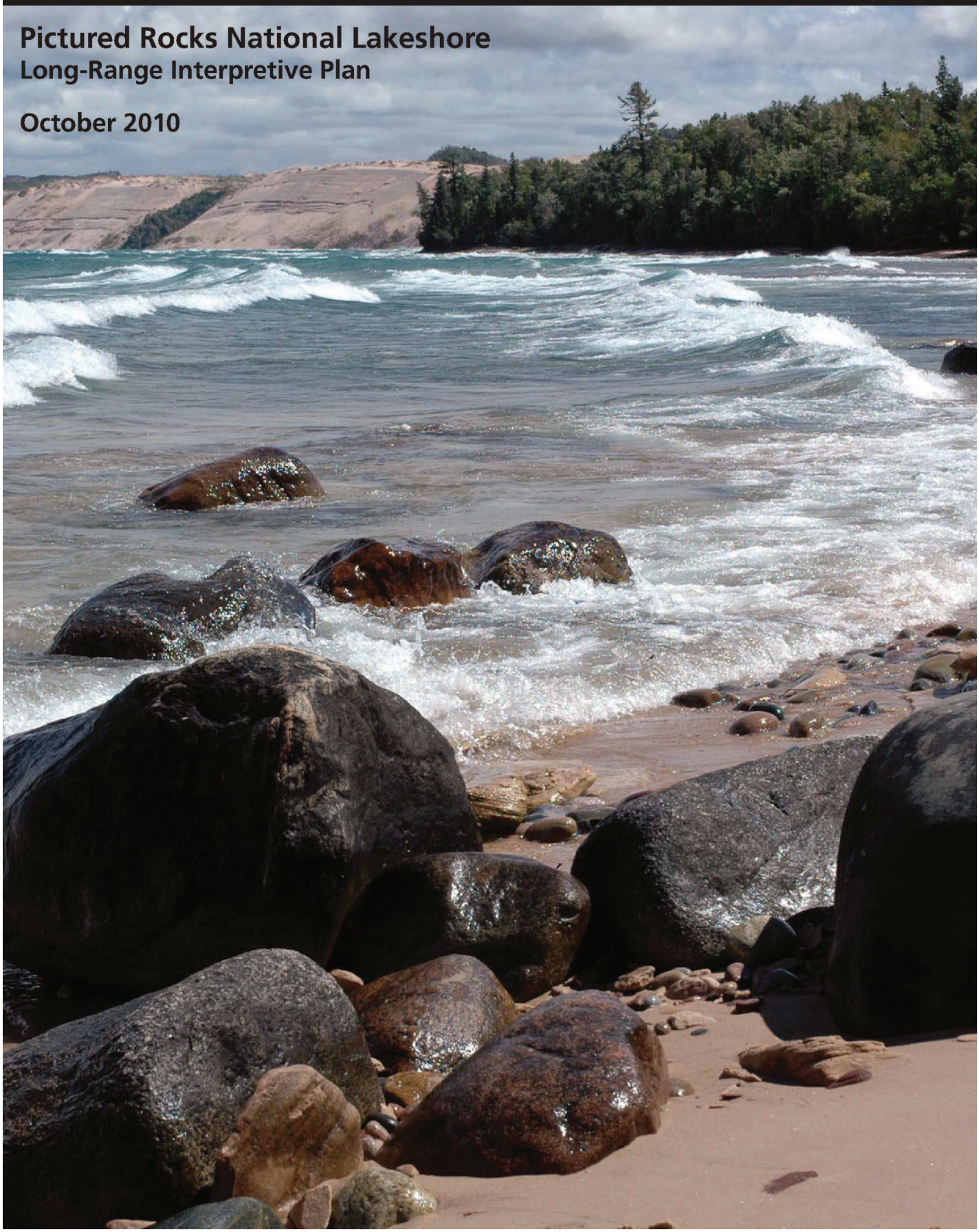
Harpers Ferry Center
National Park Service
U.S. Department of the Interior

Pictured Rocks National Lakeshore
Long-Range Interpretive Plan

October 2010



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Harpers Ferry Interpretive Design Center

and the Staff and Partners of
Pictured Rocks National Lakeshore

and the Midwest Regional Office

** All document photos are credited to NPS unless otherwise noted*

Introduction

Lake Superior is the deepest, coldest, and most pristine of all the Great Lakes, and the largest body of fresh water on earth. Pictured Rocks National Lakeshore hugs the Lake Superior shoreline for more than 40 miles. Sandstone cliffs, beaches, and sand dunes are bordered by the Lakeshore's boreal and eastern hardwood forests, offering visitors superb opportunities for hiking, camping, sightseeing, and other outdoor activities.

The Lakeshore is well known for spectacular sandstone cliffs, beautiful white sand beaches, numerous backcountry lakes, streams and waterfalls, a perched dune system over 300 feet tall, abundant wildlife, and over 100 miles of trails. The Lakeshore features an impressive collection of historic resources, including two former Coast Guard Stations, the Munising Range Lights, and the Au Sable Light Station, a magnificent lighthouse and double keepers quarters that dates to 1874.

The Lakeshore operates year-round, has over 425,000 annual visitors, and is viewed as a critical component of the local and regional tourism economy. The Lakeshore embodies "Wild Beauty on the Lake Superior Shore."

Long-Range Interpretive Plan

Interpretation and education are primary duties of the National Park Service, essential to achieving our mission of protecting and preserving our nation's natural and cultural resources. Pictured Rocks National Lakeshore is part of a national park system where people and organizations collaborate on teaching and learning about the interconnections of human culture and nature, natural systems, the values of America's diverse heritage, and the principles of democracy. Parks provide unique and powerful individual experiences that help shape understanding and inspire personal values.

This Long Range Interpretive Plan (LRIP) for Pictured Rocks National Lakeshore was created in 2009-2010 with input from a variety of park partners. It describes visitor experience goals and recommends ways to achieve those goals through interpretive media, education programs, and personal services.

The LRIP is the keystone of the Comprehensive Interpretive Planning process. Once approved, the Lakeshore staff should pursue implementation of the LRIP through a series of Annual Implementation Plans. Throughout the CIP process, the Lakeshore staff should also compile and maintain the Lakeshore's Interpretive Database.

Executive Summary and Vision

The National Park Service stewards more than the places, systems, and objects core to the heritage of the United States. The Service also cares for intangible meanings— beauty, health, wonder, democracy, and struggle inherent in the nation. The preparers of this document are hopeful that it provides you with a vision of the current and future interpretive and education program for the Lakeshore that leads to greater visitor understanding and appreciation of this incredible place in North America. This vision is comprised of several nodes of activity, including:

- Apply for base funding increase to expand current Heritage Education staff. Achieve target permanent and seasonal staffing as articulated in Appendix B;

- Continue and as staffing permits, expand multi-media information to visitors through the web, publications, exhibits, podcasts, and other new delivery systems;

- Continue and where possible expand personal services programming for both traditional and non-traditional park visitors;

- Maintain current suite of staffed visitor centers during optimum annual visitation periods. These centers will not only provide excellent orientation, informational and stewardship services, but also encourage the purchase of theme related items through the park's cooperating association;

- Core staffing levels are maintained to provide interpretive programming, education outreach, research assistance, graphic production, community and friends group liaison, and current affairs stewardship programming;

- Interpretive and educational activities support and implement the Lakeshore General Management Plan, Backcountry and Wilderness Management Plans, and Cultural, Science and Natural Resources Management Plans, as well as applicable Servicewide initiatives.

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Foundations

Legislative Background

Pictured Rocks National Lakeshore was authorized as America's first national lakeshore. On October 15, 1966, Public Law 89-668 established Pictured Rocks National Lakeshore through the following language:

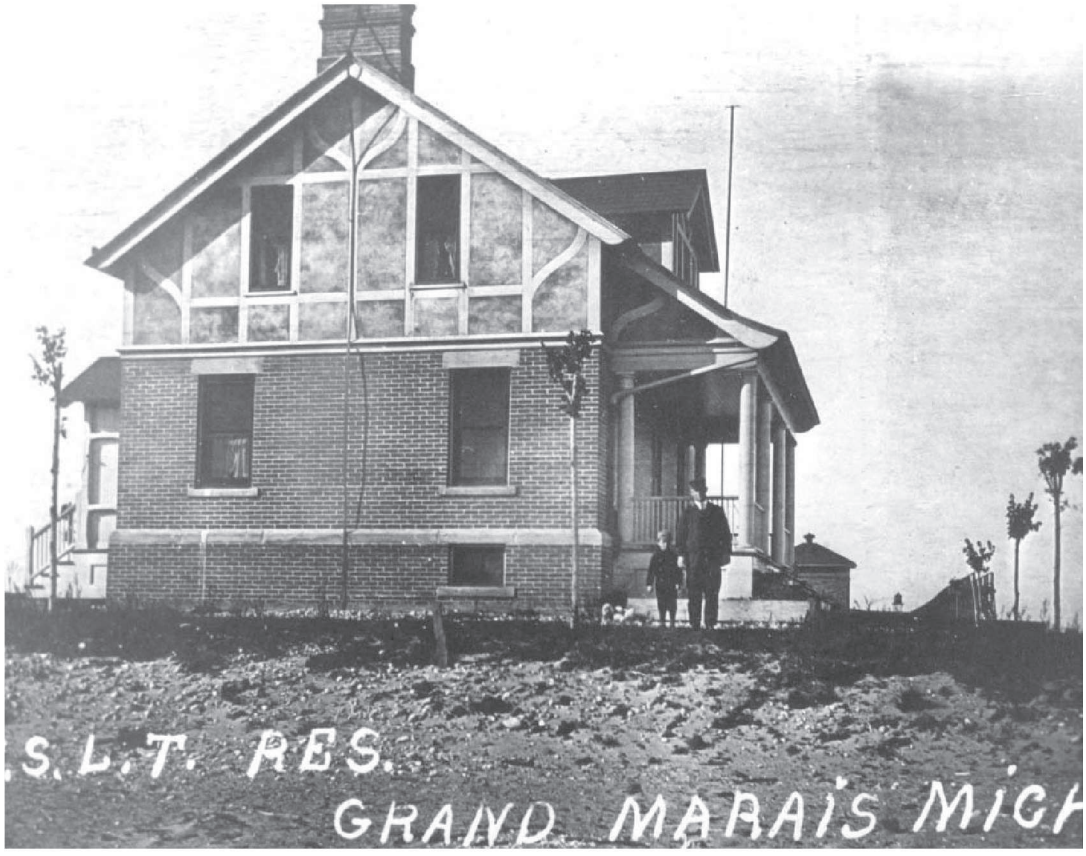
> That, in order to preserve for the benefit, inspiration, education, recreational use, and enjoyment of the public a significant portion of the diminishing shoreline of the United States and its related geographic and scientific features, the Secretary of the Interior is authorized to take appropriate action, as herein provided, to establish in the State of Michigan the Pictured Rocks National Lakeshore.

Wilderness

In addition, on March 30, President Obama signed the Omnibus Public Land Management Act of 2009 into law. Among other actions, this Act created the 11,740 acre Beaver Basin Wilderness within Pictured Rocks National Lakeshore.

Buffer Zone

Pictured Rocks National Lakeshore is the only unit of the National Park System with a legislated buffer zone. The Shoreline Zone of the Lakeshore is owned in fee simple. The Buffer zone is a mixture of private and state lands contained within the legislated boundary. The harvesting of renewable resources on a sustained yield basis — principally timber — is permitted within the inland buffer zone of the national lakeshore, pursuant to the national lakeshore's enabling legislation.



Grand Marais Harbor of Refuge, ca. 1916. Fifty years after this photograph was taken, the building was protected through the 1966 authorization of the first National Lakeshore of the United States: Pictured Rocks National Lakeshore.

National Scenic Trail
Forty-two miles of the North Country National Scenic Trail are within Pictured Rocks National Lakeshore. This trail was added to the National Trails System on March 5, 1980. The National Trails System Act (Public Law 90- 543) states that national scenic trails are located

> . . .to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.

Nationwide Rivers Inventory
The Miners River and the Mosquito River in Pictured Rocks National Lakeshore are listed on the Nationwide Rivers Inventory (NRI) prepared by the National Park Service. This inventory is a register of rivers that may be eligible for inclusion in the national wild and scenic river system. These rivers were included on the inventory based on the degree to which they are free flowing, the degree to which the rivers and their corridor are undeveloped, and the outstanding natural and cultural characteristics of the rivers and their immediate environments.

Purpose

The Lakeshore's purpose is a statement of why Congress or the president established the area as a unit of the national park system. The basic purposes of Pictured Rocks National Lakeshore were identified in the 2004 *General Management Plan/Final Environmental Impact Statement* and are reaffirmed here.

The Purposes of Pictured Rocks National Lakeshore are to:

- Preserve a portion of the Great Lakes shoreline for its geographic, scientific, scenic, and historic features.
- Provide opportunities for public benefit in recreation, education, enjoyment, and inspiration.
- Protect the character and use of the shoreline zone while allowing economic utilization of the inland buffer zone renewable resources.

Also, general direction of the Lakeshore's purpose comes from the National Park Service's Organic Act of 1916 which states that the purpose of the NPS is

> ...to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Additional direction for the Lakeshore's purpose is found in H.R. 146, the "Omnibus Public Land Management Act of 2009" which created the Beaver Basin Wilderness within the Lakeshore.

Significance

Statements of significance define what is most important about the Lakeshore's resources and values and are guided by the Lakeshore's legislation and our better understanding of the resources as a result of management activities, research, and civic engagement.

The following statements describe the significance of Pictured Rocks National Lakeshore:

- Pictured Rocks National Lakeshore affords public access to a spectacular and diverse segment of the Lake Superior shoreline.

Miners Castle is an easily accessed popular icon of the western portion of the Lakeshore and Pictured Rocks Cliffs.

- Unmatched in their scenic value, the 200-foot high Pictured Rocks cliffs rise perpendicular from Lake Superior creating a mosaic of rock form, color and texture, enhanced by cascading waterfalls.
- Five square miles of pristine sand dunes and their unique plant communities, perched atop 300-foot sand banks, rise abruptly at the shore of Lake Superior.
- Twelve miles of unspoiled and undeveloped Lake Superior beach contrast the Pictured Rocks cliffs and Grand Sable Dunes.
- Bedrock geology and glacial landforms create a tapestry of topography marked by streams, inland lakes and a diversity of associated vegetation.
- The shoreline offers extraordinary and inspirational scenic vistas of Lake Superior, the largest body of fresh water on earth.
- Pictured Rocks National Lakeshore offers a variety of affordable year-round recreational opportunities for appropriate public use.
- Within a distinct area, the Lakeshore contains a spectrum of cultural resources focused on the human use of Lake Superior and the shoreline.
- Lying in a transition zone between boreal and eastern hardwood forest, the Lakeshore's scientifically recognized collection of flora and fauna is found nowhere else within the Lake Superior Basin.
- Pictured Rocks is the only NPS area with a legislated buffer zone.

Interpretive Themes

Four topics have been identified as primary areas of interpretation at Pictured Rocks National Lakeshore. These topics are change, diversity, protection, and magnificence.

Topic: Change

Primary Theme: PIRO's diverse and dramatic landscapes are being continually transformed by changes, some occurring at glacial speed, others happening before our eyes.

- The area/region has been and will continue to be shaped by ecological and geologic processes.

  Landscape-scale changes have occurred through glaciation, river erosion, and wetland development. The Lakeshore is constantly changing with major cliff recession via collapse. In the past few decades, the effects of climate change have begun to be seen in Lakeshore weather and biological systems.

- Human activity in the area has been shaped by the influence of a changing landscape and human technology.

  The Lakeshore area is a rugged landscape where "making a living" is difficult. Short growing seasons, limited game, heavy snowfall, and severe winters have made habitation a challenge for generations.

- Human values including human response to this place have changed over time and are represented by past, present, and future uses and appreciation of the landscape.

  Early Native American populations were low resulting in relatively minor landscape changes. Euro-American use of the land led to large-scale changes brought on by the destructive forces of mining, logging, production of pig iron, and later, development of recreational camps. Current use of the land has changed from a consumptive to more of an esthetic appreciation of the Lakeshore and the processes which maintain it.

Loading lumber on a Grand Marais pier. The Lakeshore area is a rugged landscape where "making a living" is difficult. Short growing seasons, limited game, heavy snowfall, and severe winters have made habitation a challenge for generations.

Topic: Diversity

Primary Theme: Vibrant communities of life have developed in the lands and waters of Pictured Rocks National Lakeshore, occupying diverse niches in the dramatic geologic story of the Great Lakes.

- Because of its location on Lake Superior, climate, topography, and soils, the Lakeshore contains a variety of habitats and species.

  These include beech maple and conifer forests, wetlands, extensive dunes, rivers and lakes.

- Because of the variety of regional natural resources and their uses, a diversity of people have lived and worked in, and traveled through this area.

  These include Anishnabe, early explorers, miners, missionaries, fur traders, mariners, lumberjacks, iron producers, U.S. Life Saving Service, U.S. Lighthouse Service, U.S. Coast Guard, and others.

- A variety of landforms exist here because of past and present geologic processes.

  These include vast inland seas leading to sandstone bedrock, continental glaciation, post-glacial river erosion, sand dune development due to changing Great Lake levels, and wetland development as ancient river channels were abandoned.

  Intangible elements of this topic include survival, perseverance, and fragility.

- Farming

  As logging and town development occurred, small farms were established to support these rural developments. These were characterized by dairy, hay, small grains, poultry, other livestock, maple syrup and cider making.

Topic: Protection

Primary Theme: Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world.

- The Lakeshore is a link in a regional cooperative management ecosystem of recreation, education, information sharing, research, and land use planning.

  The Lakeshore has a special relationship with local civic development entities regarding recreational and sustainability issues.

- The Lakeshore contains an extensive collection of buildings, landscapes, and artifacts relating to a long and vibrant maritime history.

  The Lakeshore features an impressive collection of historic resources, including two former Coast Guard Stations, the Munising Range Lights, and the Au Sable Light Station, a magnificent lighthouse and double keepers quarters that dates to 1874.

- The National Park Service manages the Lakeshore in accordance with congressional mandates assuring public recreational access and resources protection.

  The Lakeshore was the first authorized by congress and remains the only NPS area with a legislated buffer zone. Protection of Lakeshore resources includes management of land, water, and people, through a variety of methods.

Topic: Magnificence

Primary Theme: The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes.

- Pictured Rocks National Lakeshore hugs the Lake Superior shoreline for more than 40 miles. Sandstone cliffs, beaches, and sand dunes are bordered by the Lakeshore's boreal and eastern hardwood forests, offering visitors superb opportunities for hiking, camping, sightseeing, and other outdoor activities.

  The Lakeshore is well known for spectacular sandstone cliffs, beautiful white sand beaches, numerous backcountry lakes, streams and waterfalls, a perched dune system over 300 feet tall, abundant wildlife, and over 100 miles of trails.

  Intangible elements of this topic include beauty, inspiration, seclusion, and refuge.

Anishnabe people first moved into this region in about 1600, establishing small family-based sites on the north and south shore of Lake Superior. They lived near the lake in warmer months, and retreated inland for the harsh winters.

Additional Topics for Interpretation

Cultural History

- Paleoarchaeology
  The earliest known habitation of the area was approximately 4,000 years before present. These early people were hunter-gatherers and existed in relatively small numbers.

- Archaic and Woodland Occupation
  A high percentage of pre-Anishabe habitation sites were on the ancient Lake Nipissing shoreline.

- Anishnabe or Ojibwa Occupation
  Anishnabe people first moved into this region in about 1600, establishing small family-based sites on the north and south shore of Lake Superior. They lived near the lake in warmer months, and retreated inland for the harsh winters.

- European Explorers
  The earliest explorers were French Jesuit missionaries, followed by French-Canadian voyageurs in search of lucrative mammal furs, and those exploring for minerals, timber, and fishing resources.

- Blast Furnace
  As production of iron became important economically in the region due to the proximity of the Marquette Iron Range, blast furnaces sprang up for short periods of time across the U.P., including in the Lakeshore area. These furnaces caused abundant forest resources to be used through the manufacture of charcoal, one primary ingredient in the pig iron process.

- Lumberjacks (pine, hardwood, and cordwood)
  Loggers moved into the region in the late 1800's as the nation expanded westward onto the plains. Lumberjacks cut the abundant forests and logs were milled locally before the lumber was shipped via the lake to Midwestern markets.

