

Pike River in Marinette County

# Northeast Sands ecological landscape

## Attributes and Characteristics

This ecological landscape is characterized by glaciated topography with sandy, well-drained soils as well as steep outcropping bedrock knolls. This area historically supported extensive oak and pine barrens and jack pine forests. Northern hardwood and red and white pine forests were interspersed throughout the landscape. Now, most of this landscape is forested, predominantly with aspen and paper birch. Jack pine stands remain on the outwash plains along with northern pin oak. Several important remnants of oak-pine barrens remain. The outwash plains include many pitted depressions, which frequently contain wetlands and kettle lakes.

This landscape supports an exceptional concentration of high quality rivers and streams, most of which harbor outstanding trout fisheries.

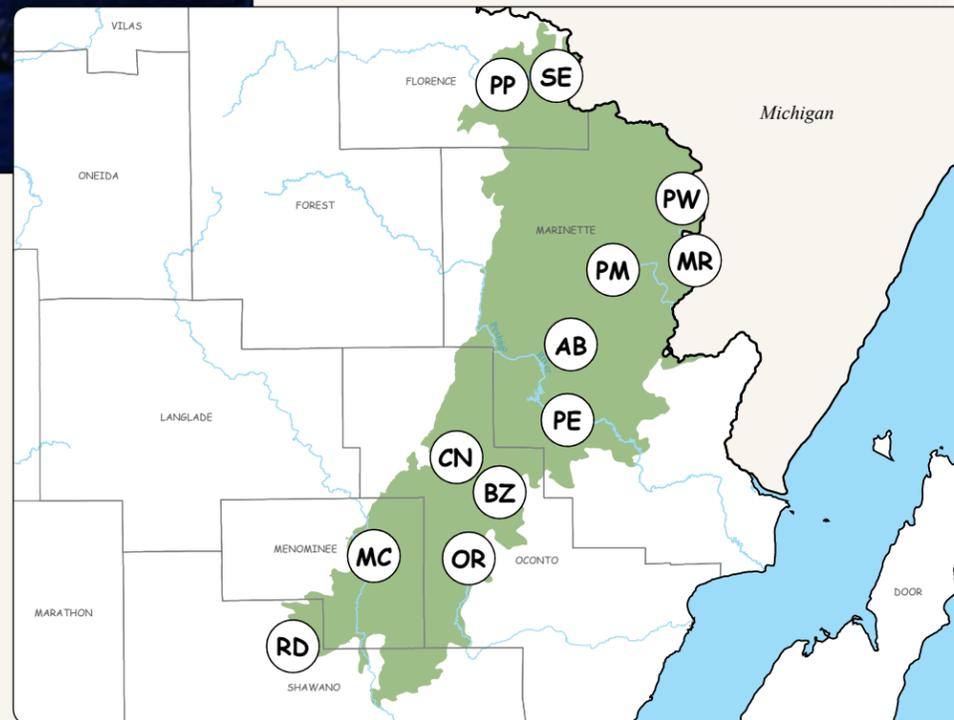
The Menominee River supported an abundant lake sturgeon population until recently. The major land use in this ecological landscape is forest commodity production, primarily for pulp. Very little agriculture occurs in the area with the majority of the crop acres in hay. The southern end of this landscape includes about the eastern half of the Menominee Indian Reservation.

## Conservation Needs and Opportunities

This ecological landscape offers one of the state's best opportunities to manage a large mosaic of oak-pine barrens and bracken grasslands. Some existing high quality barrens and bracken grasslands are found at the Spread Eagle Barrens State Natural Area, but there is potential to restore additional large patches in the drier, sandy uplands, inter-mixed with sizable stands of red and white pine.

