the riparian area may be of concern. Tamarisk's ability to outcompete native vegetation and its high rate of proliferation make it difficult to manage, and it will present long-term challenges to land managers (Johnston and Reed 1991).

Offsite

No Data

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Information Needs

There is a need to understand the historical hydrological regime. The long-term effects of water regulation and diversion directly pertain to the viability of the plains leopard frogs.

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>
21637	<i>Rana blairi</i>	Plains Leopard Frog	G5	S3	Yes
21637	<i>Rana blairi</i>	Plains Leopard Frog	G5	S3	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
195120	Friedman, Paul D. 1985. Final Report of History and Oral History Studies of the Fort Carson Pinon Canyon Maneuver Area, Las Animas, Colorado. USDI. National Park Service, Interagency Archaeological Services Branch, Rocky Mountain Regional Office, Denver, CO.
195121	HPRCC. 2008. High Plains Regional Climate Center Web Page. Based on data from automated weather stations operated by Colorado for southeastern Colorado area. High Plains Regional Climate Center Web Page: < http://www.hprcc.unl.edu >
166461	Johnston, Barry C. and Floyd Reed. 1991. Ecological inventory of Picketwire Canyonlands. USDA Forest Service, Comanche National Grassland. 22pp.
198519	Rondeau, R.J., J.R. Sovell, J.E. Stevens, D. Clark and L. Grunau. 2010. Final Report: Southeast Colorado Survey of Critical Biological Resources 2009. Addendum to the 2007 Survey. Colorado Natural Heritage Program, Fort Collins, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	01/26/2010
Version Author	Sovell, J.R.

Disclaimer

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