- Maritime Navigation
  - U.S. Life Saving Service
    With increased shipping on Lake Superior after the Sault Locks opened in 1855, federal protective services and organizations were deployed to the area to assist mariners.
  - U.S. Lighthouse Service
    Likewise, lighthouses were constructed on dangerous points and shoals to help mariners avoid hazards to navigation.
  - U.S. Coast Guard
    In the mid 1930s, the USCG established lifeboat rescue stations on Lake Superior. One was in Grand Marais, the other on Sand Point.

- U.P. Recreation – Camps and Corporate Retreats
  Beginning in the 1880s and increasing rapidly in the 1920s, citizens from downstate Michigan and surrounding areas recognized the special recreational qualities of the Lakeshore area. Over the decades, private and corporate "camps" or retreats were developed in the forest and on inland lakes.

- Relationship to Grand Island and Other Areas in the Region
  Though Grand Island is managed by the U.S. Forest Service, its history, recreational use, ecology, and management are closely linked to the Lakeshore.

- Lakeshore History
  As the Lakeshore was the first authorized in the nation, Pictured Rocks maintains a rich heritage within the National Park Service.

- NPS History
  The Service is recognized as a leader in the conservation field, though in the past has been looked upon locally as an impediment to traditional forms of recreation.

- History of NPS Interpretation & Education
  The Lakeshore's emphasis on heritage education is known throughout the area and contributes significantly to area activities.

- Farming
  As logging and town development occurred, small farms were established to support these rural developments. These were characterized by dairy, small grains, poultry, other livestock, maple syrup and cider making.

Natural History

- Pre-Cambrian, Cambrian, and Ordovician Bedrock Geology
  Vast, shallow, warm inland seas were responsible for the sedimentary bedrock now exposed in the Lakeshore. Sediments originated in the erosion of significant mountain ranges to the south and northeast of the current Lakeshore.

- Glaciation
  Research suggests that perhaps a dozen or more glacial epochs have shaped this landscape, the most recent receding some 9,500 years ago.

- Lakeshore Habitats
  A combination of weather, glacial history, bedrock, soils, flora, and fauna have led to a variety of habitats in the Lakeshore.

- Flora and Fauna
  The combination of weather, glacial history, bedrock, and soils has led to the richness of flora and fauna species in the Lakeshore.

- Erosion
  Many Lakeshore landforms are due to the vagaries of slow and catastrophic erosion, stream cutting, and mass wasting along the cliffs. Early spring spalling of the cliffs is common on warmer days, and when ice expands in bedrock cracks.

- Endangered and Threatened Species (e.g. peregrine falcon and piping plover)
  Federally listed T & E species include the lynx, timber wolf, bald eagle, Kirtland's warbler and piping plover. Several insects, mussels, and Pitcher's Thistle are also listed.

- Energy/Nutrient Cycling
  Lake Superior is a cold, stenothermic, ultra-oligotrophic ecosystem that is relatively pristine. Nutrient production is relatively low in the lake.

- Lake Superior Ecosystem and Watershed
  Lake Superior is the largest, coldest and least biologically productive of all the Great Lakes. The climate of the region is warming which has led to a warming of Lake Superior faster than the air has warmed. Twenty percent of the earth's fest water occurs here.

Existing Conditions

Locations of Interpretive Services

In 2004 Pictured Rocks National Lakeshore completed a General Management Plan for the Lakeshore. The plan outlined several different types of visitor use areas of the Lakeshore, which would set the background for different types of visitor experiences. These "management prescription zones" assist staff members of the Division of Heritage Education in determining the best approaches to interpretation in the various Lakeshore areas. In general, both ends of the Lakeshore are more developed with visitor facilities and the center is more primitive in nature.

Orientation/ History Zone

As articulated in the 2004 General Management Plan, the Orientation / History area of the Lakeshore (1% of Lakeshore area) is highly managed. Visitors can get an overview of lakeshore opportunities, activities, and resources in this area. Interaction and encounters with lakeshore staff and other visitors are common, but overcrowding is rare. Structured visitor opportunities, such as interpretive programs and tours, are provided, but self- guided opportunities are also available.

Orientation and interpretation facilities such as visitor centers, contact stations, kiosks, wayside exhibits, and other interpretive media are appropriate in this area. Access and support facilities such as parking areas, paved walkways, restrooms, picnic areas, and overlooks are found in this zone. Facilities might include groupings of historic structures and related landscapes. Sightseeing, walks, educational programs, visiting cultural resources, and other organized activities are common. Most facilities are accessible to visitors with disabilities; historic structures are sometimes modified to accommodate these visitors.

Percentage of Visitor Groups who Visited Sites (2001 Visitor Study)	
Munising Falls	47%
Miners Area (total beach and castle)	59%
Sand Point	29%
Grand Sable Visitor Center	24%
Au Sable Light Station	22%

Munising Falls includes a paved trail and fully-accessible platforms for viewing the 60' waterfall.

The **Munising Falls Interpretive Center** contains museum exhibits and a small Eastern National outlet. Fireside Chats are a mid-winter program series with 4-5 programs in February and March. The Chats are normally held at the Munising Falls Interpretive Center where a pot-belly stove is fired up and refreshments are provided. A member of the Heritage Education staff facilitates the evening program. The snowy walkway from the parking lot to the Center is lit by kerosene lamps. The series includes Lakeshore staff and guest speakers who present programs on the natural and human history of the region. Attendance is usually on the low end, (10-25) but the series has gained a reliable following and is appreciated during this time of year.

Condition: The building is in good condition. Interpretive museum exhibits are aged and need to be rehabilitated.

The ruins of the **Munising Blast Furnace** suggest a structure similar in history and construction to Bay Furnace, which is on Forest Service property west of Munising.

The **Grand Sable Visitor Center** is open in the summer months. It is located near the eastern gateway to the Lakeshore. Eastern National operates a sales outlet here. Backcountry permits cannot be completed on-line, and a high percentage are acquired at this site.

Condition: The building is in good condition. Interpretive museum exhibits are aged and need to be rehabilitated.

The **Au Sable Light Station Information Center** is reached by a 1.5 mile walk from the lower Hurricane River Campground. Several days each summer and fall, the NPS sponsors public transportation via ALTRAN for a nominal fee. The Coast Guard still maintains an active aid to navigation on the light tower. Guided tours of the double keepers' quarters and the light tower are available for a small fee during July and August, and some years even into September.

Some 9% of visitor groups report attending ranger-led walks, which include the Au Sable Light Station programs. 48% of visitor groups visit historic structures, which include the Au Sable Light Station. 73% of visitor groups consider ranger-led walks and talks to be "very important" or "extremely important" (2001 Visitor Study).

Condition: The building is in good condition. Interpretive museum exhibits were new in 2008 and are in good condition.

Au Sable Light Station, on the National Register of Historic Places. With increased shipping on Lake Superior after the Sault Locks opened in 1855, lighthouses were constructed on dangerous points and shoals to help mariners avoid hazards to navigation.

The **Miners Castle Information Station** is open summers, and has a small Eastern National outlet. In July and August, informal 10-minute presentations are offered to visitors on their way to Miners Castle and other locations. Content varies but often centers on Lakeshore geology.

Condition: The building is in good condition. Interpretive museum exhibits are limited but were new in 2006. Some fading has occurred, therefore, they need to be replaced.

Miners Castle is the most famous formation of the Pictured Rocks.

Miners Falls is reached by a 1.2 mile hike from the parking area. A staircase leads to a lower viewing platform.

The **Miners Falls Nature Trail** has a self-guiding brochure.

Bridalveil Falls are viewable only by water or from a distance at Miners Castle.

The **Munising U.S. Coast Guard Station** is located at Sand Point and serves as Park Headquarters.

The **Sand Point Marsh Trail** features a boardwalk with interpretive wayside exhibits.

Sand Point Beach is a popular walking spot.

Casual Recreation Zone

The Casual Recreation zone comprises 11% of the Lakeshore area. Visitor attractions are rustic, convenient, and easily accessible. There is a good chance of encountering other visitors and lakeshore staff in this area. Visitor contact stations and interpretive media (wayside exhibits, bulletin boards, and interpretive exhibits) might be present in this zone.

Percentage of Visitor Groups Who Visited Areas (2001 Visitor Study)	
Miners Area (total beach and Castle)	59%
Chapel Area	28%
Sable Falls	26%
Log Slide	25%
Twelvemile Campground	18%
Hurricane River Campground	17%

Twelvemile Beach Campground features three sets of stairs to the beach, trail access, picnic area, and parking. Evening campground programs are presented twice per week at the Twelvemile Beach Campground. 3% of visitor groups attend a campground program (2001 Visitor Study). 66% of visitor groups consider campground programs to be "very important" or "extremely important" (2001 Visitor Study).

One of the purposes of the Lakeshore is to "provide opportunities for public benefit in recreation, education, enjoyment, and inspiration."

Miners Beach and River includes a one-mile stretch of beach. Miners River is popular for steelhead fishing in spring and fall.

In winter months, a site bulletin is available for visitors to the **Grand Marais Ski Trail**.

In winter months, eleven wayside exhibits and a site bulletin with map help visitors to enjoy the **Munising Falls Ski Trail**.

White Birch Nature Trail is two miles long. A self-guiding trail guide is available.

Grand Sable Banks and Dunes are best viewed from the trail beginning at the Sable Falls parking area.

The **North Country Trail** is a multi-state National Trail which travels through the Lakeshore.

Sable Falls can be viewed from platforms reached by stairs.

Hurricane River Campground includes a picnic area and trail access. Evening campground programs are held once per week at Hurricane River Picnic Site.

About 3% of visitor groups attended a campground program, and 66% of visitor groups consider campground programs to be "very important" or "extremely important" (2001 Visitor Study).

A viewing platform is available at **Log Slide** as are several wayside exhibits explaining logging history.

Chapel Rock and Beach includes a popular backcountry camping site and day use destination.

Spray Falls can best be viewed from the water but it may be seen from a distance along the North Country Trail.

Primitive Zone

The Primitive zone (28% of Lakeshore area) is intended to provide a sense of remoteness and immersion in nature. Lakeshore staff will be encountered primarily in the campgrounds, and visual intrusions, including non-personal media, are not appropriate in this zone. This area includes the Beaver Basin Wilderness (11,740 acres).

Percentage of Visitor Groups Who Visited Areas (2001 Visitor Study)	
Mosquito Beach	15%
Little Beaver Area	12%

Little Beaver Lake Campground has trail access and a small boat ramp. Evening campground programs are presented once per week. 3% of visitor groups attend a campground program (2001 Visitor Study). 66% of visitor groups consider campground programs to be "very important" or "extremely important" (2001 Visitor Study).

Mosquito Falls are reached by a .9 mile side trail from the Mosquito Beach trail.

Chapel Falls can be seen after a brisk 1.5 mile walk from the end of Chapel Road.

The .7 mile **White Pine Trail** is located at the Little Beaver Lake Campground. A self-guiding map is available.

Pristine Zone

The pristine zone (3% of Lakeshore area) provides for an independent, wild experience, with full immersion in the natural environment. Lakeshore staff will rarely be encountered in this area, and wayside exhibits or other interpretive media will not be appropriate. The Grand Sable Dunes Research Natural Area is within this zone.

Mixed Use Zone

The mixed use area (51% of Lakeshore area) is located primarily within the inland buffer zone. It is intended that little or no interpretation is provided in this zone. Visitors travel at their own risk, and find a relatively primitive, independent experience. A variety of recreational activities are common on public and commercial forest lands.

Winter activities such as skiing, winter camping, ice climbing, snowshoeing and snowmobiling are popular within the Lakeshore where an average of 140" of snow falls.

Developed Zone

The developed area of the Lakeshore (6% of Lakeshore area) is not intended for visitor use, but rather contains facilities necessary for lakeshore operations and administration.

Visitor Centers

The Lakeshore operates five visitor centers: Grand Sable Visitor Center, Au Sable Information Center and Museum, Miners Castle (Ray Clevenger) Information Center, Munising Falls Interpretive Center, and the Interagency Visitor Center (IVC) in Munising. The IVC is open year-round while the others are open seasonally. The season typically runs from Memorial Day to Labor Day but is extended as staffing and funding permit. Each site has an Eastern National sales area with the exception of the IVC which is operated by Hiawatha Interpretive Association.

Special Events

The Lakeshore hosts special events at various locations throughout the Lakeshore, including the following:

- National Park Week
- Naturalization Ceremony
- National Public Lands Day
- Wolf Awareness Week
- World Wide Water Quality Monitoring Day
- National Trails Day
- Life of Lake Superior Day
- Au Sable Day
- Fireside Chat Series
- Leave No Trace Overnight Camping Trip For Scout Leaders
- Experience Your Lakeshore
- Birding by the Bay
- Munising Ice Festival
- Munising's Winterfest
- Grand Marais sea kayak symposium

During the summer, a weekly one-hour Family Junior Ranger program is presented in the Lakeshore. Children of all ages and their families participate in this program.

Landscape-scale changes have occurred through glaciation, river erosion, and wetland development. The Lakeshore is constantly changing with major cliff recession via collapse.

Outside of Lakeshore Boundaries

Pictured Rocks Cruise Boats
Five days each week during the summer months, a Park Ranger has been joining expeditions given by Pictured Rocks Cruise Boats. The Park Ranger presents 20-minute narrations while the boat is in Lakeshore waters. 29% of visitor groups take a cruise into the Lakeshore, either through Pictured Rocks cruises or shipwreck tours (2001 Visitor Study). The Pictured Rocks Cruises company was brought under an NPS Concession Contract in 2010.

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Lakeshore interpreters participate in many **Community Programs** throughout the year. These events include job fairs, regional governmental, non-profit, and club meetings

The **Munising Front Range Light and Auxiliary Station** serves as offices for the Science and Natural Resources Division of the Lakeshore. The front and rear range lights remain active aids to navigation. A site bulletin exists for this location

The **Interagency Visitor Center** (IVC) is located outside of the Lakeshore boundary in Munising, Michigan. Built in 1988, the facility houses both National Park Service and National Forest Service staff, as well as a Hiawatha Interpretive Association outlet. A small screening room houses the multi-agency-produced 15-minute video. There is no place for bus parking.

42% of visitor groups went into the Interagency Visitor Center. For 33% of visitor groups, the IVC was the first park site visited (2001 Visitor Study).

The **Grand Marais U.S. Coast Guard Station** currently serves as a ranger station for Lakeshore employees from the Protection Division. Museum collections for the Lakeshore are located on the 3rd floor.

The **Grand Marais Harbor of Refuge** is owned by the Lakeshore and leased to the Grand Marais Historical Society which operates the Lightkeepers House Museum.

The **Grand Marais Maritime Museum** was open for many years after 1985, but was closed due to a lack of staffing and low visitation. Most of the museum exhibits and objects were moved to the Au Sable Light Station maritime museum.

13% of Lakeshore visitors acknowledge receiving information about the Lakeshore through the **Michigan Travel Center** (2001 Visitor Study).

Accessibility

The following facilities are fully accessible, while others are partially accessible:

Visitor Centers
The Grand Sable Visitor Center in Grand Marais, Miners Castle, Munising Falls, and the Interagency Visitor Information Center in Munising are all disabled accessible.

Campgrounds
Lakeshore accessible campsites include an extended picnic table, boardwalk, pedestal fire grate, and close proximity to restrooms. Little Beaver Lake Campground has one accessible site, Hurricane River and Twelvemile Beach Campgrounds each have two sites. These sites are reserved for disabled campers till 6 p.m. daily. After 6 p.m. they are open to anyone for one night only and must be vacated the next morning.

Amphitheaters
Amphitheaters exist at Little Beaver Lake Campground and Twelvemile Beach Campground. Of those two, only the Twelvemile site is accessible.

Log Slide
The trail to the Log Slide overlook is densely packed gravel and is accessible. The overlook is also accessible. Total trail length is approximately 200 yards.

Sand Point Marsh Trail
The half-mile disabled accessible boardwalk into the Sand Point Marsh is a delight to nature lovers. The trail meanders through cattail swamp, open bog, spruce-tamarack, and white cedar wetlands.

Sand Point Beach
The beach parking area and sidewalks are paved. One picnic table is fully accessible with a pedestal fire grate. A section of boardwalk enables visitors to go part of the way to the Lake Superior shoreline.

Miners Castle
The trails to all of the overlooks are paved at Miners Castle. The first 100 yards of level trail lead to two overlooks of the cliffs and Miners Castle. The trail to the lower overlooks includes stairs and a very steep incline.

Munising Falls
The 800 foot long trail to the lower Munising Falls viewing platform is paved and fully accessible.

Au Sable Light Station
The Au Sable Light Station is only accessible to the public by a 1.5 mile walk (one-way). During the summer months the Lakeshore has arranged with the local bus service (ALTRAN) to provide transportation to the light station for those that are unable to walk. This service is provided 4-6 times throughout the summer. Au Sable Day is held each September for one day. This celebration also includes ALTRAN service for the entire day for those requiring transportation to the lighthouse from the lower Hurricane River campground.

Visitors who come prepared to spend days and nights in the Lakeshore have usually done a significant amount of preparatory reading and planning.

Profiles of Lakeshore Visitors

Visitor Experience as Addressed by Management

Patterns and types of visitor use changed between the Lakeshore's earlier 1981 *General Management Plan* (GMP) and the 2004 version. For example, sea kayak use on national lakeshore waters — virtually nonexistent in 1981 — occurs today. There is increased interest in motorized use of the public lands. At the same time, there is concern about the noise and impact on resources and visitors from motorized use of public lands. At public meetings for the 2004 GMP, some people wanted more national lakeshore access in general; others wanted access to be restricted. Some people commented that access to the shoreline should be available at more locations. Accessibility for the elderly and visitors with disabilities to the shoreline and specific sites such as the Au Sable Light Station was an issue for many. Also, most people felt either that current numbers of visitors were appropriate or that visitation should be limited or reduced.

Guided interpretive activities are offered through special events such as Munising's Winterfest.

The 2004 GMP addressed carrying capacity issues in the national lakeshore by describing desired visitor experiences, resource conditions, and appropriate support facilities through management prescriptions for the national lakeshore (see section on "Locations of Interpretive Services"). The management plan did not develop standards or indicators for carrying capacity, but reserved that work for a subsequent implementation plan.

Lakeshore Visitor Statistics

The Lakeshore receives approximately 450,000 visitors annually. Of this, over 50% is in the summer months of June, July, and August. Michigan visitation accounts for approximately 70% of total visitation.

The Lakeshore draws primarily from upper Midwest states of Wisconsin, Illinois, Indiana, Ohio, Iowa, and Minnesota, yet increasing numbers of other states are also represented including Pennsylvania, New York, Maryland, Missouri, California, etc. Canadian tourism is primarily from the Province of Ontario.

Visitor use statistics for 2009 include:

- Interagency Visitor Center - 46,921
- Munising Falls Interpretive Center - 18,449
- Miners Castle Information Center - 27,238
- Au Sable Light Station Information Center - 5,037
- Grand Sable Visitor Center - 17,263

Patterns of Visitor Use

Although it is understood that expectations, needs, and motivations are different for each visitor, the workshop participants identified five primary types of user groups. All potential visitors can find useful information on the Lakeshore Web site which includes directions, descriptions of various recreational opportunities, and links to community services.

1. Car Hoppers

Because much of the Lakeshore's splendor is accessible within a short walk of parking areas, it is possible for visitors to experience the Lakeshore's profound seasonal changes, dramatic weather patterns, and magnificent vistas within yards of the safe and familiar comforts of their vehicle. The parking lots are paved and many sites provide running water and bathrooms. With the paving of H-58 nearing completion, it is anticipated that travel to more remote areas of the Lakeshore by bus, motor home, and passenger vehicle will increase greatly. Lodging, dining, and souvenirs are available in the gateway communities of Munising and Grand Marais.

Summer interpretive tours of the Au Sable Light Station provide visitors with an opportunity to view Lake Superior from the 87' tower.

In addition to learning about Lakeshore opportunities from the website and from receiving an information packet through the mail, many visitors will learn about the Lakeshore from the web, newspaper and magazine articles, including publications targeted at RV users.

Road maps and directional signs on Lakeshore roads will be critical to this visitor group (the Lakeshore's official folder is currently being revised to reflect the newly paved road). Also, an increasing percentage of visitors will be navigating with GPS technology.

