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Left: Grand Portal Point
Above: Cliffs along the trail east of Miners Castle



© JEFF WALTERS

Above: Mosquito Beach

Right, top to bottom: Water-sculpted basalt, horn coral, and red jasper



Stories in Sand

Sandstone cliffs—ocher, tan, and brown with layers of white and green—tower 50 to 200 feet above the water. Vast, blue Lake Superior glistens against a cloud-streaked sky. Forests of emerald, black, and gold open onto small lakes and waterfalls. The scenes at Pictured Rocks National Lakeshore are like paintings created with Nature's palette, textures, and shapes.

The 1966 authorization by Congress of this first national lakeshore protects Lake Superior's shoreline, watershed, beaches, cliffs, and dunes. It also preserves extraordinary opportunities for recreation and discovery. Just over six miles across at its widest point, the park hugs more than 40 miles of shoreline. It consists of the Lakeshore Zone, federal land managed by the National Park Service, and the Inland Buffer Zone, a combination of federal, state, and private ownership. Together these nearly 73,000 acres protect some of Lake Superior's shoreline and watershed.

Icy Architects Massive glaciers inched back and forth over a million years ago, scouring and molding this land. They reduced its volcanic and sedimentary rock to rubble and enlarged river valleys into wide basins that would become the Great Lakes.

The last glacier began to retreat about 10,000 years ago. Meltwater formed powerful rivers. They scattered rubble onto outwash plains and into crevasses, and scooped out channels that are now wetlands. As the glacier's weight dropped, the land rose, exposing bedrock to erosion by ice and waves, and creating cliffs. Water continues to pound and sculpt the cliffs, eroding them inland and enlarging the lake.

The force of water, solid or liquid, profoundly altered this landscape and created the world's largest freshwater lake system. It sculpted arches, cliff profiles, and the inland lakes that formed when glacial outwash buried enormous blocks of ice. Melting ice formed depressions that filled with water and became kettle lakes.

The stones along Twelvemile Beach are horn coral from an ancient sea, polished granite and quartz rounded like eggs, and disk-shaped fragments of Jacobsville sandstone.

Colorful Cliffs The name Pictured Rocks comes from the streaks of mineral stain decorating the face of the cliffs. The streaks occur when groundwater oozes out of cracks. The dripping water contains iron, manganese, limonite, copper, and other minerals that leave behind a colorful stain as the water trickles down a cliff face.

The cliffs' ramparts are composed of 500-million-year-old Cambrian sandstone of the Munising Formation, which makes up much of the angled slopes and features like Miners Castle. Closest to lake level is the Jacobsville Formation, a late-Precambrian mottled red sandstone that is the oldest exposed rock in the park. Covering all is the 400-million-year-old Ordovician Au Train Formation, a harder, limy sandstone that serves as a capstone and protects the underlying sandstone from rapid erosion.

Using the Bounty of Lake and Land

Native Peoples

After the glaciers retreated north, Native people made summer camps on the coast between what is now Munising and Grand Marais. Little evidence of their camps remains today. Later, Anishinaabek people hunted and fished here in summer on their way to areas farther east. Today their descendants continue these traditions.

Newcomers

In the 1600s and 1700s trappers, hunters, and miners who were not Indigenous to the area harvested furs and dug minerals from the land. Place names like Miners Castle and Grand Marais come from written accounts of early expeditions.

We had been told of the variety in the colour and form of these rocks, but were wholly unprepared to encounter the surprising groups of overhanging precipices, towering walls, caverns, waterfalls . . . mingled in the most wonderful disorder.

—Henry Rowe Schoolcraft, regional explorer and scholar, 1820

Booming Commerce

In the 1800s people made fortunes here from timber and mining. Vast forests of white pine, beech, and maple fed the demand for lumber. Blast furnaces produced pig iron for the growing railroad industry. Boomtowns developed along Lake Superior's southern shore.

The Life-Saving Era

By the early 1900s the US Life-Saving Service and the Lighthouse Service (later the US Coast Guard) built lifeboat rescue stations and light stations to guide commercial ships around treacherous rock reefs. As natural resources grew scarcer, fewer freighters plied Lake Superior's waters. Remnants of this era survive in the park.



