

**Porcupine Mountain
Wilderness State Park**



PARK PROFILE	
AREA	59,020 acres
COUNTY	Ontonagon and Gogebic Counties
TOWNSHIP	Wakefield and Carp Lake Townships
LATITUDE	46.767000
LONGITUDE	-89.750000
ADDRESS	33303 Headquarters Rd. Ontonagon, MI 49953-9087
PHONE	1-906-885-5275

Appendix A: Supporting Analysis

A.1 Park Setting

Porcupine Mountains Wilderness State Park (PMWSP), located in the western Upper Peninsula of Michigan, is the largest of Michigan's state parks, encompassing over 59,000 acres. Most of the park is legally designated as a Wilderness Area under Part 351 of Public Act 451 of 1994 in recognition of its magnificent forests, scenic vistas and geological formations. The majority of the park is also recognized by the National Park Service as a National Natural Landmark.

The Porcupine Mountains rise abruptly above Lake Superior to a high elevation of 1,958 feet above sea level, forming a 12-mile-long escarpment. Nestled in the mountains are Lake of the Clouds and Mirror Lake, which feed into the Big and Little Carp rivers, respectively. The park features deep-cut river valleys, many spectacular waterfalls and 21 miles of shoreline on Lake Superior. The park also features old-growth hemlock-hardwood stands that were protected from logging by the formation of the park in 1945.

The expansive acreage of the park offers a range of recreation opportunities including modern and rustic camping on the lakeshore, backcountry camping, hiking on over 90 miles of trails, cross-country skiing, hunting, fishing, wildlife and scenic viewing, a Visitor's Center and a winter downhill ski

area operated through a lease agreement. The Porcupine Mountains WSP also features a number of historic structures including 12 cabins constructed primarily in the 1940s that are available for rent by park visitors.

Location & Community

Porcupine Mountains Wilderness State Park is located in the northwest corner of Michigan's Upper Peninsula in Gogebic and Ontonagon counties. The park headquarters is 15 miles west of Ontonagon and 50 miles northeast of Ironwood by road. The main access to the park is off M-64, which follows the Lake Superior shoreline from Ontonagon. The east and west ends of the park are linked by the South Boundary Road, a seasonal county road which is closed from December 1 to late spring, depending on road conditions. Locally, the communities of Silver City, White Pine and Wakefield offer limited amenities for park visitors. The cities of Houghton to the northeast and Ironwood to the southwest offer a wider range of amenities. The park welcomes over 300,000 visitors per year from across the globe.

The western Upper Peninsula is a year-round destination for adventurers, offering spectacular, remote wilderness experiences. The region includes almost one million acres of



National Forest System land, which extends from the south shore of Lake Superior to the Wisconsin border. The area is rich in wildlife viewing opportunities; supports breathtaking views of rolling hills interspersed with lakes, rivers and waterfalls; and is known for spectacular fall color displays. Historical sites are also plentiful, telling the stories of the ethnic settlements, the timber industry, iron and copper mining communities and Native American mining and trading.

A.2 Demographics

Porcupine Mountains Wilderness State Park (PMWSP) spans the border between Ontonagon and Gogebic counties. Both are rural counties with a low population density. Ontonagon County is the second least-populated county in the state after Keweenaw County. The region's low population is starkly contrasted with the high visitation the park receives. The United States Census Bureau data below shows that both counties have been experiencing a decline in population in recent years.

These counties can be characterized by a high representation of people of European decent. The data shows an aging population with a higher than state average of persons over the age of 65 and lower percentages of persons under 18 years and under 5 years. Per capita and median household income are both lower than the state average. Three sectors dominate the economy of Gogebic County: diverse industries, forest products and tourism. The largest employer in Ontonagon County is Aspirus Ontonagon Hospital, and the area also has a growing tourism and recreation industry.

UNITED STATES CENSUS DATA FOR ONTONAGON AND GOGEBIC COUNTIES

FACT	ONTONAGON COUNTY	GOGEBIC COUNTY	MICHIGAN
Population estimate 2017	5,881	15,342	9,962,311
Population, Census 2010	6,780	16,427	9,883,640
Population % change – April 2010 to July 2017	-13.3%	-6.6%	0.8%
Persons under 5 years, percent	2.8%	4.0%	5.8%
Persons under 18 years, percent	12.6%	15.7%	21.8%
Persons 65 years and over, percent	35.4%	24.9%	16.7%
Female persons, percent	49.0%	45.8%	50.8%
White alone, percent	96.1%	90.5%	79.4%
Black or African American alone, percent	0.3%	4.4%	14.1%
American Indian and Alaska Native alone	1.5%	2.9%	0.7%
Foreign born persons, percent, 2012-2016	1.8%	1.3%	6.4%
Housing units July 2017	5,691	10,798	4,595,158
Owner-occupied housing unit rate, 2012-2016	87.6%	78%	70.8%
Median Value of owner-occupied housing units	\$69,500	\$69,800	\$127,800
High school graduate or higher, % 25 yrs+, 2012-2016	91.7%	92.7%	89.9%
Bachelor's degree or higher, % 25 yrs+, 2012-2016	17.4%	17.5%	27.4%
Persons with a disability, under age 65	13.1%	11.3%	10.4%
Mean travel time to work (minutes), 2012-2016	24.3	17.3	24.3
Median household income in past 12 months, 2012-2016	\$35,038	\$35,833	\$50,803
Per capita income in past 12 months, 2012-2016	\$22,428	\$21,464	\$27,549
Persons in poverty, percent	15.80%	20.40%	15.00%
Population per square mile, 2010	5.2	14.9	174.8
Land area in square miles, 2010	1,101.85	1,311.23	56,538.90

A.3 Regional Recreation Resources

Federal Resources

- **Ottawa National Forest** spans from the south shore of Lake Superior to the Wisconsin border between Ironwood and Iron Mountain and directly borders Porcupine Mountains Wilderness State Park (PMWSP) to the south. This area of almost one million acres features rolling hills, lakes, rivers and waterfalls and is rich in wildlife and scenic viewing opportunities. Other recreation opportunities include camping, fishing, hunting, hiking, cross-country skiing, snowshoeing and snowmobiling.
- **Black Harbor Recreation Area** is located within the Ottawa National Forest on the shores of Lake Superior, just a few miles west of the Porcupine Mountains WSP. The site offers scenic hiking, Lake Superior beaches, a 40-site campground and a series of scenic waterfalls as the Black River flows through the forest. An historic pavilion built by the Civilian Conservation Corps (CCC) is also located here. The harbor offers one of the few access points on Lake Superior, with a launch ramp that can accommodate most trailered watercraft.
- **North Country National Scenic Trail (NCNST)** was authorized by the United States Congress in 1980 and is the longest National Scenic Trail at 4,600 miles. The route, from New York to North Dakota, passes through seven states. More than 1,500 miles are in Michigan,

with approximately 23 miles of the trail passing through Porcupine Mountains WSP. The trail within the park is maintained by the Ni-Miikanaake Chapter of the North Country Trail Association.

State Parks

- **Lake Gogebic State Park** is 26 miles south of Porcupine Mountains WSP. The 360-acre park provides about one mile of shoreline along Lake Gogebic, the largest inland lake of the Upper Peninsula. The park provides opportunities for camping, hiking, swimming, fishing, and boating, as well as serving as a base for exploring the western Upper Peninsula.
- **Twin Lake State Park** is about 44 miles to the east of Porcupine Mountains WSP. The park is situated in Houghton County, in the heart of Michigan's Copper Country. This 175-acre park provides a central location to explore various attractions such as nearby mines and historic Fort Wilkins. Park facilities include campsites, a boat launch, beach, 1.5-mile hiking trail and access to ORV trails.
- **Agate Falls and Bond Falls Scenic Sites** are located approximately 40 miles southeast of the park. These sites, both located on the middle branch of the Ontonagon River, offer views of scenic waterfalls, with parking and picnicking opportunities.



Bond Falls Scenic Site

Baraga Forest Management Unit

The Baraga Forest Management Unit (FMU) manages all state forest lands in Baraga, Gogebic, Houghton, Keweenaw, and Ontonagon counties. The following are the relevant management areas near Porcupine Mountains WSP.

- **Norwich Plains** sits 27 miles to the east of the park in Ontonagon County. This 4,600-acre area is situated on a Dissected Till Plain dominated by a mesic northern forest community composed of aspen and northern hardwood species. This area provides benefits such as recreational activities, wildlife habitat, fish habitat and forest products.
- **Central Houghton** covers a 46,908-acre area in Houghton County. It is about 45 miles east of Porcupine Mountains WSP. This management area is primarily situated on Dissected Moraines which are dominated by a mesic northern forest community composed of northern hardwoods, aspen and lowland conifers. Although this area's management priority is to produce high-quality timber products it also provides benefits such as recreational activities, wildlife habitat, and fish habitat. This forest also contains one of the Grouse Enhanced Management System (GEMS) areas of the western Upper Peninsula, which are intensively managed accessible ruffed grouse hunting areas.
- **The Baraga FMU** is co-managed by the Department of Natural Resources Wildlife Division to maintain viable wildlife populations and provide recreational opportunities for wildlife viewing, hunting and trapping. Featured species in the western Upper Peninsula include highly valued game species, threatened and endangered species and species of greatest conservation need. There are four grouse enhanced management sites (GEMS), premier bird hunting areas, in the Baraga FMU: Norwich, Blue Bill Creek, Mosinee, and Hazel Swamp.

State Trails

- **Iron Belle Trail** is the longest designated state trail in the nation, stretching from Belle Isle in Detroit to Ironwood in the Upper Peninsula, with separate routes for biking and hiking. The hiking trail follows the route of the North Country National Scenic Trail through Porcupine Mountains WSP and will be 1,221 miles long once complete. The biking trail follows US 2 across the western Upper Peninsula.
- Multi-Use Trails include:
 - Ontonagon to Rockland Rail Trail- (13 miles) heading south from Ontonagon
 - Bergland to Sidnaw Rail Trail- (49 miles) heading east from Lake Gogebic
 - Stateline Rail Trail (95 miles) west of the park following the Wisconsin border from Iron Mountain to Wakefield, MI
- ORV Trails in the area include:
 - Ontonagon to Rockland Route (13 miles) heading south from Ontonagon



A kayak on the shore of Lake Superior

- Bergland to Sidnaw Route (49 miles) heading east from Lake Gogebic
- Pioneer Trail (24 miles) begins northeast of Bergland to Victoria reservoir in Rockland Township
- Snowmobile Trails: a network of interconnected snowmobile trails can be found in the area around Porcupine Mountains WSP.
 - Trail 11 follows the South Boundary Road through park from the lakeshore connecting to trail 102 which leads to the north end of Lake Gogebic.
 - Trail 1 provides access to Lake of the Clouds Scenic Overlook. This very popular trail travels east from the overlook along the lakeshore then south to Lake Gogebic, it connects to multiple other routes to Ontonagon, Wakefield, Iron Mountain and more.
- Lake Superior Water Trail: The Western Upper Peninsula Water Trail traverses 319 miles along the southern shore of Lake Superior. Beginning at the Michigan-Wisconsin border, the water trail passes the Porcupine Mountains WSP and continues around the Keweenaw Peninsula to the Baraga-Marquette County line. The park provides paddlers with several access points and accommodations in the shoreline campgrounds and cabins. The water trail passes by some of Michigan's most rugged but beautiful coast line.

Township and County Parks

- **Ontonagon Township Park** is 17 miles east of the Porcupine Mountains WSP. The park provides camping along the Lake Superior shoreline.
- **Bergland Township Park** is about 20 miles south of Porcupine Mountains WSP. The park is situated at the north end of Lake Gogebic and provides opportunities for camping and picnicking as well as beach access on Lake Gogebic.
- **Black River County Park** is only about two miles southwest of Porcupine Mountains WSP along the shoreline but is around 32 miles away by road. The county park includes a harbor, providing boat access to Lake Superior. The park also features hiking trails through old-growth hemlock and hardwood forests, as well as five different waterfalls along the route.
- **Ontonagon County Park** is located 26 miles south of Porcupine Mountains WSP along the western shore of Lake Gogebic. This park provides a boating access site to Lake Gogebic, camping, beach access and picnicking.

Other attractions

There are many unique destinations in the region relating to the area's heritage and geology, some of which are listed below:

- Copper Peak, an international ski flying hill, is the location of the world's largest ski jump. It is also listed on the National Register of Historic Places as a historic mining site. The observation deck, accessed by chairlift or shuttle and 18 story elevator, provides the highest, unobstructed, 360 degree vista in the Midwest, overlooking 2500 square miles of the western Lake Superior region.
- Alligator Eye is an igneous rock outcrop which rises 300 feet above Lake Gogebic. The quartz veins found on this site were the focus of quarrying efforts by ancient miners nearly 3,500 years ago who used the quartz to produce tools.
- Ontonagon County Historical Museum is in the heart of historic Ontonagon's downtown. The museum houses displays outlining the development of the region in mining, logging, agriculture and industry, with special emphasis on Ontonagon's maritime history. There are also displays of minerals, local archaeological finds, firearms and weapons, and antiques.
- Historic Bergland Ranger Station/Heritage Center was constructed in 1936 by the CCC and was one of the first administrative offices built for the Ottawa National Forest. This vintage property is eligible for the National Register of Historic Places and is one of the only remaining United States Forest Service offices of this type within the Eastern United States.
- Bond Falls Flowage and Campground is recreational land owned by the Upper Peninsula Power Company. It includes cottages, a campground, a picnic area, boating access, and trails at the base of the falls.
- The Historic Adventure Copper Mine provides guided tours of an authentic underground mine, as well as group and educational tours.
- Victoria Dam, owned by the Upper Peninsula Power Company, includes a boat launch, parking for cars and trucks with trailers, and sport fishing opportunities.
- Old Victoria Historic Townsite is a restoration of an early mining village, with hand-hewn log cabins built to house miners at the Victoria Copper Mine.
- Military Hills is an MDOT Roadside Park with an historic marker commemorating Abraham Lincoln's commissioning of the road from Green Bay to Fort Wilkins as a military highway to secure copper supplies for the Union Forces. The park has picnic facilities, a dog run and vault toilets.

Private Recreation Facilities

The western Upper Peninsula, with an average annual snowfall of 17 feet, offers three downhill ski resorts: Big Snow, Big Powderhorn Mountain and White Cap Mountain. All provide accommodations and other services. The region also has a range of private campgrounds, lodging opportunities, resorts, guide services, liveries/rentals and more to support visitors.

