

Level 4 Potential Conservation Area (PCA) Report

Name Big Gypsum Valley

Site Code S.USCOHP*21254

IDENTIFIERS

Site ID 2034 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

County

San Miguel (CO)

SITE DESCRIPTION

Minimum Elevation	5,700.00 Feet	1,737.00 Meters
Maximum Elevation	5,800.00 Feet	1,768.00 Meters

Site Description

This site is located north of Disappointment Valley and east of the Dolores River. It extends from the Dolores River Canyon on the west to the headwaters of Big Gypsum Creek east of Highway 141. The valley is one of several parallel northwest-southeast trending valleys that were formed by the collapse of ancient salt domes. It runs parallel to Dry Creek Basin on the north and Disappointment Valley on the south. The valley is the result of a large sea embayment separated from the remaining sea that covered this area in the Pennsylvanian Age. Upon evaporation of this sea, its salts became concentrated in domes overlain with sedimentary rock. Once these sedimentary rocks were breached by erosion, the domes, comprised of soluble salt and gypsum, were washed away and the flanking structures collapsed, leaving the broad valleys at Paradox, Gypsum, and Dry creeks. Gypsum outcrops of the Paradox member of the Hermosa Formation form low hills, surrounded by alluvial deposits. These outcrops are the habitat of rare lichens and a recently described plant, Gypsum Valley cat-eye (*Cryptantha gypsophila*), which are often the dominant species in these sparsely vegetated areas. Associated species include Nealley's dropseed (*Sporobolus nealleyi*), needle-and-thread grass (*Hesperostipa comata*), cheatgrass (*Bromus tectorum*), broom snakeweed (*Gutierrezia sarothrae*), spearleaf buckwheat (*Eriogonum lonchophyllum*), winterfat (*Krascheninnikovia lanata*), fourwing saltbush (*Atriplex canescens*), James' galleta (*Pleuraphis jamesii*), Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), skeleton mustard (*Schoenocrambe linifolia*), and western tansymustard (*Descurainia pinnata*). Hillsides on the south side of the valley have patches of good quality needle-and-thread grass, although these are usually small and interspersed with areas dominated by cheatgrass (*Bromus tectorum*). The bottomlands of the valley tend to be weedy, with cheatgrass, cranesbill (*Erodium cicutarium*) and tansy mustard. BLM land in the valley is currently used primarily for grazing. There are popular rock climbing areas in the canyons on the north side of the valley, and the valley provides access to the Dolores River for rafting and other recreational pursuits. Oil and gas exploration is underway and development is likely in the near future.

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 10/01/2005
 Designer Lyon, M.J.

Boundary Justification

The boundary was drawn to encompass the element occurrences for Gypsum Valley cat-eye and three lichens. It includes all areas mapped as the Paradox member of the Hermosa Formation.

Primary Area	21,358.15 Acres	8,643.37 Hectares
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SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

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Biodiversity Significance Comments

The site supports two excellent (A-ranked) and two good (B-ranked) occurrences of the globally imperiled (G2/S2) plant, Gypsum Valley cat-eye (*Cryptantha gypsophila*). It also supports extant occurrences of three globally rare and state rare lichens: *Lecanora gypsicola* (G1/S1), *Acarospora nodulosa* var. *nodulosa* (G5T4?/S1), and *Gypsoplaca macrophylla* (G3G4/S1). In addition, there is an excellent (A-ranked) occurrence of a state rare (G4/S2) plant, weak-stemmed mariposa lily (*Calochortus flexuosus*).

Other Values Rank No Data

Other Values Comments

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element 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>
40620	<i>Acarospora nodulosa</i> var. <i>nodulosa</i>		G5T4?	S1	N
40346	<i>Oreocarya revealii</i>	Gypsum Valley cat-eye	G2	S2	Y
40620	<i>Acarospora nodulosa</i> var. <i>nodulosa</i>		G5T4?	S1	N
40346	<i>Oreocarya revealii</i>	Gypsum Valley cat-eye	G2	S2	Y
22171	<i>Calochortus flexuosus</i>	weak-stemmed mariposa lily	G4	S2	N
40617	<i>Sporobolus nealleyi</i>	Nealley's dropseed	G5	S1	N
40626	<i>Lecanora gypsicola</i>		G1	S1	N
18492	<i>Gypsoplaca macrophylla</i>		G3G4	S1	N
40346	<i>Oreocarya revealii</i>	Gypsum Valley cat-eye	G2	S2	N
18492	<i>Gypsoplaca macrophylla</i>		G3G4	S1	N
40346	<i>Oreocarya revealii</i>	Gypsum Valley cat-eye	G2	S2	N
40620	<i>Acarospora nodulosa</i> var. <i>nodulosa</i>		G5T4?	S1	N
40626	<i>Lecanora gypsicola</i>		G1	S1	N
40626	<i>Lecanora gypsicola</i>		G1	S1	N

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

No Data

Exotics Comments

No Data

Offsite

No Data

Information Needs

No Data

REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
194256	Lyon, P. and J. Hanson. 2006. Final Report: 2005 Rare Plant Survey of San Juan Public Lands, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
194279	St. Clair, L. 2005. Lichen Communities of Selected Gypsiferous Sites in Big Gypsum Valley, San Miguel County, Colorado.

ADDITIONAL TOPICS

Additional Topics

Original site design by Lyon, M.J. and J.R. Sovell 2000-03-13.

LOCATORS

Nation United States Latitude 380357N

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State Colorado

Longitude 1084442W

Quad Code **Quad Name**

38108-B7 Bull Canyon

38108-A6 Gypsum Gap

38108-A7 Hamm Canyon

Watershed Code **Watershed Name**

14030003 San Miguel

14030002 Upper Dolores

VERSION

Version Date 10/01/2005

Version Author Lyon, M.J.

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