As with all National Park areas, some visitors will seek the NPS passport cancellation as a primary motivation for visiting. During the summer months, car hoppers will find friendly, helpful staff, interpretive exhibits, and souvenirs at the Lakeshore's five visitor centers

2. Day Hikers

Visitors who come prepared to hike even short distances on Lakeshore trails will find bulletin boards at parking locations and trailheads. The bulletin boards are maintained by Law Enforcement staff and include safety tips, Lakeshore regulations, and orientation information. Self-guiding trail guides have been developed for three Lakeshore trails and are available at Lakeshore visitor centers and trailheads, at no cost. These contain information, as well as encouragement to participate in sensory experiences along the trails.

Day hikers may have learned about hiking opportunities through the Lakeshore Web site, from the Lakeshore brochure or interagency newspaper, from community partners, local outfitters, or from friends. If the visitors stop into one of the Lakeshore visitor centers, Park Rangers can advise them of appropriate and safe trail usage.

Throughout the front country areas of the Lakeshore, which include the "casual recreation" and the "orientation/history" zones, visitors will find parking areas, restrooms, benches, drinking water, directional signs, and well-maintained boardwalks, paths, steps, and switchbacks. These features provide simple, if not easy, access to spectacular views. Visitors do not have to walk very far to be impressed with natural phenomenon of the area- waves splashing, sand blasting, waterfalls crashing, the smells of earth and forest, and the sting of insects.

Lakeshore visitor centers have patches, pins, t-shirts, books, and other items for sale. In addition, the gateway communities of Munising and Grand Marais offer many regional specialties and souvenir items.

Day hikers are able to access numerous bulletin boards throughout the Lakeshore. These are maintained by the Resource and Visitor Protection staff. Past comments on the bulletin boards have included that they are very busy and perhaps over-full of information. They are however, well kept and seasonally up to date. There is no interpretive content per se on the bulletin boards.

3. Backpackers

Visitors who come prepared to spend days and nights in the Lakeshore have usually done a significant amount of preparatory reading. They may have read magazine articles about backpacking in the Lakeshore, seen the "Pure Michigan" TV ad, be in the company of returning hikers, or have communicated with other backpackers on Facebook, YouTube, or other social networking sites. Many backpackers contact the Lakeshore in advance of their trip, and so receive information through the mail. Backpackers must contact a Park Ranger at the Interagency Visitor Center in Munising or the Grand Sable Visitor Center in Grand Marais in order to obtain a permit, and so may benefit from one-on-one orientation and information as well as an orientation and Leave No Trace video. Backcountry maps and trail books provide additional information and interpretation. Visitor centers sell water bottles and field guides.

Night-time nature experiences are available to backpackers, including stargazing, real darkness, and the sounds of nocturnal animals. The immersion experience may include eating native berries and freshly-caught fish. The extended time out-of-doors may lead to increased opportunities for observation and reflection.

In addition to trailhead parking and well-marked trails, backpackers are provided with restrooms, fire rings, and food storage poles or boxes at the campgrounds. Lakeshore visitor centers provide souvenirs for the avid hiker, including hiking stick medallions, pins, patches, and postcards.

4. Boat Cruisers

Many visitors experience cultural resources of the Lakeshore, including shipwrecks, as well as the Lakeshore's magnificent shoreline from one of two boat cruise companies operating in the area. These boat cruise companies are responsible for bringing many visitors to the Lakeshore, and this mode of transportation is often their only exposure to the Lakeshore.

Experiencing the Lakeshore from the water provides different visual vantage points than from land, and allows visitors to feel the waves, wind, and spray from the falls, and the captain's narration encourages them to notice birds and other wildlife. The cruise boats provide safety equipment, food service and drinking water, restrooms, and enclosed, heated cabins.

On land, the boat cruise companies provide parking lots, bathrooms, and gift shops. Pictured Rocks Cruises distributes a souvenir scenic postcard along with their boat tickets.

In recent years, Lakeshore interpreters have been going out with visitors on Pictured Rocks Cruises, and providing twenty minutes of formal interpretation, in addition to informal conversations, aboard the boats. Without the walk-aboard Park Ranger, many boat cruisers may never realize that they are visiting a National Park area.

There are other types of boat users as well, including those who rent boats, including pontoons and kayaks, from local outfitters. These visitors face a greater challenge in locating launch sites, bathrooms and backcountry toilets, but benefit from enjoyment of the water and land recreation in the Lakeshore.

5. Twelvemile Beach Campground Users

People who find their way to this remote campground tend to be returning visitors, who Lakeshore staff view as some of the Lakeshore's greatest supporters. Many of these visitors serve as volunteers in the Adopt-a-Trail, Adopt-a-Campsite program.

Some of the campers also volunteer as campground hosts, providing welcome, orientation, and information to other campers.

The campground's facilities, including bulletin board, toilets, fire rings, picnic tables, and campsites are well-maintained. Interpretive programs are given here on weekends, and between the presence of Park Rangers, campground hosts, and other volunteers, the site and its campers are well-cared for.

The location of the campground supports a wealth of back-country experiences, including seeing the aurora in the dark night sky, sunrise and sunset, weather patterns, and the smells of pines, lake, and fire-cooked food. Long walks can be taken along Twelvemile Beach, there is access to dunes and waterfalls, and campers can access two trails from the campground.

It may be anticipated that the dynamics of this campground will change as the H-58 road is paved, with possible increases use by motorcycle, bicycle, and larger RV campers.

Recreational Activities

The 2001 Visitor Study revealed that visitor groups participate in the following activities:

Visitor Activity	Percentage of Visitor Groups Who Participate
Sightseeing	78%
Beach Activities	67%
Day Hiking	66%
Enjoying Solitude / Quiet	65%
Nature Study	23%
Non-Motorized Boating	7%
Overnight Backcountry Use	7%
Fishing	6%
Motorized Boating	3%

Bridalveil Falls are viewable only by water or from a distance at Miners Castle.

Operations

Visitor Survey Cards

Each July, Pictured Rocks National Lakeshore participates in an NPS survey through the University of Idaho Cooperative Park Studies Unit. Four hundred visitor survey cards are distributed to Lakeshore visitors, with questions designed to measure visitor satisfaction, and visitor understanding and appreciation (GPRA Goals IIa1 and IIb1). For detailed information on the survey process and results, refer to www.psu.uidaho.edu/vsp.htm.

Information from surveys for the GPRA Goal IIa1:

Percentage of park visitors satisfied overall with appropriate facilities, services, and recreational opportunities: 2008: 100% & 2009: 98%

Visitor Satisfaction with:	2008	2009
Visitor Center	94%	93%
Exhibits	88%	85%
Restrooms	84%	86%
Walkways, trails, and roads	90%	96%
Campgrounds and/or picnic areas	95%	96%
Assistance from park employees	100%	88%
Park map or brochure	94%	100%
Ranger programs	100%	87%
Learning about nature, history or culture	87%	95%
Outdoor recreation	97%	94%

Lakeshore streams and lakes are popular with fisherfolk who enjoy wetting a line.

Budget

In FY09, the Lakeshore's Division of Heritage Education spent $293,262 from ONPS Base Funds. An additional $34,465 was spent from Fee Demonstration Funds.

In FY08, the Lakeshore's Division of Heritage Education spent $264,433 from ONPS Base Funds. An additional $23,899 was spent from Fee Demonstration Funds.

In FY07, the Lakeshore's Division of Heritage Education spent $248,759 from ONPS Base Funds. An additional $8,182 was spent from Fee Demonstration Funds.

Fee Demonstration Funds are used for a variety of purposes including the cost of collection, partial funding of seasonal visitor center positions (positions whose duties include fee collection), maintenance projects and backcountry patrol seasonal positions.

Staffing

	Total Heritage Education FTE	Permanent FTE	Temporary FTE
FY2007	4.5	2.8	1.7
FY 2008	4.8	2.8	2.0
FY 2009	5.4	2.8	2.6

Current Staffing in 2009 includes:

Stationed at Headquarters:

- GS-12 Chief of Heritage Education (Permanent full time)
  This position accomplishes supervisory and administrative goals, in addition to overseeing the in-park programs and outreach efforts. Though museum collection curatorial software has become more user friendly, the entire area of responsibility continues to be a challenge every year as existing staff do not have the time or training/skills to accomplish the

work. This position also does a lot of graphics, community relations, and media contacts. Programs such as PEPC, FMSS, annual collection inventories, and cultural resources compliance demand a significant amount of staff time. This position also spends about 5 days per year on front line.

- GS-09 Park Ranger (Education) (Permanent full time)
  This position runs the extensive Lakeshore education and Junior Ranger programs as well as summer boat tour programs, campground program interpretation, and numerous special events.

Stationed at the Interagency Visitor Center:

- GS-09 Park Ranger (Permanent, less than full-time)
  This position works in tandem with a National Forest employee at the IVC. The work schedule is "four tens," or four ten-hour work days. This is to accommodate extended summer hours at the IVC. The National Forest employee and the NPS employee overlap only on Wednesdays. In the winter, the IVC is closed on Sundays, and the Park Ranger's job is reduced to three days per week.

  The IVC Park Ranger is responsible for the Lakeshore's volunteer program. The position is also the fee program coordinator and supervisor, and oversees the backcountry permit program.

- GS-04 Visitor Use Assistant (Seasonal)
  Although the IVC is open year-round, this position works only in the summer.

Stationed at Grand Sable Visitor Center:

- GS-06 Supervisory Visitor Use Assistant (Seasonal)
- GS-04 Visitor Use Assistant (Seasonal)
  The two Grand Sable employees each work five days per week. Grand Sable Visitor Center is open seven days per week, so there are three days of overlap each week, when both employees work at this site.

Stationed at Miners Castle:

- GS-04 Visitor Use Assistant (Seasonal)
- GS-04 Visitor Use Assistant: Swing position (Centennial Seasonal)
  Miners Castle is open seven days per week in the summer. The swing position covers others' lieu days at Munising Falls (two days per week), Miners Castle (two days per week), and spends the fifth work day roving.

Grand Sable Visitor Center is located near the eastern gateway to the Lakeshore. Backcountry permits cannot be completed on-line, and a high percentage are acquired at this site.

Stationed at Munising Falls:

- GS-04 Visitor Use Assistant (Seasonal)
- GS-04 Visitor Use Assistant: Swing position (Centennial Seasonal)
  Munising Falls is open seven days per week in the summer. The swing position covers others' lieu days at Munising Falls (two days per week), Miners Castle (two days per week), and spends the fifth work day roving.

Stationed at Au Sable Light Station:

- GS-05 Park Ranger (Seasonal)
- Au Sable Volunteers (Seasonal)
- Student Conservation Assistant
  Au Sable is open five to seven days per week in the summer. Between these three positions, lieu days are covered, while working employees run the site bookstore, do programs, give tours of the lighthouse and quarters, and rove.

Core Operations Budget

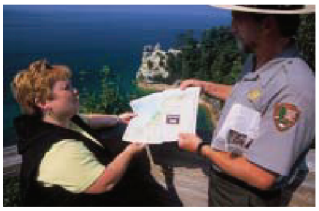
The Lakeshore experienced one of the Midwest Region's first Core Operations when the process emphasized reducing "noncore functions." Since that time, the process has evolved into a way to demonstrate the gap between existing staff and the amount of staff necessary to perform core functions. By examining the list of core functions for the Division of Heritage Education defined in the Core Operations Report, it seems obvious that the division lacks sufficient permanent staff to fulfill those functions. The proposed (and approved) organization chart to fulfill the Lakeshore's core functions failed to add any permanent employees to the Division of Heritage Education.

In April 2006, the staff at Pictured Rocks participated in a three-day facilitated workshop to initiate the Core Operations planning process. During that workshop the Lakeshore staff:

- Reviewed the park's Budget Cost Projection Model.
- Guided by the park's enabling legislation, re-articulated the park's purpose and operational priorities.
- Listed and evaluated all activities with which the park staff is currently involved or to which human or financial resources are being devoted.
- Per the defined process, attempted to identify major activities that were "above and beyond" what is "Core" or "Essential" to achieving the park's purpose and consequently could be stopped or eliminated.
- Brainstormed and briefly discussed a broad range of ideas on how the park could make cut-backs to meet anticipated budget shortfalls totaling over $417,000 within five years.

The following items were identified as being core functions to all work units, including the Division of Heritage Resources:

- Leadership, Program Management, and Supervision: leadership, management and supervision of work unit employees, partners and volunteers.
- Safety and Risk Management: Working to actively manage risk and ensure the safety of all park employees, partners, volunteers and visitors.



Park interpreters are responsible for the design and development of media, including pre-visit information for visitors, the park web page, park newspaper, exhibits, brochures, and site bulletins.

- Park-wide Planning and Environmental Compliance: Participating in park-wide planning initiatives, special projects, completion of legally required environmental compliance.

- Internal and External Communications, Meetings, Correspondence: All organizations depend upon on-going, active and effective communications and coordination with employees and other stakeholders.

- Mandatory Training, Administrative Functions: All work units have a significant workload associated with meeting mandatory training, reporting and communication requirements imposed by Regional and Washington Offices.

In addition, the Division of Heritage Education, Visitor Services, Cultural Resources, and Public Affairs was determined to have the following responsibilities:

- Media Development and Maintenance
  Design and develop pre-visit information for visitors including park web page, park newspaper, other publications, exhibits, brochures, and site bulletins. Maintain park image file. Develop podcasts and other social media.

- Public Information and Orientation
  Staff park Visitor and Information Centers. Facilitate cooperating association sales outlets. Throughout park and at visitor centers provide park rules and regulations to assure visitor safety and resource protection.

- Formal and Informal Interpretation
  Provide in-park and outreach guided ranger tours, programs, lectures or demonstrations.

- Public Affairs
  Manage park's active public affairs program including development and issuance of Press Releases, handling of media inquires, Freedom of Information Act (FOIA), Community Partner Program and Experience Your Lakeshore Program, essential for on-going constituent development.

- Cultural Resources Management
  Develop and maintain list of archeology and ethnographic sites within park. Prepare documentation to officially list and monitor sites. Collections management including documentation, accession, and catalog natural and cultural artifacts and samples. Native American program management including NAGPRA activities, tribal consultations, document actions/agreements. Historical research on variety of Lakeshore themes, professional publication and distribution to park staff and external customers. Oral history collection, documentation and management. List of Classified Structures condition assessment, Section 106 compliance for all Lakeshore historic properties, and PEPC.

- VIP Program Management
  Recruit, hire, train, and supervise volunteer-in-parks, interns, and the annual SCA program.

- Special Events
  Planning and development of special programs such as National Trails Day and other monthly events, Fireside Chats, Naturalization Ceremonies, anniversaries, etc.

Partnerships

- Pictured Rocks National Lakeshore works with Eastern National, a cooperating association which strives to offer high quality books, apparel, convenience items and other educational items to further the park's interpretive and educational mission. Eastern National provides funding for the interagency newspaper and other interpretive/educational projects which is gratefully acknowledged.

- The National Parks of Lake Superior Foundation is a non-profit group organized to assist the Lakeshore with funding beyond what can be accomplished through the normal NPS budget process. NPLSF has donated funds to support Heritage Education efforts through the purchase of period furniture for the lighthouse, educational materials, and other supportive media. The Lakeshore greatly appreciates this commitment.

- The national lakeshore maintains commercial use authorizations, and a concession contract which allow private business owners the opportunity to conduct commercial operations within the national lakeshore. These commercial activities include backpacking, ice climbing, sea kayaking, hiking, cross- country skiing, scenic boat tours, and snowshoeing.

- Community Partner Program. Thirty local businesses are contacted annually and provided with a packet of park information, which are updated with detailed event information throughout the year. Each business is also e-mailed news releases and flyers for programs, events, and special notices.

- Adopt-A-Trail, Adopt-A-Campsite Program. This program engages some thirty individuals who have adopted the maintenance of a section of the Lakeshore trail system or a backcountry campsite. Regular contacts, including e-mail notices are included in this partnership.

- The Lakeshore has a long standing partnership with other Federal agencies in the region, notably, the Munising District of the Hiawatha National Forest and Seney National Wildlife Refuge. These partnerships include a joint summer interagency newspaper, joint education and interpretive programming, staff training, and a shared Fire Management Officer position. The national lakeshore has an Interagency Agreement with Hiawatha National Forest for joint operation of the visitor center.

- A partnership exists between the Michigan Department of Natural Resources Shingleton Field Office for information transfer and staff assistance. The Lakeshore has provided interpretive programming at one DNR campground (Kingston Lake) and has assisted with publications and exhibits as well as general visitor information.

- A Concession Permit is in place for Pictured Rocks Cruises. Park interpreters often accompany the guided tour boat trips, providing interpretation in-between boat narration.

- Pukaskwa is sister park in Canada with collaborative science and outreach education programs.

- Interpretive internships with the College of Natural Resources at Michigan State University, Northern Michigan University, and Lake Superior State University.

Volunteer Program

2009
In FY09, 117 volunteers worked at the Lakeshore. Of the total 3,598 hours donated, 1365 hours were contributed by campground workers who provided Lakeshore orientation and information, and another 1453 hours were contributed directly to interpretive operations.

One of the highlights of the Lakeshore's volunteer program was the staffing of the AuSable Light Station and Museum. The Lakeshore had three couples for the months of June, July and August with over 700 hours of volunteer time. They assisted with tours, staffing the museum and Eastern National bookstore, grounds maintenance and much more. There were over 4500 visitors to the lighthouse in 2009.

The other highlight was the Lakeshore's Adopt-A-Trail/Adopt-A-Campsite program. There were 30 volunteers that participated, putting in over 400 hours of trail work from the months May through October. The Lakeshore also held a very successful volunteer recognition event in September with guest speaker John Agnew who was the Lakeshore's Artist in Residence in 2009.

The Grand Sable Dunes are five square miles of unique perched dunes, rising some 300 feet above Lake Superior. Most of the dunes are included in a federally protected Research Natural Area.

2008
In FY08, 98 volunteers worked at the Lakeshore. Of the total 3128 hours donated, 1216 hours were contributed by campground workers who provided Lakeshore orientation and information, and another 715 hours were contributed directly to interpretive operations.

The program highlight for 2008 was the opening and staffing the AuSable Light Station Museum and Information Center. Volunteers performed numerous duties including opening facilities, assisting with tours, and staffing the museum and Eastern National bookstore.

The Lakeshore also sponsors an "Artists in the Park" residence program. In 2008, 100 hours were contributed by volunteer artists who spent a portion of their creative time talking with visitors.

2007
In FY07, 80 volunteers worked at the Lakeshore. Of the total 2252 hours donated, 964 hours were contributed by campground workers who provided Lakeshore orientation and information, although no hours were recorded as contributing directly to interpretive operations.

The highlight of the FY07 volunteer program was the Adopt-a-Trail / Adopt-a-Campsite program. Sections of trails and/or campsites were adopted by 25 volunteers, who visited their site once a month from May through October. Volunteers performed light maintenance duties that otherwise might not have gotten done.

Servicewide Interpretive Report

The following data was taken from the Lakeshore's Annual Interpretive Program Report for the years 2007, 2008, and 2009.

Numbers of Programs and Contacts	2007	2008	2009
Number of Contact Stations	4	5	5
Visitors Contacted Contacts Stations	61,643	72,126	114,908
Informal Visitor Contacts	500	1,000	0
Formal Visitor Contacts	6,748	260	15,599
Junior Ranger Contacts	591	517	472
Special Events	8	15	30
Visitor Contacts at Special Events	330	1,338	1,381
Education Programs	39	71	104
Contacts at Education Programs	1,354	1,416	1,477
Community Programs	60	63	42
Contacts at Community Programs	1,898	1,906	1,223

In addition to regular Lakeshore programming, several park events stand out and illustrate the creativity being used by the Lakeshore's Heritage Education Division.

2009

The Lakeshore received two significant grants in 2009 to fund a National Park Foundation / Ford Transportation Interpreter and the Birch Bark Canoe Building Demonstration. The Transportation Interpreter contacted 5449 visitors and presented programs on the Pictured Rocks Cruises, a formerly underserved audience. Anishnabe tribal member Ron Paquin constructed a 12' long birch bark canoe at Miners Castle where over 800 visitors enjoyed watching and interacting with him. The Lakeshore also received an Utley Research Grant from Eastern National to research maritime history. The canoe will be used in period interpretive programs in the future.

2008

In July of 2008, Chief of Heritage Education Gregg Bruff led a group of community leaders in Munising, MI to establish the first annual "Sails on the Bay Maritime Festival." Some 1000 people attended the two-day event which included 850 visitors aboard the ninety-five foot schooner Madeline. The weekend included several maritime speakers, maritime musicians, a 4-H maritime youth play, "kids ketch korner," area artists, boat parade, etc. The Lakeshore was involved to help celebrate the park's rich maritime history.

