



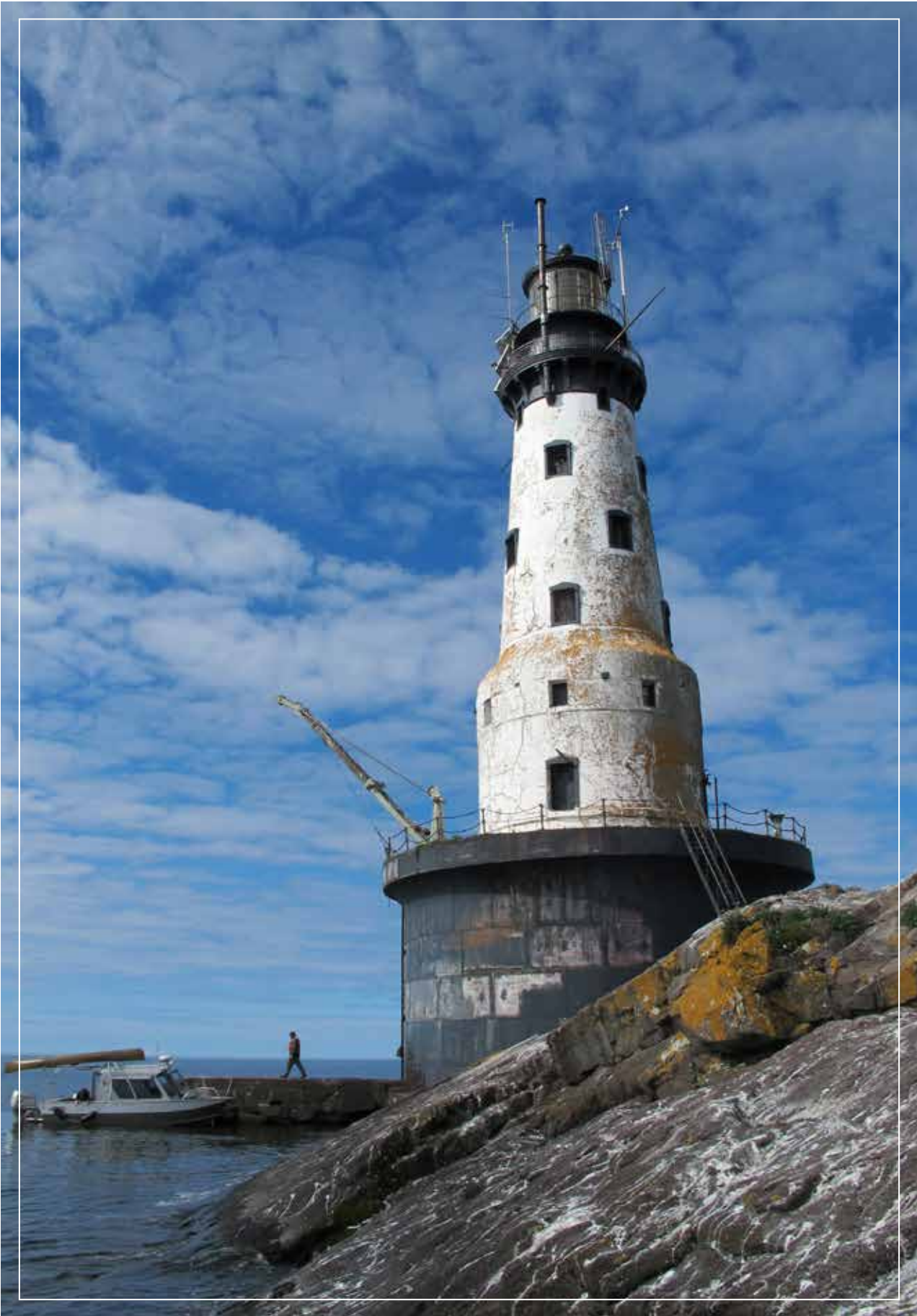
Foundation Document

Isle Royale National Park

Keweenaw County, Michigan

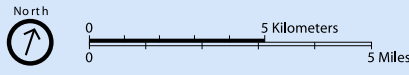
January 2016





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Do not use this map for navigation.

Seaplane
Houghton, Mich.
to Windigo
30 minutes one-way
Voyageur II
Grand Portage, Minn. to Windigo
2 hours one-way
Sea Hunter
Grand Portage, Minn. to Windigo
1-1/2 hours one-way
22mi/35km



To reduce noise and wake impacts the park has designated certain areas around the island as Quiet/No-wake Zones. For detailed information on the zones, contact a park ranger.

