



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



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

Stories in Sand

Sandstone cliffs—ochre, 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. Deep forests of emerald, black, and gold open onto small lakes and waterfalls. The images are like a painter's work. A palette of nature's colors, textures, and shapes sets the scene at Pictured Rocks National Lakeshore.

This place of beauty was authorized as the first national lakeshore in 1966 to preserve the shoreline, beaches, cliffs, and dunes and to provide an extraordinary place for recreation and discovery. Just over six miles across at its widest point, the park hugs Lake Superior's shoreline for over 40 miles and 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, inching back and forth over a million years, scoured and molded this land.

Moving ice ground volcanic and sedimentary rock from previous eras into rubble and slowly enlarged river valleys into the wide basins that would become the Great Lakes.

The last glacier began retreating about 10,000 years ago. Over time its meltwater formed powerful rivers and scattered rubble onto outwash plains and into crevasses. Water scooped out the basins and channels that harbor wetlands in the park today. Eventually, as the weight of the glacier lessened, the land rose and exposed bedrock to lake erosion. This onslaught by the lake—centuries of crushing ice and battering waves—carved the bedrock into young cliffs. Water continues to pound and sculpt the cliffs, eroding them inland while 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 the 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.

Living with Lake and Land

The bounty of the lake and land has attracted people since the glaciers retreated northward. Archaic and Woodland Indians made summer camps along the coast between what is now Munising and Grand Marais. Later, Anishinaabek Indians hunted and fished here, as their descendants still do, while en route to summer fishing areas farther east. Today, little evidence remains within the park of these early people.

European Adventurers In the 1600s and 1700s European explorers and voyageurs searched here for furs and minerals. These expeditions give us many of the area's earliest written accounts and left place names like Miners Castle and Grand Marais. In the 1800s American and European settlers arrived to make fortunes in mining and logging.

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.

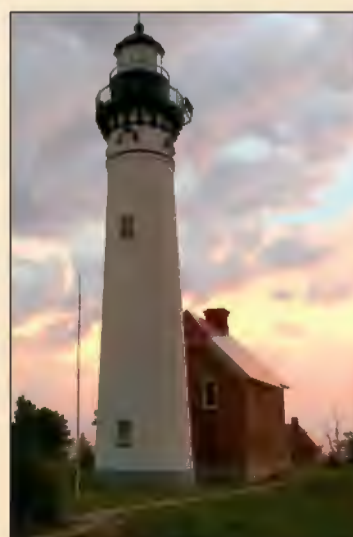
—Henry Rowe Schoolcraft, regional explorer and scholar, 1820

Booming Commerce

The demand for lumber attracted businessmen who bought vast forests of white pine, beech, and maple. Through the late 1800s boomtowns along Lake Superior's southern shore supported large logging operations and blast furnaces that produced pig iron for the nation's growing railroad industry. By the early 1900s both logging and ironworking had diminished due to loss of natural resources.

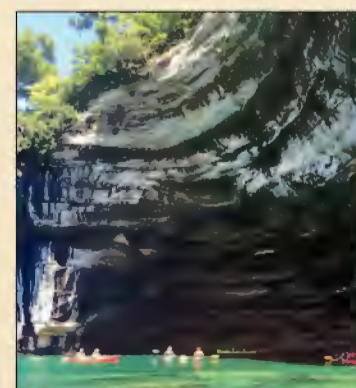
The Life-Saving Era

As businesses flourished, Lake Superior's commercial activity also increased. To help ships navigate the treacherous rock reef, the US Life Saving Service and the US



Powered today by sunlight and not kerosene, the 1874 Au Sable Light Station still warns mariners of the dangerous Au Sable reef.

Lighthouse Service (later the US Coast Guard) built lifeboat rescue stations and light stations along the shore. Remnants of this era still exist in the park.



Paddling along the Pictured Rocks cliffs

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 feet at its deepest point. The lake basin holds so much liquid that, if drained, it could 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 exerting a great influence on the surrounding land. Its cold water moderates the climate, keeping summer cooler and winter somewhat warmer. Mist, fog, wind, and lake effect snow affect the park's soil, vegetation, and wildlife and the people who live nearby.



Miners Falls

The lake continually reshapes the park's beaches and shoreline. Wave energy and the forces of ice and thaw work on the porous sandstone cliffs, causing erosion that may result in rockfalls.

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

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. Please respect the rights of private landowners.

- Lakeshore Zone (NPS)
- Inland Buffer Zone (mixed ownership)
- Wilderness within Lakeshore Zone (NPS)

Beaver Basin Wilderness Congress has designated nearly 12,000 acres in Pictured Rocks National Lakeshore for protection under the 1964 Wilderness Act. Included are forests, streams, lakes, wetlands, and 13 miles of Lake Superior shoreline.