2007

During the summer of 2007, Park Ranger (Education) Dave Kronk served as a step-on interpreter for the Pictured Rocks Cruises, operating under a commercial use license from Munising. Dave contacted several thousand visitors who, though technically in the Lakeshore (by water) did not actually visit the Lakeshore via vehicle. His return trip narrations were very popular, enabling the Lakeshore to engage a new set of visitors and distribute the interagency newspaper.

Current Programming

Critical Issues for Interpretation

Exotic Species

Numerous non-native or exotic species have and continue to move into the upper Great Lakes region due to a number of reasons which include human transport, increased recreation visits, and changing climatic conditions. These aquatic and terrestrial species are having various degrees of effect on native ecosystem function including dislocation and extirpation. The National Park Service and Lakeshore will continue to educate local citizens and visiting public about the challenges that exotic species have on the native Lakeshore ecosystem.

Climate Change

Climate change presents significant risks and challenges for protecting natural and cultural resources in the National Parks System. Scientists have been conducting research on climate change impacts to parks for nearly two decades. Some of the effects that parks are already experiencing include loss of glaciers in mountainous regions, reduced snow packs and earlier spring runoff, longer fire seasons and greater frequency of large fires, thawing permafrost and declining sea ice in northern regions. While future changes are difficult to predict, a major concern is rising sea levels (and potentially falling Great Lakes levels) that will impact cultural resources and Lakeshore infrastructure as well as coastal and estuarine ecosystems. Preparing for change requires accessing, understanding, and communicating the best information available. Lakeshore staff and partners have begun working together to educate themselves and the public about changes that are occurring.

Five days each week during the summer months, a Park Ranger has been joining expeditions given by Pictured Rocks Cruise Boats. The Park Ranger presents 20-minute narrations while the boat is in Lakeshore waters.

Education Programs

School children, education professionals and youth groups of Alger County Michigan are the target audiences for the Lakeshore's education programs. The GS 09 Park Ranger (Education) position manages this program. Approximately 100 programs are given each year resulting in about 2500-3000 visitor contacts.

Program Design

All school programs have been carefully designed, field tested and reviewed by a park advisory team to ensure success in addressing the mission and critical issues of the Lakeshore as well as covering the Michigan and National Content Standards in Science and Social Studies. Programs use the following model to improve concept comprehension:

1. Pre-visit materials sent to teacher
2. In-class presentation by Park Ranger
3. Field trip or school site activity (includes education component)
4. Follow-up activity by students with their family to reinforce learning
5. Evaluation component

Cultural Resource Programs

Cultural Resource Programs have been developed for Middle and High School Students. Topics covered are: the Schoolcraft Blast Furnace, Maritime History of the Area, Logging History of Pictured Rocks National Lakeshore, Coast Guard History and Farming.

Natural Resource Programs

Natural Resource Programs have been developed for pre-kindergarten through twelfth grade. Pre-Kindergarten through third grade programs focus primarily on developing an appreciation for Lakeshore resources along with a development of senses and science observation skills. Programs in grades four through six focus on teaching six basic concepts of ecology: energy flow, cycling of materials, diversity, change, interrelationships, community and adaptation. Programs in seventh through twelfth grade center on forest ecology, stream ecology, dunes ecology, and wilderness, Leave No Trace Ethics, watershed basics, groundwater basics, an introduction to mapping and the Geology of Pictured Rocks National Lakeshore. All programs are based on Lakeshore resources.

Climate change curriculum is taught to all students, from K-12. K-3rd grade programs focus on sensitivity and emotional connections to resources. 4th through 7th grade programs focus on developing understanding of ecological concepts. 8th through 12th grade programs focus on developing resource stewardship skills.

Youth Programs

Youth Groups

The Lakeshore provides program opportunities for youth groups to learn more about the Lakeshore and its natural and cultural resources. Examples include Life of Lake Superior Days, Lake Superior Youth Symposium, Alger County Parks and Recreation activities, Leave No Trace camping trips, National Public Lands and National Trails Day events.

Climate change curriculum is taught to all students, from K-12. K-3rd grade programs focus on sensitivity and emotional connections to resources. 4th through 7th grade programs focus on developing understanding of ecological concepts. 8th through 12th grade programs focus on developing resource stewardship skills.

Junior Ranger Enrichment Programs

The Lakeshore offers a two-hour after school enrichment program (grades 3-6) for schools in the area called a "Junior Ranger Program." This program is held for several weeks each season in cooperation with the nearby Alger County schools and the Alger Parks and Recreation Department. Some classes are held at the Lakeshore, and some are held at the schools.

Junior Ranger Camp

A one- to two-week long program is held in June as funding and staffing are available. The program teaches an appreciation for the Lakeshore and understanding of its natural and cultural resources along with knowledge of the equipment and preparedness needed for outdoor explorations. There is a small fee charged for supplies.

The Lakeshore offers a two-hour after school enrichment program (grades 3-6) for schools in the area called a "Junior Ranger Program." This program is held for several weeks each season in cooperation with the nearby Alger County schools and the Alger Parks and Recreation Department.

Teacher Programs

In-Service Training

The Lakeshore offers at least one in-service teacher/youth leader workshop each year at the fall conference of the NMU Seaborg Math and Science Center at Northern Michigan University and possibly in conjunction with the Michigan Association for Outdoor and Environmental Educators. Recent trainings have included sessions in "Greening Your Schools."

Workshop

A four-day teacher workshop is sponsored every other year on a topic related to Lakeshore resources. Workshops focus on some critical resource issue facing the Lakeshore. University credits may be earned by attending.

Community Programs

PIRO Staff as Guest Speakers

Community programs are presented by a wide variety of Lakeshore staff. Most of these are by request of local clubs and organizations where staff serve as guest speakers. Examples include MSU Extension Life of Lake Superior Days, Lake Superior Youth Symposium, and programs with Kiwanis, Lions, Alger County Historical Society, and other service organizations.

Participation in Off-Site Programs

Heritage Education staff are active in collaborating with others to bring special programs to the community. Examples include the Schooner Madeline, the EPA Research Vessel Lake Guardian, reenactment voyageurs, a Native American birch bark canoe builder, and Arts and Culture programming. For several years the Lakeshore participated in the Michigan Great Outdoor Culture Tour with poets, storytellers, authors, and musicians presenting programs at Munising Falls, Miners Castle, and Twelvemile Beach Campground.

SCA crew working on the Chapel Falls Trail. Chapel Falls can be seen after a brisk 1.5 mile walk from the end of Chapel Road.

Ongoing Tasks

The Heritage Education Division of Pictured Rocks National Lakeshore runs a complex and efficient operation aimed at providing outstanding experiences to Lakeshore visitors. At the December, 2009 Recommendations Workshop, the following tasks, currently being accomplished by the division, were identified as important to continue.

Tasks related to providing meaningful experiences to visitors:

- Continue Junior Ranger program with local schools and summer visitors
- Continue the hundred-mile challenge
- Continue to distribute and electronically post regulations
- Continue to distribute animal, bird, flower, and plant lists for the Lakeshore
- Continue to include observation elements in guided programs, such as the activity of matching paint chips with something along the trail
- Continue to promote and provide guides for ski trails
- Continue to promote the range of physical activities available at the Lakeshore through electronic media and publications
- Continue to work with regional school groups who bring students to the Lakeshore for camping and backpacking adventures
- Continue to keep telescope at Miners Castle in working order

Tasks related to environmental education:

- Conduct alternative energy demonstrations
- Continue Environmental Education programs at Alger County schools
- Continue to encourage visitors to use all senses in Lakeshore ranger-led programs
- Continue to include "Five Steps of How to Be Green" in Environmental Education programs
- Continue to include observation elements in guided programs, such as the activity of matching paint chips with something along the trail
- Continue to include sensory activities in trail guides
- Continue to post Environmental Education materials on the Lakeshore Web site
- Continue to present Leave-No-Trace materials at Scout workshops and in Lakeshore mailings
- Continue to present material on ecological relationships through interpretive and education programs and trail guides
- Continue to seek opportunities to increase sustainable practices

Tasks related to cultural history interpretation:

- Continue to distribute information to boaters about shipwrecks and anchoring spots
- Continue to maintain and interpret boathouse and other Coast Guard structures
- Continue to maintain and interpret historic logging equipment area
- Continue to encourage local tribes to build an outdoor exhibit area in the Lakeshore
- Continue providing access to Au Sable
- Continue to refurnish the first floor of the Au Sable Light Station assistant keeper's quarters
- Explore ways to interpret local farming history as one of the Lakeshore's primary historic periods.

Tasks related to partnerships:

- Conduct community events at a local café
- Continue Adopt-a-Trail, Adopt-a-Campsite program
- Continue to distribute Chamber of Commerce materials at Lakeshore visitor centers
- Continue to formally recognize Au Sable and other volunteers
- Continue to monitor and consider participation in the social networks used by visitors and potential visitors
- Continue to provide opportunities for visitor comments through suggestion forms, surveys, visitor registers, and Web site
- Continue to sponsor the Au Sable resident VIP program
- Continue to support cooperating association operations
- Continue to work with cooperating association to ensure availability of relevant and high-quality sales items
- Continue to work with regional school groups who bring students to the Lakeshore for camping and backpacking adventures

Guided tours of the double keepers' quarters and the light tower at Au Sable are available for a small fee during July and August.

Tasks related to operations:

- Continue to create, maintain, and update Lakeshore wayside exhibits
- Continue to distribute and electronically post regulations
- Continue to distribute safety materials with Lakeshore information packets
- Continue to highlight sensory experiences in trail guides
- Continue to include safety messages on Lakeshore Web pages
- Continue to maintain Lakeshore website to provide clear information to meet visitor needs
- Continue to make trail guides available
- Continue to monitor and consider participation in the social networks used by visitors and potential visitors
- Continue to promote the range of physical activities available at the Lakeshore through electronic media and publications
- Continue to provide opportunities for visitor comments through suggestion forms, visitor registers, and website
- Continue to reply to visitor requests, via in-person, email, telephone, and mail inquiries
- Continue to staff five visitor centers during the summer.
- Continue to work with cooperating association to ensure availability of relevant and high-quality sales items
- Continue to work with HFC to revise and reprint Lakeshore folder, including updated map

Current Media

Wayside Exhibits

The Lakeshore relies heavily on wayside exhibits to convey its interpretive messages to visitors. Wayside exhibits address various themes, focusing on specific topics at each of several primary locations: marsh ecology at the Sand Point Marsh Trail; glacial geology at Miners Castle; and logging at the Log Slide Overlook near Grand Sable Dunes. Additional wayside exhibits interpret other subjects at various locations throughout the Lakeshore. Most of the wayside exhibits currently in place are well conceived and do a good job of presenting information to visitors. Some, however, include more text than most visitors are willing to read. Very few feature full-color photography or illustrations consistent with the style and quality of graphics that many NPS wayside exhibits currently offer. Although only a very few of the wayside exhibits are in immediate need of replacement, most all are beginning to show the effects of age and weather. Overall the wayside exhibits have a dated look and are not as fresh, consistent, or engaging as they might be.

The Lakeshore uses low profile wayside exhibits to present outdoor interpretive experiences. Other messages (regulatory, safety, general information, etc.) are provided to pedestrians in publications or by bulletin boards on which these and other publications are posted. Although the boards and associated shelters are in good repair, and the postings are generally current and well organized, the amount of information provided is often too much for visitors to easily and quickly digest. This is especially true at trailheads, where visitors need to be informed quickly before embarking on their hike. Bulletin boards at trailheads also do not allow the presentation of large and compelling graphics that might entice visitors to take a hike they might otherwise avoid, but are capable of managing. Finally, bulletin boards at visitor contact stations do not provide information clearly and succinctly to visitors that do not (or cannot) enter the facility.

Pictured Rocks wayside exhibits were last assessed by Harpers Ferry Center in the 1970s. The current collection of outdoor exhibits displayed in the Lakeshore includes routed interpretive or informational signs, lexan and fiberglass exhibits, and bulletin cases displaying a variety of Lakeshore information. Only two exhibit panels that were developed by Harpers Ferry Center in 1997 meet present NPS-HFC wayside exhibit standards. They conform to Unigrid design and use full-color graphics. Text is concise and compellingly written, but the graphic design of the panels is simplistic and misses opportunities to display information in a more functional and content-intriguing manner. The overall appearance of Lakeshore outdoor exhibits seems dated and does not establish any Lakeshore design uniformity.

44% of visitor groups report using the nature trail exhibits, and 64% of visitor groups consider nature trail exhibits to be “very important” or “extremely important” (2001 Visitor Study).

16% of visitor groups report using roadside exhibits, and 62% of visitor groups consider roadside exhibits to be “very important” or “extremely important” (2001 Visitor Study).

Publications

The current selection and variety of publications seem to work for visitors as they cover a broad variety of topics of interest to many. Updating by staff consumes design time, but to date seems worthwhile. Very few publications are found as litter or trash in the Lakeshore so Lakeshore staff assume these publications are valued and are going home with visitors.

Site Bulletins: With limited staffing in recent years emphasis has been placed on developing a broad range of non-personal publications to help visitors and staff know and understand Lakeshore resources. The Lakeshore has created an impressive array of printed bulletins offering a very wide range of interpretive and informational messages. Some 130 bulletins are generally well written and designed, and are widely available throughout the Lakeshore. They are especially useful at the Visitor Information Center in Munising, where -- in concert with (appropriately) limited and well focused museum exhibits -- they provide an effective way of preparing visitors to enjoy and appreciate the Lakeshore.

Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world. The former Munising U.S. Coast Guard Station is located at Sand Point and serves as Park Headquarters.

The site bulletins used most by visitors include: Backcountry Camping, Kayaking, Waterfalls, Day Hikes, Ice Climbing, Munising Coast Guard Station, Au Sable Light Station, Shipwrecks, White Birch Trail Guide, White Pine Trail Guide, and Sand Point Marsh Trail, Most are picked up at visitor centers, while trail guides are in boxes at the trailheads. All of the primary publications are accessible for pdf download on the Lakeshore Web site. A complete list of site bulletins is found in the appendix.

Trail Guides: Printed guides keyed to number stops along the trail are provided for free at White Pine Trail, the White Birch Trail, and the Miners Falls Nature Trail. The Sand Point Marsh Trail is available in regular and large-print. Maps are available for both the Munising Falls Ski Trails and the Grand Marais Ski Trail. 36% of visitor groups report using self-guiding trail brochures, and 72% consider them to be "very important" or "extremely important" (2001 Visitor Study).

UniGrid Brochure: A full color, B/4 UniGrid folder is distributed to Lakeshore visitors for free. Like most publications in this series, Pictured Rock's folder is an attractive and effective communication vehicle that helps visitors enjoy the Lakeshore and helps to establish it as part of the National Park System. The folder is being redesigned in 2010 to incorporate new wilderness designation, as well as the paving of H-58. 89% of visitor groups report using the Lakeshore map and brochure (2001 Visitor Study).

Junior Ranger Book: The Lakeshore maintains a very active education program aimed largely at students (from K12) in the Alger County, Michigan School District. The program includes the distribution of a Junior Ranger booklet at no cost to participants.

Former U.S. Coast Guard 36′ self-righting lifeboat on display at Sand Point Headquarters.

Park Newspaper: A multi-agency newspaper ("Superior Wildlands") is jointly funded and published by the Lakeshore, the Seney National Wildlife Refuge, and the Munising District of the Hiawatha National Forest, and is distributed free to visitors. The Lakeshore uses the newspaper primarily to highlight current events (e.g., signing of legislation creating the Beaver Basin Wilderness, or the premier of the Ken Burns documentary on the NPS), to emphasize important topics (e.g., safety or resources protection), or to provide a current overview of activities and events.

Pre- and post-visit educational materials are provided to area schools in digital and hard-copy formats.

Travel Guides / Tour Books: Although not produced by the Lakeshore, 41% of visitors used travel guides and tour books as a source of Lakeshore information (2001 Visitor Study). Woodall's Campground Guide is stocked at the IVC.

In addition, 12% of visitors learn about the Lakeshore through newspaper and magazine articles (2001 Visitor Study).

Mailings are sent to Community Partners. In this way, area businesses and agencies are kept apprised of Lakeshore research, activities, and management efforts.

The site bulletin "Touring the Lakeshore by Motorcoach" provides information about appropriate sites to visit by bus, permits required, availability of pre-trip information, contact info, and sustainability suggestions.

Museum Exhibits

Museum exhibits can provide experiences of varying complexity, allowing visitors to select the depth of involvement with the exhibit they choose. Museum exhibits can graphically transcend language and cultural barriers by incorporating artwork, artifacts, or mixed media to produce desired atmosphere or effects. They promote visitor participation and encourage learning through interaction between individuals in the viewing party and the exhibit. Museum exhibits allow freedom of choice for visitors and they can appeal to a variety of level of interest among visitors.

In addition to the Interagency Visitor Center in Munising, the Lakeshore maintains interpretive exhibits at three sites: Munising Falls Interpretive Center (which explain the blast furnace and the area's ecology), the Grand Sable Visitor Center (which provides general orientation to the Lakeshore and limited interpretation of Grand Sable Dunes), and Au Sable Light Station (which focuses on the lighthouse and the history of lifesaving). Museum exhibits at Munising Falls were done with assistance from HFC and later supplemented by the Lakeshore. Museum exhibits at Grand Sable and Au Sable Light were accomplished entirely in house. The Interagency Visitor Center in Munising is open over 350 days each year; the other three facilities are open only seasonally, typically from Memorial Day to Labor Day.

The current museum exhibits do a good job of addressing many of the Lakeshore's primary interpretive themes. (Visitors report an 88% satisfaction rate.) Each exhibit, and the associated information and sale area, is well maintained, exceptionally tidy, and uses limited spaces very efficiently.

Au Sable Light: The current museum exhibits at are especially engaging, offering a good mix of text, historic photography, and artifacts. They are also appropriately lighted using solar energy. Combined with the historic refurnishing being completed next door, the exhibits make an outstanding historic site even more inviting.

Munising Falls Interpretive Center: The museum exhibits at Munising Falls are older and are beginning to show their age. The exhibit area is dimly lit and the current exhibit configuration prohibits using the space for other activities as is occasionally needed. The large model helps visitors understand the iron making process in the absence of any historic structures remaining on the site.

Grand Sable Visitor Center: The museum exhibits at the visitor center are very limited due in part to the size of the facility. They provide basic orientation to the Lakeshore, a brief look at the ecology of the dunes area, and a sales area.

Museum Exhibits: Museum exhibits are located at the Grand Sable Visitor Center, the Au Sable Light Station and Munising Falls Interpretive Center. 19% of visitor groups report using the museum exhibits, and 59% of visitor groups consider museum exhibits to be "very important" or "extremely important" (2001 Visitor Study).

Bulletin Boards: The Lakeshore's Protection division is responsible for maintaining the Lakeshore's bulletin boards. 52% of visitor groups report using the bulletin boards at trailheads, and 66% of visitor groups consider them to be "very important" or "extremely important" (2001 Visitor Study).

Web Site

The Lakeshore (Division of Administration) maintains a Web site at www.nps.gov/piro. Heritage Education staff work closely with the collateral duty webmaster to develop most of the content for the site. 21% of Lakeshore visitors receive park information through the Lakeshore's home page (2001 Visitor Study). Some of the important features of the website include:

- Lakeshore information
- How to schedule education programs
- Curriculum-based educational lessons
- Site bulletins
- Park newspaper

Film and Video

The Lakeshore has recently completed a brief (15-minute) video with the Munising District of the Hiawatha National Forest that provides an overview of the Lakeshore. The video is currently being shown at the Interagency Visitor Center in Munsing on a small monitor in a room just off the primary exhibit area. The video is configured in modules, which would easily allow the portion on the Lakeshore to be shown separately. The video is primarily informational rather that interpretive in tone, and although brief, the presentation does a good job helping visitors understand why the Lakeshore is significant and what aspects of it they might enjoy seeing. It does not, however, begin to approach the magnitude or technical quality that a Lakeshore of this significance needs to take full advantage of this powerful medium.

Podcasts

Informational podcasts were completed by Northern Michigan University students during the 2007-2008 school year under the direction of Dr. Craig Rademacher. These podcasts are linked from the Lakeshore's Web page. Topics include Miners Falls and Leave No Trace Ethics. Lakeshore staff have not received much feedback from podcast users as these are downloadable from the web, therefore, efficacy and level of use is still in question.

