

Superior Wildlands

A FREE GUIDE

To Your Central and Eastern Upper Peninsula Federal Lands



LAKE SUPERIOR



Today we call them the Great Lakes. First Nation people gave them names like Kitchi Gummi for Lake Superior and Michi Gami for Lake Michigan. No matter the name, these lakes exert an enormous presence on our lives and the land we live in. At the very least we must be impressed with their size and grandeur. Superior, for example, is the largest Great Lake by surface area and second largest lake on Earth by volume. Lake Michigan is the second largest Great Lake and fifth world-wide. It would take a four foot deep swimming pool the size of the continental U.S. to contain all of Lake Superior's water!

The sheer size of the lake is impressive. It takes a modern lake carrier 15.5 hours (in good weather) to haul a load of salt the 350 miles from Sault Ste. Marie to Duluth. It is 160 miles from Munising due north to Ontario's shore – the same distance as from Detroit to Grand Rapids. Lake Superior's shoreline stretches 2,726 miles, equal to the distance between Kalispell, Montana and Winter Haven, Florida.

Though diminished in the number of ships from the great shipping heyday of the late 1800s, the lakes still serves as the life blood of Midwest commerce in commodities like grain, sand, iron ore, coal, cement, fertilizer, salt, and even enormous wind turbine blades and towers. The lakes account for 2.5 million jobs and \$62 billion in U.S. wages. Recreational anglers add \$7 million through their activities. And though not all are Great Lakes craft, Michigan boasts the highest number of registered boats for any state at over one million.

Impressive as these economic figures are, they fail perhaps to convey the special qualities we find in the lakes. How do you put an economic

LAKE MICHIGAN



value on the things nature provides for free? Many communities depend on the clean fresh water, fisheries, and the climate the lakes provide. Consider how Lake Superior creates its own weather with localized storms dumping rain and snow as an average of 140 inches piles up in Munising. Where would we snowmobile, ski or snowshoe without the influence of a phenomenon called "lake effect" snow? How could we ever place value on glimpsing an ephemeral waterspout along the Pictured Rocks cliffs, or the sight of a bald eagle launching from a white pine perch?

Consider the long cavalcade of history borne by the lakes. Since the last glacier retreated north some 9,500 years ago, people have lived here "on the edge" of a series of large lakes that have waxed and waned in smaller and larger basins. Native Americans paddled these waters for millennia before Europeans knocked on the door. French Canadian and English fur traders moved their trade goods over these waters to barter for skins of beaver, mink, fox, and wolf. Since then, mining, logging, fishing, blast furnace, U.S. Life Saving Service, U.S. Lighthouse Service, and U.S. Coast Guard workers have hugged these shorelines. Today, we are still drawn to the water's edge to ice fish, kayak, sail, or just relax on a rocky shore or beach. Countless recreational hours are spent by millions beside or on the lakes.

Perhaps one of the most interesting treasures is hidden from everyday view. Most overlook the fact that there is an entire world below the surface of a lake such as Superior. Sure, we marvel in how it glistens in the sun or crashes on shore when the wind picks up in a gale, but what do we know about how the lake functions

LAKE HURON



as an aquatic ecosystem? Indeed, there is a complicated web of energy at work day and night in the lake, season by season. It is the integrity of this web that has scientists concerned about the lake's – and our – long term viability in a changing climate.

Superior's large watershed slowly feeds the lake, but it takes approximately 191 years for a complete exchange of water to occur. Superior is what we call "oligotrophic" or nutrient poor compared to the other Great Lakes. There are some 38 species of native fish in Superior, and another 17 non-native reproducing in the lake for a total of 88 species – some with considerable assistance from humans.

When was the last time you saw a few billion microscopic blue-green algae, flagellates, diatoms or rotifers, the very base of the food web? When were you introduced to a handful of mollusks (clams), mayfly nymphs, amphipods or opossum shrimp? When did you last stare a sculpin or bloater in the eye? These and many other life forms live and die in Superior in an interconnected dance of energy, life and death. We know that the lake "turns over" each spring and fall when the warm and cool waters mix, redistributing energy vertically in the water column. With recent record warm surface water temperatures, a steady and dramatic decline in lake ice, and increased winds over the lake, Superior is changing before our eyes.

So next time you stand on the shore, paddle on its surface, or take a cruise boat, imagine these waters through the millennia, think of the people who have lived on or visited the shore, who, like you are moved when you experience the greatest of lakes on Earth.



ARE YOU READY TO KAYAK LAKE SUPERIOR?

Preparation checklist

At a minimum, you should have....

- Sea kayak
- PFD (personal flotation device)
- Wet suit
- Spray skirt (and know how to use it)
- Whistle and foghorn
- Bilge pump, paddle float and tow rope
- Weather radio
- Float plan
- A partner (kayaking alone is not advised)
- Spare clothes, food and water

Kayaking at Pictured Rocks National Lake Shore and Grand Island National Recreation Area can be a fun adventure. However, it is not recommended for the novice kayaker (unless accompanied by a professional tour guide). Both Pictured Rocks and Grand Island feature many miles of sheer cliffs which offer no way off the water if wind and waves increase.

Lake Superior can become hazardous for any size vessel even in moderate weather. The weather can suddenly change, exposing you to cold temperatures, wind, fog, lightning and rough seas.

Except for shallow areas, Lake Superior's temperatures rarely reach above 55 degrees. Hypothermia can happen in as little as 15 minutes. **Before you go, check the marine forecast!** PFD's and wet suits should be worn at all times on Lake Superior.



Recreational kayakers being rescued along the cliffs of Pictured Rocks N.L. Don't let this be you!

Sea Kayaks vs. Recreational Kayaks

Sea kayaks with a spray skirt are recommended because they are safer on Lake Superior. Recreational kayaks are designed for inland waters and are not suited for high winds and big waves. Recreational kayaks can fill with water and sink because of the large open cockpit. Sea kayaks are generally 16 to 19 feet long, with hatches and bulkheads providing flotation in the front and back.



Recommended Skills

- Know how to properly use a spray skirt and be able to get back in your boat if you tip over.**
- Know how to paddle around the wake from large boats. Be aware of wave bounce near cliffs.**
- Know how to paddle within your skills and abilities. If there is any doubt, don't go out!**

<http://www.nps.gov/piro/planyourvisit/upload/Kayak-Safety-2012.pdf>

Summer Interpretive Programs Are Popular



All three agencies present a variety of thought-provoking and fun interpretive programs from May through September. For a schedule, consult area bulletin boards, stop at a visitor center, or view our websites - then join us!

Natural History Associations - Partners in Interpretation and Education

The money spent on souvenirs in gift stores at the Park, Forest or Refuge, generously donate, or contribute for membership all goes to non-profit natural history associations to be spent on interpretation, education and research. Each natural history association is guided by a volunteer Board of Directors, which votes on how revenue and donations should be spent based on budget and projects suggested by agency staff and volunteers. Here are some improvements paid for in whole or part by these associations:

- Campground programs
- Informational leaflets
- Exhibits and interpretive signs
- Observation scopes and decks
- Summer internships
- This newspaper!
- Teacher workshop materials and support

Hiawatha Interpretive Association
PO Box 913
Munising, MI 49862
www.hiawathainterpretive.com



Hiawatha Interpretive Association

Seney Natural History Association
1674 Refuge Entrance Rd.
Seney, MI 49883
friendsofseney.org



Eastern National
470 Maryland Drive, Suite 1
Ft. Washington, PA 19034
www.easternnational.org



ENFIA
307-1/2 N. State Street
Oscoda, MI 48750
www.enfiamich.org



National Parks of Lake Superior Foundation



The National Parks of Lake Superior Foundation (NPLSF) is a non-profit "friends" organization which provides financial support to the five U.S. National Park areas on Lake Superior. These include Pictured Rocks National Lakeshore (MI), Keweenaw National Historical Park (MI), Grand Portage National Monument (MN), Apostle Islands National Lakeshore (WI), and Isle Royale National Park (MI).

Your donation to NPLSF will assist parks with worthy projects over and above funding for basic park operations. Projects include the preservation of historic structures, improved visitor services, enhanced environmental education programs, and MORE! We invite individuals and major donors to contact the Foundation to learn more about how they can become involved in these efforts. Your donation is tax deductible. For additional information or to make a donation, contact: www.nplsf.org

Pictured Rocks National Lakeshore



Superintendent's Corner



On behalf of the people of the National Park Service, welcome to Pictured Rocks National Lakeshore, one of your National Parks. We are pleased and proud to welcome people from all over the United States, Canada, and other nations to this very special place. Whether on land or water, I hope you will take the time to experience some of the spectacular natural landscapes and historic resources that the park offers. I am in my first year as Park Superintendent at Pictured Rocks, and I am looking forward to being out on the trails, overlooks, and waters with you. Be safe and enjoy your park!

Mike Pflaum
Park Superintendent

Wild about Wilderness!

The Wilderness Act is turning 50!

On September 3, 2014, America celebrates the 50th anniversary of the Wilderness Act. Congress overwhelmingly passed the act in 1964, creating a National Wilderness Preservation System representing our nation's commitment to preserving some of the last large undeveloped tracts of our natural heritage.

In the Omnibus Public Lands Act of 2009, Congress designated 11,740 acres or 16% of Pictured Rocks National Lakeshore as wilderness, which is known as the Beaver Basin Wilderness.

50 Miles, 50 Minutes or 50 Seconds?

Celebrate the 50th Anniversary of the Wilderness Act right here at Pictured Rocks National Lakeshore with our 50 for the 50th Wilderness Challenge! Hike 50 miles, 50 minutes or take a 50 second mini-vacation and read about the Beaver Basin Wilderness.

50 Miles

Feeling adventurous and able to take a 50 mile celebratory trek? Start your journey at our website www.nps.gov/piro/ and download our Backcountry Trip Planner. Once you pick your route, purchase your backcountry permit at the visitor center, fill up your pack, lace up your boots and hit the trail in the Beaver Basin Wilderness. There are 17 miles of trails and 6 backcountry campgrounds in the wilderness. Complete your remaining mileage hiking the additional 70 plus miles of trail with in the Lakeshore.