## Legacy Places

- AB Athelstane Barrens
- BZ Brazeau Swamp
- CN Chequamegon-Nicolet National Forests
- MC Menominee County Forests
- MR Menominee River
- OR Oconto River
- PW Pemebonwon River
- PE Peshtigo River
- PM Pike (Marinette) River
- PP Pine-Popple River
- RD Red River
- SE Spread Eagle Barrens



### Key characteristics:

- » One of state's best opportunities to manage a large oak-pine barrens
- » Wild rivers and lakes
- » Waterfalls
- » Large working forests
- » Bedrock features

### Size:

- » 1,540 square miles
- » 986,800 acres (2.8% of Wisconsin)

### Population:

- » 53,000 (1.0% of Wisconsin's population)

### Notable species:

- » Black bear
- » Ruffed grouse
- » Northern blue butterfly
- » Brook trout
- » Smallmouth bass
- » Blacknose dace
- » American beech
- » Indian cucumber root

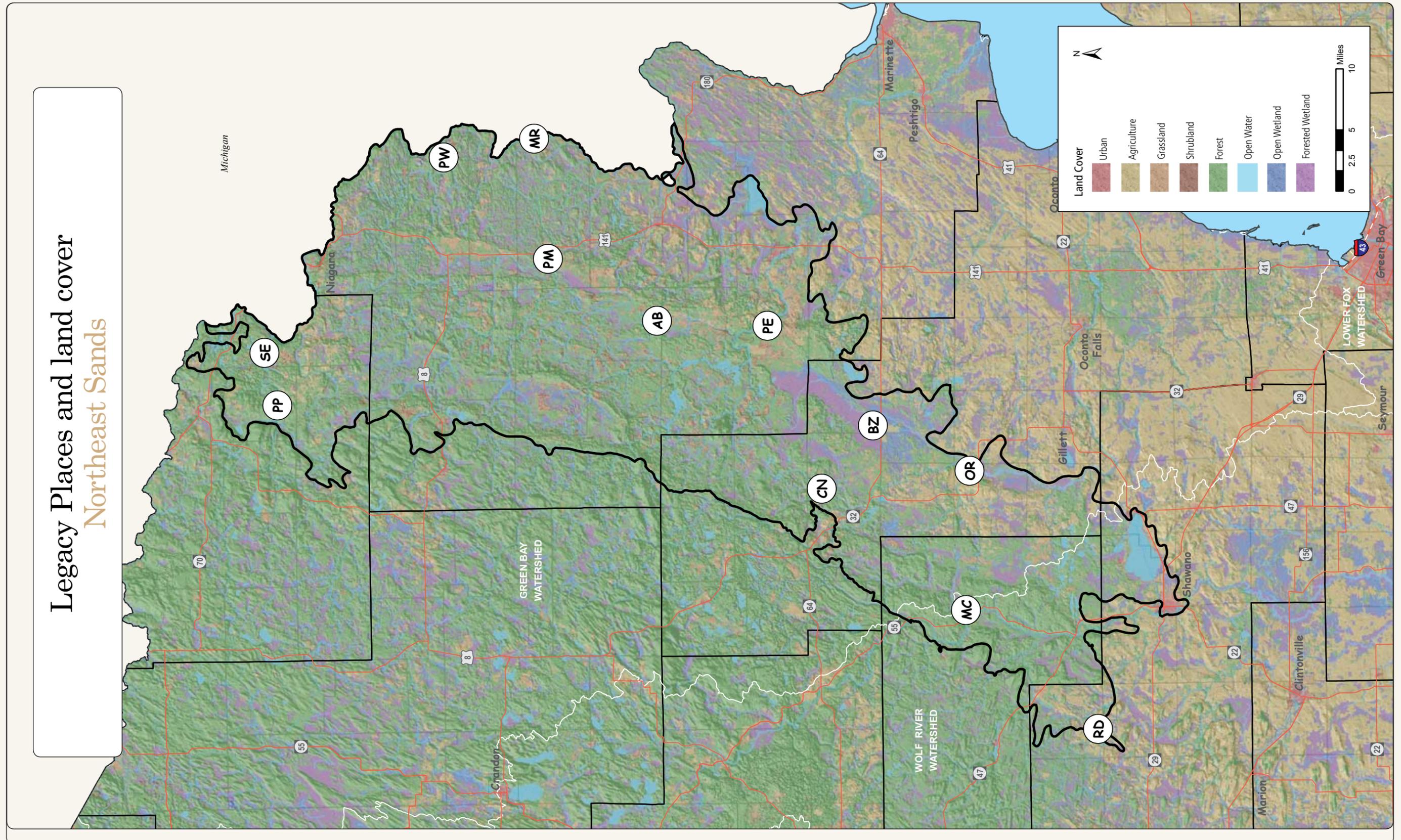
### Natural communities:

(See Appendix B for descriptions)

- » Bracken grassland
- » Dry and moist cliffs
- » Northern dry-mesic forest
- » Northern mesic forest
- » Northern wet-mesic forest
- » Oak barrens
- » Pine barrens
- » Tamarack swamp



Figure 72: Legacy Places and land cover of the Northeast Sands



## Public Conservation Lands

Map#	Property Name	Size (acres) <sup>1</sup>
<b>State</b>		
1	Amberg State Wildlife Area	1,170
2	Board of Commissioners of Public Land	3,000
3	Dunbar Barrens State Natural Area	1,320
4	Miscauno State Wildlife Area	620
5	North Branch Beaver Creek State Fishery Area <sup>2</sup>	450
6	Peshtigo Brook State Wildlife Area	2,200
7	Peshtigo River State Forest	9,200
8	Pike Wild River	4,410
9	Pine-Popple Wild Rivers	21,270
10	South Branch Oconto River State Fishery Area	640
11	Spread Eagle Barrens State Natural Area	26,010
12	Governor Thompson Centennial State Park	2,500
13	Town Corner State Wildlife Area	900
	Miscellaneous Lands <sup>3</sup>	2,570
<b>Federal</b>		
1	Chequamegon-Nicolet National Forests <sup>2</sup>	71,950
<b>County Forest<sup>4</sup></b>		
1	Florence County Forest <sup>2</sup>	20,250
2	Marinette County Forest <sup>2</sup>	183,490
3	Oconto County Forest <sup>2</sup>	27,500
<b>TOTAL</b>		<b>339,450</b>

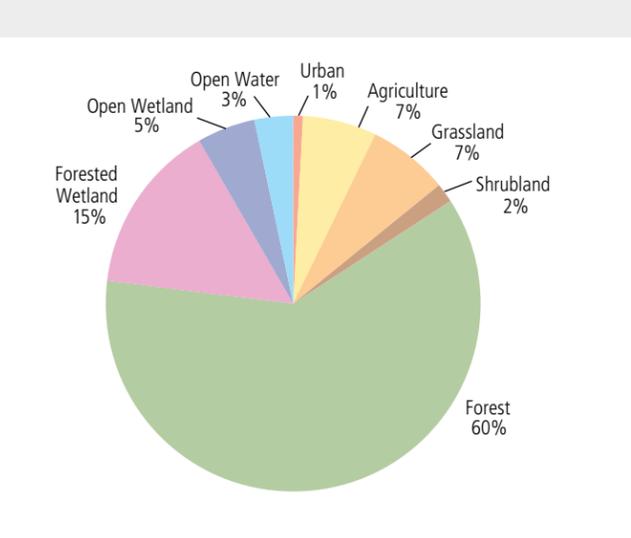
<sup>1</sup> Actual acres owned in this Ecological Landscape.

<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.