Non-Lakeshore Media

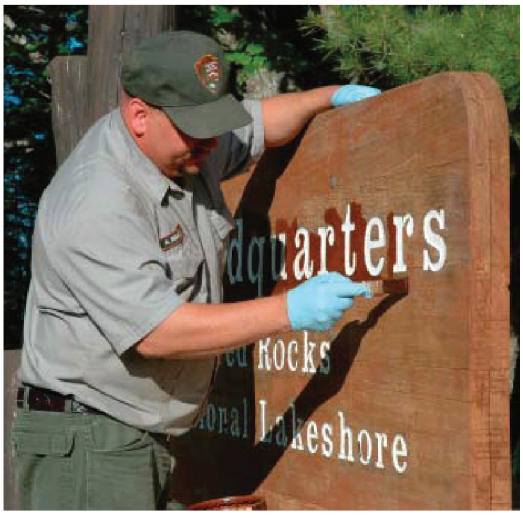
The Division of Heritage Resources contributes content to the following regional publications and websites:

- Explore Munising
- Great Waters Lake Superior Trail
- Hiawatha Water Trail
- Greater Munising Area Partnership for Commerce Development (Chamber of Commerce)
- City of Munising
- Munising Visitor's Bureau
- Munising Walking Tour
- Alger "Awesome" magazine
- Community Partner Program
- Parkcast on-line journal through Northern Michigan University

According to the 2001 Visitor Study, 60% of park visitors rent lodging outside of the park, and 34% of visitors stay in a campground or trailer park outside of the park.

Other Lakeshore Signs

In addition to the interpretation and general information provided by wayside exhibits, other signs help identify the Lakeshore and its significant features, and help visitors navigate it conveniently and safely. Current Pictured Rocks identity and motorist guidance signs do this . . . but not as effectively as they could. Most of the signs are in good repair, and visitors are generally able to use them to find their way around, especially with the aid of the Lakeshore map or other portable navigation aids. However, like the wayside exhibits, other signs do not conform to current NPS standards. Even to those not familiar with the details of these standards, the signs have a dated look that does not reflect the progressive attitude that the Lakeshore otherwise projects. The current signs also do not effectively establish a strong presence for the Lakeshore (which is especially challenging for a Lakeshore with multiple entrances), or distinguish it from the other land management agencies in the area. For example, the sign identifying the Interagency Visitor Center in Munising follows U.S. Forest Service design standards, and therefore does not clearly indicate that the facility is co-managed by the NPS.



Signs help identify the Lakeshore and its significant features, and help visitors navigate it conveniently and safely.

Research

Inventory and Monitoring Research

Lakeshore Heritage Education staff work closely with Lakeshore and I&M Office researchers to access and use information from their program. I&M site bulletins are available to visitors and are on the Lakeshore web site. Annual Investigator Reports and other studies are available to interpreters to incorporate in personal and non-personal services programming. A series of Resource Reports are available to staff and visitors for specific research topics over the years.

Likewise, cultural research reports are available to Heritage Education staff for incorporation in a variety of personal and non-personal services. Examples include the Lakeshore administrative history, ethnographic overview and assessment, Archeological survey reports, historic resource report, and cultural landscape reports.

The Lakeshore contains an extensive collection of buildings, landscapes, and artifacts relating to a long and vibrant maritime history.

Visitor Studies

The following studies have been completed or are ongoing at this time:

- Campground Impact Study
- Avian levels and human traffic

Several Resource Reports have been created over the years to convey to the studious lay reader various scientific studies conducted within the Lakeshore. These include:

Pitt, David G, Lime, David W., Vlaming, Jonathan C., Martin, Ross, Attitudes and Perceptions of Visitors to the Pictured Rocks National Lakeshore Toward Development of the Beaver Basin Rim Road, 1994

Pitt, David G, Lime, David W., Weidemann, Sue, Lewis, Michael S., Managing Au Sable Light Station for Visitor Use, 1994

Torrey, Jennifer Anderson, Use of Measurement Techniques and Management Standards to Define Acceptable Conditions in Backcountry Campsites at Pictured Rocks National Lakeshore, Michigan, 1996

Warzecha, Cynthia A., Anderson, Dorothy H., James, E.B., Thompson, Jerrilyn L., Visitor Use at Pictured Rocks National Lakeshore: Comparison of Snowmobilers and Cross-Country Skiers or Snowshoers, 2001

2001 VSP Visitor Study

The following summarizes a report for the Visitor Services Project conducted by the University of Idaho. The report describes the results of a visitor study at Pictured Rocks National Lakeshore during July 29- August 4, 2001. A total of 616 questionnaires were distributed to visitors. Visitors returned 505 questionnaires for a 82% response rate.

Thirty-six percent of visitor groups were groups of three to five. Sixty-seven percent of visitor groups were family groups. Forty-six percent of visitors were aged 31-55; 26% were aged 15 years or younger.

Eighty-five percent of visitor groups had visited only once in the past 12 months. Over one-half (54%) of visitor groups had visited one to four times in the past two to five years.

Three percent of visitors spent less than 24 hours at the park. Twenty-eight percent of visitor groups spent one or two days, and 11% spent three days at the park.

Previous visits (51%), friends and relatives (47%), and travel guides/tour books (41%) were the most used sources of information by visitor groups prior to visiting on this trip. Travel guides/tour books (40%), personal experience (32%), and the Michigan Travel Center (29%) were the most used sources of information by visitor groups during this visit.

Sixty-one percent of visitor groups visited Pictured Rocks NL as one of several destinations, 30% as their primary destination, and 9% had not planned on visiting.

The Miner's Area (59%), Munising Falls (47%), and the Visitor Information Center (42%) were the most visited sites by visitor groups. The least visited site was the Grand Marais Maritime Museum (12%).

The most common activities of visitor groups were sightseeing (78%), beach activities (67%), day hiking (66%) and enjoying solitude/quiet (65%).

In regard to the use, importance and quality of visitor services and facilities, it is important to note the number of visitor groups that responded to each question. The services that were most used by 432 respondents were the park brochure/map (74%) and the information desk service (57%). According to visitors, the most important services were park brochure/map (86% of 380 respondents) and the information desk service (81% of 239 respondents). The highest quality services were park personnel (91% of 133 respondents) and information desk service (89% of 223 respondents).

Seventy percent of visitor groups said that wildlife added to their park experience. Twenty-three percent of visitor groups said that personal watercraft detracted from their park experience.

The average visitor group expenditure was $294. The average per capita expenditure was $87. The median visitor group expenditure (50% of group spent more, 50% spent less) was $170. Forty-three percent of visitor groups spent between $1 and $150 and 27% spent $351 or more in total expenditures in Pictured Rocks NL and within 60 miles of the park. Of the total expenditures by groups, 30% was for lodging and 17% was for restaurants and bars.

Most visitor groups (95%) rated the overall quality of visitor services at Pictured Rocks NL as "very good" or "good." No visitor groups rated the overall quality of visitor services as "very poor."

VERP

In 1992 the National Park Service (NPS) began developing the Visitor Experience and Resource Protection (VERP) frame-work to address visitor use management and carrying capacity issues in the units of the national park system.

In 2004 Pictured Rocks National Lakeshore completed a General Management Plan for the park, but did not specifically use the VERP process. The plan outlined several different types of visitor use areas of the park, which would set the background for different types of visitor experiences. These "management prescriptions" assist staff members of the Division of Heritage Education in determining the best avenues of interpretation for the various park areas.

Some of the VERP tasks still to be completed include:

- Select indicators and specify standards for each zone; develop a monitoring plan
- Monitor resource and social indicators

There are no plans at this time to use additional VERP techniques for park planning.

Recommendations

Visitor Experience

Visions for Heritage Education

The division of Heritage Education has articulated six visions, from which visitor experience goals and action items have been drawn.

1. PIRO will become a premier regional and national destination, providing outstanding services and opportunities for all visitors to experience the Lakeshore in meaningful ways, regardless of background, interests, or ability.

2. PIRO will be recognized for innovation and effectiveness in environmental education for all age levels.

3. PIRO will develop a more thorough cultural history program including farming as one of the periods of emphasis.

4. PIRO will be recognized for leadership in climate change communications programming.

5. PIRO will expand stewardship of the Lakeshore by developing relationships with regional non-profits, other government agencies, universities, volunteers, and the local community.

6. Adequate facilities will support visitors' experience with important PIRO resources.

7. PIRO will maintain a rustic park atmosphere by thoughtful development of roads, campgrounds, trails, and other facilities in order to protect areas of solitude, and to minimize crowding.

Visitor Experience Goals

For each of the eight visions, visitor experience goals have been identified. These have been sorted into four categories of visitor experience: knowledge, attitude, behavior, and sensory experience.

PIRO will become a premier regional and national destination, providing outstanding service and opportunities for all visitors to experience the Lakeshore in meaningful ways, regardless of background, interests, or ability.

Knowledge: Visitors will have the opportunity to:
- Learn about the Lakeshore's universally-designed facilities and services
- Learn about the availability of shuttle services for backpackers and bicyclists

Attitude: Visitors will have the opportunity to:
- Form their own personal connections to the meanings and significance of Lakeshore resources and stories associated with those resources
- Have a feeling of achievement, both physical and mental
- Have a sense of exploration and discovery

Behavior: Visitors will have the opportunity to:
- Participate in a variety of exercise and healthy activities, including silent sports and authentic wilderness recreation
- Add to life lists
- Collect appropriate amounts of berries, fish, and game

Sensory Experience: Visitors will have the opportunity to:

- Hear natural sounds such as lakes, wind, trees, rivers, waterfalls, birds, insects, and mammals
- Smell different seasons and locations
- Touch water, rocks, sand, and trees

PIRO will be recognized for innovation and effectiveness in environmental education for all age levels.

Knowledge: Students will have the opportunity to:

- Learn about the science of resource management
- Understand the role of parks in protecting resources
- Learn about the natural history, processes, and trends in Lakeshore land and waterscapes
- Learn about ecological relationships
- Learn about how to participate in stewardship activities near their own homes
- Learn about climate change
- Recognize PIRO as a leader in sustainable energy practices

Attitude: Students will have the opportunity to:

- Feel empowered to reduce their own carbon footprints
- Imagine what the landscape must have looked like during the many past eras of Lakeshore development and evolution
- Feel a sense of kinship and ownership for Lakeshore resources

Behavior: Students will have the opportunity to:

- Participate in an outdoor education program
- Participate in a natural history interpretive program

A variety of landforms exist here because of past and present geologic processes. These include vast inland seas leading to sandstone bedrock, continental glaciation, post-glacial river erosion, and sand dune development due to changing Great Lake levels.

- Participate in youth programming
- Participate in training programs for interpreters and environmental educators
- Experience current monitoring and research activities
- Experience the variety of natural resources on their own through a variety of media

Sensory Experience: Students will have the opportunity to:

- Feel a broad range of sensory experiences through first-hand immersion in the Lakeshore landscape
- Hear natural sounds, including bird songs, various wind sounds, waterfalls, and silence
- Smell natural smells, including skunks, soil, and trailing arbutus
- Touch varieties of tree bark and snow textures
- See natural phenomena, including movement in trees, signs of animal activity, and flower activity such as the first hepaticas
- Notice colors

PIRO will develop a more thorough cultural history program.

Knowledge: Visitors will have the opportunity to:

- Learn about the significant tangible cultural resources at PIRO
- Learn about other people, times, and cultures
- Learn about the numerous human history eras in the Lakeshore and the influence of people on the land

Attitude: Visitors will have the opportunity to:

- Feel awe and wonder for the Lakeshore's cultural resources and history
- Feel what it must have been like to live in the region during the various historical periods, e.g. as a lumberjack, blast furnace worker, light keeper, U.S. Coast Guardsman

Behavior: Visitors will have the opportunity to:

- Tour historic structures and landscapes, including Au Sable lighthouse
- Have access to a virtual experience of historic structures and landscapes when not able to tour them
- See historic photos
- Walk a beach ridge where people lived 3,500 years ago
- Experience historic periods on their own through a variety of media
- View items in the Lakeshore collection
- Attend a living history or costumed interpretation program
- Be in close proximity to a Lake Superior rescue boat

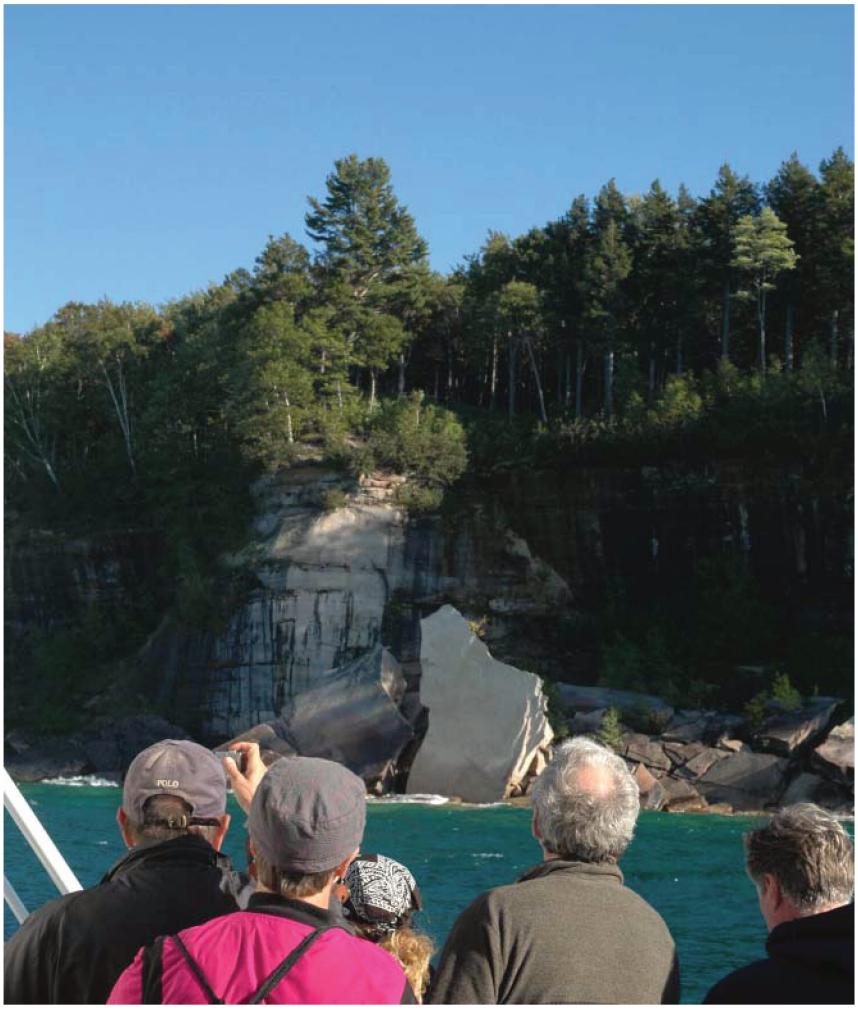
Sensory Experience: Visitors will have the opportunity to:

- Hear cultural sounds, including fog horn, Coast Guard horn, ax chopping, sounds related to a blast furnace, Native American drumming, and a Voyageur song
- Hear oral histories and other methods of people talking about history
- Smell historic aromas, including smells such as sawdust that reflect the logging industry, and smells such as smoke that illustrate a charcoal furnace
- Taste natural produce and products such as blueberries, real maple syrup, local fish and venison, pasties, and apple cider
- Touch cultural artifacts (possibly reproduction) such as flakes, slag, ropes, hides, furs, and logging artifacts
- Consider incorporating art elements into new facilities
- See historic buildings and boats
- See historic logging equipment
- Visit a period furnished historic building and ascend a lighthouse tower, and feel the wind

PIRO will be recognized for leadership in climate change communications programming.

Knowledge: Visitors will have the opportunity to:

- Understand appreciate and make emotional connections to the Lakeshore resources and visitor experiences that are being affected by climate change
- Understand, appreciate, and make emotional connections to the science of climate change
- Understand, appreciate, and make emotional connections to the power of individual actions relating to reduction of CO2 which is causing climate change
- Learn what the NPS is doing to decrease their carbon footprint



The Lakeshore is a link in a regional cooperative management ecosystem of recreation, education, information sharing, research, and land use planning.

Attitude: Visitors will have the opportunity to:

- Understand, appreciate, and make emotional connections to the power of individual actions relating to reduction of CO2 which is causing climate change
- Feel the urgency of responding the climate change issues

Behavior: Visitors will have the opportunity to:

- Participate in the "Do Your Part for Climate Friendly Parks" program
- Make individual lifestyle choices to reduce their carbon footprint
- Use bicycles and other alternate public transportation to see portions of the Lakeshore

Sensory: Visitors will have the opportunity to:

- Feel the changes in weather, see changes in landscape composition as climate change has greater effects on lakeshore resources

PIRO will expand stewardship of the Lakeshore by developing relationships with regional non-profits, other government agencies, universities, volunteers, and the local community.

Knowledge: Visitors will have the opportunity to:

- Learn about the Lakeshore and its mission
- Learn about volunteer opportunities

Attitude: Visitors will have the opportunity to:

- Feel excitement of Munising and Grand Marais as gateways to the Lakeshore
- Become an advocate for NPS resources and programs

Behavior: Visitors will have the opportunity to:
- Volunteer for the Lakeshore or other land management agency
- Contribute financially to the Lakeshore through purchases or donations
- Find lodging, food, and services in Munising and Grand Sable
- Participate in Lakeshore management decisions by voicing their opinions and ideas
- Experience a lighthouse lifestyle while volunteering at AuSable

Sensory Experience: Visitors will have the opportunity to:
- Experience tangible resources at off-site sessions

Adequate facilities will support visitors' experience with important PIRO resources.

Knowledge: Visitors will have the opportunity to:
- Learn about the range of opportunities available to them in the Lakeshore, including camping options
- Have access to information about trail conditions, distances, and difficulty
- Learn about safe practices and current safety issues
- Be informed of risks inherent in activities they choose
- Understand the reasons for Lakeshore restrictions, which they may perceive as going against their own interests (i.e. rock collecting, fires on beach, cutting firewood, dogs off leash)
- Understand where they are in the Lakeshore and how to find their way around
- Be advised of road widths and camping site space which may affect motor homes
- Understand the laws and regulations pertaining to personal and resource protection

Attitude: Visitors will have the opportunity to:
- Be willing to share the road with bicyclists and vehicles
- Find opportunities for serenity, spiritual renewal, and self-reflection
- Become a fan of the Lakeshore and its natural beauty
- Find their way around the Lakeshore without confusion
- Feel safe and secure while using the Lakeshore

Behavior: Visitors will have the opportunity to:
- Use wayside exhibits to focus their attention on significant Lakeshore features
- Purchase field guides, educational materials, and souvenirs
- Obtain maps
- View natural and scenic features from convenient vantage points
- Experience the Lakeshore by bicycle
- Immerse themselves in Lakeshore resources while having as little impact on the resources as possible
- Help reduce/eliminate invasive exotic species in the front and backcountry
- Drive safely between primary Lakeshore sites
- Have quality family time away from the distractions of modern life
- Use safe, clean, and adequate restrooms
- Share their experiences through social networks such as blogging and Facebook

Sensory Experience: Visitors will have the opportunity to:
- Find quiet time
- See and hear examples of alternative/green energy being used

PIRO will maintain a rustic park atmosphere by thoughtful development of roads, campgrounds, trails, and other facilities in order to protect areas of solitude, and to minimize crowding.

Knowledge: Visitors will have the opportunity to:

- Learn about the best places for wildlife watching, solitude, and other retreats

Attitude: Visitors will have the opportunity to:

- Feel a sense of solitude

Behavior: Visitors will have the opportunity to:

- Be in an un-crowded place
- Interact with knowledgeable NPS employees and volunteers

Sensory Experience: Visitors will have the opportunity to:

- Hear natural sounds including the squeak of sand, silence, ice cracking, wind, gurgling water, crashing waves, happy humans, etc.
- Smell campfires, pines, conifers, rain, bogs, flowers, fresh air, and food cooked on an open fire
- See natural features including real darkness, night sky, fog, thunderstorms, and aurora

The Abrahamson barn at the Grand Sable Visitor Center remains as a symbol of past farming activities in the Lakeshore.

Action Items for Visitor Experience Goals

Following is a complete list of action items that were generated at the December, 2009 Recommendations Workshop. In this section, action items are aligned with visitor experience goals. Sub-lists of action items organized by task (such as web tasks, funding requests, etc.) are found in the appendix.

PIRO will become a premier regional and national destination, providing outstanding service and opportunities for all visitors to experience the Lakeshore in meaningful ways, regardless of background, interests, or ability.