Nearby private overnight accommodations include:

- Union River's Big Bear Campground, located at the entrance of the Porcupine Mountains Wilderness State Park, with 50 campsites
- River Road RV Park, Campground and Bunkhouse, located along the Ontonagon River, with 30 full hook-up campsites and tent sites open year-rounds
- Mountain View Lodge, located on the shores of Lake Superior, offers fully furnished cabins year-round
- Lakeshore Cabins Resort in Silver City, two miles east of the park, offers six cabins for rent
- Lake of the Clouds Resort in Silver City provides full-service cabins, bike rental and lake access
- Porcupine Lodge provides six furnished condos for rent
- Konteka Black Bear Resort, located in White Pine offers a motel and other amenities
- AmericInn in Silver City is three miles east of the park with 71 guest rooms

A.4 History of Porcupine Mountains Wilderness State Park

The namesake of the Porcupine Mountains is believed to have originated with the Ojibway people, who thought the prominent escarpment resembled the hunched profile of a porcupine's back. Before the arrival of French explorers and fur traders in the early 1600s, an amalgamation of native tribes had moved into the Lake Superior region. The Upper Peninsula Anishinabe ("original people") were seasonally nomadic and subsisted primarily by hunting, trapping and fishing. A permanent Ojibway village stood at the mouth of the Ontonagon River, with other smaller villages at the mouths of the Big Iron and Presque Isle rivers. The Archaeological Atlas of Michigan (Hinsdale, 1931) shows a Native American trail running through part of what is now Porcupine Mountains Wilderness State Park from Lake Superior to Union Bay, indicating use of the park lands by the early people in the region.

Early written accounts by individuals exploring for mineral resources in Michigan's Upper Peninsula mention contact with trapper/traders and Native Americans during their travels in the 1840s. The 1841 report by Michigan's first state geologist, Douglass Houghton, resulted in the nation's first mineral rush, with prospectors heading to Michigan's Keweenaw Peninsula in search of copper. Mining in the Porcupine Mountains began in the mid-1800s (1845 at Union and LaFayette mines) though it is reported that a few of the mines were located on former prehistoric mine sites. Many different mining companies came

to the Porcupine Mountains area in search of copper and silver, but after several years and little yield the mines closed. Later attempts at reopening some of the mines and reworking the spoils yielded little results. At least forty-five mines (10 companies) were established within what is now Porcupine Mountains Wilderness State Park's boundaries including the Nonesuch Mine, which operated from 1867 until 1912, and the Carp Lake Mine, which was worked intermittently from 1858 until 1929. Townsites were built to support mining.

As the wave of mining swept the mountains, the logging industry started to take advantage of the area as lumbermen began to move westward after exhausting supplies to the east. Logging in the Porcupine Mountains began only after other forests had been cleared, with the first account of logging in 1899. In the early 1900s, the more accessible fringes of the Porcupine Mountains were logged, with several logging camps established in the area. Other areas were spared as mining companies were reluctant to sell and the inaccessible interior forests were not rich in white pine, which was the primary interest at the time. By 1913, the big camps in the Porcupine Mountains were abandoned. However, limbs and tops left behind fueled many fires. In the late 1930s and early '40s, logging in the Porcupine Mountains resumed, this time of hardwoods and hemlock. Loggers continued work in the Porcupine Mountains up until the park was dedicated in 1945 and as late as 1960 in the very eastern sections.

Although the Porcupine Mountains was not dedicated as a state park until 1945, the area was the subject of several



1945 Conservation Commission with P.J. Hoffmaster



A commemorative plaque

proposals to preserve the area for public recreation. In the early 1920s, P.J. Hoffmaster, the first chief of state parks in Michigan, identified the Porcupine Mountains as a location for a possible state park.

In 1928, a petition was made for the area to become a national park, but the Great Depression stalled the talks and the advent of World War II effectively halted park development across the nation (even though in 1935 the US Forest Service acquired over 6,000 acres near Lake of the Clouds to be added to the nearby Ottawa National Forest). Fearing loss of the virgin forest, in 1940, Raymond Dick organized the “Save the Porcupine Mountains Association” to protect the property from commercial mining and logging and to preserve it as a park.

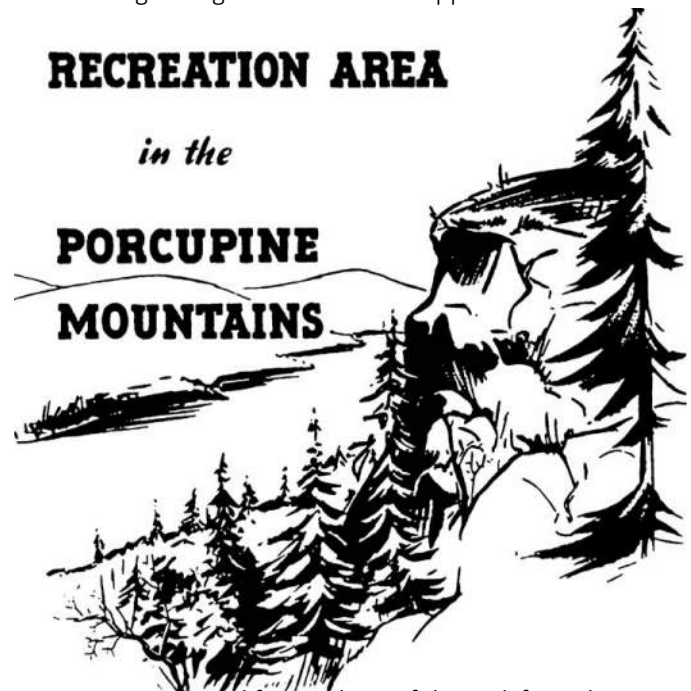
In 1933-34, an emergency conservation work wintercamp, Civilian Conservation Corps (CCC) Camp 106.5, Ontonagon State Camp, was established in the area of the current park headquarters. The camp primarily employed youth ages 18-25 in state forestry programs directed towards fire hazard reduction and restoration of depleted natural resources.

In 1944, the State Park Division adopted a new program for the acquisition of an area in the Porcupine Mountains for its scenic value, public recreation and for the preservation of a part of the last remaining large stand of virgin hardwood-hemlock forest in Michigan. The Michigan Legislature, in an extra session, appropriated \$1 million dollars for the acquisition of the Porcupine Mountains area. That year, the state purchased 46,000 acres in conjunction with the adoption of a statewide development program centered on recreation and increased tourism. Thus, the development of Porcupine Mountains Wilderness State Park wedded two ideas: preservation of the natural beauty of the area and public recreation.

In 1945, development of a trail system into the wilderness interior began. By 1949, ten cabins were constructed at scenic points on the trails and can only be reached by hiking or by boat. The earliest cabins are the Mirror Lake group of three cabins. Two additional cabins within the park once belonged to Raymond Dick— the man who led the effort to save the Porcupine Mountains in the 1940s— and became the property of the state upon his death.

The original campground for the park was a single loop road located to the east of the current Union Bay Campground at approximately the location of the organizational camp and Gitche Gumie Cabin. Work on this campground began in 1947 and was completed in 1948. The service area was constructed off County Road 107, just west of the Union Bay campground. Consisting of a garage, workshop, wood shop and two residences, this is one of the most intact original service areas in the park system.

In the 1950s, the Porcupine Mountains (Wilderness) State Park participated in the prison work program, and picnic tables and other features for Michigan’s state parks were constructed in the park’s wood shop. The prison camp was initially located within the park boundary, then re-located east of the park to the site of what is now the Lake Superior Sportsman’s Club in 1958. In 1949, the prison laborers constructed the runs of the downhill ski area as well as the cross-country ski trails. Prior to purchase by the state, a local ski club maintained some downhill runs at the eastern edge of the park. It was decided that the Department of Conservation would improve and operate the ski area to demonstrate that downhill skiing could be a growing attraction in the Upper Peninsula. The ski



Historic program used for purchase of the park from the 1944 State of MI proposal for acquiring the property



First park manager Knox Jamison on park boat

area was officially opened in 1950, with the Ski Hill Chalet constructed in 1958, and additional runs and lifts added in the 1960s and 1970s as it grew in popularity.

With the increased concern for preserving natural areas, the Natural Resources Commission, in cooperation with the Michigan Natural Areas Council, adopted four categories of natural areas. In 1954, 45,210 acres of the Porcupine Mountains were dedicated in the category of Nature Reservation. Within the confines of the Nature Reservation, three scenic sites were dedicated: Presque Isle, Escarpment and Summit Peak.

In 1965, the South Boundary Road connecting the east and west ends of the park was completed. In the winter of 1965-66, two Adirondack shelters were constructed in the park's interior. A third was added later. All Adirondack shelters have since been removed. Other more ambitious proposals, such as a hotel/cabin complex at the west end of the park and a scenic byway, were not implemented.

Past planning initiatives for the Porcupine Mountains (Wilderness) State Park included a comprehensive study delineating management policies and zoning plans for the

state park approved in 1972. Primary recommendations of this plan were to rename the park to be a Wilderness State Park, acquire an additional 3,340 acres of private and federal land to protect the character of the wilderness, acquire mineral rights not owned by the state underlying the park, control use of the park through interior park roads and other natural and cultural resource management recommendations. The provision of a visitor center to inform visitors of the diverse offerings of the park and to provide a base for interpretive services was also recommended. This plan zoned the majority (35,000 acres, encompassing the entire old-growth forest) of the park as Wilderness Zone, which was defined as:

"An area where earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of undeveloped land retaining its primeval character and influence, without permanent improvements of human habitation, which is protected and managed so as to preserve its natural conditions..."

A Park Master Plan, based on this prior study, was approved in 1973 and amended in 1974 with the goal of providing for the public "the highest quality wilderness recreational

experience”. The report stressed the interdependency of preservation, education and recreation. Currently, 47,671 acres are dedicated as Wilderness under Part 351 of Public Act 451 of 1994. In 1976, the majority of the park was rededicated as a Wilderness Area under the Wilderness and Natural Areas Act 241 of 1972 (Repealed 1995, Act 59. Now protected under the Natural Resources and Environmental Protection Act 451 of 1994, Part 351). The 1,465-acre Presque Isle River Scenic Site was also rededicated, along with dedication of the 160-acre Union Spring Scenic Site (dedicated as a Natural Area under Act 541 of 1994, Part 351). In 1984 the National Park Service dedicated 42,812 acres of the Porcupine Mountains as a National Natural Landmark.

The park Visitor Center was constructed in 1983. Other more recent developments include the renovation of the former park manager’s residence in 2006 as a modern lodge for park visitors.

Major weather events have impacted the Porcupine Mountains Wilderness State Park over time. In 1953, a windstorm destroyed over 5,000 acres of old-growth forest. The resulting blowdown was later salvaged for timber. Thirty years later, in 1983, a torrential thunderstorm resulted in heavy flooding, leading to the loss of bridges, denudation and erosion of hillsides, washout of a section of South Boundary Road and other damage. In more recent history, heavy storms in 2016 led to similar damage including heavy beach erosion. A significant wildfire occurred in the park in 2000. This fire is assumed to have started from a lightning strike during Labor Day weekend. The smoldering seemingly innocuous fire burned slowly in the deep forest duff. It was not discovered until weeks later and suppression did not begin until October 20th. Very little water was used in suppression and the fire continued to burn in many areas into mid-November. Finally, it was extinguished by winter snow. Many old growth trees were killed as their roots were burned; most were killed outright; others were toppled by the wind, their shallow root systems destabilized by burning.



The smoldering 2000 fire

A.5 Land Ownership

Funding Sources

The state acquired the lands encompassed by Porcupine Mountains Wilderness State Park through a variety of funding sources. Often, conditions attached to the original funding source or other details of the property transaction encumber the future use or disposition of the land.

The funding source map at the end of Appendix A identifies the sources used in acquiring land within Porcupine Mountains Wilderness State Park. The following outlines in more detail each funding source associated with the park.

Special Legislation

Acquisitions for park purposes through this source are tied to specific funding established by the legislature under Act 27, P.A. 1944, and Act 50, P.A. 1944. This legislation included an appropriation of \$1,000,000 for land in the Porcupine Mountains area.

- This was the primary funding source used to acquire approximately 39,000 acres of land within the Porcupine Mountains Wilderness State Park, primarily between 1944 and 1947.

State Game Fund

Act 17, P.A. 1921 established a tax on hunting licenses and directed the revenue to a fund used for land purchased. The primary purpose of this land is for hunting and fishing, and the development of other recreation facilities is restricted.

- Approximately 14,400 acres of land in the eastern region of the park were acquired in the 1940s using this funding source.

Federal Government Land Exchange

In separate land exchanges with the federal government in 1949 and 1951, the state acquired approximately 9,500 acres of land, consolidating state ownership in locations across the park.

Tax Reversion

The state received approximately 1,800 acres due to non-payment of taxes (tax foreclosure).

Michigan Land Trust Fund

The Kammer Recreational Land Trust Fund Act of 1976 (Public Act 204, 1976) created the Michigan Land Trust Fund (MLTF) program to provide a source of funding for the public acquisition of lands for resource protection and public outdoor recreation. Funding was derived from royalties on the sale and lease of State-owned mineral rights. This fund was replaced by

the Michigan Natural Resources Trust Fund in 1984.

- In 1976, the state acquired 640 acres of land in the southeast corner of the park using the MLTF.

Michigan Natural Resources Trust Fund (MNRTF)

The MNRTF was created by a state constitutional amendment in 1984, which required that oil, gas, and other mineral lease and royalty payments be placed into the Trust Fund, with proceeds used to both acquire and develop public recreation lands. To implement the constitutional amendment, the legislature passed the Michigan Natural Resources Trust Fund Act of 1985 (P.A. 101 of 1985, Act 101).

- The land (640 acres) funded by this source is mainly located in the southwest corner of the park and was acquired in 1994.

Gift

A portion of the park was obtained through gifts of land.

- Many of these transactions involved property in the southwest area of the park and were completed in 1994.

Federal Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) is a federal program administered in Michigan by the Department of Natural Resources on behalf of the National Park Service

(NPS). Land purchased using LWCF funding must be used for public outdoor recreation purposes.

- Approximately 7.8 acres were purchased with this funding source between 1966 and 1972. This land is located on the Lake Superior shoreline.

Recreation Bond Fund

Three small parcels of land were acquired using this funding source along the Lake Superior shoreline in the 1970s and 1980s.

Lake Superior Basin Trust

The Lake Superior Basin Trust was established in part through the settlement of National Wildlife Federation et al. v. Copper Range Co. for the purpose of funding various environmental mitigation and enhancement projects to restore, protect and enhance resources or habitat in the Lake Superior Basin. The 600-acre “Presque Isle River Property” was purchased in 2000 using 50% Michigan Natural Resources Trust Fund and 50% Gift (Land Transfer) from the Lake Superior Basin Trust. The award of the land is contingent upon the lands being used for “long-term conservation and management of natural areas, and to manage them to accommodate public access that does not interfere with conservation and preservation needs”. There are also restrictions on sale or transfer of the land.