The Isle Royale National Park boundary extends 4.5 miles into Lake Superior from Isle Royale and the outer islands, or to the international boundary.

- Trail
- Quiet/no wake zones
- No wake zones

- Campsite
- Lookout tower
- Lighthouse

- Overnight dock
- Day-use only dock
- Marina

- Showers
- Lodging
- Dining



Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship:** We share a commitment to resource stewardship with the global preservation community.
- **Excellence:** We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity:** We deal honestly and fairly with the public and one another.
- **Tradition:** We are proud of it; we learn from it; we are not bound by it.
- **Respect:** We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the US Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.



The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.

Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park’s purpose, significance, fundamental resources and values, other important resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Isle Royale National Park can be accessed online at: <http://insideparkatlas.nps.gov/>.



Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, other important resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

Brief Description of the Park

Isle Royale National Park, Michigan, was authorized by Congress and approved by President Herbert Hoover on March 3, 1931. The park was officially established by President Franklin Roosevelt on April 3, 1940. Isle Royale National Park is in the northwestern section of Lake Superior comprising 571,790 acres, within 14 miles of the Ontario (Canada) shoreline, 20 miles of Minnesota shoreline, and approximately 45 miles from Michigan's Upper Peninsula.

The park includes the primary large island known as "Isle Royale," and more than 400 smaller islands that together form a complex, forested archipelago surrounded by the deep, cold waters of the largest North American Great Lake. Within the designated boundary, more than 75% of the total park area is submerged. There are no contemporary roads on the island and the park is currently only accessible by ferry, seaplane, or private boat. A portion of the park's northern boundary within Lake Superior abuts the international border between the United States and Canada.

Since establishment, the park has been managed with a focus on backcountry-based recreation in concert with protection of natural and cultural resources. Under provisions of the Wilderness Act of 1964, 132,018 acres of the park's surface land base, or 99% of the total 133,788 land acres, were designated as wilderness or potential wilderness on October 20, 1976. Isle Royale is one of 13 national park system units and 23 federal wilderness areas within the Lake Superior Region in the states of Michigan, Minnesota, and Wisconsin. The park was designated an International Biosphere Reserve by the United Nations in November 1980.

The rocks of the Isle Royale archipelago exhibit more than one billion years of geologic processes, including successive volcanism, sedimentation, uplift, and erosion. Isle Royale contains minerals such as copper, greenstone, datolite, and agate.

This heavily forested archipelago is in a zone of transition between two major North American ecosystems or biomes—the boreal coniferous forest and northern hardwood forest. Boreal forest vegetation dominates the northeastern part of the island. Balsam fir and white spruce, interspersed with pockets of paper birch and quaking aspen comprise the so-called "climax" of the boreal coniferous forest. Boreal forest vegetation is strongly influenced by lake effect climate and shallow soils. Northern hardwoods are more dominant on Isle Royale's southwestern portion where soils are deeper and inland areas are less affected by Lake Superior influences than the exposed ridges and peninsulas of the northeastern end. Sugar maple and yellow birch is a dominant community on the island that is more stable and less disturbance-prone than the boreal forest. Ridges are occupied by small, open stands of northern red oak, white pine, jack pine, spruce, red maple, or occasionally red pine. In swamps and wetland forests of the park, black spruce and white cedar are dominant with the occasional occurrence of nondominant eastern tamarack. Treeless areas on the ridges support patchy grasses and shrubs, primarily common serviceberry, honeysuckle, hazelnut, and blueberry. These areas, prone to lightning because of their exposure, have burned frequently, leaving little organic soil and thwarting forest encroachment. Bogs and beaver meadows are dominated by dense stands of sedges, rushes, grasses, and shrubs such as alder that grow along the marginal edges of these wetland communities.

The climate of the park, strongly affected by Lake Superior, is characterized by short, cool summers and long, cold winters. Due to the moderating influence of the lake, summers are cooler and winters are warmer than on the nearby mainland. Fog is frequent near the lakeshore, especially in the spring.