1. Add more detailed information on accessible Lakeshore opportunities onto the Web site
2. Work with private shuttle service to oversee and advertise services
3. Develop a life-list of PIRO experiences
4. Respect and promote wilderness and primitive zones as areas with minimal intrusion of staff, other visitors, and elements of modern comfort
5. Introduce the novice naturalist to the concept of life lists by creating a site bulletin, museum exhibit, and/or webpage as a starter kit
6. Create a checklist of PIRO sounds
7. Make a checklist of Lakeshore smells to be used as a self-guiding visitor activity
8. Make a checklist of PIRO textures to encourage visitors to use their sense of touch

PIRO will be recognized for innovation and effectiveness in environmental education for all age levels.

1. Have Resource Management staff present programs to staff and public
2. Seek funding to reinstate the Summer Science Program
3. Interpret resource management activities through articles in the Lakeshore newspaper
4. Develop resource management programs for adults
5. Strengthen science pages on Lakeshore Web site and Lakeshore newspaper
6. Seek funding to set up a real-time distance learning program
7. Seek funding to add an enclosed "fourth" quadrant to the contact station at Miner's Castle
8. Strategize ways to promote the science aspect of the NPS mission
9. Distribute Leave-No-Trace videos to community organizations
10. Create an interpretive product that highlights PIRO's efforts at sustainable practices, including locations throughout the Lakeshore
11. Produce twitter to announce new season plants and animals
12. Seek funding to recreate the museum exhibits at the Grand Sable Visitor Center
13. Learn about how to participate in stewardship activities near their own homes
14. Conduct public workshops to teach sustainable energy practices
15. Create an action plan to engage Inland Buffer Zone residents in good stewardship practices
16. Produce articles for the local (and national?) newspapers highlighting sustainable practices
17. Address climate change through Environmental Education programs and on Lakeshore Web site
18. Engage in Great Lakes Restoration Initiative partnership project
19. Create and distribute podcasts of Chris Case teaching sustainability methods
20. Conduct alternative energy demonstrations
21. Work with local hotels and public transportation to promote sustainable practices
22. Work to restore passenger rail service to Munising
23. Develop How-To sheets/Web pages for sustainable practices
24. Expand recycling opportunities for visitors
25. Show Leave-No-Trace video to backpackers
26. Create an interpretive product that deals with how visitors can have a sustainable visit
27. Work with Lakeshore management to obtain more division staff, in order to present more programs about sustainability to the public
28. Seek partnership opportunities that would allow more programs about sustainability to be given to the public
29. Seek funding for an adult residential camp in order to teach concepts and practices of sustainability
30. Make efforts to increase visitation from under-represented audiences in order to expand reach of sustainability messages
31. Explore Teacher-Ranger-Teacher program as a way to increase sustainability programming
32. Present joint training for cruise boat personnel, ALTRAN, and local businesses focusing on sustainability
33. Present joint training with partners and other agencies to promote sustainability concepts
34. Personally invite partners and others to attend sustainability training sessions
35. Have educators follow and assist Lakeshore researchers
36. Film and distribute Environmental Education training session for teachers

37. Encourage Lakeshore researchers to present participatory programs; film and distribute these
38. Seek funding to set up a real-time distance learning program
39. Develop a guided bird (call) program
40. Involve visitors in an annual spring bird count
41. Consider museum exhibit media that incorporate sound
42. Create a way to interpret natural quiet
43. Request materials from NPS Natural Sounds Program
44. Develop an ehike on Lakeshore Web site to incorporate natural sound
45. Research methods used by exhibit design companies to incorporate natural smells, such as pine sap, balsam needles, campfire smoke, and cedar oil into museum exhibits
46. Consider incorporating bark and other Lakeshore textures into new facilities
47. Seek funding to create a snow exhibit
48. Incorporate textures such as bark, sand, moss, and lichen into future exhibits
49. Seek funding for binoculars to be loaned to visitors

PIRO will develop a more thorough cultural history program.

1. Explore interpretation of historic farmstead-scapes
2. Consider an "Adopt-a-Site" program for youth volunteers
3. Seek funding to significantly expand the museum exhibits in the Sand Point boathouse
4. Consider design of wayside exhibits at the Grand Marais Coast Guard complex
5. Seek funding to create a logging exhibit
6. Seek funding to create a museum exhibit on Voyageurs
7. Contact Forest Service to learn about the travelling Native American exhibit
8. Create a wayside exhibit to interpret the history of PIRO's development as a Lakeshore
9. Create a wayside exhibit to interpret the presence and significance of the inland buffer zone
10. Create a wayside exhibit to interpret why trees are being cut in the national lakeshore
11. Review marketing of Shipwreck Museum and shipwreck cruises by private companies and Chamber of Commerce for compelling messages

Lakeshore staff are responsible for managing visitor safety, both on land and on Lake Superior through front and backcountry patrols.

12. Explore ways to capture drama and pathos in Lakeshore publications and cultural programs
13. Create a plan for visitor access to the Range Lights
14. Contact the Coast Guard regarding occasional public tours of the Range Lights
15. Seek funding to replace the blast furnace museum exhibit
16. Create a video of the Au Sable Lighthouse tour and make it available to visitors
17. Create Range Light museum exhibit
18. Seek funding to archive and catalog the Lakeshore's image library
19. Finish cataloging collections
20. Seek funding for producing and posting professional photographs of Lakeshore collections through the Museum Management Program
21. Seek funding for creating a living history character, event, or program
22. Seek funding to create auditory exhibit elements
23. Seek funding to purchase or create recording of Voyageur songs
24. Work with the Heritage Center and/or NMU to collect and make available recordings of oral history interviews
25. Research companies that create olfactory displays for possible inclusion in future museum exhibits
26. Explore hosting or representing the Lakeshore at a community blueberry pie (or other natural food) festival
27. Encourage the marketing of, and visitor partaking of, historic foods in gateway communities
28. Consider maple syrup demonstrations as part of a Native American event or exhibit
29. Seek funding to recreate the museum exhibits at Munising Falls to incorporate reproduction cultural items which people can handle
30. Work with management to include interpretive art elements into new structures such as benches, pavilions, walkways, etc.

PIRO will expand stewardship of the Lakeshore by developing relationships with regional non-profits, other government agencies, universities, volunteers, and the local community.

1. Seek funding to develop an info-mercial for hotels and other public places
2. Actively solicit volunteers for specific tasks
3. Work with Chambers of Commerce to participate in Lakeshore marketing
4. Develop opportunities for seasonals to volunteer for other agencies on their lieu days
5. Make donation boxes attractive and accessible
6. Encourage membership in cooperating associations
7. Have sensory experiences as teasers used during outreach and advertising
8. Continue to conduct community events at a local café

Adequate facilities will support visitors' experience with important PIRO resources.

1. Create a data sheet describing trail difficulty
2. Check trail signs for accuracy and adequacy
3. Create a map which illustrates cell phone hot spots within the Lakeshore
4. Develop tweets to disseminate safety information
5. Attach rip current and other safety information to campground permits
6. Strengthen the conveyance of pet regulations, and include reasons for the regulations
7. Encourage visitors to have back-up communication and wayfinding plans in addition to using their electronic devices
8. Work with LE and RM to incorporate interpretation into regulation messages

9. Contact Garmin to correct Lakeshore coordinates
10. Incorporate GPS coordinates onto Lakeshore Web site to assist visitors who find their way to and through the Lakeshore using GPS
11. Revise the topographical map used by backpackers to fill in the black spot
12. Seek funding for a Lakeshore-wide sign assessment
13. Make campsite width information available to visitors and Forest Service personnel
14. Get Lakeshore rules and regulations to renters of private pontoon boats, as well as other boaters
15. Consider including road-sharing messages on Lakeshore signs, Web site, or printed material
16. Encourage emotional connections in and with Lakeshore resources through well-crafted messages used in outreach, including Web site, published articles, and social media
17. Promote recognition of the Lakeshore's outstanding resources and values through development and use of such catch phrases as "Wild Beauty on the Lake Superior Shore."
18. Seek funding for production of a full-length Lakeshore film
19. Work with visitor input and Facility Management staff to ensure that signs are strategically located, adequate, and clear
20. Work with LE to ensure that emergency numbers are posted on Lakeshore bulletin boards
21. Develop a Lakeshore wayside exhibit plan to ensure professional development of a cohesive system of wayside exhibits
22. Communicate with Facility Management if any safety, accessibility, or wayfinding issues arise concerning the Lakeshore's walkways, stairs, and viewing platforms
23. Anticipate and meet the needs of bicyclists who will use the newly paved road, to include bicycle racks
24. Work with ALTRAN to promote bike services, in order to meet needs created by newly paved road
25. Invite public and local residents to participate in Great Lakes Restoration Initiative projects
26. Consider making road closure information and weather dangers available through twitter or other electronic means
27. Work with Facility Management to ensure that picnic area and camping facilities are conducive settings for family groups
28. Develop exhibits for bathroom doors
29. When Lakeshore management begins VERP, or another avenue for visitor surveys is found, make sure that visitors' perception of crowdedness and quiet time is measured
30. Make sure solar panel, electric vehicles, and other sustainable Lakeshore practices have accompanying interpretive panels

PIRO will maintain a rustic park atmosphere by thoughtful development of roads, campgrounds, trails, and other facilities in order to protect areas of solitude, and to minimize crowding.

1. Develop a site bulletin highlighting areas for viewing wildlife, sunrise and sunset, and vistas
2. As part of Lakeshore's VERP studies, include research on visitors' perception of solitude and set thresholds for use of trails, trailheads, and camping sites
3. Monitor visitor use changes with completion of paved road
4. Encourage quiet hours in Lakeshore campgrounds
5. Use uniformed employees as much as possible in high-visibility, high-visitation areas
6. Increase number of interpretive staff, and provide formal training for them

7. Seek to hire returning seasonals in order to increase level of staff expertise and efficiency
8. Explore the possibility of joint-agency seasonal housing quarters in order to provide adequate seasonal housing
9. Seek opportunities to staff visitor centers with VIPs in order to allow seasonals to rove
10. Present formal interpretive training to VIPs
11. Upgrade VIP uniform clothing standards to ensure that volunteer staff members are clearly recognizable
12. Develop a share-point site with other local agencies which includes sections on job openings as well as equipment and resources available for loan
13. Seek funding for evaluation of interpretive programs, based on NAI model
14. Consider making a checklist of Lakeshore sounds to be used as a self-guiding visitor activity
15. Make a checklist of Lakeshore smells to be used as a self-guiding visitor activity
16. Look into finding a way to interpret these elements of wildness, to increase visitors' notice and appreciation of them

Prioritization of Action Items

Following is a prioritization of action items as rated by participants in the December, 2009 Recommendations Workshop. Listed in this section are the most important tasks to be accomplished ASAP, during 2010, by 2015, and by 2020. A complete list of all action items is included in the appendix.

Most important tasks to be accomplished ASAP:

1. Develop a life-list of PIRO experiences
2. Expand recycling opportunities for visitors
3. Revise the topographical map used by backpackers to fill in the black spot
4. Revise the Lakeshore Map & Guide
5. Facilitate the climate change portion of the Great Lakes Restoration Initiative
6. Help the community facilitate Science Café programs
7. Present orientation and training to the Pictured Rocks Cruises under the new concession permit (pending)
8. Continue Section 106 Compliance and PEPC for projects involving cultural sites

The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths, to ramparts of Cambrian and Ordovician sandstones, and vistas of the largest, deepest, coldest and most pristine of the Great Lakes.

Most important tasks to be accomplished during 2010:

1. Have Resource Management staff present programs to staff and public
2. Present joint training with partners and other agencies to promote sustainability concepts
3. Address climate change through Environmental Education programs and on Lakeshore Web site
4. Present joint training for cruise boat personnel, ALTRAN, and local businesses focusing on sustainability
5. Present formal interpretive training to VIPs

Most important tasks to be accomplished by 2015:

1. Seek partnership opportunities that would allow more programs about sustainability to be given to the public
2. Increase number of interpretive staff, and provide formal training for them
3. Continue to seek opportunities to increase sustainable practices
4. Strengthen science pages on Lakeshore Web site and Lakeshore newspaper
5. Interpret resource management activities through articles in the Lakeshore newspaper
6. Create a plan for visitor access to Range Lights
7. Seek funding for an adult residential camp in order to teach concepts and practices about sustainability
8. Seek funding to reinstate summer science program

Most important tasks to be completed by 2020:

1. Explore the possibility of joint-agency seasonal housing quarters in order to provide adequate seasonal housing
2. Create Range Light museum exhibit
3. Seek funding for production of a full-length Lakeshore film
4. Seek funding to recreate the museum exhibits at Munising Falls to incorporate reproduction cultural items which people can handle
5. Seek funding to recreate the museum exhibits at the Grand Sable Visitor Center
6. Work with Lakeshore management to obtain more division staff, in order to present more programs about sustainability to the public
7. Consider incorporating art elements into new facilities
8. Work with local hotels and public transportation to promote sustainable practices
9. Seek funding to set up a real-time distance learning program
10. Seek opportunities to staff visitor centers with VIPs in order to allow seasonals to rove

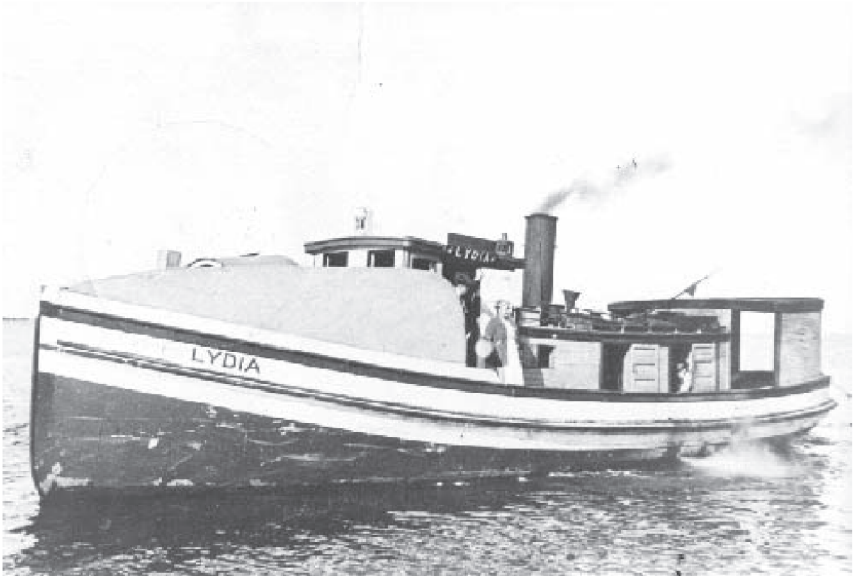
The Lakeshore is well known for spectacular sandstone cliffs, beautiful white sand beaches, numerous backcountry lakes, streams and waterfalls, a perched dune system over 300 feet tall, abundant wildlife, and over 100 miles of trails.

New Interpretive Media to be Produced

Visitors to Pictured Rocks National Lakeshore enjoy a wide range of interpretive media produced over the course of many years by a small but energetic and talented staff. The museum exhibits, wayside exhibits, publications, films, and other media – much of which was produced in-house using local resources – all do a good job of helping visitors understand, enjoy, and protect the lakeshore. With few exceptions the various media are well maintained and offer content that is thoughtful and relevant. However, the effectiveness of much of what is available would be even greater if its appearance was upgraded so that all the Lakeshore's interpretive media is as crisp, clear, and fresh as the air and water for which it is noted.

Wayside Exhibits

This plan recommends that the Lakeshore engage the Harpers Ferry Interpretive Design Center to conduct a Lakeshore-wide assessment of its wayside exhibit needs. The survey would review and assess all existing wayside exhibits, making recommendations for improvements, and would explore the need to install additional wayside exhibits. The resulting proposal would specify the location, type, subject, and purpose of each wayside exhibit recommended, and would provide a budget outlining the estimated cost of planning, designing, and fabricating the exhibits. A schedule for the work could also be included if the project was to be managed through the Center.



The fish tug Lydia once operated out of Grand Marais. She represents one of many ethnic groups who have made this place home.

Among other possibilities the wayside exhibit proposal would:

- Explore the advantages of installing upright wayside exhibits to convey informational (rather than interpretive) messages at trail heads and at visitor contact facilities, and determining whether to maintain, diminish, or eliminate the use of bulletin boards at these locations.
- Establish the best place(s) for wayside exhibits to tell the stories of the U.S. Life Saving Service and U.S. Coast Guard. The stories could be presented at multiple locations, including Sand Point, Coast Guard Point in Grand Marais, Munising Range Light, or Au Sable Light Station (assuming they were done in a way not to conflict with the historic landscape) or could be concentrated at one of these sites.

The overall appearance of Lakeshore outdoor exhibits seems dated and does not establish any Lakeshore design uniformity. This plan recommends that the Lakeshore in cooperation with Harpers Ferry Center or Region IV of NAI, conduct a Lakeshore-wide assessment of all wayside exhibit needs. The assessment would provide the Lakeshore with a written proposal outlining the number of exhibits required, the purposes for each exhibit, a schedule for completion of the exhibit work (if to be created by HFC), and a project budget detailing the estimated cost of the proposed project. This

unified approach to development of wayside exhibits using Harpers Ferry Center exhibit specialists and Lakeshore specialists representing all Lakeshore divisions and expertise assures exhibits that reflect sensitivity to themes and landscapes in language, text, design, and placement.

Wayside exhibits cannot meet all the Lakeshore interpretive needs but will contribute toward communication of Lakeshore themes in conjunction with other interpretive media and Lakeshore personal services. Three levels of wayside exhibits may be appropriate for Pictured Rocks National Lakeshore: orientation exhibits, trailhead exhibits, and site-specific interpretive exhibits. Wayside exhibits work best as a site-specific interpretive medium helping visitors make connections with the natural and cultural landscape. They should be graphically compelling and content rich, but succinctly written and avoiding any intrusion on the site.

Trailhead exhibits that introduce visitors to features within areas managed as wilderness will do so in general terms to conform to the philosophy of wilderness management, which encourages a sense of discovery. Wayside exhibit maps can make distinct the Lakeshore wilderness boundaries and text will convey the experiential expectations that should be recognized by visitors when entering lands with wilderness attributes.

- Continue rehab of old/worn/ inaccurate exhibits as funding permits.
- Consider design of wayside exhibits at the Grand Marais Coast Guard complex, telling the story of the U.S. Life Saving Service and U.S. Coast Guard at the end of Coast Guard Point.
- Consider design of a wayside exhibit at the Munising Range Light telling the history of that lighthouse.

All four Primary Interpretive Themes are currently addressed by the Lakeshore's many wayside exhibits:

- PIRO's diverse and dramatic landscapes are being continually transformed by changes, some occurring at glacial speed, others happening before our eyes.
- Vibrant communities of life have developed in the lands and waters of Pictured Rocks National Lakeshore, occupying diverse niches in the dramatic geologic story of the Great Lakes.
- Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world.
- The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes.

The following PMIS projects have already been created:

PMIS 86536 - Replace Aging Wayside and Museum Exhibits - Cyclic Replacement
This project will enable Lakeshore staff to replace aging or inaccurate wayside, visitor center, and museum exhibits on a regular basis through in-Lakeshore design and fabrication.

PMIS 51679 - MWZ- REPLACE EXHIBITS - Grand Sable Visitor Center
This project will fund the replacement of the most critically needed and most deteriorated exhibits at the Grand Sable Visitor center which receives approx. 20,000 visitors annually.

PMIS 51536 - MZM- REPLACE EXHIBITS - Munising Visitor Information Center
This project will consist of replacing the most aged and critically needed exhibits in the Munising Visitor Center.

PMIS 51469 - ZMZ - REPLACE EXHIBITS - Miners Castle
This project will consist of the replacement of existing exhibits at the Miners Castle area. This project will be accomplished by NPS staff in-house and local contract.

PMIS 8801 - Improve environmental monitoring, and upgrade storage and exhibits.
Funds will be used to purchase dataloggers and software, archival supplies to upgrade storage, and to remove objects from an outdoor maritime exhibit that have deteriorated beyond use.

Publications

This plan recommends that the trail guides, UniGrid brochure, and the Junior Ranger Booklet continue to be provided at no cost to Lakeshore visitors. The plan also recommends the following regarding other publications:

Site Bulletins: Although high in number and in the quality of their content, the fact that the Lakeshore's site bulletins were prepared over a period of years means that they do not have the consistency of appearance or editorial voice that they might have. This report recommends that the Lakeshore analyze the amount of use of the various bulletins, and then consider eliminating many titles. The Lakeshore might then engage a professional graphic design firm (with competent editing services) to redo the remaining site bulletins to enhance their look and improve their effectiveness. Redoing the bulletins would also ensure that they are rendered in current design software, and that they conform to NPS graphic design standards which have continued to evolve since many of the bulletins were initially produced. Although this could be done by the Lakeshore staff (who produced the bulletins initially) it would require a significant investment of time.