Hikers in the exposed riverbed of the Presque Isle River



A fall scene looking across the water.

Mineral Ownership

The state does not own the mineral rights beneath approximately 45% of the land within the park boundary and the DNR must provide reasonable access to private mineral rights owners should they choose to explore or develop their mineral rights, except as prohibited under Part 531, Wilderness and Natural Areas, of PA 451 of 1994 (Natural Resources and Environmental Protection Act). When the state completed a land exchange in 1951, resulting in an addition of over 6,600 acres to the park, the grantor of that property, the federal government, reserved the rights to all “fissionable material” (e.g., uranium) on or beneath the property. These types of minerals are not currently known to occur within the park in commercial quantities, but reservations like this by the federal government were very common during that time period. The current ownership maps included in this plan indicate the DNR’s best understanding of current mineral rights ownership based on available records. Where the maps show that the state owns 100% of the mineral rights for the parcels acquired from the federal government in 1951, this does not include “fissionable materials”. In addition, there may be other third-party mineral reservations that the state is not aware of.

Easements

The following easements grant access or construction rights on the state park property:

- Gogebic County Road Commission
- Michigan Transportation Commission
- Ontonagon County Telephone Company
- Ontonagon County
- Porkies Mountains TV Company INC.
- Upper Peninsula Power Company

Lease Contracts and Use Agreements

The following contracts are in effect for Porcupine Mountains Wilderness State Park:

- A & D, Inc. – lease to operate the Outpost Store including firewood and ice sales and LP tank filling, operation of the Laundry room facility, provide watercraft rentals, utilize the Water Plant as a storage and office facility, and provide full service of vending machines at the Outpost Store, Union Bay Toilet Building, Visitor’s Center and Contact Station until April 30, 2021. The lease also includes operation of the Visitor’s Center store. A competitive bid letting will be held for this concession upon its expiration.
- Friends of Porcupine Mountains Wilderness State Park – lease to operate and maintain the Old Carpenter Shop and Dan’s Cabin buildings for a period of five years ending on July 31, 2020, with an option to renew for an additional four 5-year terms. The Old Carpenters Shop is to be used for Friend’s Group and committee/community activities. Dan’s Cabin is used primarily for the Artist-in-Residence program.
- Lake Superior Sportsman’s Club Inc. (Ontonagon Shooting Range) – lease for approximately 15 acres of land of the former Porcupine Mountains prison camp for the purposes of providing a safe location for shooting and archery activities. The lease is for a period of 15 years, ending on March 31, 2020, with an automatic renewal of two additional 5-year terms unless terminated.
- Gogebic Community College – use agreement that allows the College to operate the Winter Sports Complex, which includes the ski chalet, ski slope areas, storage buildings, parking lots and apartment building for a period of seven years ending on July 31, 2019, with an option to renew for an additional three 3-year terms.

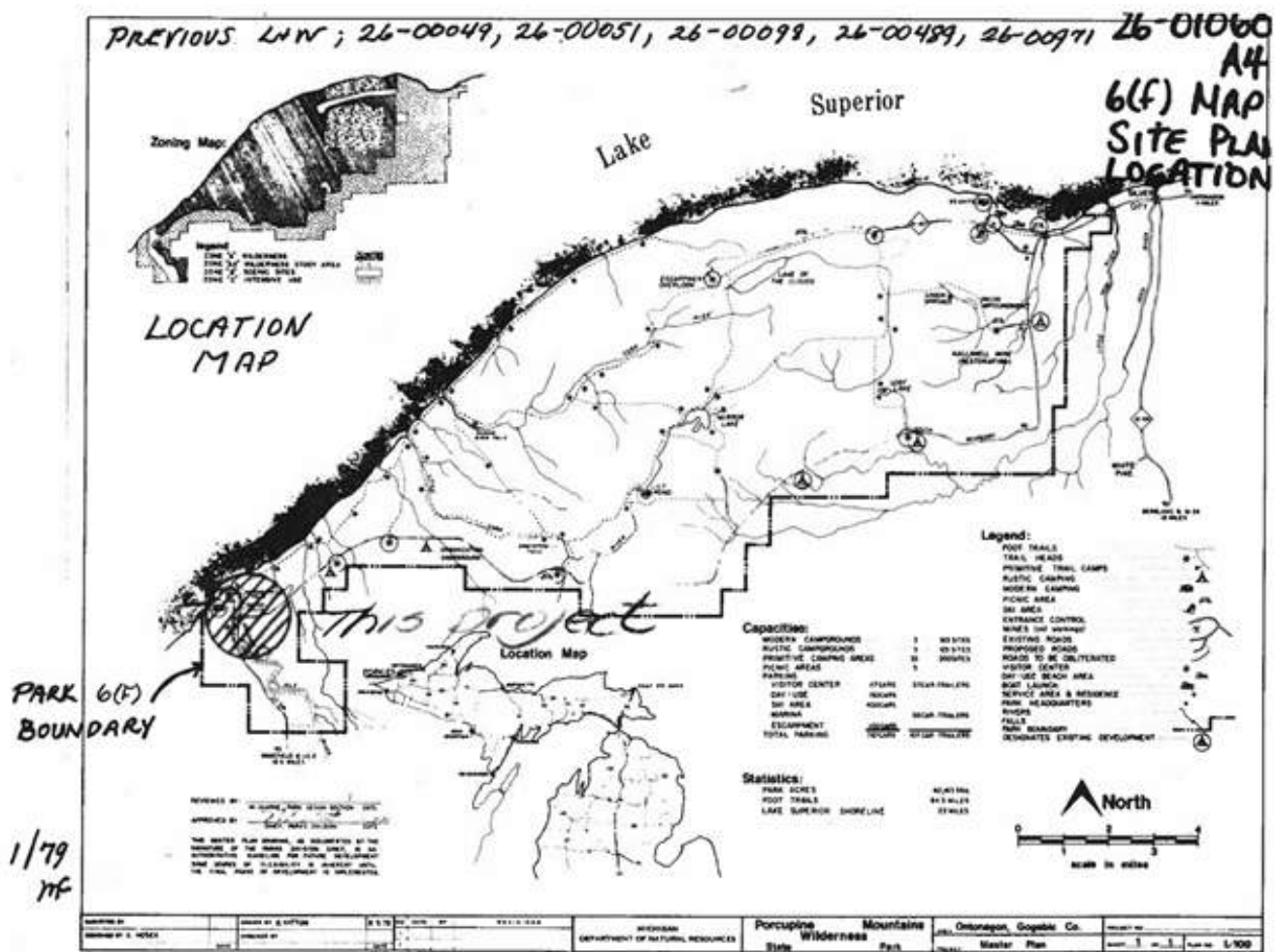


Lake Superior shoreline

Grant Funding

The following Land and Water Conservation Fund projects, for both land acquisition and development, have been completed within the park (see table below). Grant number 26-01060A for the development of the Presque Isle campground included a 6(f) Boundary Map (below) encumbering all of the Porcupine Mountains Wilderness State Park land owned at that time.

GRANT HISTORY			
LWCF GRANT NUMBER	YEAR	AMOUNT	NOTES
26-00049	1965	\$6,958.00	Acquire 35 acres. (inholding)
26-00251	1971	\$8,000.00	Acquire 3.6 acres of land (inholding)
26-00098	1965	\$62,621.50	Construct a double chair ski-lift.
26-00971	1977	\$75,795.67	Develop: complete T-bar ski lift and LWCF sign
26-00489	1973	\$197,753.59	Develop: enlarge ski chalet, increase parking lot, blacktop roads/parking areas, improve sanitary facilities/trails/stairs entrance road, improve picnic facilities, construct new visitor center/vehicle road access
26-01060 A	1978	\$53,351.41	Development of the Presque Isle unit



This 6(f) site plan delineates land encumbered by the Land and Water Conservation Fund restrictions.

A.6 Legal Mandates

For all park general management plans, all legal mandates are identified that serve to further guide the development of the general management plan and subsequent action plans. For our planning purposes, the term “Legal Mandates” refers to not only to federal and state law, but also the administrative tools of “Policy” and “Directive” of the Natural Resource Commission, the Department, and the Parks & Recreation Division. Examples include Orders of the Director, Park and Recreation Areas State Land Rules and all other laws, commission orders, and rules or directives that apply to the park.

Specific to Porcupine Mountains Wilderness State Park the following legal mandates have been identified.

FEDERAL STATUTE
ENDANGERED SPECIES ACT, 1973
The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the act.
BALD AND GOLDEN EAGLE PROTECTION ACT, 1940 AND AMENDMENTS
This Act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" includes actions that may result in injury to the eagle, a decrease in its productivity or nest abandonment.
NATIONAL HISTORIC PRESERVATION ACT, 1966 AS AMENDED
This is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal and local significance.
NATIONAL TRAILS ACT, 1968 AS AMENDED
This Act established the Appalachian and Pacific Crest National Scenic Trails and authorized a national system of trails to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The National Trails System includes four classes of trails: National Scenic Trails (NST), National Historic Trails (NHT), National Recreation Trails (NRT) and Connecting or Side Trails. The North Country NST was designated by P.L. 96-199 in 1980.
NATIONAL NATURAL LANDMARK PROGRAM
The National Natural Landmark (NNL) Program was established in 1962 by administrative action under authority provided by the Historic Sites Act of 1935. The NNL program is administered by the National Park Service under 36 CFR Part 62, published in the Federal Register on May 12, 1999. The NNL Program regulations dictate administration of the program by the National Park Service, but not NNL land use or management.

STATE STATUTE	
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (NREPA) AND AMENDMENTS	
PA 451 of 1994, Part 5	Gives the DNR authority to make rules to support its mission. This includes State Land Rules, Land Use Orders, Wildlife Conservation Orders, Fisheries Orders and Watercraft Control.
PA 451 of 1994, Part 31 Water Resources Protection	Provides authority to DEQ to require a permit for any occupation, construction, filling, or grade change within the 100-year floodplain of a river, stream, drain, or inland lake.
PA 451 of 1994, Part 301 Inland Lakes and Streams	Requires a permit from the state (DEQ) to undertake certain activities relating to inland lakes and streams, such as dredging, fill, marinas, structures, alteration of flow, etc.
PA 451 of 1994, Part 303 Wetlands Protection	Requires a permit from the state (DEQ) to undertake certain activities in regulated wetlands, such as, dredging, fill, construction or drainage.
PA 451 of 1994, Part 325 Great Lakes Submerged Bottomlands	A permit is required for all filling, dredging, and placement of permanent structures (i.e., docks, piers, pilings, etc.) below the "ordinary high water mark" and on all upland channels extending landward of the "ordinary high water mark" of the Great Lakes.
PA 451 of 1994, Article III, Chapter 1, Part 351 Wilderness and Natural Area	Allows for the designation of wilderness and natural areas and management of those areas.
PA 451 of 1994, Part 365 Endangered Species Protection	Allows for acts necessary for the conservation, protection, restoration, and propagation of endangered and threatened species in cooperation with the federal government pursuant to the Endangered Species Act of 1973.
PA 451 of 1994, Part 419 Hunting Area Control	Section 324.41901 establishes the powers of the Department to establish safety zones for hunting.
PA 451 of 1994, Part 741 State Park System	The department shall create, maintain, operate, promote, and make available for public use and enjoyment a system of state parks to preserve and protect Michigan's significant natural resources and areas of natural beauty or historic significance, to provide open space for public recreation, and to provide an opportunity to understand Michigan's natural resources and the need to protect and manage those resources.
PA 35 of 2010, Part 741 Recreation Passport	This act amended the Michigan Motor Vehicle Code to provide for a State Park and State-operated public boating access site "Recreation Passport" that a Michigan resident may obtain by paying an additional fee when registering a motor vehicle.
PA 451 of 1994, Part 761 Aboriginal Records and Antiquities	The state reserves the exclusive right and privilege to all aboriginal records and other antiquities including those found on the bottomlands of the Great Lakes.
PUBLIC HEALTH CODE	
PA 368 of 1978, Part 125, Campgrounds, Swimming Areas and Swimmers' Itch	Established to protect and promote the public health by establishing health code requirements and regulations that all public (including DNR) and private campgrounds must meet. Includes permitting, licensing, inspections and rules regarding sanitation, safety standards and public health. Also covers testing and evaluating quality of water at bathing beaches, safety and rescue equipment.

Orders

The following Orders apply to Porcupine Mountains Wilderness State Park

Land Use Orders of the Director

5.12 Certain state parks and recreation areas, requirements for use, certain conduct prohibited.

Order 5.12. The following conduct shall apply to use of Michigan state parks and recreation areas: Porcupine Mountains Wilderness State Park, prohibited conduct.

(10) A person shall not do any of the following in the Porcupine Mountains Wilderness State Park without first obtaining proper written permission from the department:

- (a) Feed a bear or lure any bear with food. This provision does not apply to the lawful baiting of bear as described in orders issued pursuant to part 401, wildlife conservation, of Act 451 of 1994.
- (b) Operate a snowmobile off the designated snowmobile route.

5.16a Entry, use and occupancy of certain state parks, recreation areas and scenic sites, prohibited conduct.

Order 5.16a (1) A person shall not do any of the following:

- (a) Enter any of the following state-owned lands with a motor vehicle unless a valid Michigan recreation passport has been purchased and affixed to the vehicle:
- (66) Porcupine Mountains Wilderness State Park, Ontonagon and Gogebic counties.

Wildlife Conservation Orders

7.9 Porcupine Mountains Wilderness State Park, hunting and trapping allowed; exception.

Sec. 7.9 Hunting and trapping shall be allowed during the established seasons on all state-owned lands within the boundaries of Porcupine Mountains Wilderness State Park



A family ready to hike



Relaxing on the shore of Lake Superior

except for section 19 and the N 1/4 of section 30, T50N R45W, Gogebic county (Presque Isle scenic site section), and the S 1/2 of the NW 1/4 and the N 1/2 of the SW 1/4 of section 21, T51N R43W, Ontonagon county (lake of the clouds escarpment scenic site section), and section 9 and the N 1/2 of section 1, T51N R42W, Ontonagon County (Union bay campground and headquarters area); also except the entire park shall be closed to the taking of waterfowl from September 1 to Labor day. History: Eff. Mar 31, 1989; Am. 2, 2016, Eff. April 15, 2016.

Fisheries Orders

Lake of the Clouds (T15N, R4ccc3W, S21, 22): the daily possession limit for smallmouth bass is zero (0). Tackle: Artificial lures only. It shall be unlawful to use or possess live bait, dead bait, organic or processed food or scented material at any time on the shore or water.