Wilderness is meant to protect forever the land's natural conditions, opportunities for solitude and primitive recreation, and scientific, educational, and historical values. In wilderness people can sense being a part of the whole community of life on Earth. Preserving wilderness shows restraint and humility and benefits generations that follow us. Learn more at www.wilderness.net.

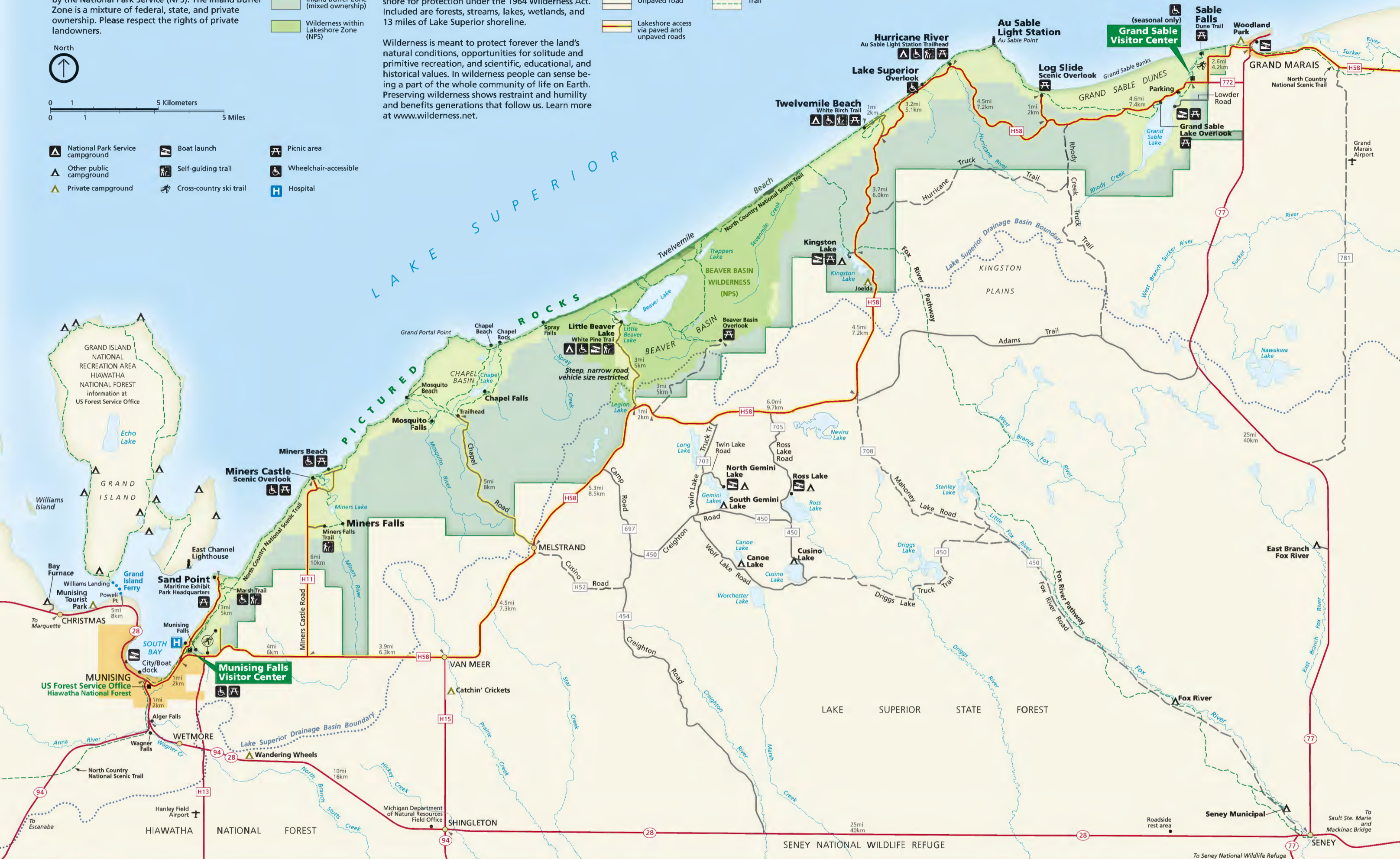
- Paved road
- Unpaved road
- Lakeshore access via paved and unpaved roads

- 4-wheel drive road
- Trail



0 1 5 Kilometers
0 1 5 Miles

- | | | |
|---|--|--|
| National Park Service campground | Boat launch | Picnic area |
| Other public campground | Self-guiding trail | Wheelchair-accessible |
| Private campground | Cross-country ski trail | Hospital |



Plan Your Visit

Munising Falls Visitor Center is located on the park's western end. Stop here for information, brochures, backcountry permit information, a bookstore, and activity and program schedules. Exhibits explain blast furnace and logging history and the geology of Pictured Rocks cliffs. Enjoy a short walk to Munising Falls. Open daily mid-May to mid-October. Open Thursdays through Saturdays in winter except federal holidays.

