

Upper St. Croix River

ROBERT QUEEN

# Northwest Lowlands

## *ecological landscape*

### Attributes and Characteristics

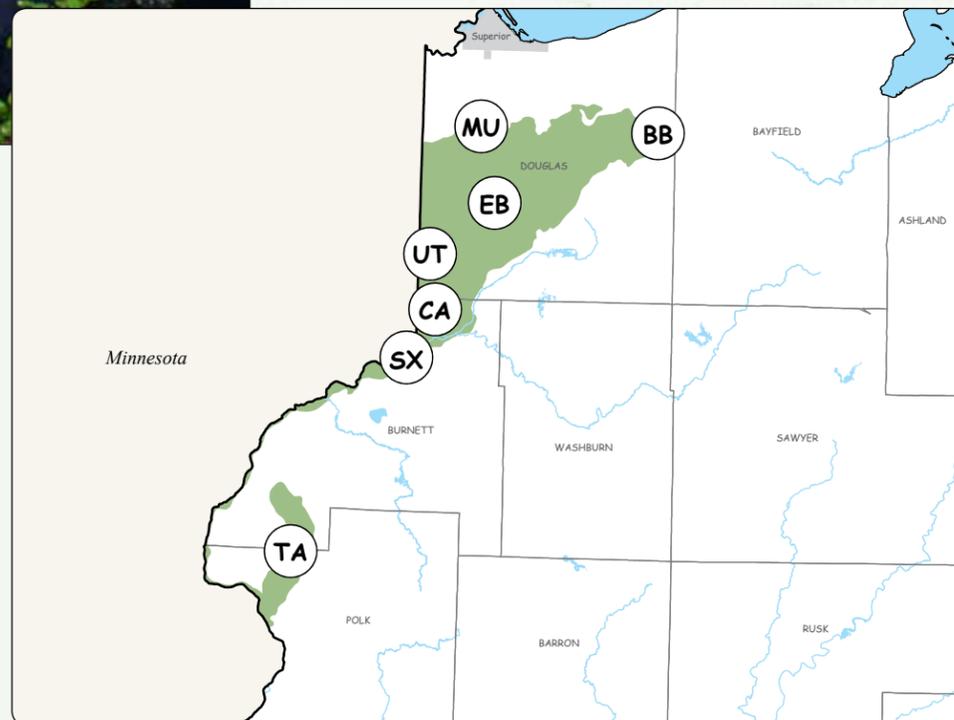
This ecological landscape is the most remote, isolated part of the state and harbors extensive, unbroken forests within which are imbedded several very large undisturbed peatlands. The area contains very few roads and is difficult to access. Much of the area is within the Douglas County Forest and is managed for a variety of habitats ranging from early succession forests that provide wood products for mills to older growth forests that provide important habitat for many forest-interior species.

Several high quality streams originate in this ecological landscape, some draining north to Lake Superior, others flowing south to the St. Croix River. Running along the border of this landscape, the St. Croix is one of the state's ecological and recreational jewels. Prominent landforms include ground and end moraine. Bedrock outcroppings are rare except along the basalt ridge that follows a fault line

and forms part of the northern boundary of this landscape. Waterfalls, cliffs, glades, and rock-walled gorges are found in this landscape, particularly within the St. Croix valley. Soils are predominantly sands and loams with significant areas of peats and mucks in the poorly drained lowlands. Lakes are generally uncommon in this landscape.

### Conservation Needs and Opportunities

Historically, the vegetation in this landscape was conifer-hardwood forest consisting mainly of white and red pine. Aspen-birch forest, conifer swamps, and bogs were also found. Jack pine barrens existed along the eastern edge of this landscape. Present vegetation is still a mixture of conifer-northern hardwood forest and many types of high quality wetlands, including fens, bogs, muskegs, tamarack swamps, spruce swamps, and wet meadows. Two of the larger bogs, the Belden Swamp and the Black Lake Bog, are State Natural Areas. Several rare plants, birds, and butterflies (including fritillaries, coppers, and arctics), have been found in these wetlands.