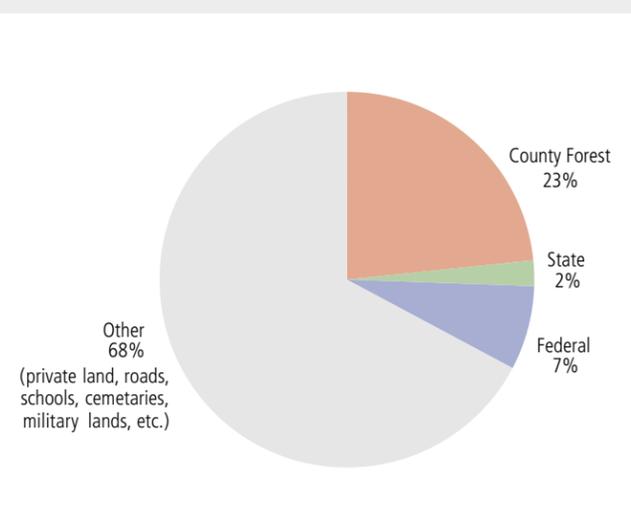
Figure 73: Land cover of the Northeast Sands



These areas could support significant populations of grassland/shrub bird species, several of which are of management concern in the Midwest. The southwest portion of this landscape contains mesic forest with a significant American beech component.

This landscape's other notable feature is the abundance of high quality streams and rivers. Many of these originate within (or are substantially fed by) the numerous wetlands scattered throughout the landscape and benefit, both in terms of water quality and quantity, from the heavy forest cover. Most streams and rivers support significant trout fisheries and are laced with numerous rapids and waterfalls. The Menominee River corridor is largely undeveloped, with many rock outcrops and cliffs that harbor a number of unusual and rare species.

Figure 74: Public conservation and other land ownership in the Northeast Sands

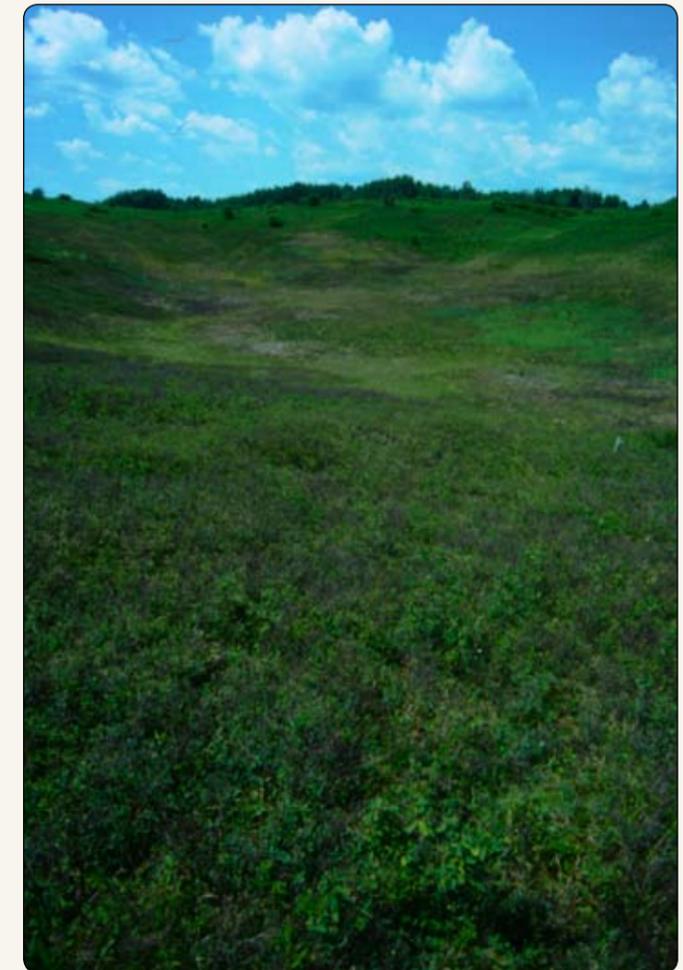
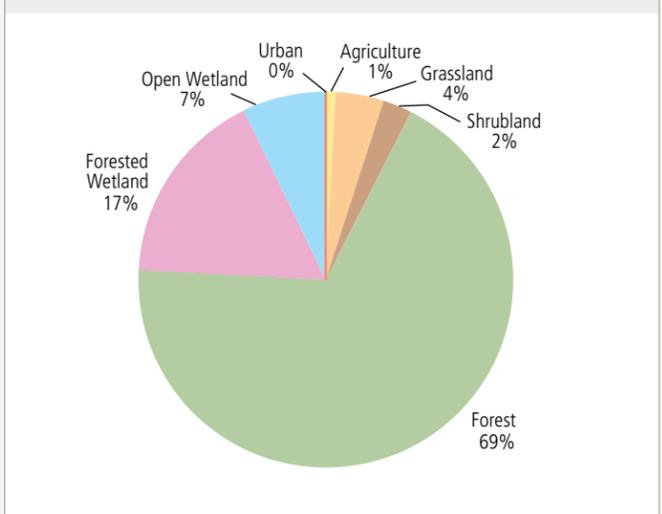


