

Level 4 Potential Conservation Area (PCA) Report

Name Michigan River

Site Code S.USCOHP*27976

IDENTIFIERS

Site ID 2664 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 403631N
State Colorado Longitude 1060441W

Quad Code Quad Name

40106-E1 Gould
40106-F2 Gould NW
40106-F1 Johnny Moore Mountain

County

Jackson (CO)

Watershed Code Watershed Name

10180001 North Platte Headwaters

SITE DESCRIPTION

Minimum Elevation	8,200.00 Feet	2,499.36 Meters
Maximum Elevation	8,900.00 Feet	2,712.72 Meters

Site Description

The Michigan River site occurs in the glacially carved valley bordered to the east by the Medicine Bow Mountains and to the west by Owl Mountain and Owl Ridge. Throughout the site the low gradient, meandering Michigan River flows northwest towards the Town of Walden. The main tributaries are the North and South Forks of Michigan River, Sales, Meadow, Sage Hen, and Owl creeks. Two reservoirs, North Michigan and Meadow Creeks reservoirs, are located outside of the site but influence the hydrology of the main stem of the Michigan River. The riparian shrubland is dominated by Geyer willow (*Salix geyeriana*), Rocky Mountain willow (*S. monticola*), and scattered planeleaf willow (*S. planifolia*), Wolf willow (*S. wolfii*), and Bebb's willow (*S. bebbiana*). Thinleaf alder (*Alnus incana*) with river birch (*Betula occidentalis*) occurs along the river banks. The understory is dominated by the introduced grasses, creeping foxtail (*Alopecurus arundinaceus*) and timothy (*Phleum pratense*). In the wetter areas, under the willows, water sedge (*Carex aquatilis*), analogue sedge (*C. simulata*), meadow sedge (*C. praegracilis*), and beaked sedge (*C. utriculata*) exist. Within the floodplain, the soils are derived from modern alluvium. There are spring-fed wetlands that have peat accumulating soils within the site. Current land use is hay production and cattle and wildlife grazing. There are signs of active beaver (*Castor canadensis*) along the river and its tributaries. Elk (*Cervus canadensis*) and mule deer (*Odocoileus hemionus*) are found throughout. The river is bordered on both sides by hay fields with a network of irrigation ditches. The uplands consist of sagebrush (*Artemisia tridentata* var. *pauciflora* and *A. cana*) shrublands.

Key Environmental Factors

Beaver (*Castor canadensis*) are primary users as well as maintainers to riparian shrublands. Beaver activity forms ponds that slow spring runoff and flooding and retain water that will be released slowly during the growing season. The primary abiotic ecological process to maintain viability is hydrology and more specifically surface flow. Annual and episodic flooding is important in maintaining riparian shrublands (Rondeau 2001).

Climate Description

The site is located in an intermountain basin that is enclosed on most sides by mountains that create precipitation shadows for air and moisture. Climate records for Walden indicate a mean annual precipitation of 10.53 inches (WRCC 2009). Annual mean for snowfall is 57.1 inches. The lowest average temperature (Jan.) is 3.9 degrees F and the highest average temperature (July) is 78.5 degrees F.

Land Use History

No Data

Cultural Features

No Data

Level 4 Potential Conservation Area (PCA) Report

Name Michigan River

Site Code S.USCOHP*27976

SITE DESIGN

Site Map Y - Yes Mapped Date 10/23/2009

Designer Culver, D.R.

Boundary Justification

Boundaries are drawn to capture the immediate watershed that starts at the confluence with the South and North Forks of the Michigan at Gould. The boundaries were developed to include immediate ecological processes. Specifically, the primary ecological process is hydrology, especially surface flow (Rondeau 2001). Only private lands with written permission were surveyed.

Primary Area 11,962.26 Acres 4,840.97 Hectares

SITE SIGNIFICANCE

Biodiversity Significance Rank B3: High Biodiversity Significance

Biodiversity Significance Comments

The site supports an excellent (A-ranked) occurrence of a globally vulnerable (G3/S3) *Salix geyeriana* / mesic forbs montane willow carr, a good (B-ranked) occurrence a globally vulnerable (G3/S3) *Salix monticola* / mesic graminoid montane riparian willow carr and an excellent (A-ranked) occurrence of a state rare (G4/S3) *Salix monticola* / mesic forbs montane riparian willow carr. Several rare plants have been observed including a fair (C-ranked) occurrence of the state imperiled (G4/S1) slender thelypody (*Thelypodium sagittatum*), a poor (D-ranked) occurrence of the state imperiled (G4/S1) Rocky Mountain ragwort (*Packera debilis*) and a fair (C-ranked) occurrence of the state imperiled (G5T5/S1) wild chives (*Allium schoenoprasum* var. *sibiricum*). In 2009, a nesting pair of Sandhill Cranes (*Grus canadensis tabida*) were noted, although this site is not designed for that species.

