

# Level 4 Potential Conservation Area (PCA) Report

Name Unaweep Seep

Site Code S.USWRO1\*760

## IDENTIFIERS

Site ID 1090 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 384600N  
 State Colorado Longitude 1084923W

<u>Quad Code</u>	<u>Quad Name</u>
38108-G8	Two V Basin
38108-G7	Fish Creek
38108-G6	Snyder Flats
38108-F6	Casto Reservoir
38108-F8	Gateway
38108-F7	Pine Mountain

## County

Mesa (CO)

<u>Watershed Code</u>	<u>Watershed Name</u>
14030004	Lower Dolores

## SITE DESCRIPTION

<b>Minimum Elevation</b>	6,600.00	<b>Feet</b>	2,012.00	<b>Meters</b>
<b>Maximum Elevation</b>	9,000.00	<b>Feet</b>	2,743.00	<b>Meters</b>

## Site Description

This site contains a large seep wetland complex. The hillside wetland at Vega Reservoir is larger, but lacks the diversity of wetland types found at Unaweep Seep. No other wetland observed during this survey matches the diversity of species and wetland habitat at Unaweep Seep. A 1983-84 study of the Bureau of Land Management Grand Junction Resource Area found that Unaweep Seep had the richest plant, bird, and small mammal life in the Resource Area (BLM 1999). The Audubon Society has declared this area an Important Bird Area in Colorado (National Audubon Society 2000). The site includes the Unaweep Seep state designated Natural Area an unusual hillside wetland ecosystem of marshes, wet meadows, and seeps. Dense stands of coyote willow (*Salix exigua*) occupy the seep's uppermost source area. Most of the seep is dominated by beaked spikerush (*Eleocharis rostellata*) with sporadic stands of river birch (*Betula occidentalis*) occurring on the lateral fringe of the seep. A large population of the giant helleborine orchid (*Epipactis gigantea*) occurs on the lower part of the slope amid spikerushes and underneath the canopy of the river birches. Near the toeslope, wet meadows and marshes support dense stands of hardstem bulrush (*Schoenoplectus acutus*), common reed (*Phragmites australis*), and creeping spikerush (*Eleocharis palustris*). Other species found in the wetland complex include red-osier dogwood (*Cornus sericea*), river hawthorn (*Crataegus rivularis*), poison ivy (*Toxicodendron rydbergii*), horsemint (*Monarda fistulosa*), Joe Pye weed (*Eupatorium maculatum*), cattail (*Typha latifolia*), fowl mannagrass (*Glyceria striata*), beggar's tick (*Bidens frondosa*), Nebraska sedge (*Carex nebrascensis*), woolly sedge (*C. pellita*), beaked sedge (*C. utriculata*), wild mint (*Mentha arvensis*), self-heal (*Prunella vulgaris*), canyon bog orchid (*Platanthera sparsiflora* var. *ensifolia*), scouring rush (*Hippochaete* sp.), horsetail (*Equisetum arvense*), and watercress (*Nasturtium officinale*). Non-native species in the seep include reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), redtop (*Agrostis gigantea*), timothy (*Phleum pratense*), white sweetclover (*Melilotus alba*), and barnyard grass (*Echinochloa crus-galli*). Most of these species are not affecting ecosystem function or displacing native vegetation. However, a population of Himalayan blackberry (*Rubus discolor*) was recently found at this site. In the Northwest USA, this species is an aggressive non-native plant where it commonly displaces native species, especially along wetland margins. The population at this site should be intensively monitored to ensure it does not displace native species. Numerous other seeps and springs exist throughout the site. At the base of the seeps, West Creek supports a lush growth of narrowleaf cottonwood (*Populus angustifolia*), box elder (*Acer negundo*), coyote willow, and other riparian species. North Fork Creek enters the canyon at the western end of the site. The adjacent slopes are covered with pinon - juniper and Gambel's oak (*Quercus gambelii*). The seeps and

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springs are not affected by flooding and fluctuation in surface water flow; however, the hydrology of the area is not completely understood. The geology is complicated and is not agreed upon. Researchers have suggested that the seep may be located in a pre-Wisconsin glacier terminal moraine or that the seep is associated with alluvial material deposited in a V-shaped valley that was cut then filled by the Gunnison or the Gunnison-Colorado River (BLM 1999). A fault defining the eastern boundary of a graben exists near the seep. This fault complicates conclusions about local hydrology (BLM 1999). Other species of interest found at UnawEEP Seep include: (1) 11 species on the BLM sensitive list including northern leopard frog (*Rana pipiens*), Bald Eagle (*Haliaeetus leucocephalus*), Cooper's Hawk (*Accipiter cooperii*), Golden Eagle (*Aquila chrysaetos*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*) (whether the willow flycatcher at UnawEEP Seep is the southwestern race is still being determined), white-throated woodrat (*Neotoma albigula brevicauda*), Great Basin silverspot butterfly (*Speyeria nokomis nokomis*), Great purple hairstreak (*Atlides halesus*), California sister (*Adelpha bredowii*), canyon bog orchid, and the giant helleborine; (2) over 67 species of butterflies (close to half of those ever recorded in Mesa County), including notably disjuncts such as Canyonlands satyr (*Cyllopsis pertepida*) and California sister (*Adelpha bredowii*), species on the periphery of their range such as the Hackberry Emperor Butterfly (*Asterocampa celtis*) plus the Colorado State insect, Colorado Hairstreak (*Hypaotus crysalus*); (3) dense population (pounds per acre) of montane shrews and western jumping mice; and (4) plant species more typical of the eastern tallgrass prairie such as Joe Pye weed (rare on the west slope), switchgrass (*Panicum virgatum*), Indian grass (*Sorghastrum nutans*), and panic mangrass (*Dichanthelium acuminatum fasciculatum*) (BLM 1999). Soils are highly variable. Soils along West Creek are derived from alluvium and vary in texture according to geomorphic position. Many areas in the seep have deep organic soil horizons (peat). Most of these soils are sapric material, and ranged in depth from a few inches to over 2 feet in some locations of the main hillside seep. This obviously indicates that the main seep has had persistent flow for hundreds, likely thousands of years. Given the aridity and low elevation of this site, the amount of peat accumulation at UnawEEP Seep is very unique.