## Recreation Uses and Opportunities

The Pine, Popple, Pike, Peshtigo, and Menominee Rivers are very popular paddling and fishing waters and draw thousands of visitors each year. The Roaring Rapids section of the Peshtigo is widely regarded as the finest whitewater canoeing and kayaking water in the Midwest. Fishing on the many high quality trout streams that feed into the major rivers is very popular. Numerous waterfalls and rapids occur throughout the northern part the landscape and are part of the aesthetic draw of the area.

With over 300,000 acres of County and National Forests in this landscape, there is ample opportunity for a variety of recreation pursuits. Snowmobiling, hunting (particularly for grouse and deer), fishing, bird watching and hiking are popular activities here. This area of the state has relatively few camping opportunities. Establishing more, especially those accessed from paddling rivers, would likely be popular. There is demand for additional off road biking, rustic camping, and recreational vehicle camping opportunities in the area. The newly established Governor Thompson Centennial State Park and Peshtigo River State Forest are both expected to draw many visitors throughout the year.

Figure 75: Land cover of public conservation lands in the Northeast Sands



Spread Eagle Barrens State Natural Area in Florence County

# Legacy Places



Brook Trout (*Salvelinus fontinalis*)

## AB Athelstane Barrens

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

This area is now used mostly for pulp production, but the growth is patchy, with groves of dense forest bounded by openings containing only scattered trees. Scattered grassy areas still harbor many prairie species, indicating a more open landscape in the past. Adding to the diversity are numerous rock outcrops. This area represents one of the best opportunities for large-scale barrens restoration in the northeast part of the state. An area large enough to support a viable population of sharp-tailed grouse could be restored here.

## BZ Brazeau Swamp

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

This vast wetland at the southern end of the ecological landscape is a mostly forested complex with some high quality sedge meadows and extensive shrub swamps. Several rare plants have been found in the wetlands. Although some farmland occurs here, a significant portion of the area is within Marinette County Forest and the DNR's Peshtigo Brook State Wildlife Area. The Chequamegon-Nicolet National Forest lies to the west. At over 10,000 acres, it is one of the largest wetlands in the state.

## CN Chequamegon-Nicolet National Forests

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

This portion of the Forest includes a remnant glacial moraine supporting aspen, northern hardwood, and pine forests. An area of sandy outwash hills and plains supports jack and red pine forests, aspen, bogs, and muskegs. Although the area makes up only about 4% of the total land

area of the Chequamegon-Nicolet National Forests, it is of significant ecological importance. It represents a landscape of mixed glacial moraine and outwash origin that is uncommon on the rest of the Forest. Some pine barrens management has taken place, although opportunities are limited by the size of the area in National Forest ownership. Aspen forests provide habitat for early-successional wildlife species, and offer opportunities for ruffed grouse and woodcock hunting. Off road vehicle use has been restricted to roads posted for such use, but current guidelines are being revised as part of the National Forest planning process.