## Legacy Places

- BB Bois Brule River
- CA Chase Creek
- EB Empire and Belden Swamps
- MU Manitou Falls - Black River
- SX St. Croix River
- TA Trade River Wetlands
- UT Upper Tamarack and Spruce Rivers

### Key characteristics:

- » Most remote, undeveloped Ecological Landscape in Wisconsin
- » Substantial wolf population
- » Large, unfragmented working forests
- » Acid peatlands and open bogs
- » Headwater streams

### Size:

- » 660 square miles
- » 420,750 acres (1.2% of Wisconsin)

### Population:

- » 20,000 (0.4% of Wisconsin's population)

### Notable species:

- » Moose
- » Timber wolf
- » Golden-winged warbler
- » Smallmouth bass
- » Northern pike
- » Gilt darter
- » Black spruce
- » Tamarack
- » Arrow-leaved sweet-coltsfoot

### Natural communities:

(See Appendix B for descriptions)

- » Alder thicket
- » Boreal forest
- » Northern dry-mesic forest
- » Northern mesic forest
- » Northern sedge meadow
- » Northern wet forest
- » Open bog



Indigo Bunting (*Passerian cyanea*)

Current land use is primarily centered on forestry for timber and pulp production, recreation, and tourism, with a very small amount of land in agriculture. The large areas of uninhabited land make this ecological landscape particularly suited for wolves, which use it as a major travel corridor between Wisconsin and Minnesota. The Northwest Lowlands ecological landscape is believed to be the most important breeding area for golden-winged warblers of any landscape in North America. This species is one of about a dozen birds occurring in Wisconsin that are listed by Partners in Flight as in critical need of habitat management. Maintaining the extensive wetland/upland shrub edge and the alder-lined stream corridors here would significantly help this species.

### Recreation Uses and Opportunities

With a substantial portion of the landscape owned by Douglas County, there are ample opportunities for outdoor recreation. Limiting factors for some outdoor activities are the large amount of wetlands (where low impact recreation uses are more appropriate) and the limited access to much of the area. Of course, this inaccessibility is a draw for recreationists who enjoy remote experiences. Minnesota's large Necedah State Forest lies adjacent to the west and offers additional extensive roadless areas.

### Public Conservation Lands

Map#	Property Name	Size (acres) <sup>1</sup>
<b>State</b>		
1	Brule River State Forest <sup>2</sup>	690
2	Danbury State Wildlife Area <sup>2</sup>	1,320
3	Fish Lake State Wildlife Area <sup>2</sup>	280
4	Governor Knowles State Forest <sup>2</sup>	10,160
5	Pattison State Park <sup>2</sup>	345
	Miscellaneous lands <sup>3</sup>	725
<b>Federal</b>		
1	St. Croix National Scenic Riverway <sup>2</sup>	19,260
<b>County Forest<sup>4</sup></b>		
1	Burnett County Forest <sup>2</sup>	17,350
2	Douglas County Forest <sup>2</sup>	174,490
<b>TOTAL</b>		<b>224,620</b>

<sup>1</sup>Actual acres owned in this Ecological Landscape.  
<sup>2</sup>This property also falls within adjacent Ecological Landscape(s).  
<sup>3</sup>Includes public access sites, fish hatcheries, fire towers, streambank and non-point easements, lands acquired under statewide wildlife, fishery, forestry, and natural area programs, small properties under 100 acres, and properties with fewer than 100 acres within this Ecological Landscape.  
<sup>4</sup>Locations and sizes of county owned parcels enrolled in the Forest Crop Law are presented here. Information on locations and sizes of other county and local parks in this Ecological Landscape is not readily available and is not included here, except for some very large properties.

The St. Croix River borders the ecological landscape on the south and provides a variety of recreation opportunities. Pattison State Park lies on the north end and offers year-round recreation activities. Winter recreation activities are popular here and draw visitors from the southern part of the state. The Duluth-Superior area is nearby, however this landscape is distant from other large population centers.