Powered now by solar energy, the 1874 Au Sable Light Station still warns mariners about the dangerous Au Sable reef.

A Powerful Lake

Measured by surface area, Lake Superior is the world's largest freshwater lake—350 miles long, 160 miles across, and over 1,300

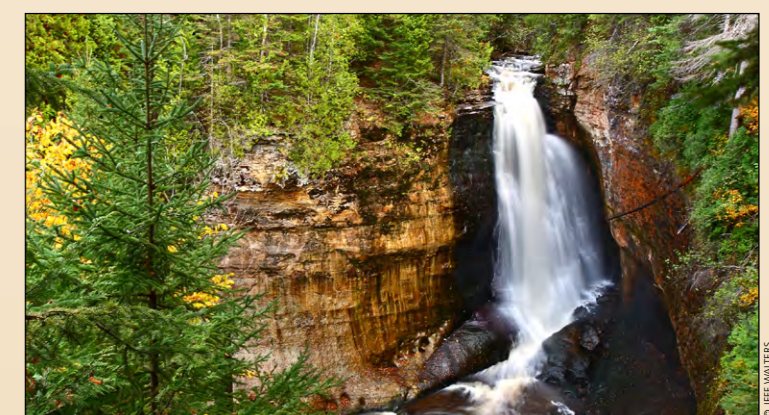


Paddling along the Pictured Rocks cliffs

feet at its deepest point. Drained, it would fill a pool the size of the lower 48 states to a depth of nearly five feet.

Lake Superior acts like an inland sea, creating powerful storms and impacting the surrounding land. Its cold water moderates the climate, keeping summer cooler and winter somewhat warmer. Mist, fog, wind, ice, and snow affect the soil, plants, wildlife, and people who live nearby.

Wave energy, ice, and thaw work on the porous sandstone cliffs. These forces reshape beaches and shoreline and cause erosion that can result in rockfalls.



Miners Falls

With each season Lake Superior shows a different mood: summer's gentle waves, autumn's furious storms, or winter's icy stillness.

