

Level 4 Potential Conservation Area (PCA) Report

Name Baca Grande and Reserve

Site Code S.USCOHP*26412

IDENTIFIERS

Site ID 2361 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 375549N
State Colorado Longitude 1054413W

Quad Code Quad Name

37105-H6 Crestone
37105-H7 Sheds Camp

County

Saguache (CO)

Watershed Code Watershed Name

13010003 San Luis

SITE DESCRIPTION

Minimum Elevation	7,054.00 Feet	2,150.06 Meters
Maximum Elevation	7,875.00 Feet	2,400.30 Meters

Site Description

The site lies on the floor of the San Luis Valley and includes the riparian areas associated with Willow, Spanish, and Cottonwood creeks and their floodplains. It lies at distances of one to over six miles from the base of the Sangre de Cristo Mountains. The soils are defined by the sandsheet that underlies the eastern portion of the San Luis Valley which formed from the prevailing southwest winds that blow across the valley. Consequently, soils include sands, sandy loam, and loamy sand. There are old inactive and fresh active diggings of a subspecies of the northern pocket gopher (*Thomomys talpoides agrestis*) sparsely scattered throughout. The area is a complex mix of vegetation types that includes sedge meadows of Baltic rush (*Juncus balticus*) and common spikerush (*Eleocharis palustris*) with other sedges; greasewood flats (*Sarcobatus vermiculatus*); herbaceous grassland dominated by blue grama (*Chondrosium gracile/Bouteloua gracilis*), but which also includes needle-and-thread grass (*Hesperostipa comata*), threeawn (*Aristida purpurea*) and Indian ricegrass (*Achnatherum hymenoides*); cottonwood galleries (*Populus angustifolia*); and shrub/grass rangeland with the aforementioned grasses interspersed between sparsely scattered rabbitbrush (*Ericameria nauseosa*). In general, the site has a moderate amount of weeds, and there are scattered patches dominated by smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*). The noxious weeds whitetop (*Cardaria* sp.) and Canada thistle (*Cirsium arvense*) are scattered, at low numbers, within parts of the site. Other animals observed included pronghorn (*Antilocapra americana*), Red-winged Blackbird (*Agelaius phoeniceus*), Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*), Wilson's Phalarope (*Phalaropus tricolor*), Green-winged Teal (*Anas crecca*), Wilson's Snipe (*Gallinago delicata*), Mountain Plover (*Charadrius montanus*), hoary bat (*Lasiurus cinereus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), western small-footed bat (*Myotis ciliolabrum*), chorus frogs (*Pseudacris triseriata*), tiger salamanders (*Ambystoma tigrinum*), and an unidentified toad.

Key Environmental Factors

The sandy loam to loamy sand soils, forage availability represented by adequate cover of vegetation, and seasonal inundation of the floodplain along the riparian corridors are ecological components important to viability of the pocket gopher population.

Climate Description

Annual precipitation ranges from 6-20 inches (15-50 cm). Most of the annual precipitation (60 to 70 percent) falls during the growing season from May through September. Mean temperatures during July (the hottest month) are highs of 80° F (27° C) and lows of 50° F (10° C), while January (the coldest month), experiences mean highs of 35° F (2° C) and lows of 10° F (-12° C).

Land Use History

The property was under the control of numerous owners from 1860 to 1971, a period in which it was a cattle

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ranch with a championship cattle rearing operation. In 1971 the Baca Grande was established as a resort/retirement development, but it has grown slowly. The last few years have seen an increase in development on the Baca as its remote mountain location has attracted a diverse community of peoples including retirees, second home buyers, and younger people attracted to the spiritual and environmental education organizations that have settled in the area. This diverse and unusual demographic endeavor to create a sustainable development that is environmentally friendly with principles of land stewardship that will identify and preserve priority natural resources. Those portions of the site to the west of the Baca Grande and within the Baca NWR were rangeland with active livestock operations until formation of the Baca NWR in the early 2000s.

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 05/11/2006

Designer Sovell, J.R.

Boundary Justification

These boundaries were developed primarily using distribution information from field survey results identifying both active diggings, from some of these active sites specimens of *T. t. agrestis* were collected, and inactive diggings. The geographic distribution of pocket gophers in Colorado indicates that only *T. t. agrestis* occur within the area of this site. The boundary includes habitat suitable for the northern pocket gopher as dictated by shallow sandy loam and loamy sand soils in grassland, semidesert shrubland, and at the edge of, and within, the riparian floodplain. The boundary extends for two miles beyond the western boundary of the Baca Grande to include territory within the Baca NWR that was also surveyed. Digital ortho photoquads and digital soil maps suggests that suitable habitat for the pocket gopher may extend even further to the west of the current boundary, but ground surveys are required to determine this with certainty.

Primary Area 3,044.68 Acres

1,232.14 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

This site supports a fair (C-ranked) occurrence of a globally vulnerable subspecies (G5T3/S3), the northern pocket gopher (*Thomomys talpoides agrestis*) and a good (B-ranked) occurrence of the globally imperiled (G2G3/S2S3) slender spiderflower (*Cleome multicaulis*).

Other Values Rank V2 - High values

Other Values Comments

The boundaries follow the riparian zone, floodplains, and some upland habitats surrounding three creeks flowing from the Sangre de Cristo Mountains that cross the Baca Grande. Water of the wetlands of the Baca NWR, which is west of the Baca Grande, is supplied, in part, by these three creeks (Willow, Spanish, and Cottonwood). The health, viability, and water quality of the reserves wetlands are dependent upon the sum of activities that occur along all four creeks from their source, high in the peaks of the Sangre de Cristo Mountains, to their terminus on the reserve. Protecting the land will then benefit the wetlands in the Baca NWR.

LAND MANAGEMENT ISSUES

Land Use Comments

Areas within the Baca Grande are proposed for residential development, however, some of the parcels have been consolidated and placed under conservation easements by the Baca/Crestone Land Trust.

Natural Hazard Comments

No Data

Exotics Comments

There are scattered patches dominated by smooth brome (*Bromus inermis*) and Kentucky bluegrass (*Poa pratensis*). The noxious weeds whitetop (*Cardaria latifolia*) and Canada thistle (*Cirsium arvense*) are scattered, at low numbers, within parts of the site, especially around Lovesy Pasture, but they are probably of little consequence to the pocket gopher population.

Offsite

The areas surrounding the site outside of the Baca Grande to the south and west are protected either within the Great Sand Dunes National Park or the Baca NWR. The area to the north is ranchland with an active

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livestock operation and to the east is the Baca Grande development.

Information Needs

Survey work to the west of the site is needed to identify the current distribution of *T. t. agrestis* in the area.

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>
23456	<i>Thomomys talpoides agrestis</i>	Northern Pocket Gopher Subsp	G5T3	S3	No
18080	<i>Cleome multicaulis</i>	slender spiderflower	G2G3	S2S3	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
194342	Sovell, J.R. 2006. Final Report: Baca Grande Biological Assessment. Colorado Natural Heritage Program, Fort Collins, CO.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	05/11/2006
Version Author	Sovell, J.R.

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