Aquatic habitats account for more than 75% of Isle Royale National Park and encompass a wide spectrum of environments from the cold, deep waters of Lake Superior to inland streams, beaver ponds, lakes, marshes, swamps, wet meadows, and bogs. The park includes 438,008 acres of Lake Superior, in addition to about 200 inland lakes and ponds totaling some 9,050 acres. There are approximately 158 linear miles of perennial streams on Isle Royale. Isle Royale's Lake Superior and inland lakes fisheries may well be the most nationally significant natural resources of the park; 61 species are known to be present. The park's lake trout population is acknowledged as the best example of a rehabilitated lake trout stock in all of Lake Superior. The Isle Royale population of the extremely rare coaster brook trout is one of only three known reproducing populations in US waters. In fact, eggs from this population have been used by the US Fish and Wildlife Service in efforts to reestablish the coaster brook trout elsewhere in Lake Superior.

Isle Royale's biodiversity (except for birds) is generally lower than that of the mainland because the islands' isolation has restricted migration of terrestrial organisms from outside populations. For example, there are approximately 19 species of mammals documented on Isle Royale, far fewer than the number of mammals on the adjacent mainland. In addition, the limited land area of the archipelago probably impedes the long-term survival of viable populations of larger organisms with larger home ranges or territories. Wolf and moose populations, together on the island only since the late 1940s, have become a classic study in predator/prey relationships. For many people these wildlife populations and their conservation are the essence of Isle Royale's wilderness character.

Evidence of human use, activity, and habitation can be found throughout Isle Royale and in the surrounding waters. As a rich source of fish, wildlife, plants, and minerals, Isle Royale has attracted human visitors and residents for millennia. Cultural resources ranging from lithic scatters of chipped stone to lighthouses reveal a rich history of human use spanning from Archaic times (ca. 3000 BC) to the present. Stone tools, mining pits, shipwrecks, vernacular boats, fishing camps, summer cabins, domestic flowers, and medicinal plants are all part of the cultural resources of the island. Many sites and resources still exist from precontact and historic use of the island, including periods of use by American Indians, voyageurs, and fur traders, and from extensive commercial fishing and mining, Lake Superior shipping, and vacationing and resort development. These cultural resources are categorized as archeological sites, historic structures, cultural objects, cultural landscapes, and ethnographic resources.

The first evidence of human use of Isle Royale was left by Archaic period aboriginal copper miners. Shallow pits remain throughout the island as testimony to the special purity of Isle Royale's copper deposits. Native groups also came to harvest the island's other natural resources through hunting, fishing, and gathering plants and berries. Three phases of historic copper mining punctuated the 19th century history of the island. Coming thousands of years after prehistoric miners, historic entrepreneurs often mined the same sites that had attracted native peoples. Success was limited because of the high cost of operation at Isle Royale. Initial profits ended when pure copper veins pinched out and inevitably all of the copper mining companies went out of business.

Abundant lake trout, whitefish, and herring populations supported a century of commercial fishing. More than 100 fishing families were based on the island at the peak of the industry in the early 1900s. However, fish populations declined severely with the arrival of the lamprey and the concurrent pressures of commercial fishing, which took their combined toll by the 1960s. Even though fish populations rebounded in later decades, the establishment of Isle Royale National Park meant an end to widespread commercial fishing operations therein.

Around the turn of the 20th century, tourism began to blossom at Isle Royale. The isolation and rugged nature of the area that draws visitors today appealed to Americans a century ago, as they sought escape from hot, crowded and dirty cities, and the torment of hay fever. Lodges and resorts opened at Washington Island, Belle Isle, Tobin Harbor, and Rock Harbor. Resort tourism thrived in the first three decades of the 20th century and helped give rise to the idea of making a “great island” national park.

The Civilian Conservation Corps (CCC) played an important role in the construction of trails and facilities on the island. CCC camps were set up at Siskiwit Bay, Rock Harbor (Daisy Farm), and Washington Harbor. Between 1935 and 1941, they were an important presence on the island and were instrumental in fighting the 1936 fire that consumed 20% of the island’s forests.

As an island archipelago in the world’s largest body of fresh water, Isle Royale has a rich maritime history. The story of Isle Royale is the story of fishing boats, passenger liners, and commercial shipping. To steer ships through treacherous reefs, four lighthouses were established at Isle Royale. The island could be both a safe haven during storms and a deadly obstacle that claimed numerous vessels over the years. Boat traffic brought occasional tragedy and Isle Royale is well known for its many shipwrecks.



Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Isle Royale National Park was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation adopted by Congress was signed into law on April 3, 1940 (see appendix A for enabling legislation and subsequent amendments). The purpose statement lays the foundation for understanding what is most important about the park.