If canoeing or kayaking is your preferred mode of transportation, five of the six backcountry campgrounds within the wilderness are accessible by water. There are four more backcountry sites accessible by water on Lake Superior within the Lakeshore. However, sea kayaks are recommended when paddling on Lake Superior. While traversing the shoreline you will have miles of beautiful sandstone cliffs rising above you, coves, waterfalls and beaches. If you prefer a canoe, the wilderness area will suit your needs. Put your canoe in at Little Beaver Lake Campground and paddle the pristine waters of Little Beaver Lake and Beaver Lake.

50 Minutes

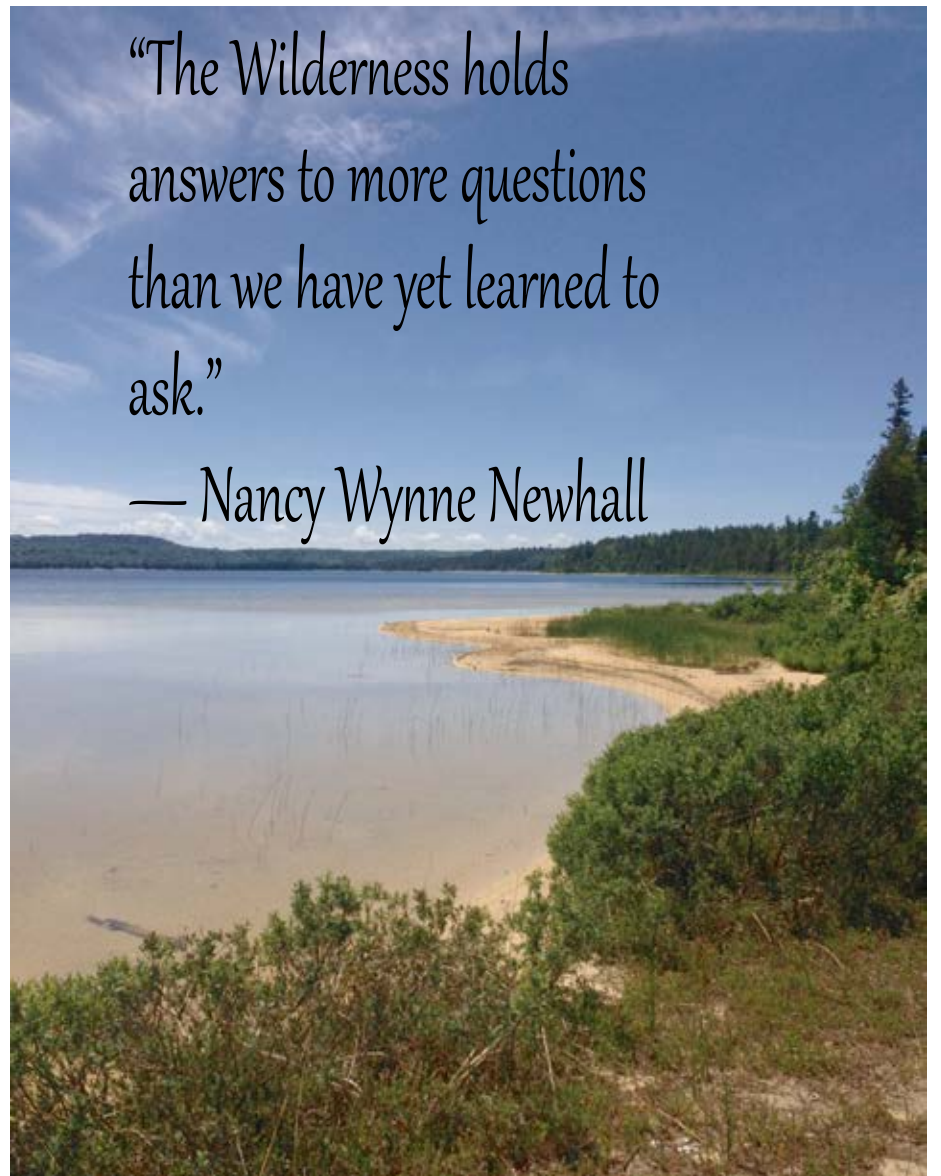
Is hiking or paddling 50 miles a bit much for this visit? Take a 50 minute day hike through the Beaver Basin Wilderness and - while you are at it - take 50 photos to commemorate your adventure! Starting from the Little Beaver trailhead, there are various three mile round trip day hikes such as the trek to the north shore of Beaver Lake, the Lake Superior shoreline or to the spot where Lowney Creek flows into Beaver Lake. Download a map to your smart phone, print a map from our website, or stop by a visitor center and plan your day hike.

50 Seconds

If you don't have time for a 50 mile or 50 minute trek during your visit, take a 50 second mini-vacation. Sit back, relax and take a spiritual journey through the Beaver Basin Wilderness.

The Beaver Basin was formed over 9,500 thousand years ago when the glaciers melted away. Ancient beach ridges, escarpments and post-glacial melt water channels were left behind. The journey to search for post glacial evidence begins atop Beaver Basin Overlook. The northern view is framed by maple trees standing watch over the expansive basin, giving way to Lake Superior flowing into the skyline. As you meander down the trail into the basin shaded by the forest canopy, you cross over creeks and sneak by beaver ponds. You have come to a fork in the trail where you can choose to travel northeast or northwest. The northeast trail guides you through the thick forest to Trappers Lake where you may see a large snapping turtle sunning itself on an old faded log. If you take the trail to the northwest you will be greeted by more beaver ponds, creek crossing and the shoreline of Beaver Lake.

The shoreline of Beaver Lake is a good spot to rest and take in the post glacial landscape. Take a seat on the downed log and rest a while.



Beaver Lake - Ranger Tembreull, NPS

Take in the sights and sounds around you. Do you see the deer tracks in the sand? A deer must have stopped by to get a cool drink of water. Oh! Look over there, at the ripples in the water. Did you see the small mouth bass leap from the water to grab a fly? Quick, look up to the cloud lined sky. The neighborhood bald eagle is soaring by, looking for its next meal.

Now that you have rested, let's continue our search for post glacial evidence on the southern shores of Lake Superior. The root covered trail, sheltered by thick pine forests, begins to fade away as roots give way to sand under your feet. The sound in the distance is the waves lapping against the shore. You are getting close to the 31,700 square miles of Lake Superior. If you are anxious to see the lake, stroll down the bluff and take in the panoramic view. To the west there are 15 miles of colorful sandstone cliff line that rise 200 feet above the lake. The nearby rocky coves, carved by the relentless waves of Lake Superior, are the natural transition from cliff line to the soft sandy shores of Twelvemile Beach and beyond to Au Sable Point and the Grand Sable Dunes. With that panoramic view locked into your mind, are you ready to plan future adventures in the Beaver Basin Wilderness?

Which 50th Wilderness Challenge will you choose? Or do you have a better idea? Share your 50th Anniversary of the Wilderness Act celebrations on our Facebook page at www.facebook.com/pages/Pictured-Rocks-National-Lakeshore/69264911752. For more events, information and news about the 50th Anniversary of the Wilderness Act check out www.wilderness50th.org/



Are you as wild about wilderness as we are?

Make sure you check out the Big Island Wilderness and Rock River Wilderness in the neighboring Munising Ranger District of the Hiawatha National Forest!



A Walk in the Park

Your visit to Pictured Rocks National Lakeshore may be only an hour or two or you may spend a week or more. If you only have a day or two to spend at the Lakeshore, consider visiting these popular attractions in developed areas of the park. Please note that **bicycles are not permitted on Lakeshore trails**. Pets are allowed along all park roads and are permitted in **some** other areas. Pets must always be on a 6-foot leash.

Munising Falls

Nestled in a cool, shady valley, the 50 foot falls are at the end of a short 800 foot walk on an improved trail. The trail is a good place to look for wildflowers in spring and early summer. Water from the creek was once used in the production of iron at the Schoolcraft blast furnace, a story told on wayside exhibits and in the Munising Falls Interpretive Center. Pets are allowed on the trail to Munising Falls, but not on Becker Farm entrance road and fields or on North Country Trail.

Sand Point

The Sand Point beach is a popular spot for walking in the evening to watch the sun go down over Munising Bay. The Sand Point Marsh Trail, a half-mile disabled accessible interpretive trail, features a large print brochure for visually impaired visitors. Sand Point is a good place to look for warblers in spring and fall. Park Headquarters is also located on Sand Point in a former U.S. Coast Guard building. Pets are prohibited on Sand Point Marsh Trail.

Miners Castle

Beginning at the picnic area, a paved foot trail leads you past interpretive exhibits to breathtaking overlooks of Lake Superior and Grand Island. Erosion over long periods of time has created the interesting rock formations that give this place its name. Pets are permitted in picnic and overlook area but prohibited on the North Country Trail.

Miners Falls

A 1.2 mile round trip gravel path through a deep woods environment leads to the falls overlook. Miners River plunging some 60 feet over a cliff is home to brook and steelhead trout. A free, self-guiding interpretive trail guide is available at the trailhead. Pets are permitted in the picnic area on a 6 foot leash, but are prohibited on the trail to Miners Falls.



Miners Beach

A picnicker and beach walker's delight, Miners Beach extends for one mile on Lake Superior where waves roll in to polish beach cobbles. Miners River is popular for steelhead fishing in spring and fall. A 1.0 mile trail connects Miners Castle developed area and the picnic area at Miners Beach. Pets are allowed in the picnic area and on Miners Beach.

White Pine Trail

Located at the Little Beaver Lake Campground this 1.0 mile self-guiding interpretive trail explores the plant and animal communities of a cool, shady valley. Free trail guides are located at the trailhead. No pets are allowed on the White Pine Trail.

Chapel Rock

Circumnavigating Chapel Lake takes you to the beautiful Chapel Beach and Chapel Rock. The 6.6 mile trip makes a great day hike. Pets are *not* permitted on this trail.

White Birch Trail

Located at the Twelvemile Beach Campground, this two mile self-guiding interpretive trail explores a variety of ancient Lake Nipissing beach and upland plant communities. Free trail guides are located at the trailhead. Pets are *not* allowed on this trail.

