

Level 4 Potential Conservation Area (PCA) Report

Name Mishak Lakes

Site Code S.USCOFO*142

IDENTIFIERS

Site ID 1141 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>
2043	S.USCOHP*16597	San Luis Valley Playa Lake

LOCATORS

Nation United States Latitude 375442N
State Colorado Longitude 1055902W

<u>Quad Code</u>	<u>Quad Name</u>
37105-H8	Moffat South
37106-H1	Harrence Lake

County

Saguache (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
13010004	Saguache

SITE DESCRIPTION

Minimum Elevation	7,500.00 Feet	2,286.00 Meters
Maximum Elevation	7,550.00 Feet	2,301.00 Meters

Site Description

This site contains over 1,300 acres of shallow wetlands, meadows and shrublands between 7,500 and 7,550 feet (2,288-2,303 meters) in elevation in the west-central part of the Closed Basin. The Mishak Lakes basin receives seasonal runoff from Russell Creek and Werner Arroyo, two ephemeral streams. The site contains Mishak Lakes Preserve, which is owned by The Nature Conservancy, with peripheral private and Bureau of Land Management land. The lakes fill from snowmelt runoff in late spring and are usually dry by late summer. The lakes may fill again in late summer if convective precipitation is adequate. The soils in the lake basins are alkali clays with low rates of water infiltration. This allows rapid evaporation at the water surface and an accumulation of salts. The basins support a flora adapted to seasonal soil saturation and saline conditions (TNC 1993). The lakes vary in depth, salinity, and period of inundation, all of which influence local vegetation patterns. Regularly flooded basins support aquatic and shoreline emergent vegetation, with pondweeds (*Potamogeton* spp.) in standing water, and spikerush (*Eleocharis palustris*) or American three-square (*Scirpus pungens*) forming marshlands at the lake margins. This site contains some of the most extensive spikerush wetlands in the Closed Basin. At the highest elevations of these basin wetlands, stands of Baltic rush (*Juncus balticus*) or alkali cordgrass (*Spartina gracilis*) usually mark the wetland boundary, interspersed with populations of the globally imperiled slender spiderflower (*Cleome multicaulis*). Stands of this plant are concentrated near the western margin of the site, presumably where hydrologic inputs from Russell Creek are more reliable. Basins with irregular or short duration flooding contain saltgrass (*Distichlis spicata*) and/or western wheatgrass (*Pascopyrum smithii*) meadows, or barren salt flats. Basins which dry by mid-summer often support seasonal stands of salt tolerant annuals, such as goosefoot (*Chenopodium album*), which complete their life cycles after surface water evaporates and the late summer rains begin. Adjacent alkali flats and dunes are dominated by greasewood (*Sarcobatus vermiculatus*) and rabbitbrush (*Chrysothamnus* spp.) vegetation, respectively, with understories of saltgrass or alkali sacaton (*Sporobolus airoides*).

Key Environmental Factors

No Data

Climate Description

No Data

Land Use History

No Data

Cultural Features

No Data

SITE DESIGN

Site Map P - Partial Mapped Date 02/16/1998

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Designer Sarr, D.A.

Boundary Justification

This boundary is drawn to 1) protect the occurrences from direct impacts such as trampling or other surface disturbances; 2) provide suitable habitat where additional individuals of slender spiderflower can become established over time; and 3) include representation from each of the local plant communities which may support a pollinator for the rare plant species.

Primary Area 1,557.11 Acres 630.14 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

Biodiversity Significance Comments

Mishak Lakes is one of the last remaining playa systems in the San Luis Valley with a largely natural pattern of hydrologic variation. The lake system is unique in its shallow and ephemeral nature, and likely represents a wetland type which was formerly much more extensive in the San Luis Valley and the Great Plains (TNC 1993). Most of the wetlands complexes in the San Luis Valley have been modified, intensively managed for waterfowl production, or destroyed (TNC 1993). Protection of this naturally functioning shallow wetland system is an essential complement to the other wetland communities of the San Luis Valley and a valuable contribution to biodiversity protection in Colorado. This site supports a medium sized (B-ranked) population of the globally rare (G2G3/S2S3) slender spiderflower (*Cleome multicaulis*). The slender spiderflower has a fairly large global range from southern Wyoming to central Mexico. In spite of this large range, populations of this plant have decreased sharply in the last 100 years, particularly in the southwestern states. The plant is also limited to very specific microhabitats, requiring alkaline soils which remain moist throughout the growing season. The slender spiderflower also appears to do well with some form of soil disturbance, which presumably limits plant competition. These discriminating habitat requirements limit the slender spiderflower to the edges of alkaline playa lakes and wetlands. The Closed Basin of Colorado contains the most numerous, largest, and healthiest populations known in the world. The site also supports an excellent (A-ranked) occurrence of the globally secure (G5/S4) emergent wetland (*Eleocharis palustris* herbaceous vegetation).

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 <u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Global Rank</u>	<u>State Rank</u>	<u>Driving Site Rank</u>
18080	<i>Cleome multicaulis</i>	slender spiderflower	G2G3	S2S3	Yes
18783	<i>Eleocharis palustris</i> Herbaceous Vegetation	Emergent Wetland	G5	S4	No

REFERENCES

Reference ID

Full Citation

171471 Rondeau, R. J., D. Sarr, M. B. Wunder, P. M. Pineda, and G. M. Kittel. 1998. Final Report: Saguache County, Closed Basin Biological Inventory Volume 1: A Natural Heritage Assessment. Colorado Natural Heritage Program, Fort Collins, CO.

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ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 02/16/1998

Version Author Sarr, D.A.

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