Level 4 Potential Conservation Area (PCA) Report

Name Vasquez Creek **Site Code** S.USCOHP*25972

IDENTIFIERS

Site ID 2320 **Site Class** PCA

Site Alias None

Network of Conservation Areas (NCA)

NCA Site ID	NCA Site Code	NCA Site Name
-		No Data

LOCATORS

Nation United States **Latitude** 395039N

State Colorado **Longitude** 1054923W

Quad Code	Quad Name
39105-G7	Berthoud Pass
39105-H7	Fraser

County

Grand (CO)

Watershed Code	Watershed Name
14010001	Colorado headwaters

SITE DESCRIPTION

Minimum Elevation	9,300.00	**Feet**	2,834.64	**Meters**
Maximum Elevation	10,800.00	**Feet**	3,291.84	**Meters**

Site Description

Site occurs along Vasquez Creek, a second order tributary of the Fraser River. The drainage occurs along the moraine of a large glaciated valley. Geology consists of unconsolidated surficial deposits and rocks of the Quaternary Age, specifically glacial drift of Pinedale and Bull lakes glaciation. Hydrology is dependent on surface water flows, snow melt from upstream snow pack, and man-made diversions of the drainage. Surrounding uplands are composed of mixed mature forests of lodgepole pine (*Pinus contorta*), subalpine fir (*Abies lasiocarpa*), Engelmann spruce (*Picea engelmannii*), and quaking aspen (*Populus tremuloides*). The main drainage has been developed and contains a forest service road that is not well-maintained. As well, the system is being dewatered by a large aquifer. Wetland communities are dependent on perennial hydrology from snow melt and groundwater, while upland species appear to be dependent on continuous disturbances to maintain site biota.

Key Environmental Factors

Key environmental factors influencing the biota of the site include spring flooding, beaver activity, and perennial surface water flows. Key anthropogenic factors include water diversion and maintenance of the aqueduct.

Climate Description

Area likely follows typical climate patterns of the Colorado Rockies being generally xeric throughout 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** 11/12/2005

Designer Jones, J.R.

Boundary Justification

The boundary is drawn to encompass the upper reaches of Vasquez Creek and approximately 2 miles of the adjacent aqueduct. Boundaries encompass all ecological processes important to element composition including surface water flows, spring run-off, sediment deposition, man-made water diversions, and disturbance. However, boundaries do not include all of the ecological processes. Activities such as logging, water diversion, development, and road maintenance may negatively or positively impact site biota and hydrology.

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Primary Area 1,044.97 **Acres** 422.89 **Hectares**

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site encompasses a good (B-ranked) occurrence of a globally vulnerable (G3/S3) plant community, *Salix drummondiana* / *Calamagrostis canadensis* shrubland, a fair (C-ranked) occurrence of a globally vulnerable (G3/S3) plant, reflected moonwort (*Botrychium echo*), a good (B-ranked) occurrence of a globally vulnerable to globally apparently secure (G3G4/S2) plant, western moonwort (*Botrychium hesperium*), and an excellent (A-ranked) occurrence of a globally demonstrably secure (G5/S4) plant community, *Salix planifolia* / *Carex aquatilis* shrubland.

Other Values Rank V3 - Moderate values

Other Values Comments

Site contains other values including wildlife habitat, recreational values, and surface water recharge for aqueduct and downstream river systems.

LAND MANAGMENT ISSUES

Land Use Comments

Predominant land uses are recreation including hiking, biking, hunting, and camping. Other uses include aqueduct maintenance and natural resource extraction (logging).

Natural Hazard Comments

Spring run-off may cause flooding along the main drainage of Vasquez Creek. There may be avalanche hazards along the upper reaches of the drainage during the fall, winter, and spring seasons.

Exotics Comments

Exotic species are present along roads, but are not common within elements.

Offsite

Off-site considerations include logging, avalanche, road maintenance, and aqueduct maintenance.

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24473	*Salix drummondiana / Calamagrostis canadensis* Shrubland	Lower Montane Willow Carrs	G3	S3	Yes
24850	*Salix planifolia / Carex aquatilis* Shrubland	Subalpine Riparian Willow Carr	G5	S4	No
20475	*Botrychium echo*	reflected moonwort	G3	S3	No
22785	*Botrychium hesperium*	western moonwort	G4	S2	Yes

REFERENCES

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Name Vasquez Creek **Site Code** S.USCOHP*25972

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.
167221	Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal and P. K. Holmgren. 1977. Intermountain Flora Vascular Plants of the Intermountain West, USA: vol. 6. New York Botanical Garden, Bronx, NY.
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.
160140	Dorn, R. D. 1997. Rocky Mountain Region Willow Identification Field Guide. Renewable Resources R2-RR-97-01. Denver, CO: USDA, Forest Service, Rocky Mountain Region. 107p.
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 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center <http://npdc.usda.gov/>, Baton Rouge, LA 70874-4490 USA. Accessed 2005.

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 11/12/2005

Version Author Jones, J.R.

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