Log Slide Overlook

The 1,000 foot trail to the viewing platform from the picnic area is worth the walk. Newspaper accounts tell of logs sent down the dry log chute generating enough friction to cause the chute to catch fire. Today the chute is gone, but the lumberjack stories still linger as you gaze out over the Grand Sable Banks and Dunes. This is a good place to glimpse the Au Sable Light Station to the west and Grand Marais to the east. Pets are *not* allowed on this trail.

Au Sable Light Station

Strolling about the grounds on a stormy day, one can feel the sense of duty and history for which this station is preserved. Access to the station is by a 1.5 mile hiking trail beginning at the east end of the lower Hurricane River Campground. Check at visitor centers and park bulletin boards for summer interpretive tours scheduled at the light station. Tour fee \$3 per adult. Pets are *not* allowed on the trail to or at the lighthouse.

Sable Falls

A picnic lunch at Sable Falls can begin a great afternoon of exploring. A 0.5 mile hike from the parking lot leads you an extensive staircase to the falls and Sable Creek and on to Lake Superior. Pets are *not* allowed on the trail to the falls.

Regulations to Know



To help ensure a pleasant visit, please take a couple minutes to become familiar with the following regulations at the National Lakeshore.

Camping - permitted only within designated Lakeshore campsites. Camping permits are required. Beach or roadside camping is prohibited. Little Beaver Lake Campground - Single unit vehicles in excess of 36 feet and vehicle/trailer combined units in excess of 42 feet are prohibited at Little Beaver because of the small campsites and the narrow, twisting, hilly access road.

Backcountry campers - must purchase a \$5 per night/person backcountry permit prior to entering the backcountry. Permits are available by reservation and in-person at visitor centers in Munising and Grand Marais.

Pets - where permitted, must be on a 6-foot leash. Check the pet map on bulletin boards for specific locations of pet walking areas.

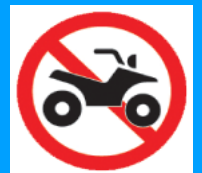
Bicycles - permitted on roads where automobiles are permitted. Not permitted on hiking trails or roads closed to vehicular traffic.

Hunting - prohibited park-wide during the high visitor use period of April 1 through Labor Day. Hunting is allowed the remainder of the year as established by state and federal laws. Target shooting and trapping are prohibited year-round.

Campfires - allowed only in fire rings. Fires on beaches are prohibited except in fire rings provided.

ATVs - are prohibited in the park.

Removing rocks or other natural features is prohibited.



Please do not injure or remove plants or harass wildlife.

Wildlife feeding prohibited - Birds and small mammals rely on natural food to get them through the winter. Please do not make them dependent on human food.

No littering - Each of us enjoy a clean Lakeshore. Please pick up after yourself and others.

Fireworks - are best left to the experts. Use or possession of fireworks within the Lakeshore is prohibited.

Pictured Rocks National Lakeshore



Where can I see the Pictured Rocks?

The Pictured Rocks Cliffs extend from Sand Point, northeast along Lake Superior for about 15 miles toward the eastern gateway community of Grand Marais.

Tell me about the Pictured Rocks Cruises?

One of the best ways to see the cliffs is from the Pictured Rocks Cruises. Cruise boats traverse about 13 miles of the cliffs during a 2.5 hour trip. Boats leave from the City Dock at Bayshore Park. The cruise schedule is available by

calling 906-387-2379.

Where are the waterfalls?

The Lakeshore publishes a site bulletin on waterfalls. Pick up a copy at one of the visitor centers.

Do I have to take the boat to see the Pictured Rocks?

No. A portion of the cliffs can be seen by driving to Miners Castle and walking a short distance to the viewing platforms. Other vistas can be accessed by day hikes on the North Country Trail.

Where is the visitor center?

The main Lakeshore visitor center is the Interagency Visitor Center in Munising at the corner of M-28 and H-58. There are small visitor centers at Munising Falls, Miners Castle, and Grand Sable Visitor Center outside of Grand Marais.

Are there guided interpretive walks and campground programs?

Yes! The schedule of interpretive hikes, tours of the Au Sable Light Station, and campfire programs are posted on all bulletin boards. Also see www.nps.gov/piro.

Where can we camp?

The park has three rustic drive-in campgrounds - Little Beaver Lake (8 sites), Twelvemile Beach (36 sites) and Hurricane River (22 sites). All are first come first served. A fee of \$14 per night is charged. There are no electrical, water or sewer hookups at Lakeshore campgrounds.

Where can I walk with my dog?

Pets are permitted in specific locations but are not allowed in the backcountry. Obtain a Pets site bulletin at one of the visitor centers for detailed information.

Yesterday and Today at Au Sable Light Station



Au Sable Light Station, Then and Now

As early as 1622, when Pierre Esprit Radisson called it "most dangerous when there is any storms," Au Sable Point or Pointe Aux Sables, French for "with sand," was recognized as a hazard to Lake Superior mariners. Au Sable Point is a mile long shallow reef, only six feet below the surface, composed of Jacobsville sandstone. This reef was one of the greatest dangers a captain faced when coasting the south shore headed to and from Munising or Marquette and the Soo Canal.

Navigating wind, snow and fog of Lake Superior

Besides the offshore sandstone reef, the area was infamous for thick fog caused by the interaction of cool lake air with warmer air rising from nearby Grand Sable Dunes. The resulting fog could completely obscure the shoreline, hiding the landmarks lake captains of the 1800s used for navigation. Between the reef, fog, snow and north wind, Au Sable Point proved to be a natural ship trap. If you need proof of the devastation Au Sable Point could produce, comb the beach west of the Point and view the wreckages left behind. These wrecks, from west to east, the Mary Jarecki, Sitka and Gale Staples, tell a poignant story of trial and loss and the dangers faced by those who sailed the Great Lakes. Take in the views and snap photos, but leave the remnants of the past preserved in the sand.

By the early 1870s, following several wrecks and near-wrecks in the area, mariners and their allies in the press began to urge that a light station be built between Grand Island and Whitefish Point. On July 29, 1871, the Marquette *Mining Journal* said, "in all navigation of Lake Superior, there is none more dreaded by the mariner than that from Whitefish Point to Grand Island." The Eleventh Lighthouse District annual report of 1871 stated the light was more a necessity at Au Sable Point than at any

other unprotected location in the district.

"Big Sable" gains a Light Station

Congress acted in 1872, appropriating funds for a lighthouse at Au Sable. The State of Michigan sold the land to the federal government and by July 1874 the Lighthouse Board released this message to mariners, "Notice is hereby given that on or about the night of Wednesday the 19th day of August 1874 a fixed white light will be exhibited from the new brick tower at Big Sable Point..."

Built on the same plan as the 1874 Outer Island Light in the Apostle Islands National Lakeshore, its whitewashed walls and black-trimmed tower made it an easily noticed landmark. The tower is 86 feet high measured from its base to the rooftop ventilator ball. At its base the walls are over four feet thick while the wall at the lower lantern room is over three feet thick. The tower foundation consists of rubble masonry lying on bedrock 23 feet below the surface!

Additions and Improvements

Over the years, numerous additions and improvements were made to the station. In 1895 a brick oil house was added. In the early 1900's there were many additions to the site such as a steam-powered fog whistle, a new seawall, a new residence for the keeper and a diaphone fog signal. Also, a rough road connecting the station to the Log Slide was built, allowing eventual access to the public highway.

transferred to the National Park Service but the U.S. Coast Guard continues to maintain the beacon and solar panel that charges the storage battery.

Restoring Au Sable Light Station



The Fog Signal Building at Au Sable Point, Then and Now

Restoration efforts at the station began in earnest in 1988 with initial historic investigations of the double keepers quarters and light tower. These activities included paint and plaster analysis, researching historic room sizes and uses, and shingle detail. Since 1988, several of the structures have been painted, both inside and out, doors, windows and screens have been restored, and the front porch on the double keepers dwelling was reconstructed to the 1909-1910 period.

In recent years volunteers and Lakeshore work crews have implemented recommendations prescribed in the Au Sable Cultural Landscape Plan. Brush and trees were removed from the area that would have been historically kept clear of vegetation to keep the light visible and to reduce the hazard of fire. Crews have rehabilitated dune blowouts and stairs to the beach as well as the extensive sidewalk system. Landscape work will continue to maintain the historic setting.

Today at Au Sable Light Station

Pictured Rocks National Lakeshore has completed restoration of the 1910 single keepers quarters as a seasonal volunteer residence and information station and museum. The station is open Memorial Day to Labor Day for guided tours and for groups by appointment. The first floor of the assistant keepers quarters is being refurbished through donations and purchase, reflecting the time when Keeper John and his wife Martha Brooks lived at Au Sable.

Join us in September in celebrating Au Sable Light Stations 140 years of maritime service during Au Sable Day!



1874 Au Sable Light Station

In 1945, the U.S. Coast Guard personnel began staffing the lighthouse, replacing the civilian keepers. In 1958 the Coast Guard converted the light station to an automatic unattended light and discontinued the fog signal. In January 1968, the Au Sable Light Station was



National Parks: America's Best Idea

By Mike Pflaum, Park Superintendent

The United States system of National Parks is the greatest such system in the world. The people of our nation have protected and preserved 401 places that represent the best of our natural resources, our cultural resources, and our stories. The great American author Wallace Stegner once said, "National Parks are the best idea we ever had. Absolutely American, absolutely democratic, they reflect us at our best rather than our worst."

Pictured Rocks National Lakeshore is one of these "best ideas". Much credit is due to the park founders and legislators who had an astute vision and worked hard for the establishment of the park in October 1966. Working with park partners and the community, today the park preserves a spectacular stretch of Lake Superior shoreline with colorful sandstone cliffs and sand and cobblestone beaches. The park's streams, waterfalls, northern forests, and wildlife contribute to its magnificence. In addition, the park has the historic Au Sable Light Station and other important cultural resources. It is one of the nation's special places.