Figure 46: Land cover of the Northwest Lowlands

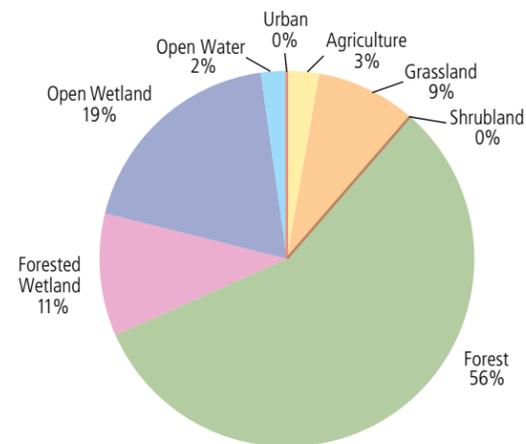


Figure 47: Public conservation and other land ownership in the Northwest Lowlands

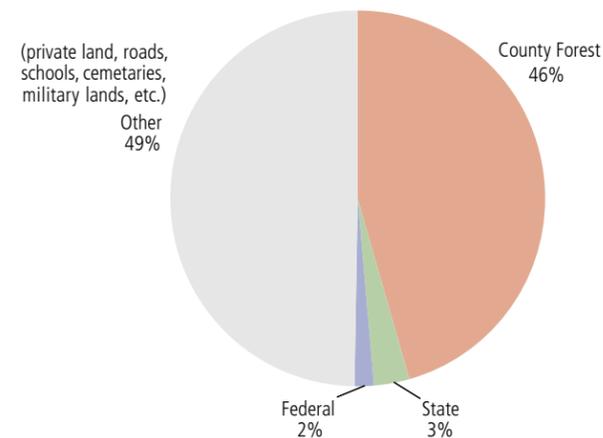
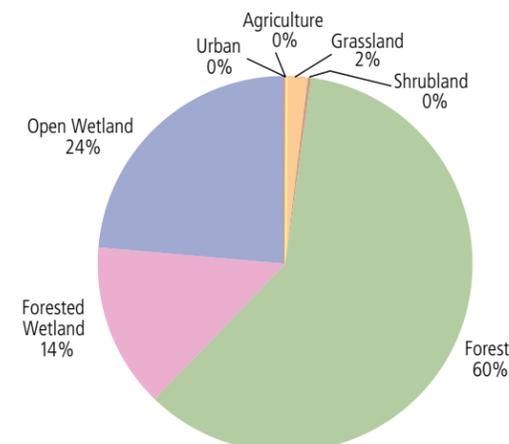