FO-210.18, Designated Trout Streams: many of the streams within the Porcupine Mountains Wilderness State Park are designated trout streams, which are classified by type and have specific regulations for season and catch. These include Presque Isle River and all tributaries, Little Carp River, Carp River, Union River and several creeks.

State Land Rules

Parks and Recreation Areas – State Land Rules are issued by authority conferred on the Michigan DNR by Section 504 of 1994 PA 451 MCL 324.504. The rules cover entry, use and occupation of state lands and unlawful acts.

Wilderness and Natural Areas are recorded under Michigan Administrative Rule R322. See Appendix C for legal description of designated Wilderness and Natural Areas within the Porcupine Mountains Wilderness State Park and requirements for the maintenance, restoration and prohibited activities in accordance with NREPA.

A.7 Landscape Context and Natural Resources

Landscape Context Sub-subsection

The following information was obtained from Regional Landscape Ecosystems of Michigan, Minnesota and Wisconsin, prepared by Dennis Albert in 1995, which classifies regional landscapes based on macroclimate, physiology, soil and vegetation. PMWSP falls into sub-subsections: IX.6.1, the Gogebic-Penokee Iron Range and subsection IX.8, Lake Superior Lake Plain. The Porcupine Mountains are a band 3-4 miles wide and 10 miles long, of Keweenaw basalt and conglomerate Ridges. On the bedrock ridges, red pine, white pine, red oak and paper birch grow on thin red and sandy loam soils that formed from glacial abrasion of iron rich bedrock formations. On till, northern hardwood forest occurs.

Glacial lake plain and water-reworked moraine dissected by small rivers flowing within straight shallow valleys cover most of subsection IX.8, Lake Superior Lake Plain. This subsection extends into Wisconsin. Conifer and hardwood-conifer forest are dominate on both the flat uplands and steep ravines. Dominant species include eastern hemlock, northern white-cedar, balsam fir, basswood and white spruce. Northern hardwoods are sporadic on better drained sites.

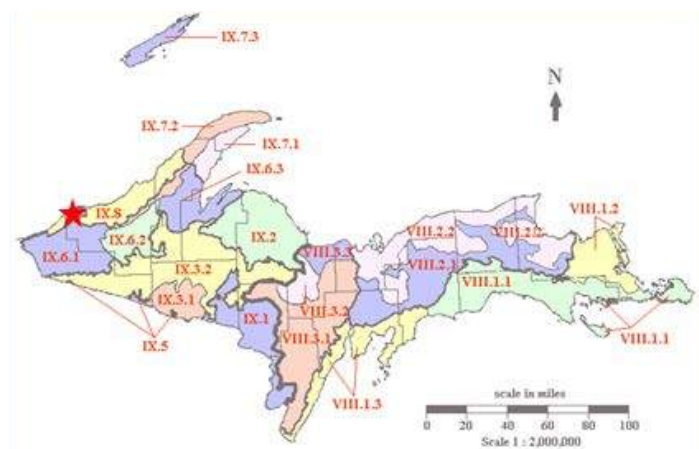
Climate

The two subsections described above can be characterized by slightly different climatic conditions. For IX.6.1, the growing season in Michigan ranges from 120-130 days and has an average precipitation of 31-36 inches. The winter months bring extreme cold temperatures of -40°F along the coast and -50°F farther inland. Among the states included in this subsection, Michigan receives the highest amount of annual snow



A fallen tree

fall ranging between 60-200 inches each year. In the IX.8 lake plain region, the growing season is similar in length, ranging from 110-140 days. Extreme minimum temperatures range from -30°F to -40°F and this area of Michigan also sees large amounts of snowfall, with a range of 120-160 inches annually.



Regional landscapes of Michigan's Upper Peninsula (Regional Landscape Ecosystems of Michigan, Minnesota and Wisconsin, Dennis Albert, 1995)

Topography

Topography in the park ranges from a minimum elevation of 602 feet above sea level along the coast of Lake Superior to a high of 1,958 feet within the park's interior mountain peaks. The Porcupine Mountains are the highest range of hills between the Alleghenies in West Virginia and the Black Hills of North Dakota. The most distinct range of hills is known as the escarpment, with steep cliffs paralleling the Lake Superior shoreline. The park features a number of lakes within the hills as well as numerous deep river valleys and creeks.

Water Resources

Among the ridges of the Porcupine Mountains, there are two lakes, Lake of the Clouds and Mirror Lake. The main watershed of the park is the Presque Isle River watershed which is part

of the South-Central Lake Superior Basin. This watershed contains many mountain streams and rivers including Carp River that feeds Lake of the Clouds, Little Carp River that feeds Mirror Lake, and the Presque Isle River. The deep valley gorges and rocky terrain result in approximately 90 waterfalls within the park boundaries, including Manabezho Falls, Manido Falls and Nawadaha Falls near the mouth of the Presque Isle River, and many more both named and unnamed. The main stem of the Presque Isle River within the Ottawa National Forest, from the confluence of the east and west Branches to Minnewawa Falls, (south of the park) is designated as a Wild and Scenic River in recognition of its outstanding geologic, scenic and wildlife value.



Presque Isle River

Soils

The soils in sub-subsection IX.6.1 are composed of red loams and sandy loams, which were formed by the erosion of iron formations by the glaciers. These are classified as Orthods and Inceptisols (Hole 1976). Soils in subsection IX.8 include leached calcareous red loams, clays and pink sands. The latter soils are derived from local, iron-rich, volcanic bedrock and shale, classified as Aquepts and Boralfs (USDA Soil Conservation Service 1967).

More than 100 unique soil types can be found within the park's vast boundaries. The most commonly found type is from the Oldman Series of very gravelly loams and silt loams. This series makes up about 25% of the park. Each soil type has a soil surface texture classification. Prevalent soil surface textures within the park, as seen on the Soil Texture map, include slightly to highly decomposed plant material, gravelly moderately decomposed plant material, loams, and silt loams.

Geology and Mineral Resources

The bedrock geologic formations represented in Porcupine Mountains Wilderness State Park are a product of a significant tectonic event that began more than one billion years ago in which a rift began to form in what is now North America.

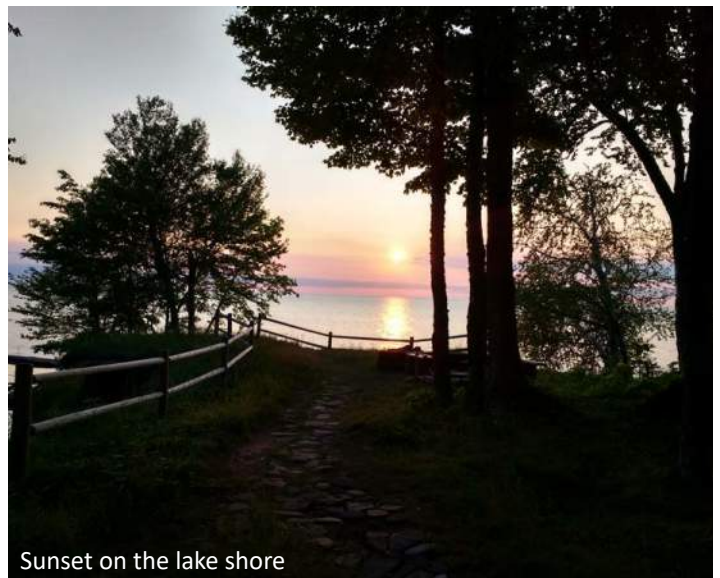
Ultimately, the continent failed to split apart. Evidence of the Mid-continent Rift extends in an arc from northern Kansas up to Lake Superior and then back down through the center of the Lower Peninsula of Michigan. In most places, rocks of the Mid-continent Rift System are buried by thick sequences of Phanerozoic sediments. However, in the Lake Superior region, these older igneous and metasedimentary rocks are at or near the surface and have been studied in detail.

The bedrock formations in the park are all Precambrian in age and consist primarily of lava flows and sedimentary rocks that filled the rift basin. Much younger (<20,000 years old) glacial sediments, typically less than 20 feet thick, cover much of the park area.

The formations present in the park have been a source for copper in the region, both in its elemental (native) form and as the mineral chalcocite disseminated in some of the sedimentary rocks. Commercial exploration and production of metallic minerals in the park dates back to the mid-1800s. The mines that existed within the current park boundary reported relatively small amounts of production. However, just east of the park, the White Pine Mine produced over 18 million tons (4 billion pounds) of copper. There has been additional metallic mineral exploration at the west end of the park.

Hydrocarbons have been encountered in the Nonesuch Shale in this region. However, the consensus among experts is that the hydrocarbons do not present significant potential for commercial extraction. Where present, the glacial sediments in the region can be a local source for construction aggregate. In other parts of the region, some of the volcanic rocks have also been used for road aggregate.

The state does not own the mineral rights beneath much of the land within the park boundary. See Section A.5, Land Ownership, for additional information.



Sunset on the lake shore

Circa 1800 Vegetation

Based on information taken from the General Land Office survey notes from the period of 1816 to 1856, the area now occupied by the park was dominated by sugar maple-basswood forest and sugar maple-hemlock forest. Small areas of hemlock-yellow birch forest occurred along the east bank of the Presque Isle River, while hemlock-white pine forest was found on the eastern edge of the park. The shoreline of Lake Superior supported a narrow band of spruce-fir forest. In addition, several types of wetland were found within the park area including mixed conifer swamp, cedar swamp and shrub swamp/emergent marsh.

Current Land Cover and Vegetation

Several different types of upland and wetland forests cover the park today, together with small areas of open wetland and exposed bedrock glades. Most of Porcupine Mountains Wilderness State Park consists of northern hardwoods dominated by a mix of sugar maple, hemlock, yellow birch and basswood with a rich ground flora. The wilderness is largely unchanged from what the first Europeans encountered. With the arrival of the Emerald Ash Borer and widespread ash mortality, the first landscape level change is underway. Higher elevation forests located north of Escarpment Trail occurring on thinner soils over bedrock, have a relatively thin canopy, and include red oak, sugar maple and white ash. Northern white cedar is common along stream channels, the Lake Superior shoreline and in depressions adjacent to inland lakes. Areas of exposed bedrock beach also occur along the shoreline, supporting lichen species, hairbell, beach pea, bog goldenrod and spiked lobelia. Several areas of bedrock glade occur in exposed locations including along the steep-sided, south-facing cliff of the escarpment above Lake of the Clouds.



A scenic view of the Porcupine Mountains



A Pileated Woodpecker

Natural Communities

There are 66 exemplary occurrences of 20 different natural community types documented by Michigan Natural Features Inventory (MNFI) within Porcupine Mountains Wilderness State Park. The largest of those, the mesic northern forest, is one of the largest tracts of old growth forest in the state, covering almost 49,000 acres. It is thought to contain the largest stand of virgin sugar maple-hemlock forest between the Rocky Mountains and Adirondacks. The volcanic bedrock glade is one of only 19 occurrences in the state. The exemplary natural communities documented within the park are:

- Bog G3G5/S*4
- Clay Bluff GNR/S2
- Dry-mesic Northern Forest G4/S3
- Emergent Marsh GU/S4
- Hardwood-Conifer Swamp G4/S3
- Mesic Northern Forest G4/S3
- Northern Bald GU/S1
- Northern Hardwood Swamp G4/S3
- Northern Shrub Thicket G4/S5
- Northern Wet Meadow G4/S4
- Rich Conifer Swamp G4/S3
- Sand and Gravel Beach G3?/S3
- Sandstone Bedrock Lakeshore G4G5/S2
- Sandstone Cliff G3/S2
- Sandstone Cobble Shore G2G3/S2
- Submergent Marsh GU/S4
- Volcanic Bedrock Glade GU/S2
- Volcanic Bedrock Lakeshore G4G5/S2
- Volcanic Cliff G4G5/S2
- Volcanic Cobble Shore G4G5/S3

* G and S denote global and state rank, where 1 is the most critically imperiled.

FAUNA: RARE ANIMALS PRESENT OR LIKELY TO BE PRESENT AT PORCUPINE MOUNTAINS WILDERNESS STATE PARK

Scientific Name	Common Name	State/ Federal Status
<i>Myotis septentrionalis</i>	northern long-eared bat	SC/LT
<i>Myotis lucifugus</i>	little brown bat	SC
<i>Pemimyotis subflavus</i>	tri-colored bat	SC
<i>Falco peregrinus</i>	peregrine falcon	E
<i>Haliaeetus leucocephalus</i>	bald eagle	SC
<i>Glyptemys insculpta</i>	wood turtle	SC
<i>Vertigo bollesiana</i>	delicate vertigo snail	T
<i>Boloria freija</i>	Freija fritillary	SC
<i>Ophiogomphus anomalus</i>	extra-striped snaketail	SC
<i>Coregonus artedii</i>	cisco	T
<i>Planogyra asteriscus</i>	Eastern flat-whorl	SC
<i>Gavia immer</i> *	common loon	T
<i>Falco columbarius</i> *	merlin	T
<i>Accipiter gentilis</i> *	northern goshawk	SC

Ecological Reference Areas

The dedicated wilderness area is also an Ecological Reference Area (ERA) designated by the DNR as such to meet Forest Certification. "ERAs are a category of High Conservation Value Area (as defined by the Forest Stewardship Council certification standard) and are Forests with Exceptional Conservation Value (as defined by the Sustainable Forestry Initiative certification standard). An ERA identifies a geographic area on the landscape where there is an emphasis on biodiversity conservation achieved through maintaining and/or restoring high quality native natural communities, with a long-term goal of ensuring that these natural communities are conserved as examples of our State's biodiversity. They serve as models of ecological reference within the state. They are higher quality examples of functioning ecosystems that are primarily influenced by natural ecological processes." - MDNR Forest Certification Work Instruction, June 23, 2015

Wildlife and Fisheries

The Porcupine Mountains Wilderness State Park is home to a variety of rare and threatened species. The peregrine falcon is an endangered species in Michigan and nests in the cliffs of the mountains. The bald eagle is a bird of special concern that can be seen along the Lake Superior shoreline as well around the larger lakes within the park. Northern long-eared bat is a Federal Threatened Species that hibernates in some of the abandoned mines within the park. As a large, undeveloped wilderness area, the park supports a large population of black

FLORA: RARE PLANTS PRESENT OR LIKELY TO BE PRESENT AT PORCUPINE MOUNTAINS WILDERNESS STATE PARK

Scientific Name	Common Name	State Status
<i>Adlumia fungosa</i>	climbing fumitory	SC
<i>Disporum hookeri</i>	fairy bells	E
<i>Crataegus douglasii</i>	Douglas's hawthorn	SC
<i>Ribes oxycanthoides</i>	northern gooseberry	SC
<i>Cardamine maxima</i>	large toothwort	T
<i>Collinsia parviflora</i>	small blue-eyed Mary	SC
<i>Dryopteris filix-mas</i>	male fern	SC

*Breeding Bird Atlas record (not confirmed by MNFI)

LT Listed as Federal Threatened
E State Endangered
T State Threatened
SC State Special Concern

bear and grey wolf, although both are rarely seen. The park also contains a documented deer wintering complex, providing vital habitat for deer during the winter months. Many other mammals inhabit the area such as fishers, bobcats and coyotes.