Our parks are set aside primarily to preserve and protect natural and cultural resources and to provide for the opportunity for safe, outstanding visitor experiences. There is great value to the people of the United States and the world in having these special places for education, recreation, and spiritual renewal. In addition, our parks protect and serve as reservoirs for clean water, clean air, native vegetation, and native wildlife; and provide anchors for historic preservation.

When the people of the National Park Service, in collaboration with park partners and communities, do a great job of preservation and providing outstanding opportunities for visitors, another value exists: economic benefit locally and nationally. A peer-reviewed study for the National Park Service showed that nationally in 2012, there was approximately \$14.7 billion in direct spending by approximately 283 million park visitors in communities within 60 miles of a national park. That visitor spending had a \$27.5 billion impact on the entire U.S. economy and supported 243,000 jobs nationwide.

This same report shows that visitors to Pictured Rocks National Lakeshore spent about \$23.7 million supporting 312 jobs in nearby communities. To review the report on the internet, go to www.nature.nps.gov/socialscience/economics.cfm.

In addition to visitor spending, the Lakeshore's federal budget, project funding, and fee revenue amount to an additional \$2.7 million annually, supporting approximately 32 jobs.

Visit Pictured Rocks National Lakeshore and the other parks of Lake Superior, Michigan, and the nation. Experience all that these great places have to offer. As I once heard former President Clinton say in one of our parks, "National Parks are places where people can have the same great experiences, regardless of their wealth or their means." Our parks are great places for people, preservation, education, recreation, and for the economy!

An Erosional Park

What do a kayak or hiker rescue, sandstone bedrock, and ice have to do with each other? It's a topic Park Rangers think about frequently – and you should too.

The story begins with 500+ million year old Cambrian and Ordovician sandstone here along the south shore of Lake Superior. The bedrock that forms the Pictured Rocks cliffs was laid down in shallow oceans millions of years ago. The lower portions of the cliffs we see today are layers of Munising Formation that are poorly cemented together and prone to water seeping through them throughout the year. The sand that makes up this rock came from the erosion of the Michigan Highlands, an ancient and now extinct range of mountains south of our location. The Au Train Formation lies atop the Munising Formation and forms a caprock in many places. It was derived from another range of mountains that eroded over millions of years to the northeast of the park. The Au Train layer of bedrock is much thinner than the Munising Formation, but is more strongly cemented together. Though sturdier, it too is very water permeable – which is where the ice comes in.

In spring, winter and autumn, water travels slowly through the porous bedrock freezing and thawing, freezing and thawing. This particularly occurs near the exposed surface of the cliffs. This freeze-thaw action is a basic erosional process known worldwide, but is particularly active here on Lake Superior where we have fairly extreme weather conditions.

Layers of bedrock fracture along fault lines, lineaments, or cracks in the rock, often

causing tiny or enormous rock falls along the cliffs. If you are hiking along the edge of the cliffs or kayaking or boating below the cliffs, you could be in danger from one of these unpredictable calving events.

Imagine a peaceful summer day. You and some friends are kayaking along the cliffs and decide to move in closer to see the multi-colored stains where mineral laden water seeps to the surface. All of a sudden, you hear a dull roar, and the water around you comes alive with pieces of rock rapidly splashing into the water around you. You back paddle furiously away from the cliffs and, luckily, no one in your group was hit by a 300 pound piece of rock falling from over 100 feet.

The next time you hike, boat, or visit the cliffs, think about the connection between ancient bedrock, water and ice, and your safety. And if you plan on making a big splash in life, please do it somewhere else!



Being Aware for Your Safety

Falling rock, cascading dunes, rip currents and encounters with bears due to improper backcountry storage of food... as a Lakeshore visitor, these are things you should be thinking about. As you visit the park, be aware of the situations you find yourself in and ask yourself "what if?"

Many cliff areas along the North Country Trail are actually overhangs with free space below. As you are hiking in the park - stay back from the edge.

Rip currents are possible at several beaches along the Lakeshore depending on weather and water conditions. Check the bulletin boards to know what they look like and how to get out of one.

When visiting the park, if you need to talk on your cell phone, pull over at a safe location out of traffic. Talking on your cell phone may cause you to miss seeing wildlife - or worse!

While the Grand Sable Dunes are a unique and beautiful part of the park, they too can hold hazards. Be aware that sand banks can collapse - sending you downslope or perhaps covering you. Take care when traversing dune faces.

People often remark they would love to see a bear during their visit to the park, but at a safe distance. Remember that a fed bear is a dead bear. Please follow food storage guidelines posted on bulletin boards and in backcountry regulations by hanging your food on the food pole provided or securing food in the food locker



provided or in a vehicle. If you encounter a bear while on foot in the park, make noise and wave your arms. Do not drop your day pack or other items with food in them. Please report all incidents to a Park Ranger or visitor center.

For info about Pictured Rocks National Lakeshore:

Pictured Rocks National Lakeshore
N8391 Sand Point Road
P.O. Box 40
Munising, MI 49862

Interagency Visitor Center (906) 387-3700
Grand Sable Visitor Center (906) 494-2660
Park Headquarters (906) 387-2607

Feeling
Social?

www.nps.gov/piro



Hiawatha National Forest - West Unit

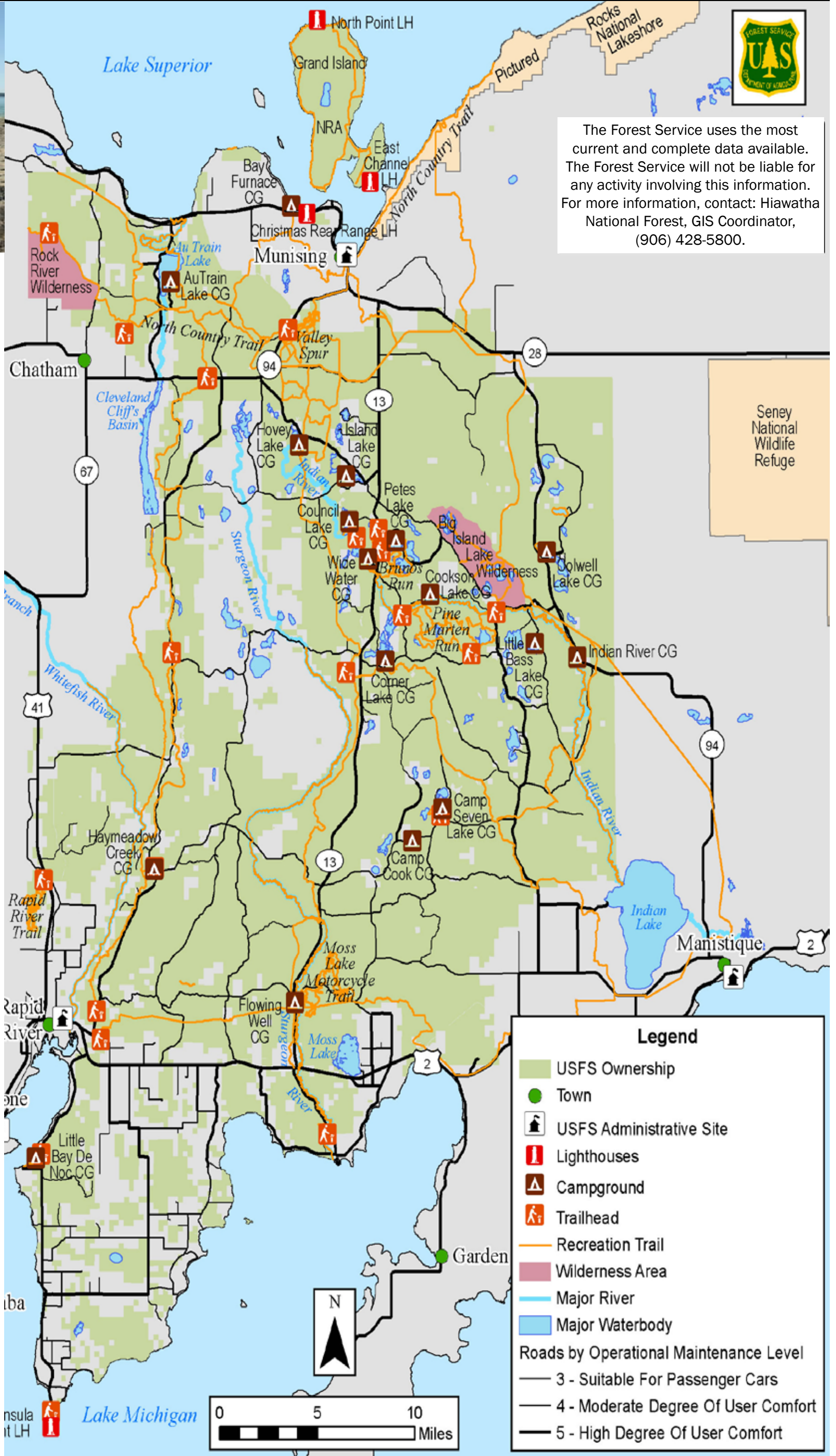


When you first enter the Hiawatha National Forest, look around. At first glance, you'll see a forest with abundant wildlife, miles of rivers and streams, and dozens of waterfalls. You'll see a forest that touches the scenic shorelines and beaches of three Great Lakes, and is home to six historic lighthouses. You'll see historical structures, archaeological sites, and prehistoric Native American artifacts that are a window to our past, which are being preserved for our future.

With one hundred miles of shoreline on three Great Lakes, the Hiawatha National Forest is uniquely positioned to provide visitors with a range of nationally distinct forest recreation opportunities. From lighthouses to Great Lakes islands, spectacular shorelines to the Midwest's finest winter playground, the Hiawatha brings to life a fascinating natural and cultural history while providing unique recreation opportunities to the visiting public.

Then look closer and you may catch sight of rare birds like Kirtland's warblers and piping plovers, or hear the distinctive calls of sandhill cranes. You may hear the howl of a gray wolf or perhaps the cry of a bobcat. You'll see a landscape that is home to rare plants like the Houghton's goldenrod, dwarf lake iris, Pitcher's thistle and lakeside daisy.