Lakeshore Newspaper: The multi-agency newspaper provides a cost effective way to provide certain kinds of information to visitors. Partnering with other agencies also helps to ensure that the information is coordinated and consistent, and that it highlights for visitors the similarities and differences in purpose and policy of the three agencies involved.

Narrative and graphics in the many Lakeshore publications addresses three Primary Interpretive themes:

- PIRO's diverse and dramatic landscapes are being continually transformed by changes, some occurring at glacial speed, others happening before our eyes.
- Vibrant communities of life have developed in the lands and waters of Pictured Rocks National Lakeshore, occupying diverse niches in the dramatic geologic story of the Great Lakes.
- Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world.

However, the two-dimensional, often black-and-white nature of publications makes it more difficult to convey the fourth theme:

- The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes.

Museum Exhibits

The Lakeshore's ability to significantly increase its reliance on indoor interpretive museum exhibits is limited by a lack of adequate facilities to accommodate them. Existing exhibit facilities are small, and there are no specific plans to enlarge them or to construct additional facilities. Moving headquarters operations from the Sand

Point Coast Guard Station, restoring the Munising Range Light Station, or rehabilitating the Grand Marais Coast Guard Station (all of which are being considered but lack funding) would offer additional space, but each of these sites is best suited to tell the story of life saving, which is only one of the Lakeshore's primary interpretive topics. This plan therefore recommends that the Lakeshore consider one or more of the following options:

- Follow the recommendation of the 2003 Operations Evaluation to reduce the number of staffed visitor centers and contact stations by converting some of the less-visited facilities to unstaffed exhibits.
- Engage the Harpers Ferry Interpretive Design Center (or another competent exhibit planning/design/and fabrication source) to completely redo the museum exhibits at the Munising Falls Interpretive Center, and at the Grand Sable Visitor Center. The museum exhibits in Munising would continue to focus on both cultural and natural history, but would expand coverage beyond the iron industry to other historic commercial activities in the area. New museum exhibits in Grand Marais would provide a more in depth look at the ecology of the dunes, and would add information about their creation. Having museum exhibits at these two locations that employ the latest media technologies and interpretive concepts is consistent with the Lakeshore's stated goal of concentrating its visitor facilities at each end of the lakeshore.
- Move forward with plans to add an enclosed "fourth" quadrant to the contact station at Miner's Castle, and that museum exhibits focusing on glacial geology be developed in the new space (along with a relocated sales area). Exhibit planners should consider using freestanding, three-dimensional models of glacial processes and the landforms that those processes produce. Such models would: 1. Allow walls to be dedicated to sales or lake viewing; 2. Complement the two-dimensional wayside exhibits present on the trail along the overlook; 3. Provide a way to allow visitors with limited vision to understand (through touch) the site's primary natural feature.
- Seek funding to significantly expand the limited exhibits in the boathouse at Sand Point (using either in-house, HFC, or commercial exhibit expertise) so that the boat on display can be better used to explain the history of the U.S. Coast Guard and the profound commitment and bravery of those who lived and worked at this place. The fact that the boathouse is not staffed and is exposed in a lakeside environment will require that great care be used in designing and constructing the exhibits.

54% of visitor groups prefer to learn about cultural and natural history through visitor center exhibits (2001 Visitor Study).

Web Site

The Superintendent's Secretary is the Lakeshore's webmaster. The Lakeshore's Web site is very well maintained, providing a variety of timely and useful information to its users. In order to transform the Web site to include not only information, but interpretation, the Division of Heritage Education should become more involved in maintenance of the Web site. In addition, the site could be expanded to include more information on natural resources and the education curriculum.

Web sites are frequently the main source of information for visitors. Web site content should reflect the desired visitor experience. The Pictured Rocks National Lakeshore experience is much more than just hiking, camping, rock climbing, and sightseeing. Nationally significant with its unspoiled shoreline, multicolored sandstone cliffs, fascinating waterfalls, and intriguing plant, animal, and bird species… these are just some of PIRO's other features that could be explored and addressed using web-based interpretation. There is no doubt that PIRO Park Rangers have unique experiences and stories that have yet to be shared with visitors. Web-based interpretation provides a vehicle for accomplishing this, as well.

Using a previously developed and implemented NPS web site model – the Acadia National Park eCruise -- the Picture Rocks experience could be effectively communicated in a "virtual" manner. (http://www.nps.gov/acad/photosmultimedia/virtualtour.htm) In reviewing the Acadia National Park eCruise online features, it was clear that workshop participants felt that the template and style of the eCruise or eHike would be a natural fit for PIRO. This type of virtual tour can be customized. The visitor selects and activates audio and video clips, photographs, information panels, panoramic images, and Park Ranger talks. Easy to use Quick Facts and Start Over buttons make the experience a simple and pleasurable one.
A virtual tour of Pictured Rocks National Lakeshore would allow visitors to share in some of the magic of the site in a way that may not be possible on a simple day trip. The visitor would have a chance to experience PIRO at different times of day, at different seasons, and to see and hear things that may not always be evident on any given actual visit. The virtual tour provides an experience for the "visitor in absentia", as well as solutions for disabled persons who may not otherwise have the pleasure of experiencing Pictured Rocks National Lakeshore in person. 36% of visitor groups prefer to learn about cultural and natural history through the internet and Web sites (2001 Visitor Study).

The numerous pages of the Web site make it possible for all four Primary Interpretive Themes to be addressed:

- PIRO's diverse and dramatic landscapes are being continually transformed by changes, some occurring at glacial speed, others happening before our eyes.
- Vibrant communities of life have developed in the lands and waters of Pictured Rocks National Lakeshore, occupying diverse niches in the dramatic geologic story of the Great Lakes.
- Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world.
- The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes.

Film and Video

This plan recommends that the Lakeshore consider acquiring funds to produce a full-length audiovisual presentation on the Lakeshore. The film can be used for schools, pre-visit, podcast, and Web site. Also, it could be shown on cruise boats, boat ticket centers, or in hotel lobbies. All four primary interpretive themes could be addressed by the film, but the visual and auditory strengths of the medium might best communicate the topic of magnificence.

Until such a full-length film is produced, the current multi-agency orientation video can be viewed at the Visitor Information Center in Munising. The portion dedicated to the Lakeshore might be shown also

on kiosks at other locations in the Lakeshore (e.g. Munising Falls, Grand Sable, and an expanded Miner's Castle interpretive facility) or at hotels and other appropriate commercial sites in the area.

Although all four Primary Interpretive Themes may be addressed by film and video, the medium may best convey the magnificence of the resource, as stated in the fourth theme "The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes."

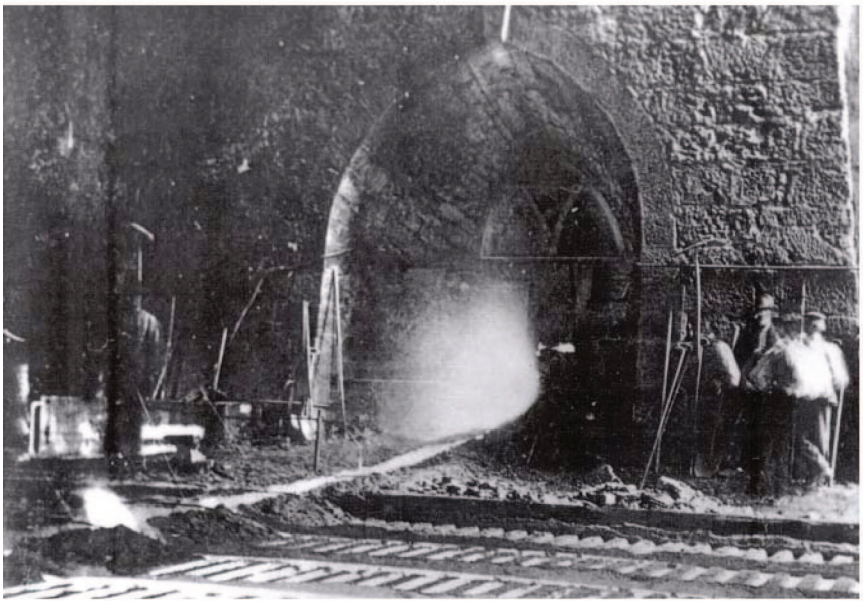
Historic Furnishings

Historically accurate refurnished rooms offer the public a unique interpretive experience by placing visitors within historic spaces. Surrounded by historic artifacts visitors can feel the spaces "come alive" and relate more directly to the historic events or personalities commemorated by the Lakeshore. Historic furnishings can help give the public as rich an interpretive experience as possible given the nature of the structure.

The Au Sable Light Station will be fully furnished on the first floor of the Assistant Keeper's Quarters. The lens room and watch room in the tower will be refurnished according to materials that would have been present during this period of operation. The period reflected by this refurnishing will be approximately 1910 when John A. Brooks was the Second Assistant Keeper. It may be anticipated that a lack of climate control in the structure might lead to damage to historic furnishings placed there. In addition, the Lakeshore would need to develop a security system to safeguard those historic furnishings, keeping in mind they are in a historic structure in a remote location.

If Lakeshore administrative offices are moved from Sand Point, the former U.S. Coast Guard station will be refurnished (1940s era) on the first floor, with the second floor as seasonal staff housing. The grounds would be restored to the 1940s era.

The Primary Interpretive Theme most likely to be addressed by historic furnishings would be "Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world".

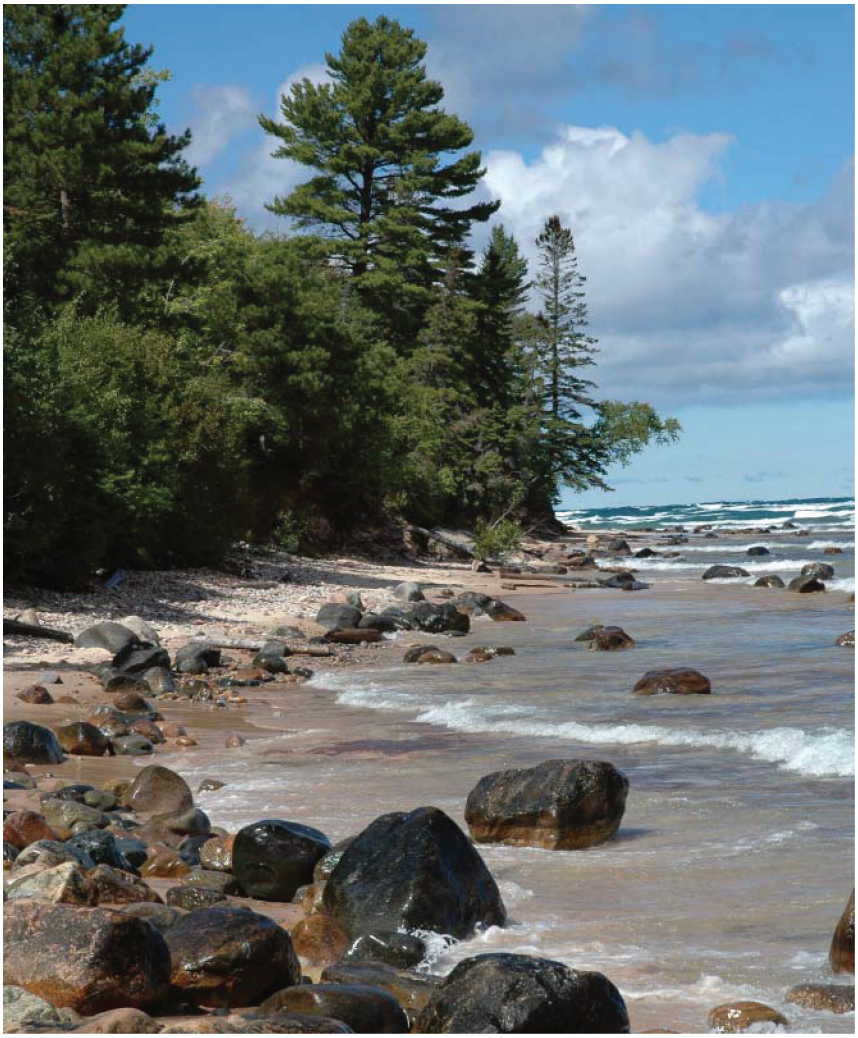


Casting room of the Schoolcraft blast furnace. These furnaces caused abundant forest resources to be used through the manufacture of charcoal, one primary ingredient in the pig iron process.

New Media

PIRO should look at and regularly reevaluate new media possibilities for reaching their various audiences and visitors. "New media" clearly is acknowledged as a rapidly evolving branch of Interpretive Planning and choosing appropriate media requires careful consideration of present and future technologies. The preparation for and implementation of new media also requires evaluation and reevaluation of available resources and staffing.

The merging of individual stand-alone technologies will influence future decisions about which media to use for defining and/or enhancing visitor experiences at PIRO. Wireless telephone technology advances (such as Smartphones) may soon eliminate the need for a separate GPS enabled device or a separate MP3 player for listening to podcasts.



The shoreline offers extraordinary and inspirational scenic vistas of Lake Superior, the largest body of fresh water on earth.

Preserving the tranquility and the natural land/waterscape of Pictured Rocks National Lakeshore, by maintaining a disturbance-free environment should remain high on PIRO's priority list.
Hand-held media devices and social media are prevalent in the visitors' lives.

Cell phone audio interpretation works very effectively in an environment that begs interpretation, but also requires an approach respectful of the site's sanctity. Non-intrusive cell phone audio interpretation signs can allow the visitor to guide oneself and determine the level of interpretation desired on any one trip to the Lakeshore.

Cell phone audio interpretation has great potential for PIRO. As coverage networks expand and 4th generation (4G) broadband infrastructure is introduced in the United States over the next several years, wireless access technology should move closer to being truly "Anytime, Anywhere". This bodes well for cell phone audio interpretation, a media type that can be implemented and installed at a relatively low cost with minimal monthly costs. Telephone numbers and cell phone tour maps can be posted and distributed at logical visitor gathering places and key interpretive crossroads at the site.

Currently, there are limitations to cell phone coverage throughout the site. Planned future cell phone coverage enhancements by local providers should be earmarked for further research and investigation.

Global Position System technology has a wide array of uses in our everyday lives (cartography, forestry, etc.) GPS Ranger can serve as an instrument for self-guided multimedia tours, as well as a device for adventure game experiences. Both of these uses have potential application at PIRO. The location-triggered nature of GPS Ranger makes it especially useful as a source of both general and detailed information about PIRO and its features.

Earth Caches use GPS technology within the Lakeshore. Earth caches differ from geo caches in that earth caches remain virtual with little impact on Lakeshore resources. The Lakeshore would have an opportunity to add Lakeshore information and interpretation to the earth cache guide to locations within the Lakeshore.

Social Media currently includes twitter, MySpace, Facebook, and texting. Currently, Lakeshore members contribute to a non-Lakeshore Facebook site at (http://www.facebook.com). Social networking systems must be monitored, harnessed and put to use for the good of the PIRO site. Being actively involved in this process only stands to benefit the site.

Flickr, YOUTUBE, and other popular web sites demand that we are vigilant in creating the online experience *we* want for our visitors. National Park Service sites usually do find their place on Flickr and YouTube, whether we like the message or not. Controlling the message as much as possible is a good idea. Harnessing the power of these audience-building (also communication and networking) tools will require allocation of already scarce resources, but using these online tools to control and define our online presence is necessary.

Any of the four Primary Interpretive Themes may be addressed through New Media:

- PIRO's diverse and dramatic landscapes are being continually transformed by changes, some occurring at glacial speed, others happening before our eyes.
- Vibrant communities of life have developed in the lands and waters of Pictured Rocks National Lakeshore, occupying diverse niches in the dramatic geologic story of the Great Lakes.
- Pictured Rocks National Lakeshore continues a tradition of providing safe harbor for life, in a sometimes perilous world.
- The Lakeshore offers a range of breathtaking settings, from magically intimate forest paths to spectacular vistas of the largest, deepest, coldest, and most pristine of the Great Lakes.

Other Lakeshore Signs

This plan recommends that the Lakeshore acquire (through the NPS Center for Media Services or from other competent environmental graphic design sources) a Lakeshore-wide sign assessment. A sign assessment would survey all signs currently in place, documenting their location, and evaluating their physical condition and effectiveness. The assessment would also make general recommendations for new signs, and provide an estimate for planning, designing, and fabricating them and upgrading existing ones. With an approved assessment, the Lakeshore can acquire the funding needed to prepare a sign plan, which would provide the comprehensive and detailed specifications necessary to acquire and install each of the signs identified by the assessment.

Needs

Staffing Needs

As numbers of seasonal NPS employees are somewhat fixed each fiscal year through the available budget, the Lakeshore will seek ways to use volunteers in situations where staffing is not available via ONPS funds. It is recommended that the Lakeshore participate in the NPS Registered Park Coach Program to enhance their capacity to provide training and coaching for both seasonal staff and volunteers.

Examples of volunteer duties:

- Additional assistance for Lakeshore staff at visitor centers
- Facilitation of aspects of the VIP program
- Backcountry patrol and education
- Interpretive programs
- Assistance with the National Parks of Lake Superior Foundation

The Lakeshore should prepare PMIS project statements to propose uses for special volunteer funds available from the Washington Office and the Midwest Regional Office.

The following PMIS projects have already been created:

PMIS 72095 Sustain Lakeshore Volunteer in Parks Program
VIP funds are required to support the ongoing Lakeshore volunteer program. Volunteers currently perform basic duties assisting uniformed personnel in visitor center, campground host, trail maintenance, facility maintenance, resource management inventory and monitoring, maritime museum and interpretive center staffing, and a host of other front-line public contact duties.

PMIS 63650 Sustain Lakeshore Volunteer in Parks Program
VIP funds are required to support the ongoing Lakeshore volunteer program. Volunteers currently perform basic duties assisting uniformed personnel in visitor center, campground host, trail maintenance, resource management inventory and monitoring, maritime museum and interpretive center staffing, and a host of other front-line public contact duties. In the past they have helped support Geologist in Park, Artist in Residence and Composer in Residence programs.

Pictured Rocks National Lakeshore affords public access to a spectacular and diverse segment of the Lake Superior shoreline.

Partnership Needs

The Lakeshore is currently engaged in several partnership opportunities, yet others should be explored.

- A residential "science education center" within the Inland Buffer Zone to include a Leeds certified full service facility to teach northern hardwood forest ecological concepts and a host of other topics to all ages of students. The center would be equipped with labs, dormitories, food service, and related facilities for 30-35 people at a time.
- The Pictured Rocks Cruises have been very supportive of having a Lakeshore interpreter on board for the past few summers. This program should be reviewed for expansion and possible funding through the Cruises.

Research Needs

Evaluation of the Lakeshore's services and facilities will continue each summer through the Cooperative Park Studies Unit (CPSU) at the University of Idaho. The Visitor Survey Card program will be administered by Lakeshore staff in July.

The last Visitor Services Project visitor survey took place at the Lakeshore in 2001. The variety and level of Lakeshore uses has changed since then, and more changes are expected with the coming completion of paving the highway that links the ends of the Lakeshore. The Lakeshore should consider having a new visitor survey conducted, in order to assess current visitor use trends.

More detailed historical information is required to expand the Lakeshore's cultural history program. Specific studies on the various historic eras are needed by qualified researchers.

More detailed natural history information is required to expand the Lakeshore's natural history program. As research is conducted in the Lakeshore, lay summaries of the findings should be published and made available to the staff and public.

In addition, these natural-resource based PMIS projects have been entered:

- 92759 Test Population Sampling Design for Selected Aquatic invertebrates at Pictured Rocks NL
- 67003 Conduct Baseline Inventory of Forest Wildlife
- 52521 Initiate Forest Baseline Inventory
- 52534 Initiate Integrated Aquatics Monitoring Program

Copper knife ca. 3200 years old, found in Munising. The earliest known habitation of the area was approximately 4,000 years before present. These early people were hunter-gatherers and existed in relatively small numbers.