Figure 48: Land cover of public conservation lands in the Northwest Lowlands



Round-leaved Sundew (*Drosera rotundifolia*) at Becker Lake Bog

Figure 49: Legacy Places and public conservation lands of the Northwest Lowlands

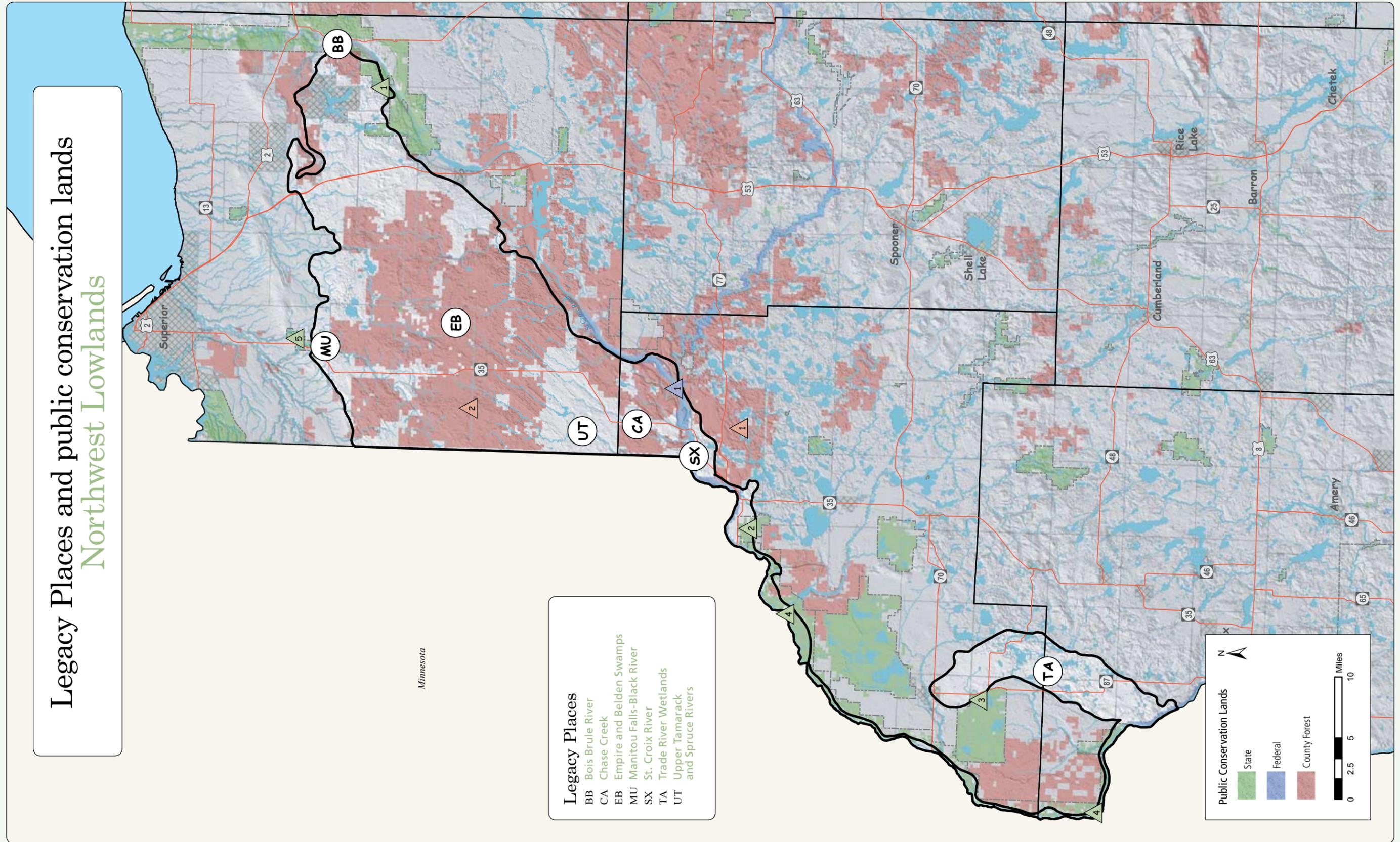
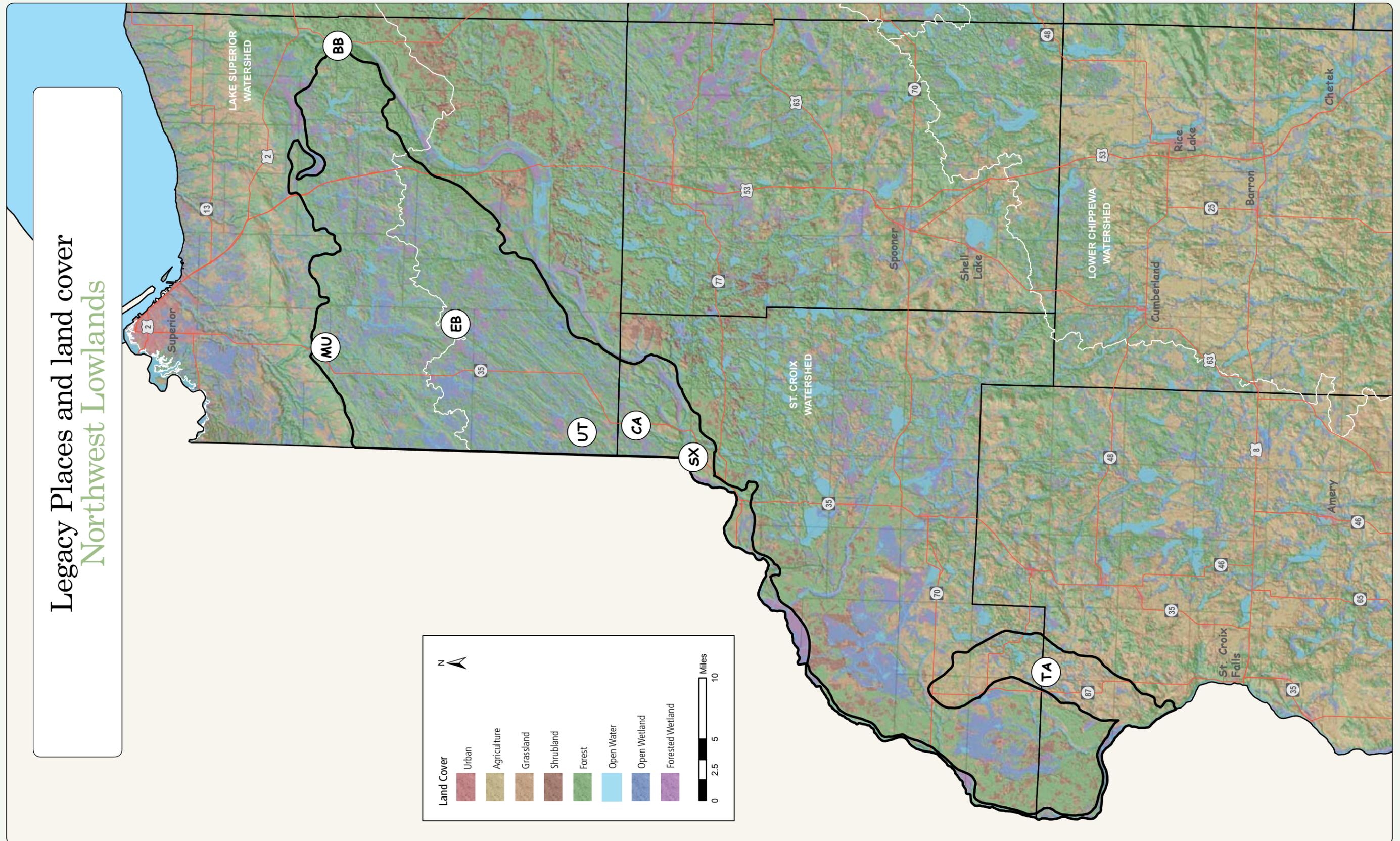