For info about Hiawatha's West Unit:
 Hiawatha National Forest
 400 E. Munising Ave.
 Munising, MI 49862
 906-387-2512
www.fs.fed.us/R9/forests/hiawatha



The Forest Service uses the most current and complete data available. The Forest Service will not be liable for any activity involving this information. For more information, contact: Hiawatha National Forest, GIS Coordinator, (906) 428-5800.

Purchase a More Detailed Map at the Visitor Center or any Hiawatha National Forest District Office

Hiawatha National Forest - East Unit



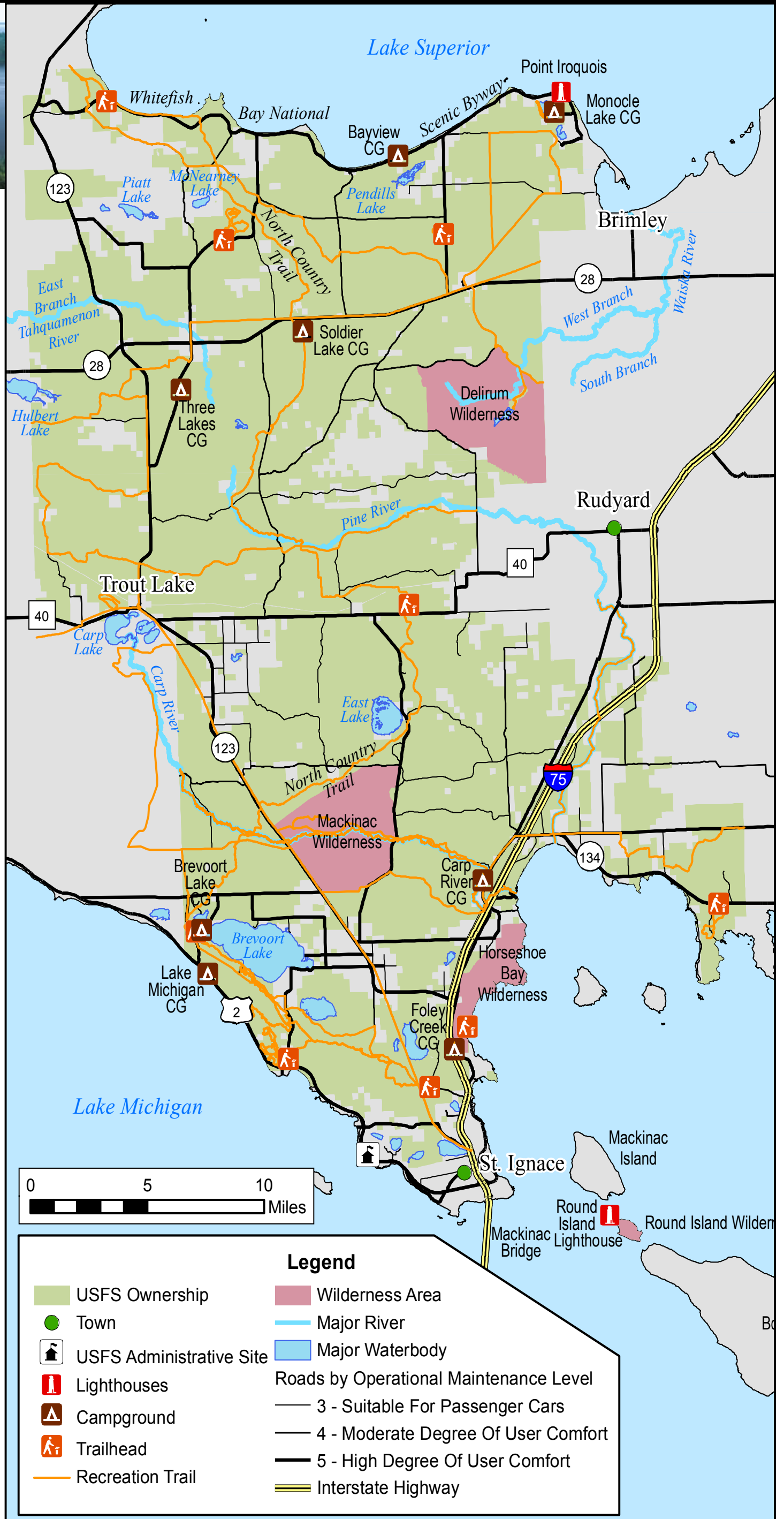
The Hiawatha National Forest consists of about a million acres in two large units. The map on the previous page shows the Forest's West Unit, located between Munising, Manistique and Rapid River. Shown on this page, the Forest's East Unit is located between St. Ignace and Sault Ste. Marie. The Forest touches Lake Superior, Lake Michigan and Lake Huron and boasts six lighthouses and a 26 mile scenic byway along Lake Superior's south shore.

The Hiawatha National Forest was created in 1931 from abandoned farms, razed logging tracts and lands devastated by forest fires. Replanted originally by the Civilian Conservation Corps and cared for since by the US Forest Service, today's Hiawatha provides quality habitat for a variety of fish, wildlife and rare plants. The Forest is dotted with about 420 inland lakes, and eight hundred miles of streams and rivers flow through the Hiawatha, emptying into the Great Lakes. Five of those rivers are National Wild and Scenic Rivers.

This is today's Hiawatha National Forest. We hope you'll plan to visit us while you're in the Upper Peninsula. Whether you enjoy historic sites, scenic drives, wildlife viewing, or wide range of recreation opportunities, there is truly something for everyone. Check us out!

For info about Hiawatha's East Unit:

Hiawatha National Forest
 W1900 US 2
 St. Ignace, MI 49781
 906-643-7900
www.fs.fed.us/R9/forests/hiawatha



Purchase a More Detailed Map at the Visitor Center or any Hiawatha National Forest District Office



Lighthouses of the Hiawatha

Point Iroquois Light Station



Point Iroquois Light Station marks the mouth of the St. Mary's River between the shoals off Point Iroquois and the rocky reefs of Gros Cap, Ontario.

In 1620, the first white men to the area were French explorers Brule and Grenoble. From that time, Point Iroquois became a familiar landmark for the French explorers, fur traders and the missionaries who were to follow. The discovery of copper and iron ore in 1844 necessitated a passage for ore-carrying vessels through the rapids of St. Mary's River to the steel plants of the lower Great Lakes. In 1865, the St. Mary's Falls Canal (commonly known as the Soo Locks) was opened. The light was exhibited for the first time on September 20, 1857. With the growth of traffic through the locks, the importance of the light station increased. In 1870 the wooden tower and residence were replaced with the brick buildings that stand today. After one-hundred seven years of service, the light at Point Iroquois was replaced in 1962 with an automated light in the channel off Gros Cap. The light station became the property of Hiawatha National Forest in 1965. Through the efforts of the US Forest Service and Bay Mills/Brimley Historical Society, the light station was restored for all to enjoy. Visit the museum to learn more about life as it once was in a lighthouse on Lake Superior.

Summer Hours

May 15 - October 15
Open 9 am to 5 pm
7 days a week

Winter Hours

October 16 - May 14
Open 10 am to 3 pm
Saturday and Sunday



Round Island Lighthouse



Located in the Straits of Mackinac, Round Island Lighthouse was built in 1895-1896, at the same time that resort development was booming on Mackinac Island. Because of its prominent location, Round Island Light immediately became a scenic attraction as well as an aid to navigation. The light was decommissioned in 1947, following construction of a light and radio beacon near the Mackinac Island breakwall, and in 1958 ownership of the island and

structure were transferred to the Forest Service. Private donations and volunteer effort have long been key to maintenance of the aging structure. In 2010, the Forest Service signed a Memorandum of Understanding with the Round Island Lighthouse Preservation Society in order to recognize cooperative efforts by the organization to maintain the light and associated structures. The group works cooperatively with Boy Scout Troop 323 of Freeland, Michigan, to host an annual Open House at the lighthouse. Visible from Mackinac Bridge, today the light is most frequently viewed from the passenger ferries traveling to Mackinac Island.

Peninsula Point Light



Peninsula Point is a special place to visit on Lake Michigan. When iron ore loading docks were built in Escanaba by Chicago Northwestern Railroad in 1864, Congress appropriated the funds to build a lighthouse at Peninsula Point. Construction was completed in 1865 and a hand-operated oil lamp burned in the lighthouse until 1922, when an automated acetylene light replaced it. In 1936, when the Minneapolis shoal lighthouse was put in operation, Peninsula Point light was decommissioned by the Coast Guard and the Forest Service was granted custodianship. Although the lighthouse keepers quarters burned down in 1959, the brick tower survived and is now listed on the National Register of Historic Places. Today, visitors can climb the 40 foot circular staircase to find a panoramic view of Lake Michigan. In addition to the Lighthouse, the limestone shoreline is a great place to find fossils 400 to 500 million years old, and Peninsula Point is a popular spot to enjoy the Monarch butterfly migration in the late summer.

East Channel Lighthouse

The small wooden frame lighthouse on the southeast shore of Grand Island was constructed during the period 1869 - 1870 for the purpose of guiding vessels into Munising Harbor from the east. The location, opposite the dangerous shoal at Sand Point, was critical for safe navigation.

When the Range Lights were constructed in 1908, this lighthouse was no longer needed and by 1913, the light was abandoned. The land and lighthouse were privately purchased and divided into lots. Today, the lighthouse is community property and a private group has made efforts to stabilize the shoreline and renovate the lighthouse to preserve it in its current condition. Since the lighthouse is private, it cannot be accessed by land and can only be viewed by water. Several commercial boat tours pass close by and allow for great photo



opportunities.

North Lighthouse



Situated atop a 175 foot cliff on Grand Island's north end, this lighthouse has

been identified as the highest lighthouse above sea level in the United States. Originally built of wood in 1856, this remote lighthouse was a key navigational marker. In 1867, the lighthouse was replaced with the current brick keepers house and a 40 foot tower. The lighthouse is privately owned and not accessible by land, but can be viewed from the water by private watercraft.