## MC Menominee County Forests

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

Entirely within the Menominee Indian Reservation, this large forest block harbors many interesting features. The extreme southeast portion is dominated by oak-jack pine forest. Traveling to the northeast part of the County, the forest cover proceeds through immense white cedar swamps to a mesic forest with a heavy beech component. Along the Wolf are rocky outcrops harboring several uncommon plant species.

The forests are managed differently than most in the state with an emphasis on maintaining nearly every tree species to its biological rotation age (growing the tree until the heartwood begins to decay). The result is a dense canopy with many large diameter trees. The Menominee County forest provides a source population for many Neotropical migrants.

## MR Menominee River

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

Over 100 miles long, the Menominee River forms a portion of the border between Wisconsin and Michigan's Upper Peninsula for its entire length from its source until it empties into Green Bay at the twin cities of Marinette and Menominee. The upper reaches of the Menominee flow through a mostly wild landscape, dominated by upland

and lowland forests, although some open barrens also exist. The forests bordering the river are diverse, containing deciduous and coniferous species. The lower Menominee watershed is characterized by more farmland and residential development, but is still scenic. The topography of the river corridor varies from broad floodplains to narrow bedrock gorges with basalt cliffs or talus slopes. Places of particular scenic value include Piers Gorge, just downstream from the City of Niagara, the Chalk Hills area and Pembine Talus Slopes

The Menominee River provides many spectacular views, great fishing, and a variety of water-based recreation opportunities. The river's warmwater fishery harbors northern pike, walleye, smallmouth bass and panfish. It also provides some fall fishing for sturgeon. Several rare species are known to occur in the river corridor, particularly along north-facing talus slopes, and it is likely that more rare plants and invertebrates exist than have been documented to date. Although less than ten miles of the shoreline on the Wisconsin side of the Menominee River is in public ownership, electric power and forest products companies own a significant amount of land, much of which is currently open for public recreational use.

The Menominee River discharges into Green Bay near the City of Marinette's municipal water system intake and may affect the raw water quality of that system. The Marinette system provides drinking water to approximately 12,700 customers.

## OR Oconto River

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

Originating in a series of small, spring-fed streams deep in the Nicolet National Forest, the North and South Branches of the Oconto River flow through extensive floodplain forests before uniting into a larger main stem. The headwaters area is characterized by numerous trout streams, small lakes and dense woods. At Suring, the North and South Branches are joined by Peshtigo Brook, which drains the vast Brazeau Swamp. Downstream from here the river is impeded by only two dams, one at Oconto Falls and one that forms the Machickanee Flowage.

Northeast Sands  
ecological landscape



Peshtigo River in Marinette County

ROBERT QUEEN

The Oconto River corridor connects several areas of significant natural resources. In its upper reaches, the river connects the Nicolet National Forest with several small, scattered state and county lands. From Suring downstream to Pulcifer, the river flows through very large blocks of high quality forest, most of which is floodplain forest interspersed with open wetlands and upland woods.

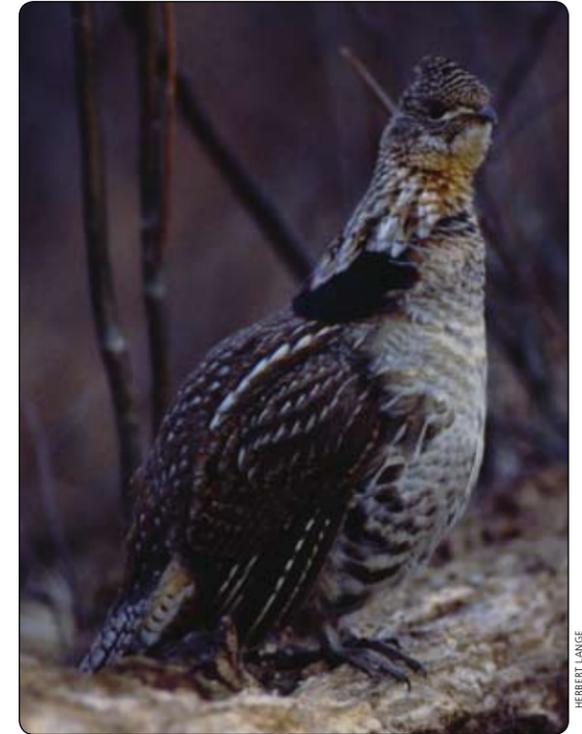
Canoeing and kayaking are popular activities on the river, with an abundance of rapids on the upper stretches and more serene waters further downstream. The river harbors an excellent trout fishery in its headwaters and a warmwater fishery in its middle and lower portions. Also, a prolonged steelhead run occurs in the spring as fish enter the mouth and are able to swim upstream as far as the Stiles dam. Throughout the river and its tributaries are many important spawning areas that help sustain the fisheries of Green Bay.

