

# Level 4 Potential Conservation Area (PCA) Report

Name White Rocks

Site Code S.USCOFO\*7

## IDENTIFIERS

Site ID 1527 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 400317N  
State Colorado Longitude 1050932W

## Quad Code Quad Name

40105-A2 Niwot

## County

Boulder (CO)

## Watershed Code Watershed Name

10190005 St. Vrain

## SITE DESCRIPTION

Minimum Elevation	5,085.00 Feet	1,549.91 Meters
Maximum Elevation	5,250.00 Feet	1,600.20 Meters

## Site Description

The White Rocks are sandstone exposures and cliffs out on the plains of eastern Boulder County. The cliffs are comprised of Fox Hills sandstone carved by Boulder Creek. Water seeps through the porous sandstone supporting wetland vegetation beneath overhangs. In addition to the American groundnut (*Apios americana*), these wet areas support chokecherry (*Prunus virginiana*), joe-pye weed (*Eupatorium maculatum*), and Canada goldenrod (*Solidago canadensis*). The moist alcoves contrast with the dry rock outcrops above, although water pools in shallow depressions on the surfaces in places. These pools support fairy shrimp. The sandstone outcrops emerge from grassland habitat. Grasses are characteristic on the outcrops include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), switchgrass (*Panicum virgatum*), few-flowered panic grass (*Dicanthelium oligosanthes*), needle-and-thread (*Hesperostipa comata*), Indian grass (*Sorghastrum nutans*), and blue grama (*Bouteloua gracilis*). Rock crevices also harbor scurfpea (*Psoralidium lanceolatum*), silky sophora (*Sophora nuttalliana*), and black nightshade (*Solanum nigrum*), species more common on the plains (Clark et al. 2001). This unique area also supports a small stand of sand sage (*Artemisia filifolia*), which is very rare in Boulder County. Boulder Creek winds through the site and is lined by riparian woodland with plains cottonwood (*Populus deltoides*) and crack willow (*Salix fragilis*) with swards of Nebraska sedge (*Carex nebrascensis*), prairie cordgrass (*Spartina pectinata*), threesquare (*Schoenoplectus pungens*), and saltgrass (*Distichlis spicata*) and alkali muhly (*Muhlenbergia asperifolia*) on terraces. Wet meadows in the floodplain support noxious and exotic weeds which are a severe problem at this site. Jim Hill mustard (*Sisymbrium altissimum*) forms nearly impenetrable thickets and cheatgrass (*Bromus tectorum*) and sowthistle (*Sonchus arvensis*) are abundant. Russian olive (*Elaeagnus angustifolia*), teasel (*Dipsacus fullonum*) and Canada thistle (*Cirsium arvensis*) are prevalent in the floodplain and wet meadows. Unique fauna persist at White Rocks, including fairy shrimp in the pools on the sandstone, rare ant species (*Aphaenogaster fulva*, *A. huachucana*, *Formica criniventris*, and *Lasius occidentalis*), and a mining bee (*Perdita opuntiae*), which feeds on prickly pear cactus (*Opuntia* spp.) and carves holes in the sandstone bedrock for nests.

## Key Environmental Factors

Fox Hills sandstone

## Climate Description

No Data

## Land Use History

The surrounding area is primarily in irrigated agricultural production. The area was historically grazed by cattle, but grazing has decreased since it was designated as a natural area and held under conservation easement by the City of Boulder Open Space and Mountain Parks.

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## Cultural Features

No Data

## SITE DESIGN

Site Map P - Partial

Mapped Date 01/23/2009

Designer Neid, S.L.

## Boundary Justification

This site was drawn for the state rare fern which occurs on the slopes above Boulder Creek.

Primary Area 197.41 Acres

79.89 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B4: Moderate Biodiversity Significance

## Biodiversity Significance Comments

This site is based on a state rare (G5/S1) fern species, black spleenwort (*Asplenium adiantum-nigrum*) which is known from only this location in the state. It also contains an excellent (A-ranked) occurrence of the state rare (G5/S1) American groundnut (*Apios americana*) and an unranked occurrence of a state imperiled (G5/S1) grass species, forktip three-awn (*Aristida basiramea*). This location needs to be revisited and more information collected.

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

Weedy plants include include Jim Hill mustard (*Sisymbrium altissimum*), cheatgrass (*Bromus tectorum*), chicory (*Cichorium intybus*), diffuse knapweed (*Centaurea diffusa*), jointed goatgrass (*Aegilops cylindrica*), leafy spurge (*Euphorbia esula*), and sowthistle (*Sonchus arvensis*). Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix ramosissima*), teasel (*Dipsacus fullonum*), Canada thistle (*Cirsium arvensis*), purple loosestrife (*Lythrum salicaria*), and Eurasian water milfoil (*Myriophyllum spicatum*)

## Offsite

No Data

## Information Needs

This site needs to be surveyed for the rare black spleenwort (*Asplenium adiantum-nigrum*). This is the only documented location of this plant in Colorado and it was last observed in the 1970s.

## ASSOCIATED ELEMENTS OF BIODIVERSITY

<u>Element</u>			<u>Global</u>	<u>State</u>	<u>Driving</u>
<u>State ID</u>	<u>State Scientific Name</u>	<u>State Common Name</u>	<u>Rank</u>	<u>Rank</u>	<u>Site Rank</u>
23792	<i>Aristida basiramea</i>	forktip three-awn	G5	S1	No
23563	<i>Apios americana</i>	American groundnut	G5	S1	Yes
22566	<i>Asplenium adiantum-nigrum</i>	black spleenwort	G5	S1	Yes

## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
198283	Clark, D.A., Crawford, C., and Jennings, W.F. 2001. Draft baseline plant survey of White Rocks and Surrounding Area in Eastern Boulder County. Unpublished report prepared for the City of Boulder Open Space and Mountain Parks Department.
195190	Neid, S., J. Lemly, K. Decker and D. Culver. 2009. Final Report: Survey of Critical Biological Resources in Boulder County 2007-2008. Colorado Natural Heritage Program, Fort Collins, CO.

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## ADDITIONAL TOPICS

### Additional Topics

Original site design by Pague, C.A. 1994-09-12. Updated by Fayette, K.K. 1995-05-04.

## VERSION

Version Date 01/23/2009

Version Author Neid, S.L.

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