Grand Island Harbor Range Lights



Tucked away among the tag alders and swamp conifers along M-28, the Grand Island Harbor Rear Range Light (a.k.a. Christmas Range Light) is easy to drive by without noticing. Range lights are different from traditional lighthouses because they were not used to warn away ships but to provide them with a line of travel through dangerous waters. As shown above, the Grand Island Harbor Range Lights can be clearly seen from the water and have been a very valuable navigation tool. The 62-foot rear and the smaller 23-foot front range lights were designed to work as a pair. By keeping the rear range light aligned with the front range light, mariners were able to stay on the proper heading through the narrow channel west of Grand Island leading to Munising Harbor. The Rear Range light was abandoned in 1969 and was transferred to the Forest Service in 1977.





GRAND ISLAND IN LAKE SUPERIOR

Grand Island National Recreation Area, managed by the Hiawatha National Forest, is located about one-half mile from the mainland community of Munising, Michigan. With approximately 27 miles of shoreline, boaters can experience the island from a unique perspective. Discover private coves, beautiful beaches, and spectacular rock formations from the water.

Most of Grand Island's shoreline consists of 200-300 foot cliffs, so it is important to know your destination and plan your trip accordingly. Paddling around Grand Island's northern half may be hazardous as it sits 8 miles out into Lake Superior. Two-hundred-foot sandstone cliffs line the island's north shoreline and descend directly into the water with no place to beach a kayak. Most storms come from the northwest so you are fully exposed to the winds of Lake Superior. Allow ample time to travel. Underestimating distance is easy to do. Notify a friend or relative of your intended route and your times of expected arrival.

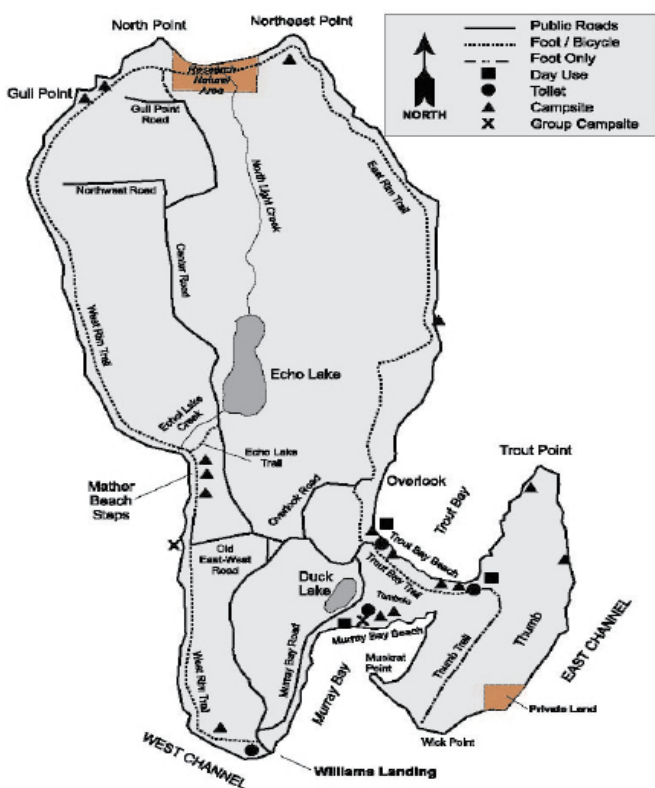


If you don't have your own boat or kayak, you can access Grand Island National Recreation Area via the passenger ferry and spend a day or even just a few hours biking and exploring. The island's breathtaking overlooks, pristine sandy beaches, fascinating cultural sites, deep hard woods, and inland lakes make it an exciting and secluded mountain biking destination. The island provides a combination of rugged dirt/sand trails and easier gravel roads that will accommodate any level of biker. If you don't have a bike with you, no problem! The Grand Island Ferry Service rents mountain bikes right at William's Landing.

Spend the day beachcombing, picnicking or swimming on one of Grand Island's fabulous beaches. Accessible by private boat, biking or hiking, these beautiful sand and rock beaches will captivate you.

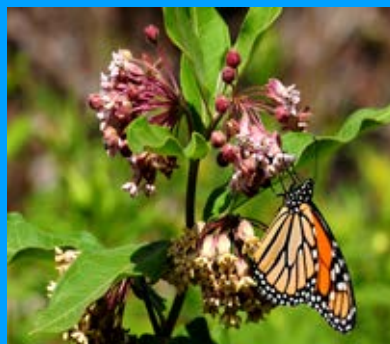
Take advantage of a motorized bus tour on Grand Island that takes you on a tour of the some of the island's scenic vistas and historic sites. Each stop on the 2.5 hour tour is designed to give you a glimpse into Grand Island's past and familiarize you with the recreation opportunities that are available.

If you are interested in planning a day or overnight trip to Grand Island, we recommend that you contact the Visitor Center at 906-387-3700 for more information. We offer updated day use and camping brochures that can assist in planning a trip to suit you. Topographic maps are also available for a fee. For bus tour and ferry schedule and pricing information, please call 906-387-3503 from Memorial Day Friday until early October.



Monarchs of Peninsula Point Lake Michigan

During the summer months, monarch butterflies use the Stonington Peninsula as a nursery. They lay their eggs on milkweed plants and the caterpillars grow and mature there. While the migration dates are unpredictable, large numbers of monarchs are often seen from late July to early September, particularly if a cold front is passing through the area. Monarchs use the northerly winds associated with these fronts to speed their flight southward 1,900 miles to Mexico. Monarchs may spend several days at the point as they wait for favorable winds. If you are lucky enough to time your visit just right, you may be fortunate enough to see thousands of monarchs congregate at the Point, covering the cedar trees and flitting about the picnic area as the day warms. Before you make a journey to see this special phenomenon, be sure to contact the Rapid River/Manistique District of the Hiawatha National Forest at 906-474-6442.



© Barbara Hysell

GREAT LAKES PIPING PLOVER

Since 2004, Piping plover (*Charadrius melodus*), have been monitored on the west unit of the Hiawatha National Forest. You may ask "Why does the Forest Service participate in monitoring of a federally endangered shorebird?" As a federal agency, the Forest Service is required to assist in recovery efforts of endangered species as directed in the Endangered Species Act. The Forest's program is just a small part of a much larger regional interagency monitoring and protection effort coordinated through the U.S. Fish and Wildlife Service.

Monitoring is conducted by volunteers and wildlife biologists along with a shared seasonal employee (funded with a grant from the National Fish and Wildlife Foundation). Surveys are conducted in suitable habitat along the Lake Michigan shoreline. If nesting occurs, monitoring occurs daily and the nest is protected with a fenced enclosure that allows piping plovers easy passage but stops ground and aerial predators. Once placed, plovers are observed to see if they accept the predator enclosure. If they do not, the enclosure is immediately removed. Upon hatching, chicks are able to forage for invertebrates along the shoreline. Yearly, chicks are banded by researchers from the University of Minnesota.

On rare occasions and as directed by U.S. Fish and Wildlife Service, if biologists need to recover eggs from a site due to wash-out or another emergency, a dedicated group of zookeepers volunteer from zoos across the country at the Biological Station in Pellston to incubate eggs. Captive raised chicks are released in an area with piping plovers of similar age.

Over 2007-2009, the west unit of the Forest provided nesting habitat for 2% of the Great Lakes breeding population, produced 3% of the naturally fledged young-of-year and 7.5% of the fledged captive raised. However, nesting had not occurred on the Hiawatha National Forest during the 2011/2012 nesting seasons; it seems the plovers were finding more enticing habitat elsewhere. In 2013 Point aux Chens did have a nesting pair after three years of absence.

Over the entire Great Lakes, 66 pairs established nests in 2013 which fledged 124 chicks. This is the second highest number of nesting pairs since 2009.

Interested in Volunteering? Contact Janet Ekstrum by emailing her at jekstrum@fs.fed.us or call her at (906) 474-6442 ext 140 (west unit) or Steve Sjogren by emailing him at ssjogren@fs.fed.us or call him at (906) 643-7900 ext 134 (east unit).

For information regarding assisting at other Great Lake State localities, contact Vince Cavalieri, Fish and Wildlife Biologist, (Great Lakes piping plover coordinator) U.S. Fish and Wildlife Service, East Lansing Field Office, 2651 Coolidge Road, East Lansing, MI 48823, (517) 351-5467 vincent_cavalieri@fws.gov

Note: While there are two other populations of piping plover, the Great Plains and Atlantic coast populations, only the Great Lakes piping plover is endangered. The other two populations are considered threatened.



Biologists and volunteers place a predator enclosure around a piping plover nest. Netting is placed across the top to protect the nest and adults from aerial predators as well as from ground predators.



Whitefish Bay Scenic Byway

A Journey to the Past Along Lake Superior's Shoreline



Whitefish Bay Scenic Byway provides an outstanding opportunity to escape to the shores of Lake Superior for a relaxing drive, to explore scenic sand beaches, and to journey back in time at Point Iroquois Light Station.

The Byway begins just north of Brimley on Curly Lewis Memorial Highway, also known as Lake Shore Drive. Beginning on the Byway's east end, Point Iroquois Light Station is a highlight of the Whitefish Bay Scenic Byway experience. The historic light station is open during the busy summer season. Visitors can tour the grounds, and during the visitor center's open hours, can also see exhibits inside the historic structure.

Heading west along the byway, beautiful landscapes abound. The two lane road passes through hardwood forest of birch, maple, and oak, which blaze red, orange and gold during late September and early October.

The Big Pine Picnic Area provides a lovely stopping point. Nestled among giant red and white pine trees you'll find tables and grills – the perfect setting for a picnic. Plan to watch huge freighters passing or the sunset from benches overlooking the waterfront.

Between Big Pine Picnic Area and Michigan Hwy 123, visitors will find numerous scenic pull-offs featuring white sand paths to the lake shore. These secluded stops offer the opportunity to spend quiet time walking the beach, fishing the many streams, wading in Lake Superior, or having a picnic.

In addition, the North Country National Scenic Trail follows the shore with frequent access points from the byway.

Whether you're looking for a scenic auto tour or prefer to park your car and get outdoors, there's something for everyone! For more information about the Whitefish Bay Scenic Byway, call the Forest Service at 906-643-7900 or stop by the Light Station for information.