**PW Pemebonwon River**

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

Downstream from USH 141, the Pemebonwon flows through a remarkably scenic valley of hardwood forests, rock outcrops, waterfalls, and unusual north-facing talus slopes. Many rare plants and invertebrates are found on the rock outcrops and talus slopes. The Pemebonwon River and its North and South Branches contribute excellent water quality to the Menominee River and support high quality, coldwater fisheries. While a significant amount of the Pemebonwon River flows through county forest land, critical stretches remain unprotected.

The Pemebonwon River drains into the Menominee River, which discharges into Green Bay near the City of Marinette's municipal water system intakes and may affect the raw water quality of that system. The Marinette system provides drinking water to approximately 12,700 customers.



Ruffed Grouse (*Bonasa umbellus*)

HERBERT LANGE

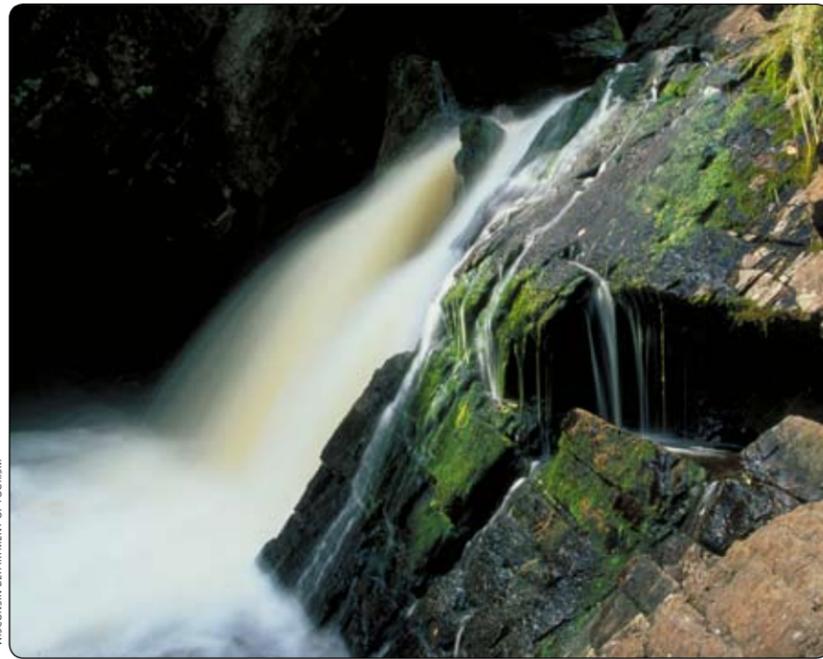
**PE Peshtigo River**

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

The Peshtigo is one of America's great rivers. From headwaters to mouth, it is a very scenic river, offering outstanding recreational opportunities. The Peshtigo has a rich history, interesting geology and a diverse flora and fauna. The river contains segments of both flatwater and whitewater as it passes through different geologic regions. Precambrian shield bedrock dominates the river's upper sections. Sandy soils and small drumlins define its middle section. Before emptying into Green Bay, it crosses the flat bed of a larger glacial Lake Michigan.