Lake Superior and its tributaries within the Porcupine Mountains Wilderness State Park support a variety of salmon species, including steelhead, lake trout, brown trout, Chinook and coho salmon and whitefish. Perch and smallmouth bass can be found in the inland lakes. The rivers and streams within the park, including the Big Carp River, Little Carp River, Presque Isle River, Union River and the Little Iron River, offer native brook trout habitat. Fishing regulations within the state park vary according to stream designation and location.



A family enjoys the view

A.8 Recreational Resources

Porcupine Mountains Wilderness State Park offers a range of recreation opportunities from modern and rustic campgrounds on the shoreline to remote backcountry experiences.

Trails

The Porcupine Mountains Wilderness State Park offers an extensive trail system, featuring more than 90 miles of hiking trails. Twenty-three miles of the North Country National Scenic Trail, which is also the hiking route of the Iron Belle Trail, runs through the park. The park's trail system offers a variety of hiking experiences ranging in difficulty from easy to strenuous. The park allows mountain biking on the designated cross-country ski trails.



Skiing

Within the park there are cross-country ski trails available as well as a downhill ski area. There are 26 miles (42 km) of groomed cross-country ski trails featuring two warming shelters. The trails are accessed from the downhill ski area and are maintained by the Department of Natural Resources with the support of donations. The other trails in the park are also available for cross-country skiing but are not groomed. The Porkies Ski Area contains 200 skiable acres with a 641-foot vertical drop. There are 12 runs available with the longest run being 1.2 miles.

Hunting and Fishing

The Porcupine Mountains Wilderness State Park is the largest of the state parks in Michigan and is home to many wildlife game species including white-tailed deer, black bear, coyote, squirrel, snowshoe hare and ruffed grouse. Natural brook trout habitat is found throughout the park. There are some



A bridge through the woods

restrictions to fishing in the park which include: fishing in Union Springs is prohibited, fishing on the Lake of the Clouds is artificial lure only, and bass fishing on the Lake of the Clouds is catch and release only. The entire park is open to hunting during established seasons, with a few exceptions.

Beach

A one-mile stretch of sandy beach along Union Bay offers the best swimming in the park; however, it is not a designated swimming beach and contains no buoys. The rest of the Lake Superior shoreline is generally rocky. The cold waters of Lake Superior limit swimming to the brave.

Boating

The park manages two boat launches providing access to Lake Superior, one at the Union Bay campground and the other at the mouth of the Big Iron River in Silver City (outside of the Porcupine Mountains Wilderness State Park boundary). Canoe and kayak rentals are available seasonally at the concession store located near Union Bay Campground on County Road 107. Although the streams and rivers within the park are not suitable for paddling due to their shallow, rocky nature, the concessionaire at the park provides shuttling to other sites more suitable for paddle sports.

Camping/Lodging

There are many options for camping throughout the park. The two main campgrounds are located at either end of the park: Union Bay to the east and Presque Isle to the west. Union Bay, also the location of the park headquarters, offers a modern campground with 100 sites, two yurts, and the modern Kaug Wudjoo Lodge. The lodge, which formerly served as the park manager's residence, can sleep 12, with a fully equipped kitchen and modern amenities. Presque Isle campground has 50 rustic campsites, including six walk-in sites.

There are also 18 rustic cabins located throughout the park that require a one- to four-mile hike to reach. Four of these cabins are available year-round. Sixty-three reservable backcountry campsites are located throughout the park. Camping is prohibited in areas other than a designated site, except when the ground is snow covered, when dispersed camping is allowed at least 0.25 mile from any park building, trail or waterbody. The park also features two adjacent rustic group use camp areas in the Union Bay Area, accommodating up to 24 people each.

Picnic Areas and Scenic Overlooks

Presque Isle day-use area has a picnic shelter available for rent. Picnic tables and grills are also provided at Union Bay, Summit Peak and Lake of the Clouds.

The primary scenic overlooks at Porcupine Mountains Wilderness State Park are:

- o Lake of the Clouds
- o Summit Peak
- o Presque Isle

Disc Golf Course

An 18-hole course is available within the Porkies Ski Area. The course is free and discs are available for rent at the park's campground store located near the Union Bay Campground on County Road 107.

Visitor's Center

The visitor center is located near the junction of County Road 107 and South Boundary Road and is open daily from mid-May until mid-October. The center has a 100-seat auditorium and an exhibit hall featuring natural communities of the mountains and native wildlife species including fisher, goshawk, gray wolf, porcupine, peregrine falcon, bear and beaver. The exhibit hall also displays the history of the Porcupine Mountains from prehistoric copper miners to the lumber camps of the early 1900s.

Concession/Store

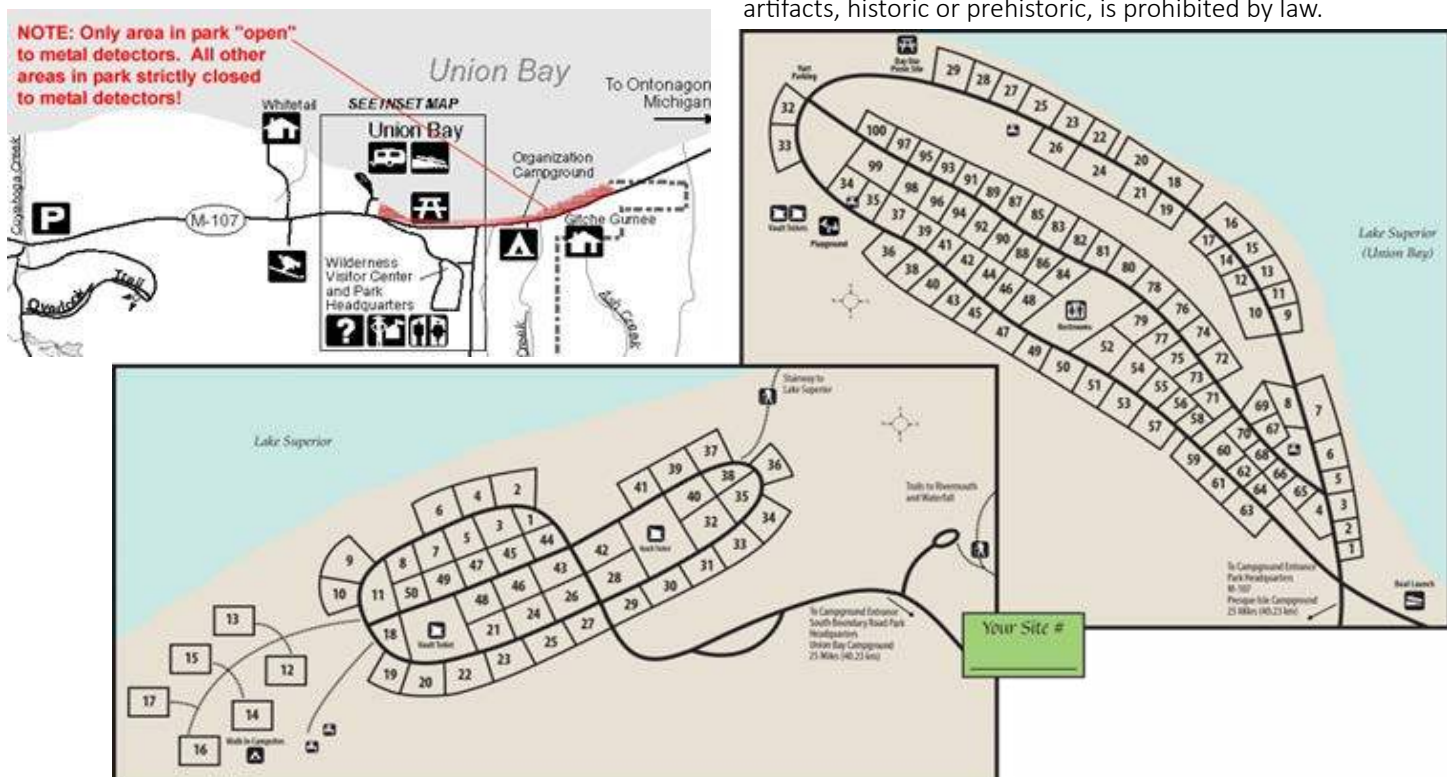
A store is operated by a concessionaire close to the Union Bay campground, where visitors may purchase firewood, ice, gifts and refreshments. Bicycle, canoe and kayak rentals are also available.

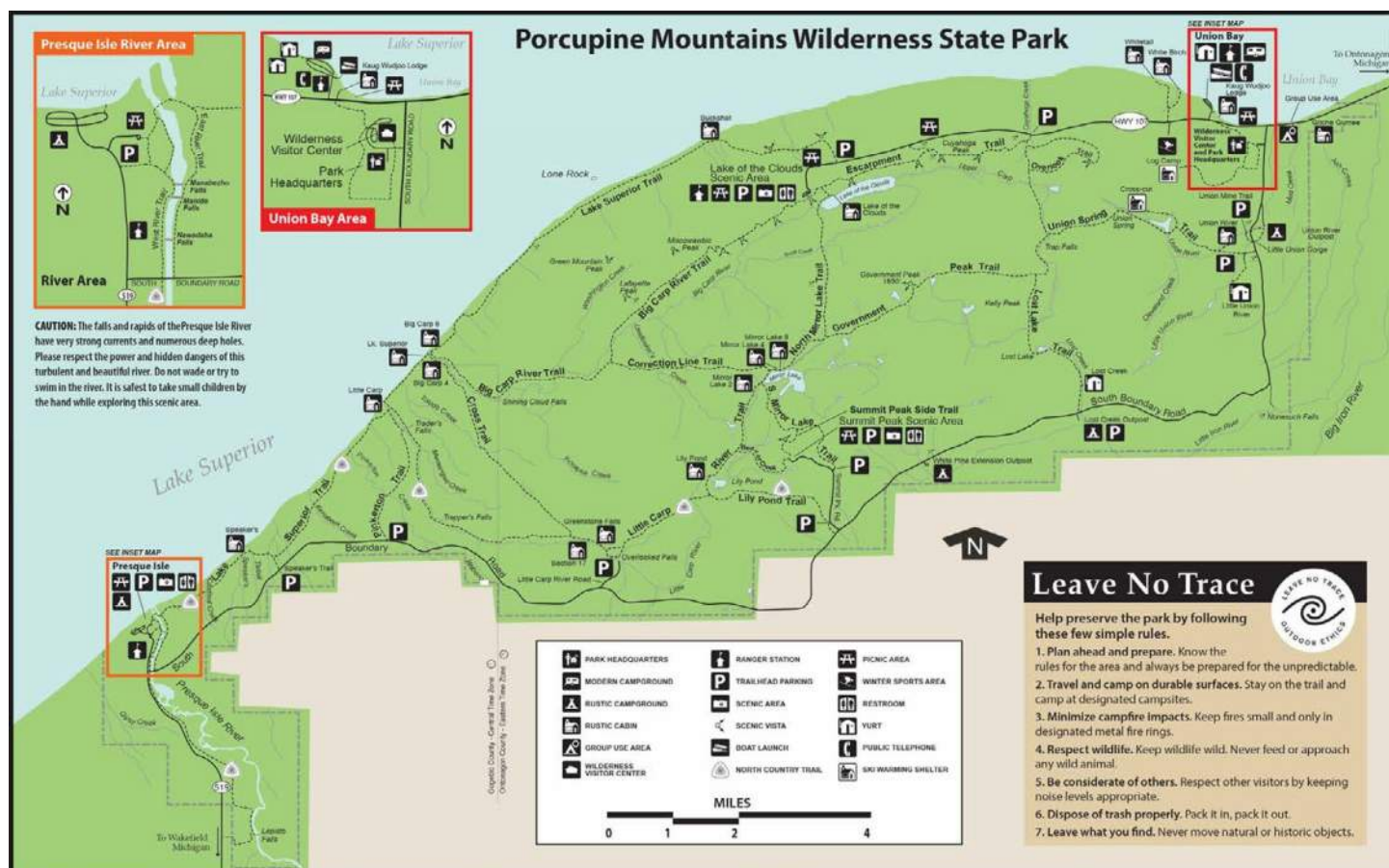
Snowmobiling

South Boundary Road and County Road 107 within the park are closed to vehicles December 1 through late spring. Both are designated snowmobile trails during the snowmobile season. Snowmobiling is prohibited off the designated snowmobile route by Director's Order.

Metal Detecting

The majority of the park is closed to metal detecting. Metal detecting is allowed in one designated area of the park as shown by the map to the left. Removal of archaeological artifacts, historic or prehistoric, is prohibited by law.





A.9 Historic and Cultural Resources

Archaeological Resources

Native Americans lived in the area prior to European settlers. The rich resources found in Porcupine Mountains Wilderness State Park brought many prospectors to the land to try their luck at mining and logging, resulting in many physical reminders of the history of the park.

The state archaeological site file records held by the State Archaeologist in the State Historic Preservation Office provide a view of known and recorded archaeological resources in the park. There are 37 archaeological sites reported within the Porcupine Mountains Wilderness State Park's boundary in both Ontonagon and Gogebic counties. Interestingly, no formal, systematic survey by professional archaeologists has been conducted within the park boundaries. Consequently it is certain that many additional historic and prehistoric archaeological sites exist in the Porcupine Mountains Wilderness State Park.

It is also worth noting that there are only two Native American-related sites among the 37 recorded sites. One is a camp site that dates at least as early as the 1840s and perhaps earlier. The other is a burial that is not specifically identified in

the site file records as Native American, but characteristics of the burial suggest it is Native American.

Not surprisingly, mining-related sites are the most numerous type of site recorded in the park. Among these sites is the Nonesuch copper mine and townsite. The Nonesuch mine opened in 1867 and was worked more or less continuously for about seven years, and then sporadically for another 30 years until it closed in 1913. The Nonesuch mine appears to have been the longest-running mining operation within the park. Many of the other mines that were begun during the second half of the nineteenth century and the early twentieth century were relatively brief operations.