The purpose of ISLE ROYALE NATIONAL PARK is to set apart a remote island archipelago and surrounding waters in Lake Superior as a national park for the benefit and enjoyment of the public and to preserve and protect its wilderness character, cultural and natural resources, scenery, and ecological processes. Additionally, as a unit of the national park system, Isle Royale National Park provides opportunities for recreation, education and interpretation, and scientific study.



Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Isle Royale National Park, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Isle Royale National Park. (Please note that the sequence of the statements does not reflect the level of significance.)

1. **Largest Island Archipelago.** Isle Royale, the largest island in Lake Superior, and its more than 400 smaller accompanying islands, comprise a complex and remote freshwater archipelago surrounded by the largest freshwater lake in North America, Lake Superior. This distinctive setting influences and shapes Isle Royale's natural, cultural, maritime, wilderness, and scenic resources.
2. **Isolation and Isolated Character.** The nautical distance from shore and natural setting of the rugged Isle Royale archipelago starkly contrasts the usual sights, sounds, and modifications of an increasingly populous and mechanized civilization, and provides an exceptional opportunity to experience solitude and isolation. A visit to Isle Royale requires passage across a vast and often dangerous open expanse of water.
3. **Geology, Copper, and Distinct Topography.** The visible billion-year-old Greenstone flow forming the island's main ridge reveals one of the oldest, largest, and longest-lasting lava flow events on Earth. Inclusions of some of the purest forms of native copper known to exist on the continent and other rare minerals found within volcanic and sedimentary layers of rock, distinguish the geologic resources of Isle Royale. Uplifted layers of these rocks create the park's distinctive ridge and valley topography.
4. **Habitat and Refuge for a Unique Assemblage of Self-Sustaining Cold Water Fish.** Isle Royale's distinct topography continues underwater, providing habitat for rare lake trout morphological variants and one of the last viable populations of coaster brook trout.
5. **Scientific Study and Research.** Isle Royale provides exceptional opportunities for study and research within a minimally disturbed setting.
6. **Scenery and Scenic Resources.** The forces of nature are readily visible as the dominant element that has shaped and continues to shape the stunning scenic character of this relatively undeveloped, rugged archipelago. Brilliant and diverse colors are boldly displayed along the intricate margins of the rocky shoreline and within the dense forest interior. Ever-changing seasonal and atmospheric conditions on the vast, open expanse of Lake Superior introduce an additional dynamic to the distinctive Isle Royale scenery.
7. **Archeological Mining Sites and Resources.** The archeological resources of Isle Royale contain an assemblage of copper mining sites and features spanning more than 4,000 years. The precontact component of this story is unmatched in quantity and in quality anywhere else in the Lake Superior Basin including the copper-rich Keweenaw Peninsula of Michigan. Unlike the more accessible sites on the Keweenaw Peninsula, the isolated setting of Isle Royale led to the preservation of these archeological sites.

Fundamental Resources and Values

Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Isle Royale National Park:

- **Excellent Water Quality and Clarity**

Water sustains and shapes all life on and surrounding Isle Royale. Water quality, clarity, and temperature are fundamental qualities of Isle Royale water resources. Lake Superior holds approximately 10% of the freshwater on Earth.

It is this icy, crystal clear water body within a remote setting that preserves and provides shelter to the native fish populations, insulates the native flora and fauna from contemporary mainland human influences, and cools and thus greatly influences the composition of the vegetation community nearest the shoreline.

Maintaining water quality, clarity, temperature and water levels, including that of Lake Superior, within the natural fluctuation ranges is critical to ensure that the qualities of this fundamental resource and value are preserved.

- **Archeological and Ethnographic Resources Illustrating the Interaction of Human Culture and Nature at Isle Royale National Park**

For more than four millennia humans have visited and lived on Isle Royale. Evidence of use and interaction between humans and the natural environment, including the complex influences each has had on the other, is well preserved on Isle Royale and can range from subtle to dramatic indications of cultural uses or alterations within the natural landscape. Despite high levels of human use and disturbance having occurred during historic times, remarkable examples of prehistoric use and environmental interactions remain intact in many locations.

Traditional environmental knowledge passed down through generations range from detailed information concerning island fish types, populations, locations, and uses to landscapes, places, and stories associated with traditional Anishinaabeg (Ojibwe) beliefs and represent some of the intangible values associated with human interactions on this island.