## 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 03/22/1996

Designer Ellingson, A.R. and M.J. Lyon

## Boundary Justification

Boundaries are drawn to include all colonies which are part of the "UnawEEP Canyon population" of the Great Basin silverspot butterfly. Also included is the intervening riparian habitat which is necessary to maintain dispersal between colonies, as well as the potential spring recharge zones which must be maintained to preserve hydrological integrity of the seep/spring wetland complexes.

Primary Area 19,922.00 Acres

8,062.18 Hectares

## SITE SIGNIFICANCE

Biodiversity Significance Rank B2: Very High Biodiversity Significance

## Biodiversity Significance Comments

This site supports the largest known (A-ranked) Colorado population of the globally critically imperiled (G3T1/S1) Great Basin silverspot butterfly (*Speyeria nokomis nokomis*). Although there is a larger population in Utah, there appears to be a genetic difference between the two. The butterfly larvae feed specifically on bog violets (*Viola nephrophylla*) growing in open areas. The violets were found to grow in a very narrow range of moisture, usually on toe slopes at the base of seeps or on hummocks, where their roots can reach open water. Nectar plants, such as Joe Pye weed and bull thistle (*Cirsium vulgare*), used by the adult butterflies, are also found here. The Yuma skipper (*Ochloides yuma*), which is vulnerable in Colorado (G5/S2S3) has also been documented from this site historically. This skipper is found in freshwater marshes, stream courses, ponds, and seeps/springs. It is common in its limited habitat in California, Nevada, Utah, Colorado, northern New Mexico, and Arizona. Western Colorado represents the eastern periphery of this species range. The site supports an excellent (A-ranked) occurrence of the globally critically imperiled

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(G1Q/S1) boxelder - narrowleaf cottonwood riparian forest (*Acer negundo* - *Populus angustifolia* / *Celtis reticulata*) which occurs in dense patches around several small channels fed by the seep. Currently, this association is known from only one stand in Colorado. Additional surveys should be conducted in western Colorado, southern Utah, northern Arizona, and northwest New Mexico to identify its distribution. The site also supports an excellent occurrence of the globally vulnerable (G3/S2) beaked spikerush emergent wetland association (*Eleocharis rostellata*), and numerous wetland and riparian plant associations, which are vulnerable in Colorado (S3). These wetland plant associations support the richest diversity of plant and bird life of any other BLM parcel in the Grand Junction Resource Area (BLM 1999). The giant helleborine (*Epipactis gigantea*) which is vulnerable throughout its range (G3G4/S2) is abundant at this site. This orchid grows along streambanks and near springs and seeps in the pinon - juniper zone. Although the species is widespread in the southwestern region, its specific habitat requirements limit its numbers.

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

One of few, if not the only, record of the aggressive Himalayan blackberry was found. Also documented was reed canarygrass (*Phalaris arundinacea*), Kentucky bluegrass (*Poa pratensis*), redtop (*Agrostis gigantea*), timothy (*Phleum pratense*), white sweetclover (*Melilotus alba*), and barnyard grass (*Echinochloa crus-galli*).

### Offsite

Hydrological processes originating outside the planning boundary, including water quality, quantity, and timing must be managed to maintain site viability.

### Information Needs

No Data

## 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>
24860	<i>Populus angustifolia</i> / <i>Cornus sericea</i> Woodland	Cottonwood Riparian Forest	G4	S3	No
16900	<i>Speyeria nokomis nokomis</i>	Great Basin Silverspot Butterfly	G3T1	S1	Yes
44146	<i>Acer negundo</i> - <i>Celtis laevigata</i> var. <i>reticulata</i> Woodland		GNR	SNR	Yes
22447	<i>Coluber constrictor mormon</i>	Western Yellowbelly Racer	G5T5	S3	No
24645	<i>Alnus incana</i> / Mesic Forbs Shrubland	Thinleaf Alder/Mesic Forb Riparian Shrubland	G3	S3	No
24872	<i>Salix exigua</i> / Mesic Graminoids Shrubland	Coyote Willow/Mesic Graminoid	G5	S5	No
24564	<i>Schoenoplectus acutus</i> - <i>Typha latifolia</i> - ( <i>Schoenoplectus tabernaemontani</i> ) Sandhills Herbaceous Vegetation	Great Plains Marsh	G4	S2S3	No
18216	<i>Eleocharis rostellata</i> Herbaceous Vegetation	Emergent Wetland	G3	S2	No
17626	<i>Epipactis gigantea</i>	helleborine	G4	S2S3	No

## REFERENCES

<u>Reference ID</u>	<u>Full Citation</u>
165750	Ellis, S. 1989. Preserve design for the Nokomis fritillary butterfly colonies, UnawEEP Canyon, Mesa County, Colorado. Prepared for The Nature Conservancy, Colorado Field Office, Boulder, Colo. and Bureau of Land Management, Grand Junction Area Office, Grand Junction, Colo.
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.
193461	National Audubon Society. 2000. Important Bird Areas of Colorado. Compiled by K.A. Cafaro. Audubon-Colorado, Boulder, CO.

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## ADDITIONAL TOPICS

### Additional Topics

No Data

## VERSION

Version Date 03/22/1996

Version Author Ellingson, A.R. and M.J. Lyon

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