There is mention made in mining company documents that in the course of exploration work, earlier pre-contact Native American mining excavations were observed. This is further evidence for Native American presence and the likelihood of more Native American sites in the park.

There are several logging-related sites within the park boundaries. Commercial logging in the Upper Peninsula began substantially later than in the Lower Peninsula. The logging sites in the park appear to be associated either with a relatively early phase of logging in the U.P. that pre-dated 1910 or with a later phase that took place in the 1930s.

Finally, there are several homestead/cabin sites in the park. These sites tend to date to the early twentieth century and are located on waterways and lakeshores in the park. Little is known about these sites; at least some of them were probably seasonally-occupied recreational sites while others may represent attempts to establish year-round homestead locations.

Extant Historic Structures

Historic structures within the state park are listed in the following tables. The two historic districts listed below are considered eligible for listing on the National Register of Historic Places. In addition, the Ski Hill Chalet, constructed in 1958, and the and Ski Hill Storage (Taj-Mahl), are considered historically significant.

Cabins and Trail System

In 1945 development of a trail system into the wilderness interior of the park began. A total of 12 cabins are located at scenic points on the trails. The earliest state built cabins, designed by Ernest Hartwick and constructed in 1948, were the Mirror Lake group of three cabins of log construction and Big Carp 4 cabin on the Carp River. Two existing cabins in this area, Big Carp 6 and Lake Superior, pre-date the park, once

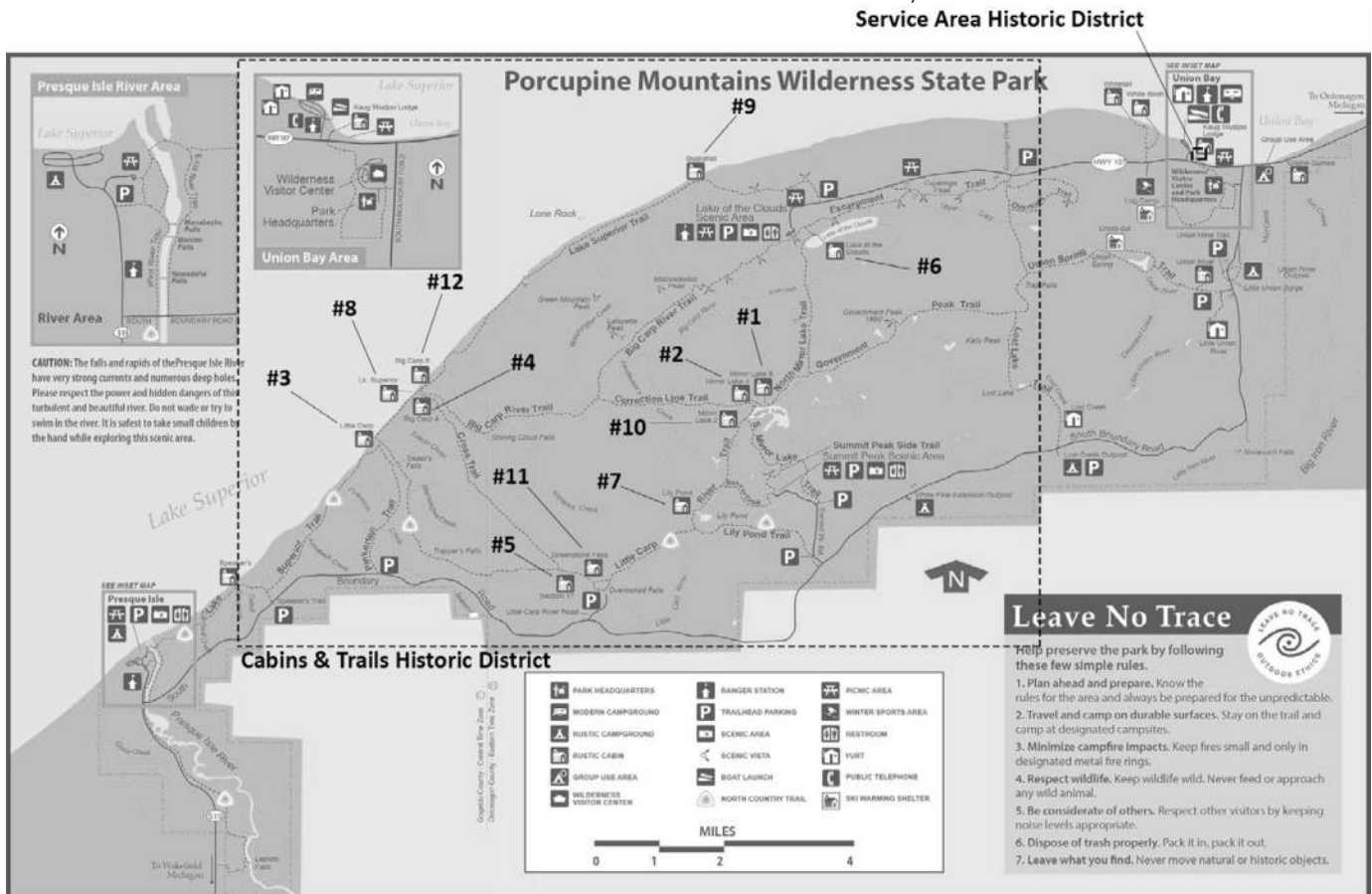
HISTORIC DISTRICT – CABINS & TRAIL SYSTEM

Structure	DTMB #	Map #
Mirror Lake 8 Bunk Cabin	80072	1
Mirror Lake 4 Bunk Cabin	80073	2
Little Carp Cabin	80074	3
Big Carp 4 Bunk Cabin	80075	4
Section 17 Cabin	80078	5
Lake of the Clouds Cabin	80079	6
Lily Pond Cabin	80080	7
Lake Superior Cabin	80081	8
Buckshot Cabin	80082	9
Mirror Lake 2 Bunk Cabin	80083	10
Greenstone Falls Cabin	80084	11
Big Carp 6 Bunk Cabin	83189	12

HISTORIC DISTRICT – SERVICE AREA AT UNION BAY

Structure	DTMB #*	Map #
Asst. Park Mgrs. Residence (Kaug Wuojoo Lodge)	80057	13
Staff Apartment Building	80067	14
Carpenter Shop (Wood Shop)	80087	15
Garage/ Shop	80088	16

*DTMB- Department of Management and Budget (state reference number)



belonging to Raymond Dick, who led the effort to save the Porcupine Mountains, and becoming the property of the state upon his death. A small plaque on a rock overlooking the Carp River commemorates Mr. Dick. Other 1948 cabins designed by Ernest Hartwick include: Buckshot (the half log cabin on the Lake Superior Trail) and three frame cabins: Greenstone Falls, Lily Pond, and Lake of the Clouds. Lake of the Clouds is unique as the interior was finished as a “show cabin” with knotty pine paneling in circa 1948. A ranger cabin, Section 17, was also constructed along the trail and rehabilitated for use by the public. The cabins show the evolution from the labor-intensive log construction of the Mirror Lake cabins done in the rustic architecture style to more inexpensive, frame, standard design cabins such as Lily Pond and Lake of the Clouds. The cabins maintain a high degree of integrity and have been well-maintained. On the trails, some remnants of Civilian Conservation Corps (CCC) work can still be found, such as a half log culvert.

The Porcupine Mountains Wilderness State Park trail and cabin system is a historic district unique to the state park system. Given the integrity and high degree of historic significance of the historic district described above, all elements, historic objects and features, including landscape design, should be preserved as a cultural resource.

Service Area at Union Bay

The service area at the northeastern end of the park is one of the most intact in the state park system. Built on a loop, it includes the east contact station (now a store), a wood shop, a garage workshop, and the manager’s residence. The park participated in the prison work program of the 1950s and the wood shop constructed picnic tables and other features for Michigan’s state parks. The service area provides a good example of the interior workings of a state park and the operation of the DNR personnel as opposed to the tourist aspect of the park. A historic district would encompass the entry drive and loop of the service area.

Given the integrity and high degree of historic significance of the service area historic district at Union Bay, all elements, historic objects and features including landscape design should be preserved as a cultural resource. This is the best opportunity to preserve an example of the working infrastructure of the state park system.

Other Historic Features

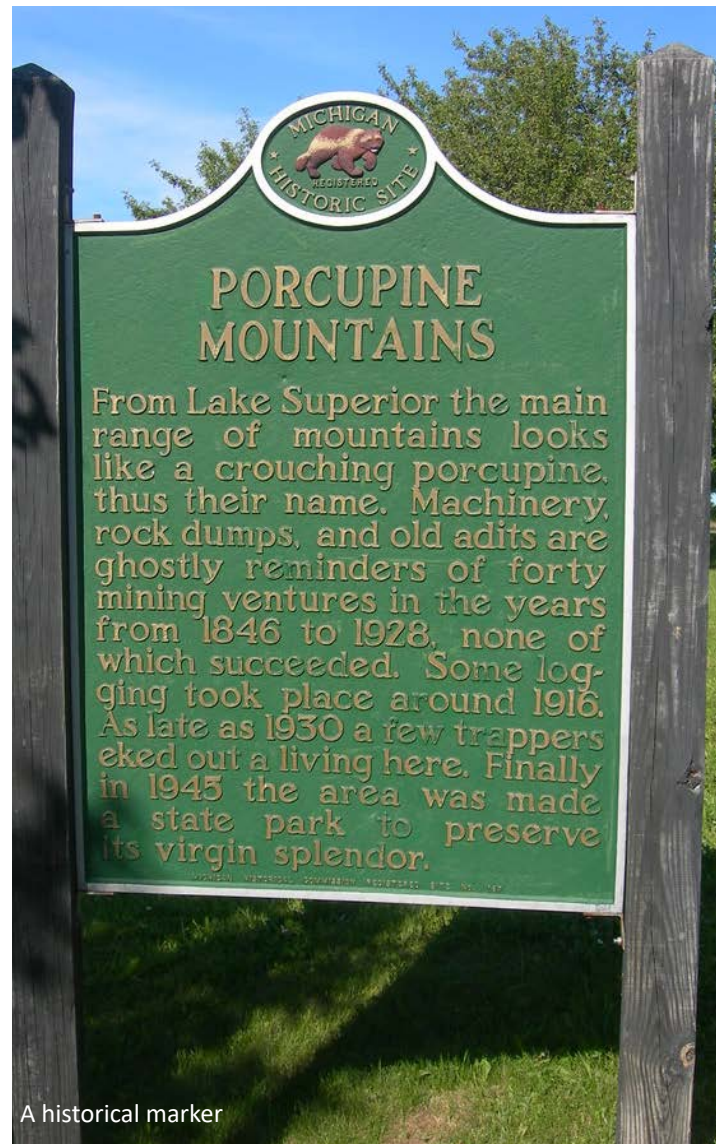
The warming house (Ski Hill Chalet) in the downhill ski area, constructed in 1958, underwent a major renovation in the 1990s and has thus lost its historic integrity. The Expert Slope has been modified since its construction by prison labor in 1949 while the Open Slope is more intact. Because of

significant changes to the downhill ski area, it would not be eligible as a historic district.

The original park cross-country ski trails were constructed in 1949. However, according to a 1959 ski hill brochure, there were 1.5 miles of cross-country ski trails at that time, and that trail has since been converted to a downhill ski run. Most of the cross-country ski trail system currently in use was constructed from 1977-1978.

Historical Context

Historical Marker S0167, Porcupine Mountains, was erected in the park in 1958. It is located at the Meade Copper Mine Picnic Area along County Road 107, with the approximate coordinates of 46.81938600, -89.70568600. It describes the origin of Porcupine Mountains’ name, the history of commercial pursuits in the park, and the date of the park’s inception.



A historical marker

A.10 Programing, Events and Volunteers

The Porcupine Mountains Wilderness State Park is one of only seven parks in the state park system with a year-round interpretive program.

Programs

Regular programs are held from June to early October and again in the winter from December to February. These cover a variety of topics, including astronomy, bear dens, gray wolves, agate rocks, wilderness navigation and much more. In addition, interpretive hikes are commonly held to locations such as the Nonesuch townsite and Summit Peak. Introductory and more in-depth classes for outdoor skills, such as archery, fishing and hunting, are also held.

Special Events

Porcupine Mountains Wilderness State Park hosts a variety of different events throughout the year:

- Snowburst Winter Carnival
- CopperFest
- Lake Superior Day
- Annual Porcupine Mountains Music Festival (last weekend in August)
- Lantern lit skiing and snowshoeing



Interpretive hike at Cloud Peak

Friends Group / Volunteers

The Friends of the Porkies is a non-profit group whose goals are to inspire appreciation of the wilderness by promoting, supporting and enhancing the resources and the visitor experience of the Porcupine Mountains Wilderness State Park. The Friends sponsor an Artist in Residency program and many workshops, events and volunteer opportunities. The Porcupine Mountains Folk School is located in the historic carpenter shop building and provides a number of art related workshops. The Conservation Film Series is a new program offered by this very active non-profit organization. Ni-Miikanaake Chapter of the North Country Trail Association works with the DNR to administer, construct, and repair the trail and is currently working on major reroutes and realigned in the park.



Lantern lit trail

A.11 Park Use Statistics

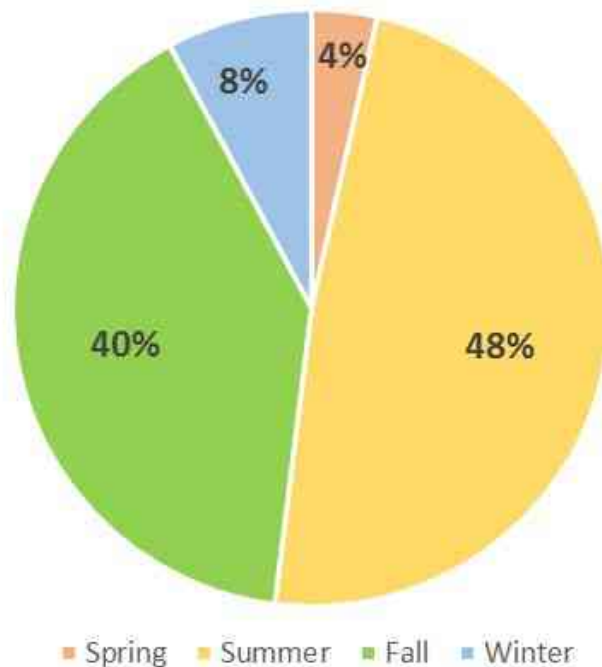
In 2017, Porcupine Mountains Wilderness State Park had an estimated 329,989 visitors (day-use and campers). The number of campers was derived from camp nights recorded in the reservation system multiplied by the average party size. Day-use numbers are estimated by car counts in the park. Camping data indicates that the park draws visitors from a large geographic range, from other mid-western states and from Houghton in the Upper Peninsula, to Ann Arbor in southeast Michigan, to Minneapolis Minnesota.