Lake Michigan Beach and Dunes



Hiawatha National Forest touches the shores of three Great Lakes, including Lake Michigan. On the Forest's east unit, visitors will find National Forest lands beside the beaches and dunes of Lake Michigan, approximately 5 miles west of the St. Ignace Ranger Station on U.S. Hwy-2.

The accumulation of windblown sand marks the beginning of one of nature's most interesting and beautiful phenomena: sand dunes. Stand before the enormous, gleaming white sand dunes and consider that all of this was once an ancient lake bed or coastal plain. Gradually, the piles of sand are colonized by unique communities of plants and animals, known by scientists as "Beachgrass Dune Communities". This specialized landscape hosts a variety of Federal and State of Michigan endangered and threatened species including piping plover, Prairie warbler, common tern, Caspian tern, Pitcher's thistle, Houghton's goldenrod, and more. Hiawatha National Forest biologists work to protect these astonishing resources.

If you have a moment on a hot sunny summer days, stop along these expansive sand beaches and enjoy sun bathing and relaxation along Lake Michigan's blue waters. While you're there, help preserve the beauty and habitats of the dunes. To avoid trampling sensitive plants and minimize the spread of non-native invasive plants, use only the designated trails to access the beach.



RIP CURRENTS
Break the Grip of the Rip!

ESCAPE ESCAPE ESCAPE ESCAPE
RIP CURRENT

Rip currents are powerful currents of water moving away from shore. They can sweep even the strongest swimmer out to sea.

IF CAUGHT IN A RIP CURRENT

- ◆ Don't fight the current
- ◆ Swim out of the current, then to shore
- ◆ If you can't escape, float or tread water
- ◆ If you need help, call or wave for assistance

SAFETY

- ◆ Know how to swim
- ◆ Never swim alone
- ◆ If in doubt, don't go out

More information about rip currents can be found at the following web sites:
www.ripcurrents.noaa.gov
www.usfa.org

Rip Currents

Before you (or your children) swim in the Great Lakes, you should learn about "rip currents." Rip currents are dangerous currents or undertows may develop without warning from any increase in wind speed. Personal flotation devices are recommended in areas where such currents may develop.

National Wildlife Refuges



Common Loon - Amy Widenhofer/2012 Photo Contest - 1st Place Wildlife Category

What are National Wildlife Refuges?

The National Wildlife Refuge System is a network of lands that benefits wildlife, provides unparalleled outdoor experiences for all Americans, and protects a healthy environment. The Refuge System includes 150 million acres of land and water from the Caribbean to the Pacific, Maine to Alaska. There is at least one National Wildlife Refuge in every state.

Mission

The Mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Upper Peninsula National Wildlife Refuges

There are four National Wildlife Refuges located in the Upper Peninsula of Michigan: Seney, Harbor Island, Huron and Michigan Islands.



Black-capped Chickadee - Sierra Utych/2012 Photo Contest 2nd Place Youth Category

Wildlife First

- There are more than 560 National Wildlife Refuges and over 3,000 Waterfowl Production Areas, which are small wetlands located mainly in the upper Midwest, located throughout the 50 states and several U.S. territories. The Refuge System is the world's largest system of lands and waters whose primary purpose is the conservation of wildlife and habitat.
- National Wildlife Refuges provide habitat for over 700 bird species, 220 mammal species, 250 reptile and amphibian species, and more than 1,000 species of fish.
- Refuges are home to more than 280 federally threatened and endangered species.
- Each year, millions of migrating birds use refuges as stopovers to rest as they fly thousands of miles south for the winter and return north for the summer.

Welcoming People


- **Hunting and Fishing:** Hunters are welcome on more than 300 National Wildlife Refuges and on 3,000 Waterfowl Production Areas. Anglers also enjoy the fishing opportunities available at more than 260 Refuges where they catch a variety of fish. Fishing is allowed at Seney National Wildlife Refuge. Hunting is allowed at Seney and Harbor Island National Wildlife Refuges. Consult the Refuge brochures or websites for regulations.
- **Wildlife Observation and Photography:** Bird watchers, photographers and nature lovers visit Refuges for great opportunities to see wildlife in their natural habitats and congregations of birds, during peak migrations. Seney National Wildlife Refuge offers observation decks, nature trails, an auto tour, and miles of backcountry roads for observing wildlife and their habitats. Whitefish Point Unit of Seney National Wildlife Refuge offers excellent opportunities to see birds, especially during migration.
- **Interpretation and Environmental Education:** Refuges are great places for children and adults to learn about the natural world. Programs are offered at over 230 National Wildlife Refuges around the country. Seney National Wildlife Refuge offers tours, programs and special events.



Photographer - Barbara Hysell/2012 Photo Contest


Upper Peninsula National Wildlife Refuges

Huron National Wildlife Refuge




Lighthouse Island - Sara Giles/USFWS

Whitefish Point Unit of Seney National Wildlife Refuge




Piping Plover - Sigurd Utych/2012 Photo Contest

Seney National Wildlife Refuge
Headquarters for the Upper Peninsula Refuges




Monarch - Anne Chase/2012 Photo Contest

Michigan Islands National Wildlife Refuge
Closed to the Public



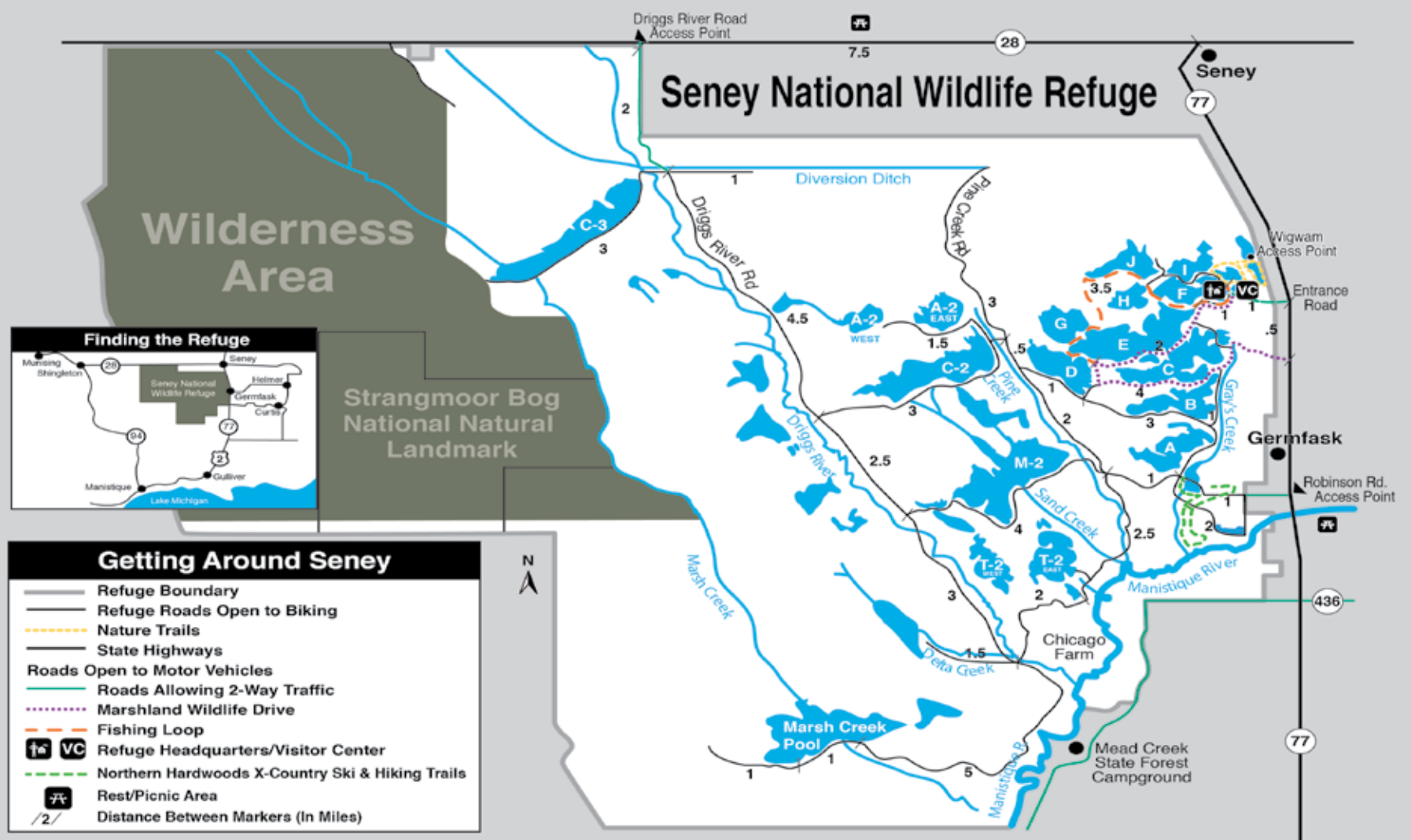
Herring Gull Chicks - USFWS

Harbor Island National Wildlife Refuge



Spring Peeper - Sara Giles/USFWS

Seney National Wildlife Refuge



Discovering Seney

The Refuge is a great place for visitors of all ages and abilities to watch and learn about the local flora and fauna. Established in 1935 as a sanctuary and breeding ground for migratory birds and other wildlife, today the 95,238 acre Refuge supports a variety of wildlife including rare and reintroduced species by providing a rich mosaic of habitats – scrub-shrub, wetlands, forest, meadow, and lakes/ponds.



Visitor Center - Open May 15 – October 20 from 9 a.m. – 5 p.m., seven days a week, including holidays. Highlights include exhibits, a children's touch table, "The Wonder of Nature" orientation film, and a bookstore. Binoculars, field guides, fishing poles, tackle boxes, geocaching supplies, and kid's packs can be checked out free of charge courtesy of the Seney Natural History Association.



Marshland Wildlife Drive (7 miles) & Fishing Loop (+1.5 miles) - These one-way auto tour routes meander through wetlands, meadows and forests. Four wheelchair accessible observation decks make these drives great for wildlife watching. Borrow a pair of binoculars from the Visitor Center to add to your viewing pleasure. Please note that the **Fishing Loop will be closed** for the spring and a portion of the summer of 2014 to replace a bridge.



