

Level 4 Potential Conservation Area (PCA) Report

Name Mack

Site Code S.USCOHP*10445

IDENTIFIERS

Site ID 174 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 391146N
State Colorado Longitude 1085212W

Quad Code Quad Name

39108-B7 Mack
39108-B8 Ruby Canyon

County

Mesa (CO)

Watershed Code Watershed Name

14010005 Colorado headwaters-Plateau

SITE DESCRIPTION

Minimum Elevation	4,600.00 Feet	1,402.00 Meters
Maximum Elevation	5,400.00 Feet	1,646.00 Meters

Site Description

This site, south of the town of Mack and north of the Colorado River, supports a mosaic of desert shrub and juniper woodland communities as well as several imperiled or vulnerable plant and animal species. Natural communities supported by the site include shadscale/galleta shrublands and Utah juniper/salina wild rye woodlands, black sage/salina wildrye shrublands, and saltbush/salina wildrye shrublands. Other associated species include black sage, Hood's phlox, Eastwood's milkvetch and Eastwood evening primrose. The site encompasses about 5,000 acres of sandstone and shale benches, talus slopes, and bluffs.

Key Environmental Factors

[Stevens 2004:] The key environmental factors of this site are the convergence of climatic and edaphic factors. The soils are derived primarily from sandstone and shale parent material and range from sandy to very rocky. Together with the dry arid climate the geology of the site provides conditions which support several imperiled plant species and cold-desert plant associations.

Climate Description

[Stevens 2004:] The climate of the area is characterized as arid semi-desert. The average maximum summer daytime temperature is 93 (deg F) and nighttime minimums of 57 (deg F). Summer maxima may be as high as 110 (deg F). Average winter daytime and nighttime temperature extremes are 38 (deg F) and 12 (deg F), respectively. Precipitation averages less than 8.64 inches per year and primarily occurs in the late summer and fall as rain. (WRCC 2004)

Land Use History

[Stevens 2004:] The BLM lands of this site have supported a wide range of human uses, including livestock grazing, quarrying, and off-road recreation. Currently the area is within the Colorado Canyons National Conservation Area, and is presently used mainly for livestock grazing and non-motorized recreation.

Cultural Features

[Stevens 2004:] The site contains numerous unimproved roads and single and two track trails. In the north central portion of the site an abandoned rock quarry area is evident. There are no known archaeological or significant cultural features within this site.

SITE DESIGN

Site Map P - Partial Mapped Date 02/13/2004
Designer Stevens, J.E.

Boundary Justification

The Mack site is drawn to support two imperiled plant species and an imperiled desert woodland community. The site encloses a mosaic of several desert shrub and woodland communities which are typical of the area,

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and within which other vulnerable plant and animal species are found. The boundary was defined to encompass the element occurrences as well as much of the surrounding suitable habitat where the requisite ecological processes occur. This includes the more densely wooded north-facing slopes on the north side of the site as well as the south-facing cliffs, benches, and scree slopes that trend toward the southern side of the site. These areas are critical to the viability of the plant species and natural community elements which, based on their ecological scale, may require an area of anywhere from 1,000 to 20,000 acres to be viable. As drawn, the site provides an area of about 5,000 acres within which management for the elements may ensure their viability.

Primary Area 4,976.31 Acres 2,013.85 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

Biodiversity Significance Comments

The Mack site supports extant (E-ranked) occurrences of two globally imperilled (G2) plant species and a good (B-ranked) occurrence of a globally imperilled (G2) natural community. Other occurrences supported by the site include a good (B-ranked) occurrence of a natural community whose global and state ranks are unknown at this time and good and fair (B and C-ranked) occurrences of globally vulnerable (G3) plant species and natural communities.

Other Values Rank V3 - Moderate values

Other Values Comments

The CCNCA contains areas of high aesthetic value and high recreational value. Recreational activities include hiking, mountain biking, horseback riding, and nature viewing.

LAND MANAGEMENT ISSUES

Land Use Comments

No Data

Natural Hazard Comments

No Data

Exotics Comments

[Stevens 2004:] A dense cover of the exotic cheatgrass is present in many of the upland areas. It is unknown but presumed that much of the area currently occupied by cheatgrass previously supported herbaceous cover dominated by galleta (*Hilaria jamesii*), ricegrass (*Achnatherum hymenoides*), needle and thread (*Stipa comata*), and *Salinus wildrye* (*Leymus salinus*) grasses. Management efforts to control the further spread of cheatgrass and to restore previously invaded areas is critical to preserving the viability of the remaining occurrences.