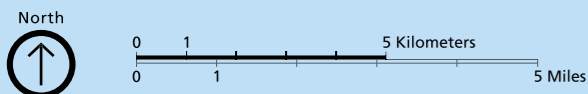


Anishinaabek birch bark storage basket
NPS

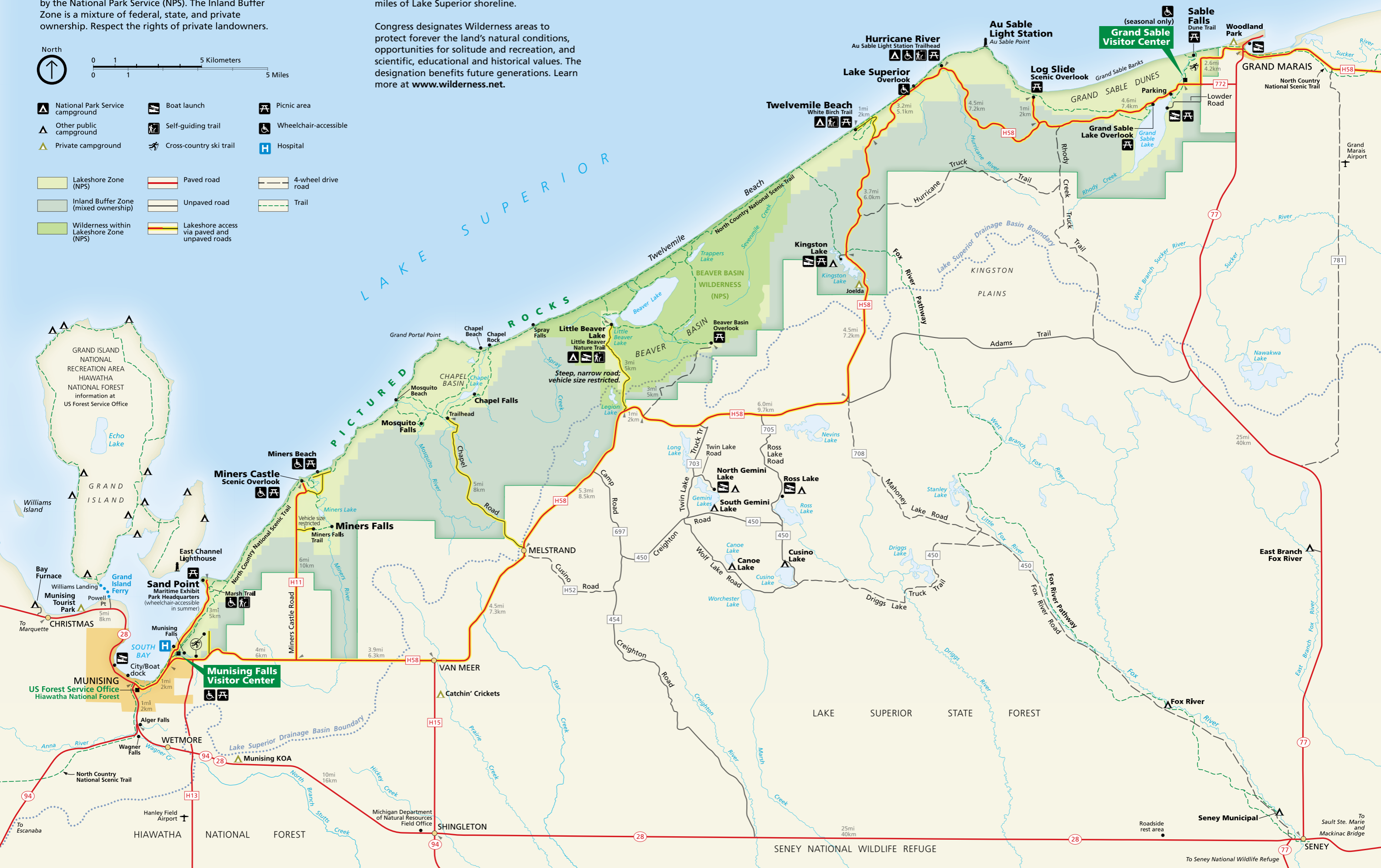
Pictured Rocks National Lakeshore consists of two zones. The Lakeshore Zone is federal land managed by the National Park Service (NPS). The Inland Buffer Zone is a mixture of federal, state, and private ownership. Respect the rights of private landowners.

Beaver Basin Wilderness includes nearly 12,000 acres of forests, streams, lakes, wetlands, and 13 miles of Lake Superior shoreline.

Congress designates Wilderness areas to protect forever the land's natural conditions, opportunities for solitude and recreation, and scientific, educational and historical values. The designation benefits future generations. Learn more at www.wilderness.net.



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| National Park Service campground | Boat launch | Picnic area |
| Other public campground | Self-guiding trail | Wheelchair-accessible |
| Private campground | Cross-country ski trail | Hospital |
| Lakeshore Zone (NPS) | Paved road | 4-wheel drive road |
| Inland Buffer Zone (mixed ownership) | Unpaved road | Trail |
| Wilderness within Lakeshore Zone (NPS) | Lakeshore access via paved and unpaved roads | |



Plan Your Visit

Munising Falls Visitor Center is on the park's western end. Stop here to pay your entrance fee and get park information. Enjoy a short walk to Munising Falls. Open daily mid-May to mid-October. Winter hours depend on staffing.

Grand Sable Visitor Center, at the foot of Grand Sable Dunes on the park's eastern end, offers information, exhibits, and a bookstore. Open daily in summer as staffing permits.

Passes and Fees Entrance fees are required for all visitors. Pay online via www.recreation.gov, via QR codes on bulletin boards, or at the Munising Falls Visitor Center.

Pets are allowed in limited areas of the park. They are prohibited on most trails. Ask at visitor centers or check bulletin boards or the park website. Where pets are allowed, they must be leashed and attended. Pet waste must be picked up and disposed of in trash. Pets and domestic pack animals are prohibited in the backcountry.

Viewing the Cliffs The colorful Pictured Rocks cliffs in the western part of the park are best viewed from the water. Concessioners offer boat and guided kayak tours along the cliffs in sum-

mer. Some parts of the cliffs can be seen from land. Go to Miners Castle, Miners Beach, or the North Country Trail for the best viewing access.