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

Boat Tours/Trips Concession cruise boats travel from Munising along the Pictured Rocks cliffs daily mid-May to mid-October. For tickets and more information visit www.picturedrocks.com or call 906-387-2379. Various commercial businesses offer kayak trips and other guided recreational opportunities: www.nps.gov/planyourvisit/commercial-services.htm.

Hiking and Walking Pictured Rocks offers 100 miles of trails; choose from short or long, easy

or strenuous. Get maps and information at the visitor centers. Portions of the North Country Trail and other trails give you spectacular vistas of the lake, cliffs, dunes, and waterfalls. Plan ahead. Tell someone where you are going. Carry plenty of water and food. Be prepared for rain or rapid weather changes. Wear sturdy footwear and layered clothing.

Beaches Sand beaches on Lake Superior that are suitable for sunbathing and swimming are located at Sand Point, Miners Beach, Twelvemile Beach, Hurricane River, and Little Beaver Lake Overlook. Use caution. Cold water and rough conditions can make swimming hazardous. Observe surf and rip current warnings. Lifeguards are not present.

Drive-In Camping is available at Twelvemile Beach, Hurricane River, and Little Beaver Lake campgrounds. All have water, tables, fire rings with grill grates, and toilets but NO showers. Campsites (fee) are first-come, first-served. Register and pay at the campground. Stays are limited. Some size restrictions apply. In peak season, campgrounds often fill by 10 am.

Camping is also available in state forests and parks, private campgrounds, and Hiawatha National Forest.

Backcountry Camping In the park are 14 backcountry campgrounds, including one boat-in site and seven group sites. Most are located every 2 to 5 miles along the North Country Trail. Overnight backcountry sites (fee) require a permit, obtained at www.recreation.gov or 877-444-6777. Camp only in designated sites. Use stoves at Chapel Beach and Mosquito Beach campgrounds; fires prohibited. At other sites fires are allowed only in metal fire rings. Ground and beach fires are prohibited. There is no potable water; use a water filter.

Boating, Canoeing, and Sea Kayaking Beaver Lake, Little Beaver Lake, and Grand Sable Lake are favorites for small boats, kayaks, and canoes. Boats must be clean and dry before launching to prevent introduction of invasive species. Only electric motors are allowed on Beaver and Little Beaver lakes. Most rivers are too shallow for canoeing. Lake Superior is often too rough for small craft. Kayakers on Lake

Superior should use sea kayaks only and make sure they have all necessary safety gear. See the Kayaking Safety brochure for details. Munising and Grand Marais have launch ramps for motor boats. Backcountry permits (fee) are required for overnight boaters and sea kayakers.

Hunting/Fishing are allowed in season under federal and state regulations. Michigan hunting or fishing licenses are required. Trapping and target practice are prohibited. Some park areas are closed to hunting for safety reasons. For firearms regulations see the park website. Check at visitor centers for more information.

Winter Activities Crosscountry ski on miles of groomed trails. Snowmobile on one of the designated park roads. Also popular are ice fishing on inland lakes and South Bay (Munising Bay), snowshoeing, ice climbing, and winter camping. For details see the park website.

Weather, Bugs Your visit will be more enjoyable if you come prepared for changing conditions. The proximity of Lake Superior moderates the climate, but sudden storms can develop

year-round and hypothermia is always a threat. Bring rain gear and layers of warm clothing. Black flies and mosquitoes can be aggravating mid-May to mid-July. Stable flies are common along the shore in warm, humid weather. Wear long light-colored pants and long-sleeved shirts. Use insect repellent. Wear a hat.

Pets are allowed only in limited areas of the park. They are prohibited on most trails. Check at visitor centers or see website for details. Where they are allowed, pets must be leashed and attended. Pets and domestic pack animals are prohibited in the backcountry.

Safety First Be alert. Your safety is your responsibility. • Do not climb or slide on cliffs. Stay back from their 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 make watersports treacherous. Use caution when wading, swimming, fishing, scuba diving, and boating. • Use caution while bicycling on park roads and H58.

Emergencies call 911

Observe These Regulations Bicycles are prohibited on all trails. • Motorized or wheeled vehicles are prohibited in the backcountry. • ORVs are prohibited in the lakeshore except for limited access on certain park roads. • Federal and state laws protect natural and historic features. Do not disturb shipwreck remains on the shore or in the water. • Drones are prohibited in all areas of the park.

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

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

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