Offsite

No Data

Information Needs

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>
24840	<i>Artemisia nova</i> / <i>Leymus salinus</i> Shrubland	West Slope Shrubland	G1G2Q	SU	No
24753	<i>Atriplex confertifolia</i> / <i>Pleuraphis jamesii</i> Shrubland	Cold Desert Shrublands	G3G5	S2	No
40542	<i>Juniperus osteosperma</i> / <i>Leymus salinus</i> spp. <i>salinus</i> Wooded Herbaceous Vegetation	Mesic Western Slope Pinyon-Juniper Woodlands	G3	S3	No
40542	<i>Juniperus osteosperma</i> / <i>Leymus salinus</i> spp. <i>salinus</i> Wooded Herbaceous Vegetation	Mesic Western Slope Pinyon-Juniper Woodlands	G3	S3	No
22447	<i>Coluber constrictor mormon</i>	Western Yellowbelly Racer	G5T5	S3	No
24655	<i>Atriplex confertifolia</i> / <i>Leymus salinus</i> Shrubland	Cold Desert Shrublands	G3G5	S3	No
21323	<i>Astragalus musiniensis</i>	Ferron milkvetch	G3	S1	Yes
40542	<i>Juniperus osteosperma</i> / <i>Leymus salinus</i> spp. <i>salinus</i> Wooded Herbaceous Vegetation	Mesic Western Slope Pinyon-Juniper Woodlands	G3	S3	No
24984	<i>Juniperus osteosperma</i> Woodland	Mesic Western Slope Pinyon-Juniper Woodlands	G5	SU	No
24769	<i>Juniperus osteosperma</i> / <i>Artemisia nova</i> / Rock Woodland	Utah Juniper/Black Sagebrush/Rock Woodlands	G5	SU	No

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24476	<i>Juniperus osteosperma</i> / <i>Cercocarpus montanus</i> Woodland	Utah Juniper/Mountain-mahogany Woodland	G2G3	S2?	Yes
24655	<i>Atriplex confertifolia</i> / <i>Leymus salinus</i> Shrubland	Cold Desert Shrublands	G3G5	S3	No
24553	<i>Juniperus osteosperma</i> / <i>Forsellesia meionandra</i> Woodland	Utah Juniper/Utah Greasebush	GU	SU	No
18648	<i>Amsonia jonesii</i>	Jones blue star	G4	S1	No
19729	<i>Eriogonum scabrellum</i>	Westwater buckwheat	G3	S1	No
18026	<i>Astragalus eastwoodiae</i>	Eastwood milk-vetch	G3	S3	No
24553	<i>Juniperus osteosperma</i> / <i>Forsellesia meionandra</i> Woodland	Utah Juniper/Utah Greasebush	GU	SU	No
22665	<i>Cynomys leucurus</i>	White-tailed Prairie Dog	G4	S4	No
24857	<i>Hesperostipa comata</i> Great Basin Herbaceous Vegetation	Western Slope Grasslands	G2G4	S2	No
24769	<i>Juniperus osteosperma</i> / <i>Artemisia nova</i> / Rock Woodland	Utah Juniper/Black Sagebrush/Rock Woodlands	G5	SU	No
18337	<i>Crotalus oreganus concolor</i>	Midget Faded Rattlesnake	G5T4	S3?	No

REFERENCES

Reference ID	Full Citation
173289	Lyon, P., C. Pague, R. Rondeau, L. Renner, C. Slater, and C. Richard. 1996. Final Report: Natural Heritage Inventory of Mesa County, Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
184712	Stevens, J.E. 2004. Final Report: Biological Inventory of Colorado Canyons NCA. Colorado Natural Heritage Program, Fort Collins, CO.
184604	WRCC. 2004. Western Regional Climate Center. Division of Atmospheric Sciences, Desert Research Institute. Reno, Nevada. < http://www.wrcc.dri.edu >.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date	02/13/2004
Version Author	Stevens, J.E.

Disclaimer

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