

Conservation Challenges:

- *Changes in agricultural practices
- *Conversion to mining
- *Deforestation/logging
- *Increased draintiling makes stream flow more flashy, reduces groundwater for algific habitats
- *Waterways are more incised, with more alluvium, and higher turbidity
- *Invasive spp.: Common buckthorn, Eurasian honeysuckle, garlic mustard, leafy spurge
- *Valley bottoms prone to high-volume floods
- *Urbanization
- *Fire-dependent communities are likely to decline due to difficulty in restoring natural fire regimes

Conservation Opportunities:

Existing Conservation Network:

State Parks:

State Forests:

Richard J. Dorer Mem'l Hardwood

SNAs:

Zumbro Falls Woods

Oronoco Prairie

Aquatic Management Area:

Zumbro River

Wildlife Management Area:

Rare Features:

Acadian Flycatcher
 American Brook Lamprey
 American Ginseng
 Bald Eagle
 Black Sandshell
 Blanding's Turtle
 Cerulean Warbler
 Cliff Goldenrod
 Clustered Broomrape
 Crystal Darter
 Davis' Sedge
 Ellipse
 Fluted-shell
 Goat's-rue
 Goldie's Fern
 Gray's Sedge
 Green Dragon
 Hill's Thistle
 Jewelled Shooting Star
 Kitten-tails
 Lilia-leaved Twayblade
 Little White Tiger Beetle
 Milk snake
 Moschatel
 Mucket
 Mussel Sampling Site
 Narrow-leaved Spleenwort
 Plains Wild Indigo
 Plantain-leaved Sedge

Prairie Bush Clover
 Prairie Moonwort
 Rattlesnake-master
 Red-shouldered Hawk
 Rock Sandwort
 Sandhill Crane
 Sandy Stream Tiger Beetle
 Smooth Rock Cress
 Squirrel-corn
 Stemless Tick-trefoil
 Timber Rattlesnake
 Tuberosus Indian-plantain
 Valerian
 Western Fox snake
 White Baneberry
 White Wild Indigo
 Wood Turtle



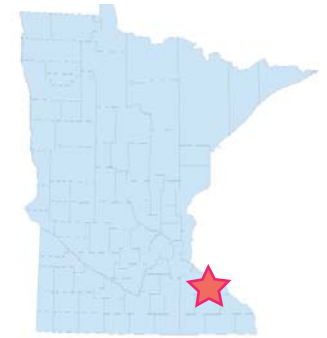
Photo courtesy of Cold Snap Photography

Zumbro Bluffs Opportunity Area

Ecological Significance:

The Zumbro River Valley is a large drainage system that lies mostly within the hilly area of southeastern Minnesota. The watershed has had a history of being vulnerable to flooding, erosion, and sedimentation as a result its highly dissected terrain. The river system has several (former) and existing reservoirs (Lake Shady, Lake Zumbro) that have demonstrated in several ways the vulnerability of the system to erosional forces. These reservoirs are filling with sediment, precipitating the discussion of the need for dredging. Another environmental concern is that Lake Shady dam was incapacitated in a 2010 flash flood. Improved land protection could ameliorate some of these impacts. *Protection of natural features provides an additional function of increasing the resilience of the watershed by reducing land use impacts from farming and urbanization.*

In addition, the use of Best Management Practices in this watershed, and other Blufflands streams will also increase the resilience of the landscape.



Counties:

Olmsted
 Wabasha

Rare Native Plant Communities:

Dry Bedrock Bluff Prairie (Southern)
 Dry Sand - Gravel Oak Savanna (Southern)
 Dry Sand - Gravel Prairie (Southern)
 Elm - Ash - Basswood Terrace Forest
 Mesic Prairie (Southern)
 Oak - Shagbark Hickory Woodland
 Red Oak - Sugar Maple-Basswood- (Bitternut Hickory) Forest
 Red Oak - White Oak (Sugar Maple) Forest
 Red Oak - White Oak Forest
 Silver Maple - Green Ash - Cottonwood Terrace Forest
 Southern Mesic Maple-Basswood Forest
 Sugar Maple - Basswood - (Bitternut Hickory) Forest
 Sugar Maple - Basswood - Red Oak - (Blue Beech) Forest
 White Pine - Oak - Sugar Maple Forest
 White Pine - Oak Woodland