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

Exotic species include Canada thistle (*Breca arvensis*), musk thistle (*Carduus nutans*), and a small occurrence of Dames rocket (*Hesperis matronalis*) that was observed along the river banks.

Offsite

No Data

Information Needs

No Data

ASSOCIATED ELEMENTS OF BIODIVERSITY

Element State ID	State Scientific Name	State Common Name	Global Rank	State Rank	Driving Site Rank
24629	<i>Salix geyeriana</i> / Mesic Forbs Shrubland	Montane Willow Carr	G3	S3	Yes
24809	<i>Salix monticola</i> / Mesic Forbs Shrubland	Montane Riparian Willow Carr	G4	S3	No
24585	<i>Salix monticola</i> / Mesic Graminoids Shrubland	Montane Riparian Willow Carr	G3	S3	Yes
17443	<i>Thelypodium sagittatum</i>	slender thelypody	G4	S1	No
22365	<i>Packera debilis</i>	Rocky Mountain ragwort	G4	S1	No
19688	<i>Allium schoenoprasum</i> var. <i>sibiricum</i>	wild chives	G5T5	S1	No

REFERENCES

Level 4 Potential Conservation Area (PCA) Report

Name Michigan River

Site Code S.USCOHP*27976

Reference ID

Full Citation

198407	Culver, D.R., K. Decker, J. Parker, J. Bell, J. Sovell, and J. Huggins. 2010. CNHP Final Report: Identification and Assessment of Important Wetlands within the North Platte Watershed, CO. Colorado Natural Heritage Program, Fort Collins, CO.
190863	Rondeau, R. 2001. Ecological system viability specifications for Southern Rocky Mountain ecoregion. First Edition. Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO. 181 pp.
198320	Western Regional Climate Center. 2009. Record Climate Summaries. Accessed in 2009. http://www.wrcc.dri.edu/

ADDITIONAL TOPICS

Additional Topics

No Data

VERSION

Version Date 10/23/2009

Version Author Culver, D.R.

Disclaimer

These data are a product and property of Colorado State University, Colorado Natural Heritage Program (CNHP). These data are strictly "on loan" and should be considered "works in progress". Data maintained in the Colorado Natural Heritage Program database are an integral part of ongoing research at CSU and reflect the observations of many scientists, institutions and our current state of knowledge. These data are acquired from various sources, with varying levels of accuracy, and are continually being updated and revised. Many areas have never been surveyed and the absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. These data should not be regarded as a substitute for on-site surveys required for environmental assessments. Absence of evidence is NOT evidence of absence. Absence of any data does not mean that other resources of special concern do not occur, but rather CNHP files do not currently contain information to document this presence. CNHP is not responsible for whether other, non-CNHP data providers have secured landowner permission for data collected.

These data are provided for non-commercial purposes only. Under no circumstances are data to be distributed in any fashion to outside parties. To ensure accurate application of data, tabular and narrative components must be evaluated in conjunction with spatial components. Failure to do so constitutes a misuse of the data. The Colorado Natural Heritage Program shall have no liability or responsibility to the data users, or any other person or entity with respect to liability, loss, or damage caused or alleged to be caused directly or indirectly by the data, including but not limited to any interruption of service, loss of business, anticipatory profits or indirect, special, or consequential damages resulting from the use of operation of the data. Data users hereby agree to hold CNHP, Colorado State University, and the State of Colorado harmless from any claim, demand, cause of action, loss, damage or expense from or related to data users use of or reliance on the data, regardless of the cause or nature thereof, and even in the event that such cause is attributable to the negligence or misconduct of CNHP.

These data are provided on an as-is basis, as-available basis without warranties of any kind, expressed or implied, INCLUDING (BUT NOT LIMITED TO) WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. Although CNHP maintains high standards of data quality control, CNHP, Colorado State University, and the State of Colorado further expressly disclaim any warranty that the data are error-free or current as of the date supplied