Appendices

Appendix A: Planning Team

In September of 2009, an Interpretive Planner and a Media Specialist from Harpers Ferry Center participated in a two-day scoping trip of Pictured Rocks National Lakeshore. In December 2009, the Interpretive Planner facilitated a two-day workshop at the Lakeshore, with input from a second media specialist. During the workshop, Lakeshore staff and about 25 Lakeshore stakeholders discussed their 7 to 10-year vision for PIRO that is summarized in this Long-Range Interpretive Plan (LRIP). Through meetings, phone calls, workshop sessions, and document review, the participants who helped forge this LRIP are:

Pictured Rocks National Lakeshore
Jim Northrup, Superintendent
Gregg Bruff, Chief of Heritage Education
Brody Block, Recent NPS Seasonal Employee
Bruce Leutscher, Biologist
Catherine Kimar, Recent NPS Seasonal Intern
Chris Case, Facility Manager
Dave Dimond , Administration
David Kronk, Park Ranger (Education)
Lora Loope, Biologist
Mary Jo Cook , Budget Technician
Pam Baker, Park Ranger
Patty Hughes, Recent Seasonal Employee, Educator
Tim Colyer, Chief of Visitor and Resource Protection

Harpers Ferry Interpretive Design Center
Peggy Scherbaum, Interpretive Planner (Team Captain)
Phil Musselwhite, Media Specialist

Midwest Regional Office
Tom Richter, Chief of Interpretation and Education, Midwest Region

Lakeshore Partners and Consultants
Autumn Jauck , Hiawatha National Forest
Brenda Kelley , Explore Munising
Cathy Nagle-Ervin, Eastern National
Craig Rademacher, Professor, Northern Michigan University
Deb Fulcher, Alger County Parks and Recreation
Janel Crooks, Recreation Planner, Hiawatha National Forest
John Madigan , Pictured Rocks Boat Cruises
Karen Bacula, Marquette Educator and Former NPS Employee
Kathleen Harter, Chief of Interpretation, Kewenaw National Historical Park
Mary Snitgen, Hiawatha Interpretive Association
Natasha Koss, Superior Watershed Partnership
Rochelle Cotey, ALTRAN Transportation Service
Ron Sundell, Watershed Partnership, Northern Michigan University Environmental Science Program
Ted Gostomski, Great Lakes Inventory and Monitoring Network
Vid Mednis, Interpretive Solutions

Appendix B: Staffing

The following list articulates the target permanent and seasonal staffing needs at Pictured Rocks National Lakeshore. An OFS request will be submitted to the Midwest Regional Office to document these needs.

Target Permanent Staffing

GS-12 Park Ranger - Chief of Heritage Education*

GS-09 Park Ranger – Education Outreach*

GS-09 Park Ranger – General Interpretation

GS-09 Park Ranger – Interagency Visitor Center / Fee Collection Supervisor*

Target Seasonal Staffing

GS-05 Park Ranger – Interpretation - Au Sable Light Station Interpreter*

GS-05 Park Ranger – Interpretation - Pictured Rocks Boat Cruise*

GS-07 Park Ranger – Seasonal Interpretive Programming (East end)

GS-07 Park Ranger – Seasonal Interpretive Programming (West end)

GS-05 Park Ranger – Junior Ranger Summer Day Camp Assistant

GS-05 Park Ranger – Seasonal Museum Collection Technician

****denotes existing position in 2010***

Appendix C: Special Populations Guidance

Harpers Ferry Center has recently revised the Programmatic Accessibility Guidelines for NPS Interpretive Media. It clarifies how to provide programmatic access to people with disabilities and those from special populations. The document is written for media specialists, interpreters, Park Rangers, superintendents, and other National Park Service employees and contractors who approve or develop interpretive media and programs. It provides guidance regarding personal services programs, audiovisual programs, audio tours, museum exhibits, publications, and web-based media. Topics include:

- New chapters on the laws, regulations, and policies that govern accessibility interpretive media
- Highlights of the new Americans with Disabilities Act and Architectural
- Barriers Act Accessibility Guidelines (ABAAS), which takes the place of the Uniform Federal Accessibility Standards (UFAS)
- Useful links to laws and best practices in accessible media
- Park and Harpers Ferry Center accountability for accessible media
- The latest pictographs and links for pictograph downloads
- How to plan and scope for accessibility
- Accessibility for web-based media
- Updates on new technology
- How to prepare a report or document so that computers can read the text content aloud
- How parks can get the word out about their accessible sites and programs
- Lots of diagrams to help NPS employees and contractors understand the specifications

Successful programmatic accessibility begins with comprehensive parkwide interpretive planning so that all media and personal services can work together. Where one may not be accessible to all persons, other services can fill the gaps. Early recognition of, and sensitivity to, accessibility issues will result in the most successful visitor experience.

The new guidelines are available now in PDF format at www.nps.gov/hfc.

Appendix D: Locations, Media Types, and Topics

The following chart identifies the locations, media types, and topics of Lakeshore media and interpretive services as of 2010.

Location	Media Type	Topic
Sand Point Headquarters	Wayside Exhibit	Pictured Rocks View
		US Coast Guard
	Publication	Munising USCG Lifeboat Station
	*Education Program	
	*Interpretive Program	
Sand Point Beach	Wayside Exhibit	Climate Change
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Sand Point Marsh Trail	Wayside Exhibit	A Clearing in the Marsh, etc.
	Publication	Large Print Marsh Trail Guide
	Education Program	Winter School Programs
	*Interpretive Program	
	*Bulletin Board	
Munising Falls	Wayside Exhibit	Old Munising
		Schoolcraft Blast Furnace
	Publication	Munising Falls Day Hikes
		Schoolcraft Blast Furnace
	Education Program	Junior Rangers After School
	Museum Exhibit	Blast Furnace
		Logging
		Endangered Species
		Sandstone Cliffs
	*Interpretive Program	
	*Bulletin Board	
Interagency Visitor Center	Wayside Exhibit	Wildflower Garden
	*Bulletin Board	
Munising Ski Trail	Wayside Exhibit	Bear Sign
		Becker Farm
		Close to the Edge
		Enchanted Forest
		Log Landing
		Munising Ski Trail
		Trail Orientation
		Sand Point Overlook
		Winter Birds
		Winter Tracks
		Wood Paths
	Publication	Trail Guide
	*Bulletin Board	

* Topic Name Not Provided

Miners Castle	Wayside Exhibit	Miners Castle Orientation
		Different Perspectives
		Grand Island View
		Where are the Pictured Rocks?
		Lake Superior Geology
		Layered Past
		Crumbling Time
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Miners Castle Information Station	Museum Exhibit	Twinning
		Bedrock
		Lake Superior Geology
	*Bulletin Board	
Miners Beach	Wayside Exhibit	Climate Change
		Miners Beach Orientation
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Miners Falls	Publication	Miners Falls Trail Guide
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Legion Lake	*Education Program	
	*Interpretive Program	
Little Beaver Lake Campground	Wayside Exhibit	Little Beaver Orientation
	Publication	White Pine Trail
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Chapel Trailhead	Wayside Exhibit	Chapel Orientation
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Kingston Plains Campground	Wayside Exhibit	Kingston Lake Campground Orientation
	Interpretive Program	Summer Interpretive Program
Twelvemile Beach Campground	Wayside Exhibit	White Birch Trail
		White Birches
	Publication	White Birch Trail Guide
	Education Program	Summer Interpretive Program
	*Interpretive Program	
	*Bulletin Board	
Hurricane River Campground	Wayside Exhibit	Hurricane River Orientation
	Interpretive Program	Summer Interpretive Program
Au Sable Light Station	Wayside Exhibit	Au Sable Orientation, Shipwrecks (on trail)
	Publication	Au Sable Booklet
	Education Program	4th Grade School
	Interpretive Program	Summer Interpretive Program

* Topic Name Not Provided

Log Slide	Wayside Exhibit	Cabin in the Clearing
		The Changing Forest
		Tools of the Trade
		What's Happening Here?
		Log Slide Overlook
		Where's the Log Slide?
		Maritime Connection
		Grand Sable Banks and Dunes
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Grand Marais Ski Trail	*Bulletin Board	
Grand Sable Visitor Center	*Bulletin Board	
	*Museum Exhibit	
Grand Sable Lake	Wayside Exhibit	Dunes Processes
	Publication	Grand Sable Dunes Research Natural Area
	*Bulletin Board	
Grand Sable Dunes	*Wayside Exhibit	
	*Publication	
Sable Falls	Museum Exhibit	Sand Dune Ecology
	*Education Program	
	*Interpretive Program	
	*Bulletin Board	
Grand Marais USCG and Harbor of Refuge	Publication	Grand Marais USCG and Harbor of Refuge

* Topic Name Not Provided

Appendix E: Prioritization of Action Items (Complete List)

Following is a complete list of the prioritized action items as rated by participants in the December, 2009 Recommendations Workshop. It is understood that current staffing levels will not permit the accomplishment of all the items listed, but they are provided here for reference.

Most important tasks to be accomplished ASAP:

1. Expand recycling opportunities for visitors
2. Facilitate the climate change portion of the Great Lakes Restoration Initiative
3. Help the community facilitate Science Café programs
4. Present orientation and training to the Pictured Rocks Cruises under the new concession permit (pending)
5. Continue Section 106 Compliance and PEPC for projects involving cultural sites

Most important tasks to be accomplished during 2010:

1. Have Resource Management staff present programs to staff and public
2. Present joint training with partners and other agencies to promote sustainability concepts
3. Address climate change through Environmental Education programs and on park Web site
4. Present joint training for cruise boat personnel, ALTRAN, and local businesses focusing on sustainability
5. Present formal interpretive training to VIPs

Other tasks to be accomplished during 2010:

1. Seek funding for creating a living history character, event, or program
2. Encourage visitors to have back-up communication and wayfinding plans in addition to using their electronic devices
3. Anticipate and meet the needs of bicyclists who will use the newly paved road
4. Continue to formally recognize Au Sable and other volunteers
5. Upgrade VIP uniform clothing standards to ensure that volunteer staff members are clearly recognizable
6. Continue to monitor and consider participation in the social networks used by visitors and potential visitors
7. Seek to hire returning seasonals in order to increase level of staff expertise and efficiency
8. Get rules and regulations to renters of private pontoon boats, as well as other boaters
9. Explore Teacher-Ranger-Teacher program as a way to increase sustainability programming
10. Continue to staff five visitor centers during the summer
11. Attach rip current and other safety information to campground permits
12. Actively solicit volunteers for specific tasks
13. Make campsite width information available to visitors and Forest Service personnel

Most important tasks to be accomplished by 2015:

1. Seek partnership opportunities that would allow more programs about sustainability to be given to the public
2. Look into staffing a division secretary
3. Increase number of interpretive staff, and provide formal training for them
4. Continue to seek opportunities to increase sustainable practices
5. Strengthen science pages on Lakeshore Web site and Lakeshore newspaper
6. Interpret resource management activities through articles in the Lakeshore newspaper
7. Seek funding for an adult residential camp in order to teach concepts and practices about sustainability
8. Seek funding to reinstate summer science program

Other important tasks to be completed by 2015:

1. Have educators follow and assist Lakeshore researchers
2. Continue to encourage local tribes to build an outdoor exhibit area in the Lakeshore
3. Seek funding to archive and catalog the Lakeshore's image library
4. Develop a share-point site with other local agencies which includes sections on job openings as well as equipment and resources available for loan
5. Make sure solar panel, electric vehicles, and other sustainable Lakeshore practices have accompanying interpretive panels
6. Show Leave-No-Trace video to backpackers
7. Check trail signs for accuracy and adequacy
8. Create an action plan to engage Inland Buffer Zone residents in good stewardship practices
9. Engage in Great Lakes Restoration Initiative partnership project
10. Continue to refurnish the first floor of the Au Sable Light Station assistant keeper's quarters

Most important tasks to be completed by 2020:

1. Explore the possibility of joint-agency seasonal housing quarters in order to provide adequate seasonal housing
2. Create Range Light exhibit
3. Seek funding for production of a full-length Lakeshore film
4. Seek funding to recreate the museum exhibits at Munising Falls to incorporate reproduction cultural items which people can handle
5. Seek funding to recreate the museum exhibits at the Grand Sable Visitor Center
6. Work with Lakeshore management to obtain more division staff, in order to present more programs about sustainability to the public
7. Consider incorporating art elements into new facilities
8. Work with local hotels and public transportation to promote sustainable practices
9. Seek funding to set up a real-time distance learning program
10. Seek opportunities to staff visitor centers with VIPs in order to allow seasonals to rove

Other tasks to be completed by 2020:

1. Seek funding to replace the blast furnace museum exhibit
2. Develop tweets to disseminate safety information
3. Continue to present material on ecological relationships through interpretive and education programs and trail guides
4. Personally invite partners and others to attend sustainability training sessions
5. Encourage visitors to use all senses in ranger-led programs
6. Make efforts to increase visitation from under-represented audiences in order to expand reach of sustainability messages
7. Explore interpretation of historic farmstead-scapes
8. Contact Garmin to correct Lakeshore coordinates
9. Strengthen the conveyance of pet regulations, and include reasons for the regulations

Appendix F: Additional Tasks Listed by Work Areas

The Recommendations Workshop held in December, 2009, generated a vast list of potential tasks related to visitor experience goals. While it is understood that current staffing levels do not permit the accomplishment of all these tasks, they are listed here for reference.

Additional tasks related to research:

1. Monitor/assess visitor use perception and other changes with completion of paved road

Additional tasks related to outreach and the development of messaging:

1. Create a way to interpret natural quiet
2. Respect and promote wilderness and primitive zones as areas with minimal intrusion of staff, other visitors, and elements of modern comfort
3. Look into finding a way to interpret elements of wildness, to increase visitors' notice and appreciation of them.
4. Create a wayside to interpret the history of PIRO's development as a park
5. Strategize ways to promote the science aspect of the NPS mission
6. Explore ways to capture drama and pathos in Lakeshore publications and cultural programs
7. Consider including road-sharing messages on Lakeshore signs, website, or printed material
8. Encourage emotional connections in and with Lakeshore resources through well-crafted messages used in outreach, including website, published articles, and social media
9. Promote recognition of the Lakeshore's outstanding resources and values through development and use of such catch phrases as "Wild Beauty on the Lake Superior Shore."
10. Have sensory experiences as teasers used during outreach and advertising

Additional tasks related to sustainability:

1. Conduct public workshops to teach sustainable energy practices
2. Produce articles for the local (and national?) newspapers highlighting sustainable practices
3. Develop How-To sheets/ Web pages for sustainable practices
4. Create an interpretive product that deals with how visitors can have a sustainable visit
5. Create an interpretive product that highlights PIRO's efforts at sustainable practices, including locations throughout the Lakeshore

Additional tasks related to environmental education:

1. Film and distribute Environmental Education training session for teachers
2. Encourage Lakeshore researchers to present participatory programs; film and distribute these
3. Develop resource management programs for adults
4. Continue to present Leave-No-Trace materials at Scout workshops and in Lakeshore mailings
5. Continue to include "Five Steps of How to Be Green" in Environmental Education programs
6. Continue Environmental Education programs at Alger County schools
7. Conduct alternative energy demonstrations

Additional tasks related to providing opportunities for visitor activities in the Lakeshore:

1. Continue providing access to Au Sable
2. Involve knowledgeable visitors in an annual spring bird count (Breeding Bird Survey)
3. Continue the hundred-mile challenge
4. Use uniformed employees as much as possible in high-visibility, high-visitation areas
5. Continue to include observation elements in guided programs, such as the activity of matching paint chips with something along the trail
6. Continue Junior Ranger program with local schools and summer visitors
7. Develop a guided bird (call) program
8. Encourage availability of binoculars to be loaned to visitors on Pictured Rocks Cruises
9. Seek funding for evaluation of interpretive programs, based on NAI model in appendix

Additional tasks related to museum exhibits:

1. Request materials from NPS Natural Sounds Program
2. Seek funding to significantly expand the museum exhibits in the Sand Point boathouse
3. Seek funding for a museum exhibit to interpret the blast furnace
4. Seek funding to create a snow exhibit
5. Develop exhibits for bathroom doors
6. Seek funding to create an museum exhibit on Voyageurs
7. Seek funding to add an enclosed "fourth" quadrant to the contact station at Miners's Castle
8. Seek funding to create a logging exhibit
9. Create a wayside to interpret the presence and significance of the inland buffer zone
10. Seek funding to create auditory exhibit elements
11. Incorporate textures such as bark, sand, moss, and lichen into future exhibits
12. Consider exhibit media that incorporate sound
13. Continue to keep telescope at Miners Castle in working order
14. Consider maple syrup demonstrations as part of a Native American event or exhibit
15. Continue to maintain and interpret boathouse and other Coast Guard structures
16. Continue to maintain and interpret historic logging equipment area
17. Continue to create, maintain, and update Lakeshore wayside exhibits
18. Develop a Lakeshore wayside plan to ensure professional development of a cohesive system of waysides
19. Consider design of waysides at the Grand Marais Coast Guard complex
20. Make donation boxes attractive and accessible

Additional tasks related to partnerships:

1. Invite public and local residents to participate in Great Lakes Restoration Initiative projects
2. Work with the Heritage Center and/or NMU to collect and make available recordings of oral history interviews
3. Work with Chambers of Commerce to participate in Lakeshore marketing
4. Continue to work with regional school groups who bring students to the Lakeshore for camping and backpacking adventures
5. Distribute Leave-No-Trace videos to community organizations
6. Encourage the marketing of, and visitor partaking of, historic foods in gateway communities
7. Work with ALTRAN to promote bike services, in order to meet needs created by newly paved road
8. Encourage membership in cooperating associations
9. Continue to distribute Chamber of Commerce materials at Lakeshore visitor centers
10. Continue to sponsor the Au Sable resident VIP program
11. Continue Adopt-a-Trail, Adopt-a-Campsite program
12. Continue to support cooperating association operations
13. Conduct community events at a local café
14. Continue to work with cooperating association to ensure availability of relevant and high-quality sales items
15. Contact Forest Service to learn about the travelling Native American exhibit

Additional tasks related to creating new media products:

1. Produce twitters to announce new season plants and animals
2. Create and distribute podcasts of Chris Case teaching sustainability methods
3. Create a video of the Au Sable Lighthouse tour and make it available to visitors
4. Create podcasts of Au Sable Lighthouse walking tour and make them available to visitors
5. Consider making road closure information and weather dangers available through twitter or other electronic means
6. Continue to monitor and consider participation in the social networks used by visitors and potential visitors

Additional tasks related to the Lakeshore website:

1. Continue to maintain Lakeshore website to provide clear information to meet visitor needs
2. Incorporate GPS coordinates onto Lakeshore website to assist visitors who find their way to and through the Lakeshore using GPS
3. Continue to include safety messages on Lakeshore Web pages
4. Continue to post Environmental Education materials on the Lakeshore website
5. Develop an e-hike or podcast for Lakeshore website that incorporates natural sound
6. Continue to promote the range of physical activities available at the Lakeshore through electronic media and publications
7. Continue to distribute and electronically post regulations
8. Add more detailed information on accessible Lakeshore opportunities onto the website

Additional tasks related to publications:

1. Continue to provide opportunities for visitor comments through suggestion forms, visitor registers, and website
2. Introduce the novice naturalist to the concept of life lists by creating a site bulletin, exhibit, and/or webpage as a starter kit. Suggest "top ten" experiences including olfactory, tactile, and other sensory methods, areas for viewing wildlife, sunrise and sunset, and vistas, etc.
3. Develop a site bulletin highlighting Continue to distribute animal, bird, flower, and plant lists for the Lakeshore
4. Continue to include sensory activities in trail guides
5. Continue to highlight sensory experiences in trail guides
6. Continue to promote and provide guides for ski trails
7. Create a map which illustrates cell phone hot spots within the Lakeshore
8. Continue to distribute safety materials with Lakeshore information packets
9. Continue to make trail guides available
10. Continue to reply to visitor requests, via in-person, email, telephone, and mail inquiries

Additional tasks related to working with other divisions:

1. Work with Facility Management to ensure that picnic area and camping facilities are conducive settings for family groups
2. Work with LE and RM to incorporate interpretation into regulation messages
3. Work with visitor input and Facility Management staff to ensure that signs are strategically located, adequate, and clear
4. Work with LE to ensure that emergency numbers are posted on Lakeshore bulletin boards
5. Communicate with Facility Management if any safety, accessibility, or wayfinding issues arise concerning the Lakeshore's walkways, stairs, and viewing platforms
6. Encourage quiet hours in Lakeshore campgrounds

Additional tasks related to collections:

1. Move the PIRO collection to a regional storage facility where it can be managed effectively by competent staff and used by the public

Harpers Ferry Center
National Park Service
U.S. Department of the Interior

Pictured Rocks National Lakeshore

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