

Level 4 Potential Conservation Area (PCA) Report

Name Bohart Playas

Site Code S.USCOHP*21999

IDENTIFIERS

Site ID 1446 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 384253N
 State Colorado Longitude 1042028W

Quad Code Quad Name
 38104-F3 Hanover NE

County
 El Paso (CO)

Watershed Code Watershed Name
 11020004 Chico

SITE DESCRIPTION

Minimum Elevation	5,780.00 Feet	1,762.00 Meters
Maximum Elevation	5,820.00 Feet	1,774.00 Meters

Site Description

A few scattered playas occur within the sandsage prairie on the Bohart Ranch in southeastern El Paso County. The Bohart Playas site contains two small (0.5 to 3 acre)(0.2-1.2 ha) playas. The small, flat-bottomed depressions occur between rolling hills. No surface channels drain the area and rainfall and runoff collects in these basins forming ephemeral wetlands. These playas are about five miles west of the greater concentration of playas found in the vicinity of Truckton (Buffalograss Playas site). The two playas on the Bohart Ranch are presented as a site because of their excellent landscape context - they occur within 48,000 acres (19,425 ha) of State Land Board property leased to The Nature Conservancy. These basins remain dry throughout most of the year and collect water only after heavy rainfall. In southeastern El Paso County, the heavy rains generally fall in the late summer and in many cases a series of storms are required in order for the playas to retain water (Weathers 2000). Runoff collecting in a dry playa infiltrates cracks in the clay bottom of the playa and swells the clay effectively sealing the playa bottom (Zartman et al. 1994). After the clay has been wetted, subsequent storms can result in playa filling. The playas may hold water for periods ranging from days to weeks, depending on the local topography and intensity of the rainstorm (Weathers 2000). In dry years the playas may remain dry year round. The upland plant community around the playas is sandsage prairie (*Artemisia filifolia* / *Andropogon hallii*). Interestingly, even though the upland plant community is different in the playas to the east (shortgrass prairie versus sandsage prairie), the vegetation in the playas is the same. The dominant species in the playas is the perennial warm-season grass buffalograss (*Buchloe dactyloides*). Growing with the buffalograss are the perennial forbs plains ambrosia (*Ambrosia linearis*) and short-ray prairie coneflower (*Ratibida tagetes*). The vegetation in the playas occurs in bands where the outermost rim supports the highest density of plains ambrosia and coneflower. Other plants growing in the playas include a dryland sedge (*Carex eleocharis* ssp. *stenophylla*), blue grama (*Bouteloua gracilis*), purple three-awn (*Aristida purpurea*), prostrate vervain (*Verbena bracteata*), frog-fruit (*Phyla cuneifolia*), and Russian thistle (*Salsola iberica*). Buffalograss submerged during the growing season has been known to withstand more than five weeks of inundation (Porterfield 1945). Plains ambrosia is a shortgrass prairie species that is endemic to an area of about 100 miles by 50 miles primarily in El Paso and Lincoln counties. It requires a little more moisture than most upland plants and as such, the playas appear to be their native habitat as the clay soils of the playas retain moisture longer than the upland soils. Roadsides also appear to provide the extra moisture required by the plains ambrosia and, as such, plains ambrosia is very prevalent on the sides of many unpaved roads in the area. The Bohart playas may be the westernmost playa-occurrence of plains ambrosia. The playas occur within a mosaic of sandsage prairie providing added heterogeneity to the landscape. Heterogeneity is important biologically to provide for the needs of a wide range of species (Knopf 1996a, Hoagland and Collins 1997). Playas are often considered deflated, or wind-eroded, depressions though theories on playa formation are controversial (Osterkamp and Wood 1987). Additionally, these playas are consistent with descriptions of buffalo wallows. Wallows are formed by bison pawing the ground, creating patches of bare ground in which to dust bathe (Uno 1989), or perhaps mud bathe to protect against biting insects or aid in shedding their heavy

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fur (Hornaday 1887, F. Knopf, pers. comm., USGS). Active wallows range from 10 to 15 feet (3 to 5 meters) in diameter and merging of adjacent wallows can create wallows larger than about 0.5 acre (0.2 ha) (Uno, 1989, Knopf, 1996a). Bison were extirpated from the area by 1875 (Hornaday 1889) but evidence of their wallows can remain evident on the landscape for more than a hundred years (Knopf 1996a). Perennial grasses invade wallows not used by bison (Uno 1989). It is possible that the playas result from of a combination of factors including deflation and buffalo wallowing.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes Mapped Date 06/15/2001

Designer Doyle, G.A.

Boundary Justification

The site boundary for Bohart Playas includes two playas and the surrounding sandsage prairie uplands.

Primary Area 240.45 Acres 97.31 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

This site contains an excellent (A-ranked) occurrence of the globally vulnerable (G3/S3) plains ambrosia (*Ambrosia linearis*) and a good (B-ranked) example of a globally vulnerable (G3/S3) buffalograss playa grassland (*Buchloe dactyloides* - *Ratibida tagetes* - *Ambrosia linearis*). The landscape context of the playas is excellent. Plains ambrosia, though locally abundant, has a very limited global range (about 50 miles by 100 miles) and almost all of the habitat is privately owned.

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

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24524	<i>Buchloe dactyloides</i> - <i>Ratibida tagetes</i> - <i>Ambrosia linearis</i> Herbaceous Vegetation	Buffalograss Playa	G3	S3	Yes
23164	<i>Ambrosia linearis</i>	plains ragweed	G3	S3	Yes
24524	<i>Buchloe dactyloides</i> - <i>Ratibida tagetes</i> - <i>Ambrosia linearis</i> Herbaceous Vegetation	Buffalograss Playa	G3	S3	No

REFERENCES

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Reference ID

Full Citation

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No Data

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 06/15/2001

Version Author Doyle, G.A.

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