Photo courtesy of explorethezumbro.org

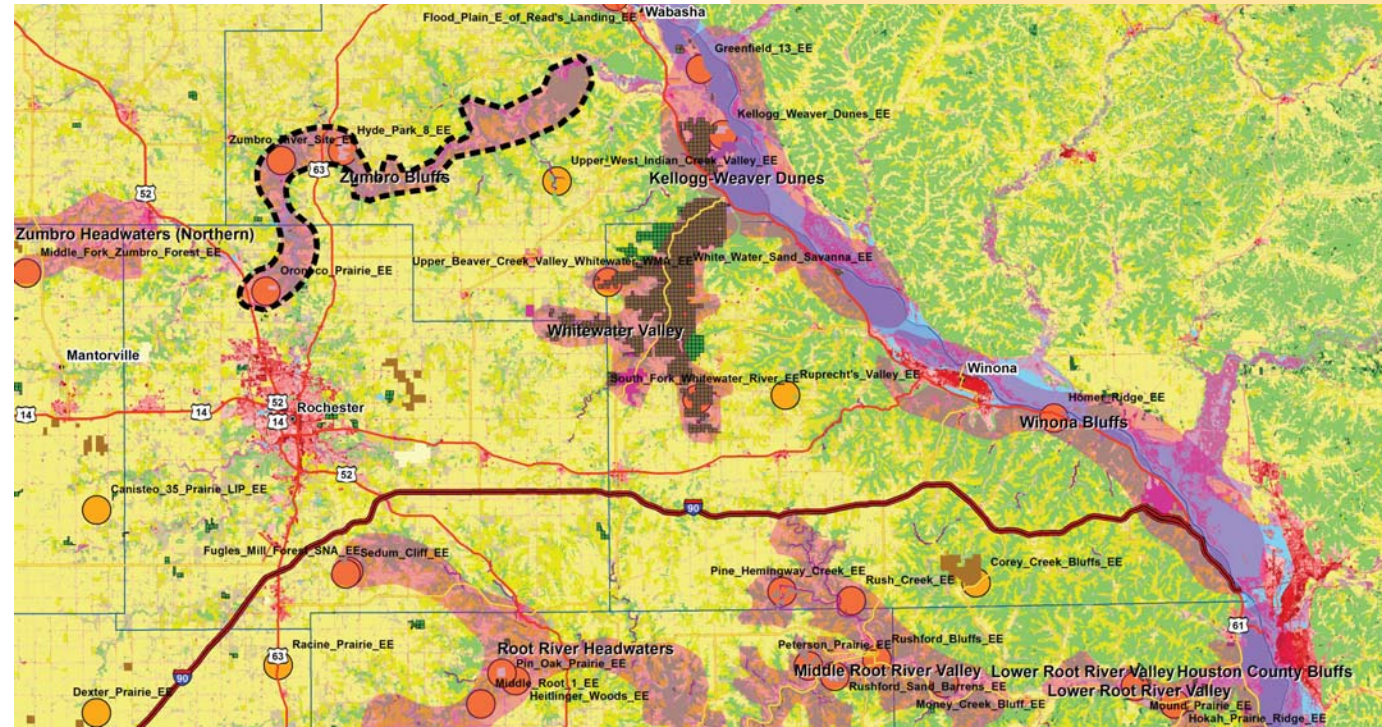
Ecological Evaluations:

Zumbro River Site
 Hyde Park 8
 Oronoco Prairie

Other Candidate Sites:

Zumbro Bluffs

Ecological Evaluations, Land Cover, Public Ownership



Please see Legend at the front of the Opportunity Area Descriptions for a key to this map

Zumbro Bluffs

Marxan Prioritization, Element Occurrences

