

# Level 4 Potential Conservation Area (PCA) Report

Name Sulphur Spring

Site Code S.USCOHP\*25911

## IDENTIFIERS

Site ID 2296 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 400505N  
State Colorado Longitude 1061605W

Quad Code Quad Name  
40106-A3 Junction Butte

County  
Grand (CO)

Watershed Code Watershed Name  
14010001 Colorado headwaters

## SITE DESCRIPTION

Minimum Elevation	7,380.00 Feet	2,249.42 Meters
Maximum Elevation	7,760.00 Feet	2,365.25 Meters

### Site Description

The community inhabits large, open salt flats and continues down Sulphur Gulch drainage for 2.25 miles near its former confluence with the Colorado River. The lowest reach of the drainage is now diverted and dispersed at its junction with Hwy 40. Site hydrology is dependent on multiple warm, mineral springs, just below Rd 2757. There are high salt accumulations present from sedimentary substrates carried to the surface by the spring. Site has a very strong sulfur smell and is considered saline due to its pH of 8.5 and conductivity of 3000 micromhos. Geology consists of sedimentary rocks of the Cretaceous and Jurassic Ages, specifically of the Dakota and Morrison Formations. Species composition is distinctly separated along the soil moisture gradient. Common threesquare (*Schoenoplectus pungens*) and seaside arrowgrass (*Triglochin maritimum*) are the dominant species along the areas of perennial hydrology. Common spikerush (*Eleocharis palustris*) is common in some areas, but throughout it only occurs at about 10% cover. Inland saltgrass (*Distichlis spicata*) occurs on seasonally inundated flats as large patches. Nuttall's alkaligrass (*Puccinellia airoides*) dominates many edges of inundated areas. Greasewood (*Sarcobatus vermiculatus*) and saltlover (*Halogeton glomeratus*), a listed noxious weed, are common in the uplands which are interspersed between mesic rivulets. Surrounding uplands are dominated by Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) / xeric graminoid communities and pockets of threetip sagebrush (*Artemisia tripartita*). Site is impacted by wildlife and past livestock use as a mineral source, with some areas showing evidence of poggging from use during the wet season. Road just above the site does not seem to heavily impact the area. Site is very unique due to its warm, perennial, mineral spring hydrology. Biota is also unique for the area which is mainly dominated by Wyoming big sagebrush and mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) on clay substrate.

### Key Environmental Factors

Key environmental factors influencing the biota of the site include perennial hydrology source, salt accumulations, and slope degree and shape.

### Climate Description

Climate likely follows patterns typical of this region of Colorado being generally xeric throughout most of the year with wet spring seasons and late summer "monsoons".

### Land Use History

No Data

### Cultural Features

No Data

## SITE DESIGN

Site Map Y - Yes Mapped Date 12/18/2005  
Designer Jones, J.R.

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## Boundary Justification

Boundaries include mineral spring and large open flat of mesic soils below the spring extending down a small drainage to its junction with Hwy 40 near the Colorado River. Boundaries are drawn to encompass buffered uplands and those ecological processes necessary to maintain site hydrology including groundwater discharge and perennial surface flows of the lower reaches of the site. Boundaries do not include all ecological processes influencing the site. Activities upstream and along adjacent slopes such as improper grazing, water diversion, and development may negatively impact hydrology and biota.

Primary Area 312.78 Acres 126.58 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

This site is drawn for an excellent (A-ranked) occurrence of the globally vulnerable to apparently secure (G3G4/S3) common threesquare (*Schoenoplectus pungens*) herbaceous vegetation plant community. This community type is probably more common than the global rank implies (most likely a G4 instead of a G3G4).

Other Values Rank V2 - High values

## Other Values Comments

The site provides an important mineral source for local wildlife. It also provides open space and is aesthetically pleasing. The site is unique to the county due to its mineral, groundwater fed hydrology, salt accumulations, and species composition.

## LAND MANAGEMENT ISSUES

### Land Use Comments

Actual wetland area is not heavily used except by livestock and wildlife as a mineral source. Surrounding uplands are used by the public for recreational purposes including hunting and OHV use.

### Natural Hazard Comments

No Data

### Exotics Comments

Site harbors dense cover of saltlover (*Halogeton glomeratus*) along dry areas within the wetland.

### Offsite

Off-site considerations include OHV use, road maintenance, and other recreational uses.

### Information Needs

No Data

## ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
18654	<i>Schoenoplectus pungens</i> Herbaceous Vegetation	Bulrush	G3G4	S3	Yes

## REFERENCES

Reference ID	Full Citation
160903	Carsey, K., D. Cooper, K. Decker, D. Culver, and G. Kittel. 2003. Statewide wetlands classification and characterization: Wetland plant associations of Colorado. Prepared for Colorado Department of Natural Resources, Denver, CO by Colorado Natural Heritage Program, Fort Collins, CO.
193632	Culver, D.R. and Jones, J.R. 2006. Final Report: Survey of Critical Biological Resources in Grand County. Colorado Natural Heritage Program, Fort Collins, CO.
167224	Hurd, E.G., N.L. Shaw, J. Mastroguiseppe, L.C. Smithman, and S. Goodrich. 1998. Field Guide to Intermountain Sedges. U.S. Department of Agriculture, Rocky Mountain Research Station, Ogden, UT.
192747	Tweto, O. 1979. Geologic Map of Colorado, 1:500,000. United States Geological Survey, Department of Interior, and Geologic Survey of Colorado, Denver, CO.
193553	USDA, NRCS. 2005. The PLANTS Database, Version 3.5 ( <a href="http://plants.usda.gov">http://plants.usda.gov</a> ). Data compiled from various sources by Mark W. Skinner. National Plant Data Center < <a href="http://npdc.usda.gov/">http://npdc.usda.gov/</a> >, Baton Rouge, LA 70874-4490 USA. Accessed 2005.
172684	Weber, W.A. and R.C. Wittmann. 2001. Colorado Flora: Western Slope, Third Edition. University Press of Colorado, Niwot, CO.

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## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

Version Date 12/18/2005

Version Author Jones, J.R.

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