Hiking and Walking Pictured Rocks offers 100 miles of trails. Get maps and information at visitor centers or on the park website. Sections of the North Country Trail and other trails give you spectacular vistas of lakes, cliffs, dunes, and waterfalls. Plan ahead and be prepared. Know the distance, have a map, and tell someone where you are going. Carry plenty of water and food. Wear and bring appropriate clothing. Come prepared for rapid changes in weather.

Beaches The sand beaches on Lake Superior where you can sunbathe and swim are at Sand Point, Miners Beach, Twelvemile Beach, Hurricane River, and Lake Superior Overlook. Use caution; cold water and rough conditions can make swimming hazardous. Be aware of boats coming ashore. Observe surf and rip current warnings. No lifeguards, beach camping, or beach fires.

Sea Kayaking Use only sea kayaks (kayaks longer than 15 feet) on Lake Superior. Be prepared for rough conditions and changing weather.

Always wear a life jacket. Have the skills to get back in and right your boat if tipped. Carry all necessary safety gear. See the park website for more information. Backcountry permits are required for camping.

Other Boating Beaver, Little Beaver, and Grand Sable lakes are favorites for small boats, canoes, and recreational kayaks. Launch only clean, dry vessels to avoid introducing invasive species. Only electric motors are allowed on Beaver and Little Beaver lakes. Most rivers are too shallow for canoeing or kayaking.

Drive-in Camping is available at Twelvemile Beach, Hurricane River, and Little Beaver Lake campgrounds. All have tables, fire rings with grill grates, nearby potable water, and vault toilets. No showers, hookups, or dump stations. Find size limits and rules on the park website. Use only downed deadwood for campfires. Campgrounds are open May 15 through October 15. You must reserve your campsite at www.recreation.gov or call 877-444-6777. Find other campgrounds outside the park.

Backpacking Read the Backcountry Camping Planner on the park webpage before getting a

required backcountry permit. The planner includes camping sites, distances, rules, where fires are allowed, where to find water, and how to get permits.

Winter Activities Lots of snow means lots of winter fun. Crosscountry ski on miles of groomed trails. Snowmobile on a designated park road. Enjoy ice fishing on inland lakes and Munising Bay. Snowshoe just about anywhere. Ice climb along the cliffs. View the winter landscape and frozen waterfalls.

Hunting and Fishing are allowed in season under federal and state regulations. Michigan hunting and fishing licenses are required. Trapping and target practice are prohibited. Some areas are closed to hunting for safety reasons.

Weather and Bugs Be prepared for changing conditions. Sudden storms develop year-round. Hypothermia is always a threat. Bring layers of warm clothing and waterproof gear. Black flies and mosquitoes are common mid-May to mid-July. Stable flies are common along the shore on warm days. Wear long, light-colored pants and long-sleeved shirts.

Cell Service and Wi-Fi Cell phone service is non-existent or limited in the park, but best at Grand Marais and Munising. Find limited Wi-Fi at Grand Sable and Munising Falls visitor centers in summer.

Observe These Regulations Bicycles are prohibited on all trails. Motorized and wheeled vehicles are prohibited in the backcountry. ORVs are prohibited except on certain park roads; check the park website. Federal and state laws protect all natural and cultural features in the park. Do not disturb shipwreck remains. Metal detectors and remotely piloted aircraft like drones are prohibited.

Safety First Be prepared and stay alert. Do not climb on cliffs. Stay back from cliff edges; they can suddenly give way. Stay on trails and boardwalks. Use the overlooks. Do not climb on rocks near waterfalls. Sudden storms and Lake Superior's cold water makes watersports treacherous. Use caution when wading, swimming, fishing, and boating. Use caution while bicycling on park roads and H58. For firearms regulations check the park website.

Accessibility We strive to make facilities, services, and programs accessible to all. For more information, go to a visitor center, ask a ranger, call, or check the park website.

Emergencies call 911

More Information
Pictured Rocks National Lakeshore
PO Box 40
Munising, MI 49862-0040
906-387-3700
www.nps.gov/piro

Use the official NPS App to guide your visit.

Pictured Rocks National Lakeshore is one of over 400 parks in the National Park System. Learn more at www.nps.gov.

National Park Foundation
Join the park community.
www.nationalparks.org

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