Figure 50: Legacy Places and land cover of the Northwest Lowlands



Legacy Places and land cover  
Northwest Lowlands

Northwest Lowlands

# Legacy Places



Northern Saw-whet Owl (*Aegolius acadicus*)

## BB Bois Brule River

See the Northwest Sands and Superior Coastal Plains ecological landscapes.

## CA Chase Creek

Size ..... Medium  
Protection Initiated ..... Moderate  
Protection Remaining ..... Moderate  
Conservation Significance ..... ★★★★★  
Recreation Potential ..... ★

This creek flows through very high quality wetlands and eventually drains into the St. Croix River. The creek supports a diverse aquatic ecosystem and, along with the Upper Tamarack system, provides a link between the extensive Douglas County Forest and Minnesota's St. Croix State Forest. The area is one of the most isolated and wild parts of the state and provides a truly remote experience for visitors.

## EB Empire and Belden Swamps

Size ..... Large  
Protection Initiated ..... Substantial  
Protection Remaining ..... Limited  
Conservation Significance ..... ★★★★★  
Recreation Potential ..... ★

One of the most remote areas of the state (it is likely the largest block of roadless land in the state), these forested wetlands form the core of a landscape dominated by spruce, tamarack and black ash. Northern boreal species, such as timber wolf, great gray owl, and boreal butterflies are more commonly found here than anywhere else in the state. Moose are occasionally sighted here and there is evidence that the American marten may be colonizing in the area. The land is quite flat with outlet streams that flow both north to Lake Superior and south to the St. Croix River. Low-impact recreation opportunities could occur year-round. Given the remote nature of the area and the sensitivity of breeding species present, increased motorized recreation or road building could significantly reduce the unique wild character of the area.

## MU Manitou Falls-Black River

Size ..... Small  
Protection Initiated ..... Substantial  
Protection Remaining ..... Limited  
Conservation Significance ..... ★★  
Recreation Potential ..... ★★

The Black River is a high quality river system that flows through Pattison State Park. The river contains a number of rare species and is a major tributary to the Nemadji River. Pattison is an all season park, providing facilities for camping, picnicking, swimming, hiking, and cross-country skiing. The Douglas Fault runs through the area and acts as a demarcation between the boreal forest habitat to the north and the northern mesic and aspen forests to the south. This area around the park could provide more recreation opportunities, notably trail uses.

The Black River drains into the Nemadji River, which drains into Lake Superior near the Superior municipal water system intakes and may affect the raw water quality of that system. The Superior system provides drinking water to approximately 29,600 customers.

## SX St. Croix River

Size ..... Large  
Protection Initiated ..... Substantial  
Protection Remaining ..... Limited  
Conservation Significance ..... ★★★★★  
Recreation Potential ..... ★★★★★

Flowing out of the spring-fed Upper St. Croix Lake, the river begins as a shallow, narrow, relatively fast waterway. After receiving the large volume of the Namekagon River, the river slows, widens and deepens, flowing through a wide valley with low banks. The valley is dominated by high quality mature hardwood forest. The river harbors a very diverse assemblage of aquatic species, including a variety of gamefish as well as many rare species.

In this Ecological Landscape the river is a very popular boating and paddling destination and offers some of the Midwest's most dramatic scenery. Much of the river frontage here is protected within the National Park Service's St. Croix National

Scenic Riverway and the Governor Knowles State Forest. Outside of this ribbon of land are large holdings of County Forest and State Wildlife Areas. The St. Croix River valley forms the "tail" of this Ecological Landscape; just north of St. Croix Falls, it enters the Western Prairie Ecological Landscape.

## TA Trade River Wetlands

Size ..... Small  
Protection Initiated ..... Limited  
Protection Remaining ..... Moderate  
Conservation Significance ..... ★★★★★  
Recreation Potential ..... ★

This wetland complex of marsh, sedge meadow, and shrub swamp is located in the Trade River watershed of the St. Croix Basin and straddles the Polk/Burnett County boundary. Historically, these wetlands were located at the convergence of several natural communities: mesic prairie, oak savanna, barrens, and southern mesic hardwoods. The surrounding land is rolling and soils are silt loams. The Trade River is a somewhat degraded cold-water river that flows to the St. Croix.

## UT Upper Tamarack & Spruce Rivers

Size ..... Medium  
Protection Initiated ..... Moderate  
Protection Remaining ..... Moderate  
Conservation Significance ..... ★★★★★  
Recreation Potential) ..... ★

Originating in the vast Empire and Belden Swamps, these rivers flow through a mosaic of aspen, conifer lowlands, and open wetlands. The high quality of the waters in these rivers supports a rich assemblage of species. Along with the Chase Creek system, these rivers provide a link between the extensive Douglas County Forest and Minnesota's St. Croix State Forest. Given its isolated setting, like Chase Creek to the south, the Upper Tamarack and Spruce Rivers provide a remote experience for visitors.

### Other Areas of Interest

None noted.