Some of the increased visitation to the park in recent years can be attributed to expanded publicity. In 2015, the park ventured into social media and quickly attained a large following. The park also has been routinely featured in national and international publications. This helped boost public interest in the park.

TOP CITIES FOR CAMPING RESERVATIONS 2013

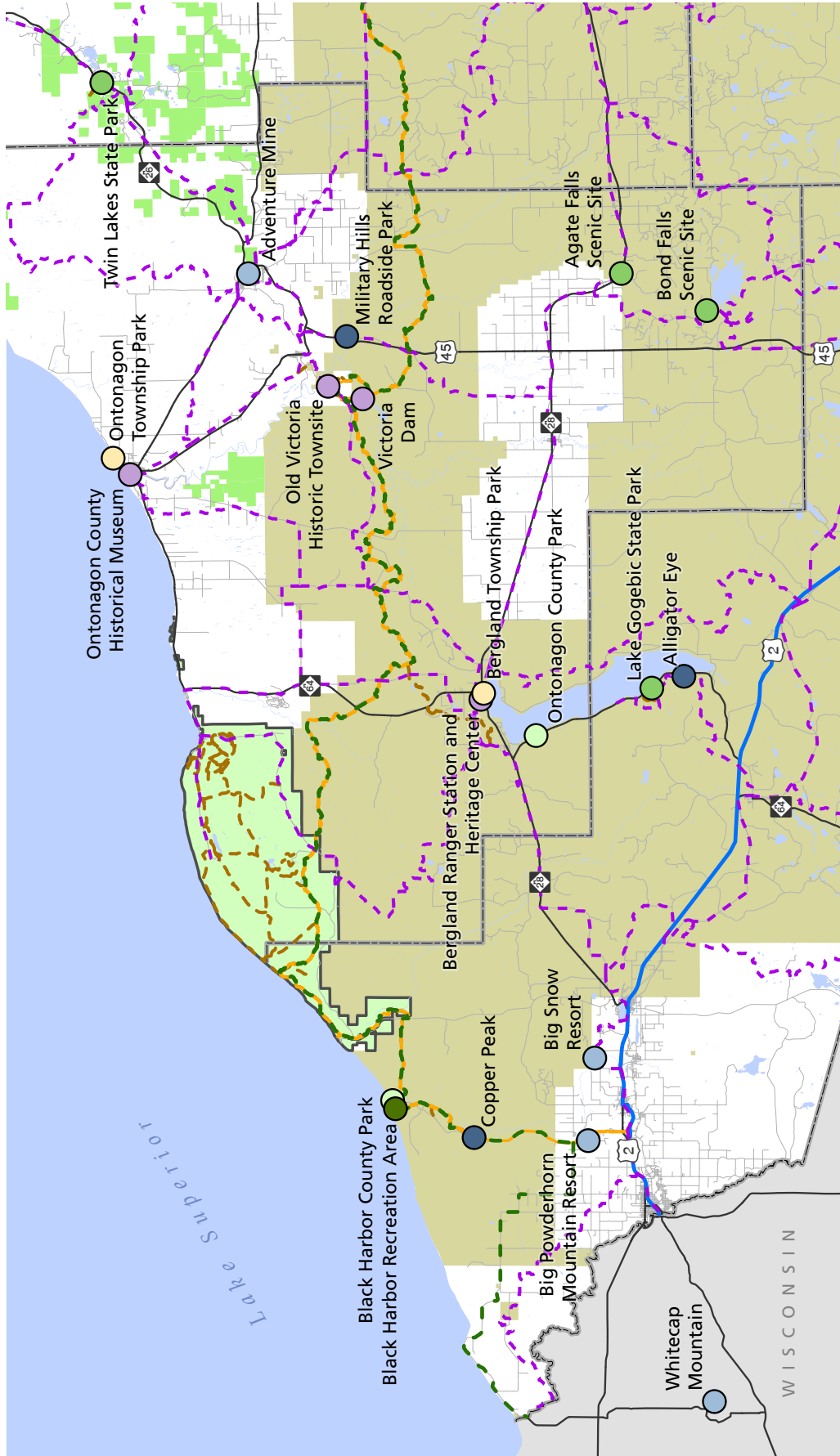
CITY & STATE	RESERVATIONS	NUMBER OF NIGHTS
Madison, WI	252	547
Chicago, IL	171	378
Minneapolis, MN	126	266
Grand Rapids, MI	101	241
Marquette, MI	99	182
Duluth, MN	91	191
Milwaukee, WI	81	205
Houghton, MI	76	151
Ann Arbor, MI	70	170
Green Bay, WI	63	166

2017 Day-Use Visitors by Season



PARK USE STATISTICS		
FISCAL YEAR	NUMBER OF CAMPERS	DAY-USE VISITORS
2018	87,882	362,187
2017	87,630	253,500
2016	80,090	228,611
2015	80,872	110,470

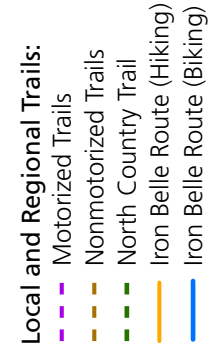
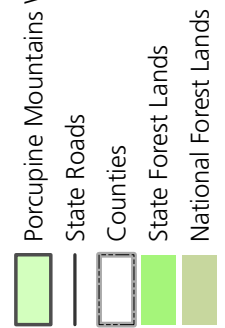