Canoeing - Enjoy a day of paddling on the Manistique River, which flows through the south-eastern part of the Refuge. Use is limited to daylight hours with no overnight camping allowed. Due to numerous snags, shallow water, limited access and the length of the Driggs River, canoeing the entire stretch is not recommended. The best way to explore the Driggs is to paddle upstream from the Manistique River. No boats or other flotation devices are allowed on Refuge pools.



Nature Trails - The Pine Ridge Nature Trail starts at the Visitor Center. This 1.4 mile loop trail takes visitors through a variety of landscapes. Songbirds, swans, muskrat and beaver are commonly sighted along the trail. The Wigwam Connector Trail ties into the Pine Ridge Nature Trail and offers hikers a one mile extension (round trip) leading them to the Wigwams Access Area and the show pools. From there you can enjoy the newly constructed South Show Pool Loop (one mile). The **Northern Hardwoods Cross-country Ski Trials** are also a nice backdrop for a hike. In the spring, woodland wildflowers delight the senses and, in the summer and fall, ferns and mosses carpet the forest floor.



Bicycling - Many miles of backcountry roads are available for biking throughout the Refuge. For those who seek wildlife and solitude, these trails are for you. The roads are open during daylight hours only, so you need to plan your trip carefully. You may see vehicles on these backcountry roads as staff and researchers conduct investigations, so please be aware of the possibility of vehicles on the roads. To help you plan your visit, mileage is marked on the Refuge map above. Roads/areas may be closed due to biological or management (fire, logging, maintenance) reasons; please obey the closure signs. All hiking and ski trails are closed to bicycles.



Winter Activities - The Northern Hardwoods Cross-country Ski Area offers ten miles of groomed trails. Turn west off M-77 onto Robinson Road 1/3 mile south of the blinking light in Germfask. The trailhead is at the end of the road. Brochures and maps are available at the trailhead or may be downloaded from our website. Dogs are not allowed on ski trails. Snowshoeing is allowed almost anywhere on the Refuge except on the groomed tracks. Snowmobiles are not permitted.



Hunting - Ruffed grouse, American woodcock, snipe, snowshoe hare, white-tailed deer and black bear may be hunted during some state seasons in designated areas with the proper licenses. Only approved non-toxic shotgun shot is allowed on the Refuge. Check the hunting brochure for current regulations.



Fishing - Anglers normally may fish along the 3.5 mile Fishing Loop including the accessible fishing pier or in other designated pools from May 15 to September 30. However, due to a bridge replacement on the Fishing Loop in the spring/summer of 2014 the Fishing Loop will be closed and access to the adjacent pools normally open to fishing will be limited. Please check at the Visitor Center and watch for signs announcing the closed pools. As soon as the bridge is finished the Fishing Loop will reopen. The Show Pools and C-3 Pool will remain open.

The Manistique, Creighton and Driggs Rivers, as well as the Walsh Creek and Ditch are open for fishing during regular state seasons. The Refuge is open to ice fishing from January 1 to February 28 on any pool. Species found on the Refuge include northern pike, yellow perch, brown bullhead, brook trout, and sunfish. To protect the trumpeter swan and common loon, lead sinkers cannot be used on the Refuge. Check the fishing brochure for current regulations.

Mushroom & Berry Picking - Foragers may enjoy picking mushrooms or berries at the Refuge. Raspberries, blueberries and other wild fruits help satisfy your sweet tooth. Morels, chanterelle, boletes and other edible mushrooms offer savory flavors. *Some mushrooms and berries are poisonous!*



www.facebook.com/seneyrefuge
www.flickr.com/seneynwr
www.fws.gov/refuge/seney

Seney National Wildlife Refuge



Calendar of Events

Visit our website – www.fws.gov/refuge/seney for more events and additional information about the Refuge.

Twilight Tours

Last Thursday of May and First Thursday of June - 9:00 p.m. to Midnight

Use your ears, not just your eyes, on these special nighttime tours of Seney National Wildlife Refuge. The Refuge is closed from dusk to dawn, so this tour is a rare opportunity to experience the Refuge in the twilight and early evening hours when many animals are active. We will be listening for secretive marshbirds like the yellow rail, Virginia rail and sora, as well as frogs and other animals.

Wildlife Wednesdays

Wednesday Nights 7 – 9:30 p.m. June, July, August

Join us for a casual, guided auto tour. Tours take you onto part of the Marshland Wildlife Drive and into the backcountry. This is a great chance to view wildlife, enjoy the scenery, and ask questions. Some seating is available in Refuge vehicles; once those seats are full, participants drive their own vehicles (caravan style) and use a radio to communicate with the guides.

Children's Fishing Day

Third Saturday of June

Catch the excitement! Open to youth up to age 16. Registration begins at 9:00 a.m. All fish being entered in the contest must be registered at the Visitor Center by 2:00 p.m. Fish dinner and prizes offered to all participants.

Amateur Photo Contest -

Photos Due August 31

Did you get some great shots while enjoying the Refuge? Enter them in the Amateur Photo Contest! In September we will display all the entries in the auditorium and on the Seney Natural History Association's Flickr site, where visitors will vote for their favorites. When on display for voting, the entries depict an incredible array of Refuge experiences. Details can be found in the Visitor Center or on our website.

Youth in the Outdoors

Last Saturday of September

This fun filled day is open to youth ages 7 to 17 and is designed to get youth out into the Refuge to explore and learn. A variety of activities are available for kids to choose from. There is sure to be an activity that will pique anyone's interest. Pre-registration and a \$5 registration fee are required. Some activities may have an additional charge.

Fall Color Float

First Saturday of October

Take a float down the Manistique River and see the beautiful fall colors. The tour takes approximately 4-5 hours. Early October is a beautiful time to visit the Refuge as the leaves will be changing color. Pack a lunch, dress for the weather (it could be warm or cool), and remember to pre-register so we know that you're coming. Boat rentals are available locally.



Spotted Tussock Moth - Katelyn Cox/2012 Photo Contest 2nd Place Macro

Special Rules

- Please do not feed wildlife.
- Daylight use only.
- Dogs are allowed on a leash.
- No camping or overnight parking is allowed.
- Off-road vehicles are prohibited.
- Open fires are not allowed.
- No boats or flotation devices are allowed on Refuge pools.
- Only approved non-toxic sinkers and shot are allowed on the Refuge.
- For specific details on hunting and fishing regulations see the respective brochures or the website.

Whitefish Point Unit

The Whitefish Point Unit of Seney National Wildlife Refuge was established in 1998 with the transfer of 33 acres from the United States Coast Guard. An additional 20 acres were acquired in 2012.

The Whitefish Point Unit is nearly 80 miles away from the rest of the Refuge and is a stop-over for birds migrating to and from Canada. The Whitefish Point region is renowned for its concentrations of birds during migration. Each year thousands of raptors, passerines (perching birds) and

water birds funnel through the point to cross Lake Superior. The unit's primary natural features are gravel beaches, sandy beach dunes and stunted jack pine-dominated forest.

Allowable Activities:

- Dogs allowed on leash only.
- Open during daylight hours only.
- Hiking, cross-country skiing, snowshoeing, wildlife observation, photography, and mushroom and fruit picking are permitted.
- Fires, camping, rock collecting, removal of natural items, and off road vehicles are not permitted.



Piping Plover - Sarah D'Angelo/2012 Photo Contest

Portions of the Whitefish Point Unit are closed during the summer months to provide nesting habitat for the endangered Great Lakes piping plover. In 2013, four pairs nested on the point and fledged a total of 10 chicks.

Harbor Island National Wildlife Refuge

Harbor Island National Wildlife Refuge is located just off the northwest shore of Drummond Island in Potagannissing Bay on Lake Huron. Managed by Seney National Wildlife Refuge, the 695-acre horseshoe-shaped island hosts a variety of habitats and wildlife. Harbor Island was obtained from The Nature Conservancy in 1983.

Refuge habitats include a marsh-lined harbor in the center, sandy beaches, and mature stands of balsam fir, white cedar, paper birch, sugar maple and red oak. The gently rolling terrain of the island peaks around 100

feet above the level of the lake. Resident wildlife species include red fox, ruffed grouse, snowshoe hare, white-throated sparrows, white-tailed deer, gray jays, magnolia warblers, and several species of frogs and snakes.



Northern Water Snake - Mark Vaniman/USFWS

Huron National Wildlife Refuge

Eight small islands, totaling 147 acres, make up the Huron National Wildlife Refuge. It is located just three miles off the south shore of Lake Superior in Marquette County, Michigan. The Refuge was established as a refuge and breeding ground for migratory birds and other wildlife, especially the herring gull, which has large nesting colonies on the islands. These bird sanctuaries were vital for a number of species of birds, including the herring gull, whose populations had been drastically reduced by plume hunters and egg collectors in the 1800s and early 1900s.

Lighthouse Island is the only island open to the public. You can still view the exterior of the beautiful stone lighthouse constructed in 1868.



Huron Lighthouse - Jeremy Maslowski/USFWS

Learn More about the Refuge - www.fws.gov/refuge/harbor_island

Learn More about the Refuge - www.fws.gov/refuge/huron



FUN PAGE

Can you find and identify the 21 animals hidden in this picture?



Photo Collage Photos Courtesy of Jan Barrett, Sara Giles, Michael Youngblood, Cathy Federighe, Ron Snider, Traci Lawson, Fred Gaunt, Conrad Warren and Dale Maxson.

HARDWOODS HUNT

Need help naming the animals above? Look for their names in the word search below.

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Pictured Rocks National Lakeshore



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.

- Lakeshore Zone (NPS)
- Inland Buffer Zone (mixed ownership)
- Wilderness within Lakeshore Zone (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. Please respect the rights of private landowners.



- National Park Service campground
- Other public campground
- Ranger station
- Wheelchair-accessible
- Boat launch
- Picnic area
- Cross-country ski trail
- Self-guiding trail

- Paved Lakeshore access road
- Unpaved Lakeshore access road
- Trail
- Other unpaved road