The river's upper reaches, along with several of its tributaries, support an excellent trout fishery. Notable tributaries include the North Otter Creek and the North Branch of the Peshtigo. Most of the headwaters of the Peshtigo are within the Nicolet National Forest and Marinette County Forest.

## Northeast Sands ecological landscape



Long Slide Falls on the Pemebonwon River

WISCONSIN DEPARTMENT OF TOURISM

The Roaring Rapids section of the river, upstream from the Caldron Falls Reservoir, is considered the most challenging paddling experience in the Midwest and draws thousands of whitewater enthusiasts each year.

The state recently established two new public properties along the Peshtigo River: Governor Thompson Centennial State Park and the Peshtigo River State Forest. These properties, which together include over 11,000 acres along the Caldron Falls and High Falls Reservoirs, and the Peshtigo River, protect some of the state's most spectacular scenery and are expected to be very popular destinations for a variety of outdoor activities. Boating and fishing on the flowages are very popular.

Two high ridges, Thunder and McCaslin Mountains, lie within two to three miles of the Peshtigo River. These quartzite monadnocks are covered with second growth maple-beech forest with some large white pines. Bedrock glades and talus slopes are present. The river and the adjacent upland ridges offer an opportunity to provide a wide variety of land and water based recreation activities in this area.

The Peshtigo River eventually drains into Lake Michigan near the City of Marinette's municipal water system intakes and may affect the raw water quality of that system. The Marinette system provides drinking water to approximately 12,700 customers.

### PM Pike (Marinette) River

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

The two main branches of this crystal clear river originate in the Marinette County Forest. Numerous rapids and waterfalls occur throughout this river system. The Pike is designated as a Wild River and the DNR currently owns almost 4,000 acres along the river corridor in this ecological landscape. The Pike is one of Wisconsin's better and more popular whitewater rivers. Although the DNR's land is buffered by Marinette County Forest in the headwaters and near the Menominee River, little land beyond the immediate river corridor is formally protected in the middle reaches.

The Pike River drains into the Menominee River, which discharges into Green Bay near the City of Marinette's municipal water system intakes and may affect the raw water quality of that system. The Marinette system provides drinking water to approximately 12,700 customers.

### PP Pine - Popple River

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

The headwaters of the Pine flow out of wetlands in the Nicolet National Forest. As the river gains volume with the many coldwater feeder creeks, it also picks up speed and flows through many rapids. The Popple River joins the Pine in central Florence County and adds considerable volume. The Pine-Popple offers excellent whitewater paddling opportunities and it, as well as its many tributaries, are highly prized trout waters. The Pine flows through the Spread Eagle Barrens area before meeting the Menominee River. The Pine-Popple system is a designated Wild River and the DNR currently owns just over 1,200 acres along the river corridor in this landscape. Very little formal protection exists outside of the immediate river corridor.

The Pine-Popple River drains into the Menominee River, which discharges into Green Bay near the City of Marinette's municipal water system intakes and may affect the raw water quality of that system. The Marinette system provides drinking water to approximately 12,700 customers.

### RD Red River

See Northern Lake Michigan Coastal ecological landscape.

### SE Spread Eagle Barrens

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

This is the largest remaining pine barrens/bracken grassland in northeastern Wisconsin. Many species of concern that require large open landscapes are found here, including black bear, badger, upland sandpiper, and Nashville warbler. A combination of timber harvesting and prescribed burning is used to restore and maintain the barrens. The DNR owns almost 3,000 acres and has a conservation easement on an additional 1,900 acres within the Spread Eagle Barrens State Natural Area. This large area offers visitors a remote setting for a variety of non-motorized uses.

## Other Areas of Interest

### Middle Inlet (Marinette County)

This good quality, coldwater trout stream drains out of the rolling moraine of central Marinette County. In its lower reaches it flows through several large forested wetlands before entering Lake Noquebay. This stream is not formally protected.