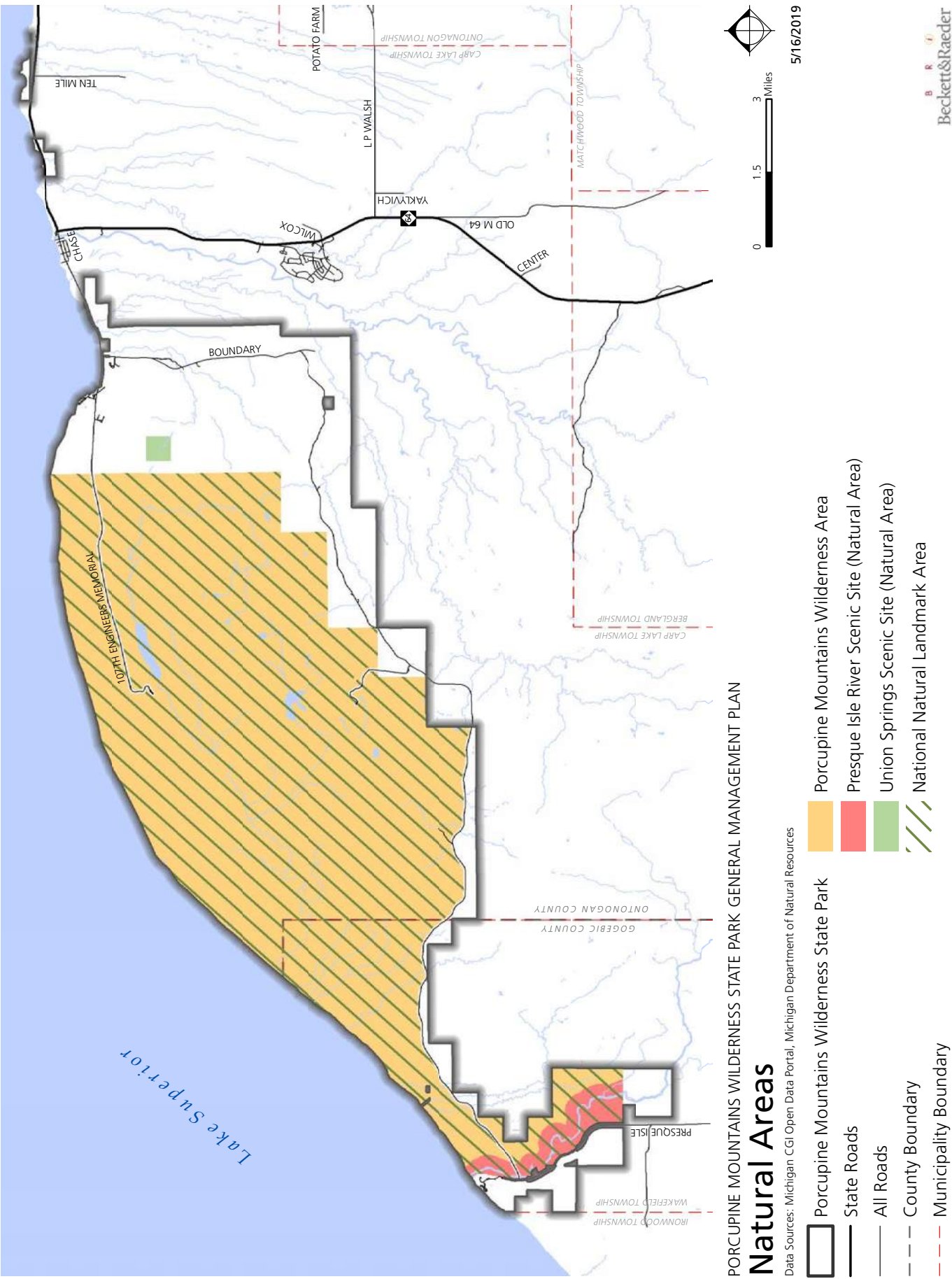
PORCUPINE MOUNTAINS WILDERNESS STATE PARK GENERAL MANAGEMENT PLAN

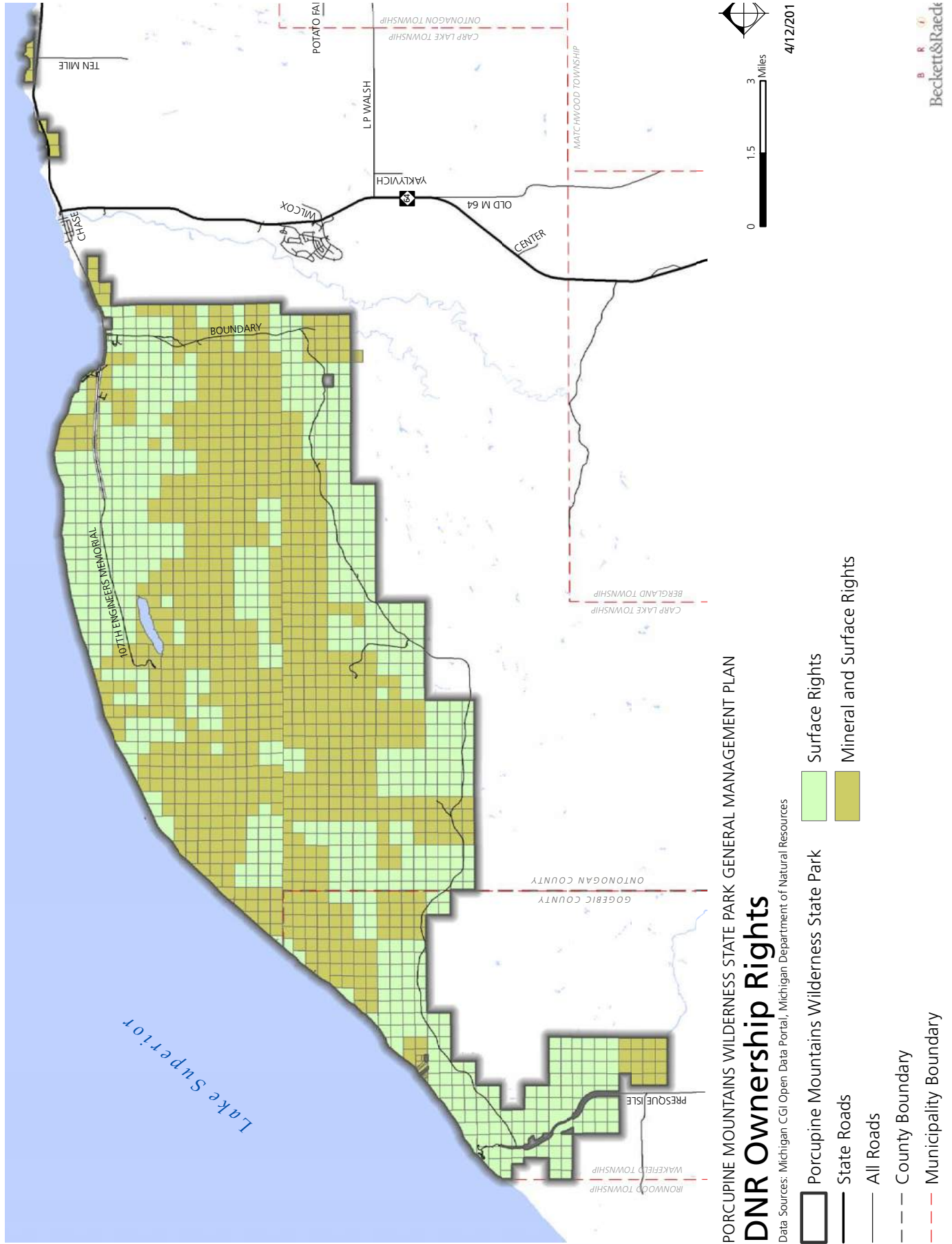
Regional Recreation Resources

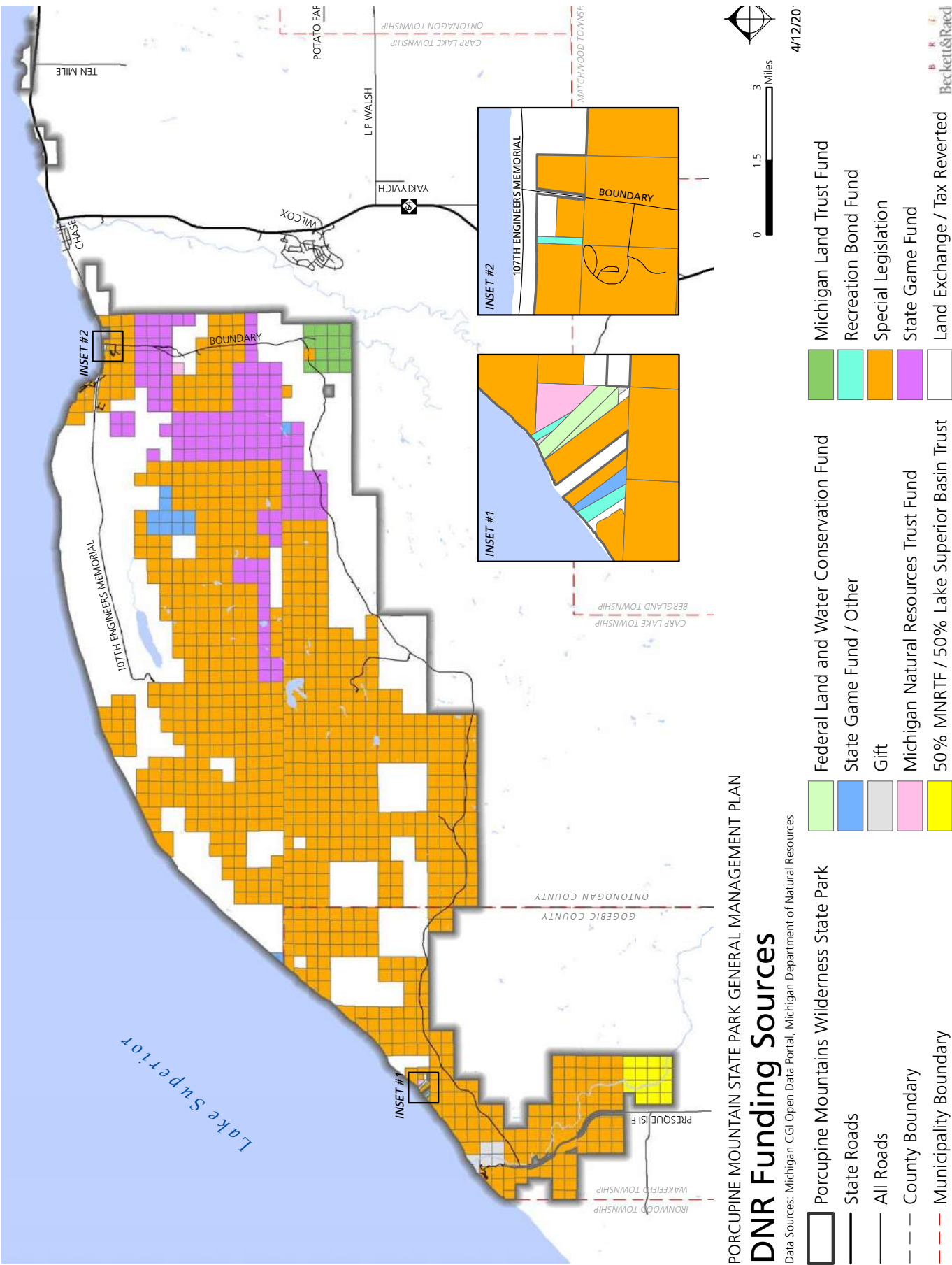
Data Sources: Michigan CGI Open Data Portal, Michigan Department of Natural Resources, USDA Forest Service

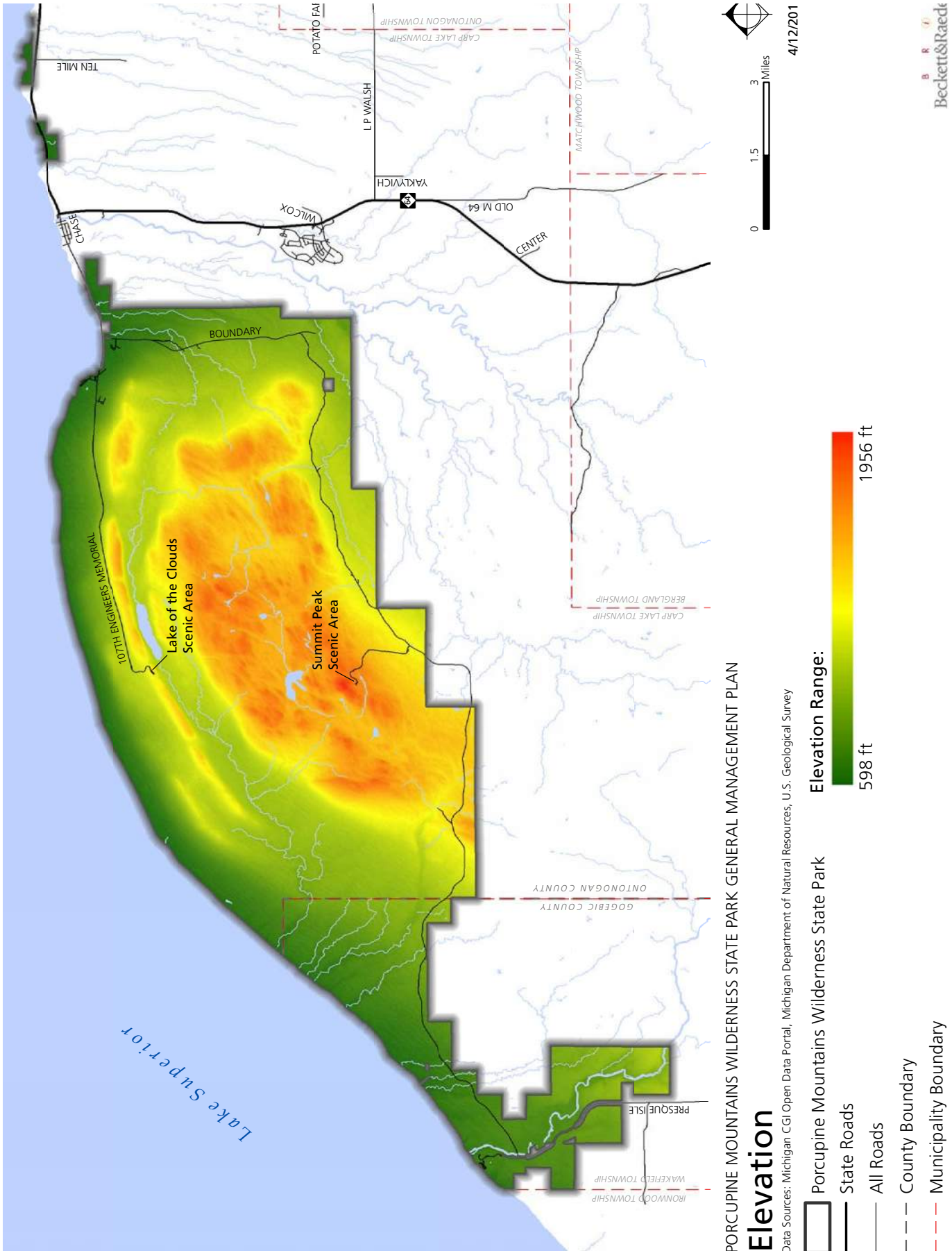


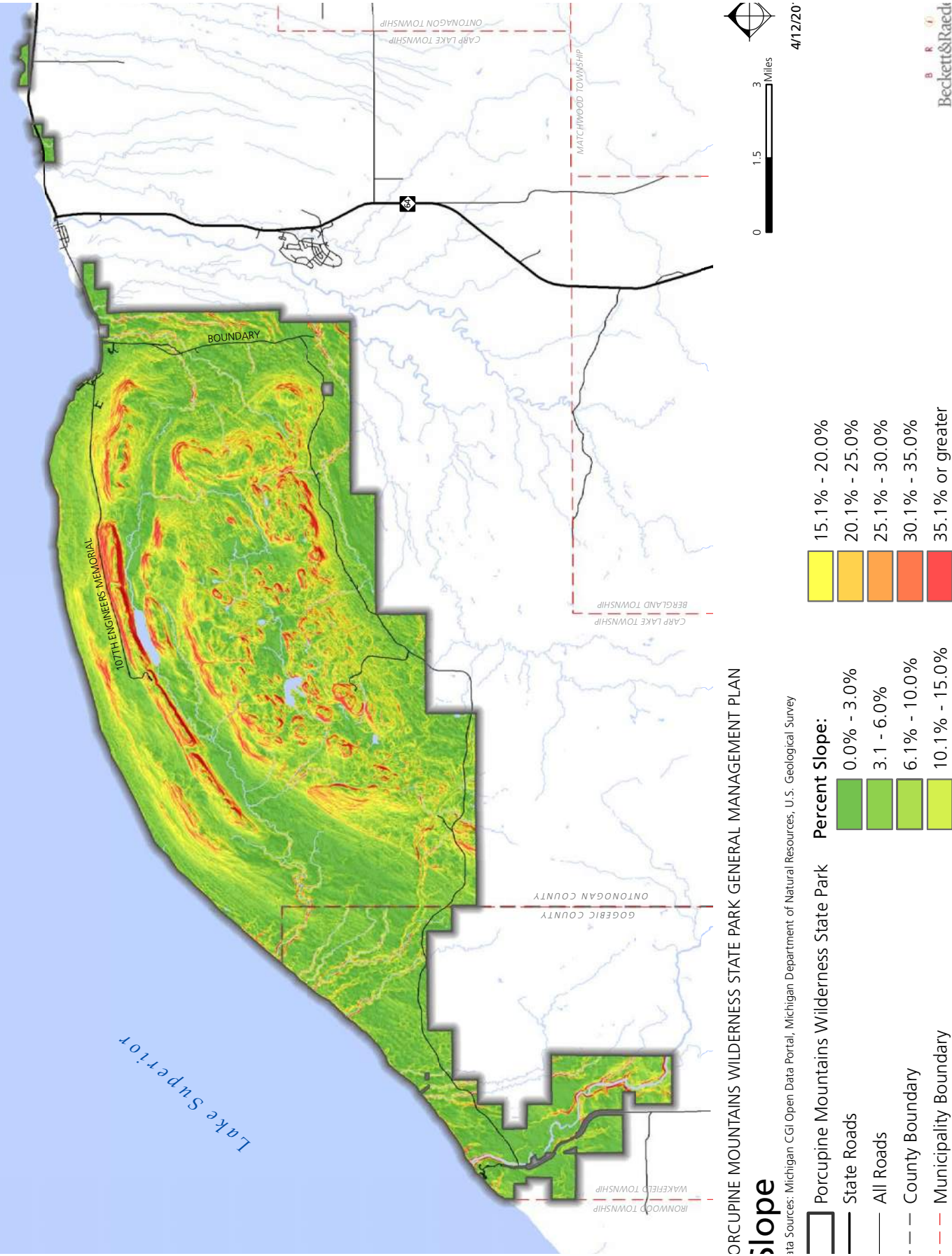
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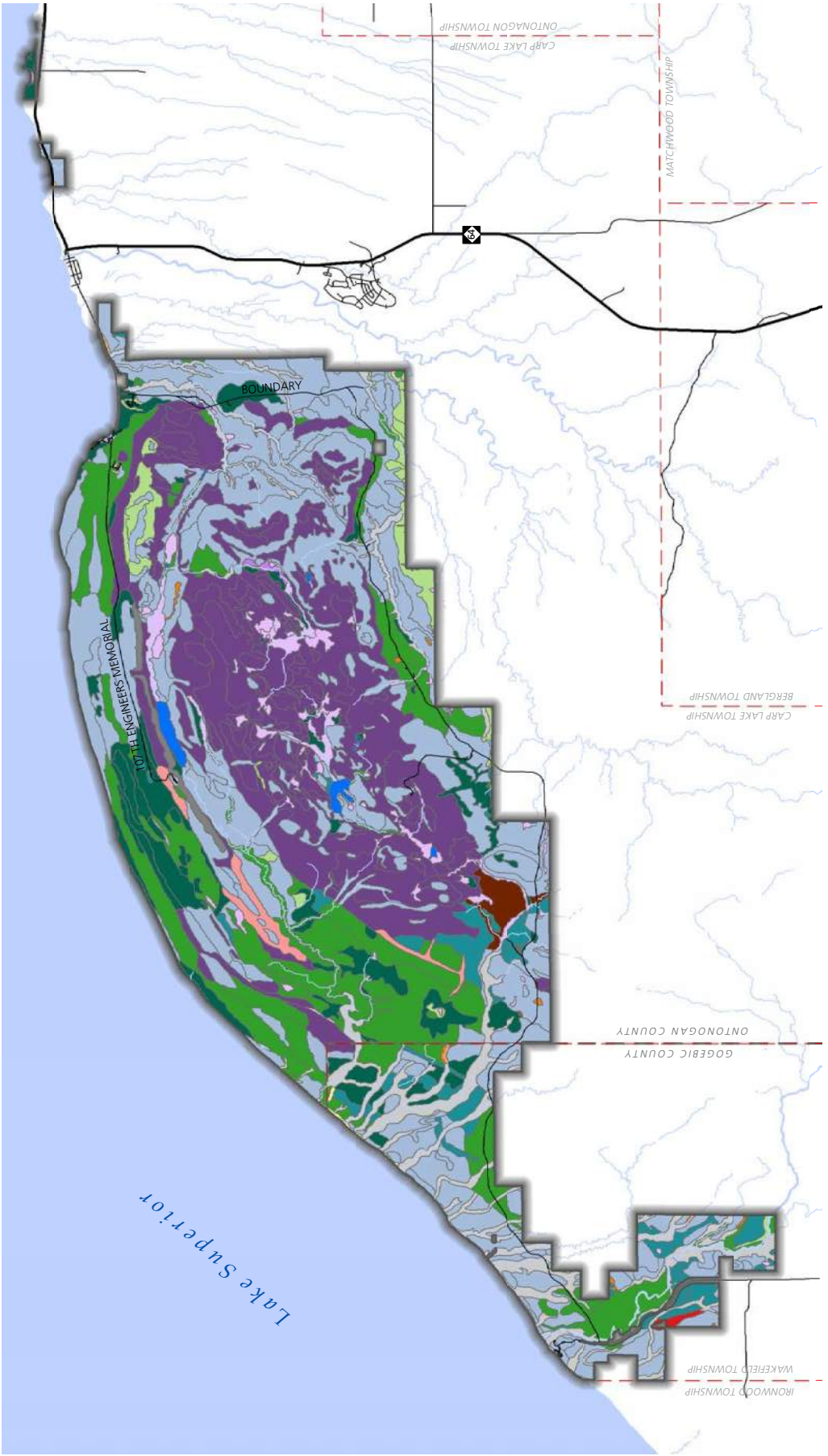












PORCUPINE MOUNTAINS WILDERNESS STATE PARK GENERAL MANAGEMENT PLAN

Soil Texture

Data Sources: Michigan CGI Open Data Portal, Michigan Department of Natural Resources

	Porcupine Mountains Wilderness State Park		Muck		Other
	Slightly Decomposed Plant Material		Mucky Silt Loam		Silt Loam
	Moderately Decomposed Plant Material		Fine Sandy Loam		Loam
	Highly Decomposed Plant Material		Very Fine Sandy Loam		Water
	Gravelly Moderately Decomposed Plant Material		Sand		
					Cobbly Very Fine Sandy Loam
					Peat
					Pits, Sand, and Gravel
					Beach, Rubbly, Very Rocky
					Unweathered Bedrock

