

Level 4 Potential Conservation Area (PCA) Report

Name Schriever Playas

Site Code S.USCOHP*21998

IDENTIFIERS

Site ID 975 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 384846N
State Colorado Longitude 1043238W

Quad Code Quad Name
38104-G5 Corral Bluffs

County
El Paso (CO)

Watershed Code Watershed Name
11020004 Chico

SITE DESCRIPTION

Minimum Elevation	6,320.00	Feet	1,926.00	Meters
Maximum Elevation	6,380.00	Feet	1,945.00	Meters

Site Description

The landscape consists of scattered playas within the rolling hills of shortgrass prairie in central El Paso County. Schriever Playas site contains four of these small, periodically inundated, closed basins. The playas support stands of western wheatgrass with mixed species of spikerush (*Pascopyrum smithii* - *Eleocharis* spp.), a plant community previously documented in only a few playas in Wyoming (G. Jones, pers. comm., Wyoming NHP). The vegetation in the playas occurs in two zones, resulting from differences in the period of inundation. The lowest part of the stand, which is inundated most often and for the longest time, is dominated by spikerush (*Eleocharis acicularis* and *E. palustris*) and bare ground. The higher part of the stand is dominated by western wheatgrass (*Pascopyrum smithii*), a cool-season perennial. These basins remain dry throughout most of the year and collect water only after heavy rainfall. 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 most common explanation for the origin of playas is deflation, or wind erosion, though theories on playa formation are controversial (Osterkamp and Wood 1987). These playas are also consistent with descriptions of buffalo wallows which 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 fur (F. Knopf, pers. comm., USGS). Active wallows range from 3 to 5 meters in diameter and merging of adjacent wallows can create wallows larger than about 0.5 acre (1,400 square meters) (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 a combination of factors including deflation and buffalo wallowing. The land is owned and managed by Schriever Air Force Base, State Land Board, or private owners. The area has historically been used for cattle grazing. Limited cattle grazing probably continues, but housing developments are increasingly encroaching from the west.

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

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Cultural Features

No Data

SITE DESIGN

Site Map Y - Yes

Mapped Date 06/15/2001

Designer Doyle, G.A.

Boundary Justification

The site boundary includes four playas and most of the surrounding lands acting as the catchment basin for the playas. The catchment basin boundary was roughly delineated using the 1:24,000 scale USGS topographic quadrangle. Scattered playas occurring within a few miles of these playas were not surveyed and are not included within the site.

Primary Area 514.17 Acres 208.08 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

This site contains a good (B-ranked) occurrence of a globally imperiled (G2/S1) playa grassland community (*Pascopyrum smithii* - *Eleocharis* spp.).

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 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>			
24718	<i>Pascopyrum smithii</i> - <i>Eleocharis</i> spp. Herbaceous Vegetation	Playa Grassland	G1	S1	No
24718	<i>Pascopyrum smithii</i> - <i>Eleocharis</i> spp. Herbaceous Vegetation	Playa Grassland	G1	S1	Yes

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
169085	Doyle, G.A. 2000. Colorado Natural Heritage Program Field Survey of Wetland and Riparian Areas in Pueblo and El Paso Counties.
162855	Doyle, G.A., J. Gionfriddo, D. Anderson, and D. Culver. 2000. Final Report: Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
165097	Uno, G. 1989. Dynamics of plants in buffalo wallows: Ephemeral pools in the Great Plains. Pages 431-443 in The Evolutionary Ecology of Plants (J. Bock and Y. Linhart, eds.).
193320	Weathers, Kristin. 2000. Thesis: Prairie Playas: Attributes and historic flooding patterns in southeastern Colorado. Department of Rangeland Ecosystem Science, Colorado State University, Fort Collins, CO.

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ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 06/15/2001

Version Author Doyle, G.A.

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