The continued appreciation and understanding of human interactions on Isle Royale, combined with continued opportunities to learn and in turn preserve and pass on traditional environmental knowledge and practices specifically related to the island, is critical to maintain this fundamental resource and value.

- **Geologic Resources**

Isle Royale is a visible testament to ancient continental rifting and massive glaciations. Globally significant exposures of billion year old lava flows provide evidence of large-scale geologic processes. The Greenstone flow, one of the largest single lava flows in the history of Earth, forms the island's main ridge. Massive glacial events over the last three million years sculpted the landscape of the archipelago. The resulting formation of Lake Superior effectively isolated Isle Royale from the rest of the continent. Glacial processes provided the foundation for the developing ecology of the island. The island's distinct ridge and valley topography continues underwater, and is all a direct result of these dynamic geologic processes.

A distinctive feature of the lava flows is the presence of a variety of minerals including prehnite, datolite, quartz, calcite, and a rare variety of pumpellyite—Isle Royale greenstone, Michigan’s state gemstone. Native copper, found throughout the lava flows and sedimentary layers, influenced human presence on the island for thousands of years. Maintaining the integrity of geologic resources in situ and without further alterations is critical to ensuring this fundamental resource and value is preserved and remains available for all visitors to discover, see, experience, and enjoy in perpetuity.

- **Native Fish Populations**

Fish populations in park waters are an important source population for greater lake fish populations, especially lake trout, and help provide sustainability of the Lake Superior fishery. Intact native inland fish communities are exemplary in that there appears to be no record of these waters ever having been stocked with either native or nonnative fish species. Maintaining genetically pure and healthy native fish populations within their native habitats and providing opportunities for visitors to see and experience these fish in their natural habitat is critical to maintain this fundamental resource and value.

- **Maritime Character**

Travel around and among the islands requires intimate knowledge of and skills in navigating the treacherous waters of Lake Superior. Historic boats, landscapes, structures, sites, and submerged remnants of their adaptation to this maritime environment are found throughout the inlets and harbors of the archipelago.

A significant maritime fishing culture with an associated traditional environmental knowledge of fish and fishing developed slowly over time and has been passed down generation after generation in response to this very specific environment. The park provides a continued opportunity for the expansion and quarry of the abundant fish populations in these waters.

Maintaining and preserving examples of maritime resources and the designs, vernacular methods, and skills used to create them is critical to preserving this fundamental resource and value.



- **Scenic Resources**

The physical size and intricacy of this wild, largely undeveloped archipelago where natural processes remain the dominant element shaping the island scenery, rather than human modifications, distinguishes Isle Royale from most other similar locations and settings within this region. Abundant bays, inlets, and narrow channels unfold from hidden locations within the rugged and intricate rocky shoreline to provide indefinite opportunities for observing distinct scenery at a variety of different scales. Brilliant, saturated, diverse and naturally contrasting colors, forms, and textures are further modified by the dynamic environment, ever-changing climatic conditions, and seasonal variations to create a complex environment rich with attractive, largely natural scenic settings.

The undeveloped qualities of the island, especially along the shoreline, where natural process and the dynamic ecological characteristics of a naturally functioning system are permitted to continue relatively unhindered are essential to maintaining this fundamental resource and value. Cultural modifications that are in harmony with the natural setting further contribute to the island's scenic values.

- **Wilderness**

Surrounded by the cold expanse of Lake Superior, and in contrast to more typical Midwestern urban, agricultural, or managed forest environs, Isle Royale's wilderness offers exceptional opportunities for solitude, self-sufficiency, and discovery.

Established as a national park in recognition of the exceptional wilderness character and associated opportunities, the prevailing forces of nature have been allowed to proceed largely unimpeded at the park. The effects of time, natural weathering, and unhindered forest growth have transformed the limited historic remnants of human occupation and activity into an increasingly uninterrupted natural environment.

It is essential that the wilderness character of Isle Royale is preserved in order to maintain this fundamental resource and value.

- **Island Biogeography and Ecology**

The isolated position of Isle Royale within the greater confines of Lake Superior creates an outstanding example of island biogeography. The cooler temperature and distance across Lake Superior to mainland shores has greatly influenced the diversity of its flora and fauna. The natural history of Isle Royale through time demonstrates an atypical composition of animal life compared with the nearby mainland as a result of the remote and isolated island setting.

The greatest botanic value of the park lies in its disjunct populations, most of which are found along Lake Superior's shoreline and on Passage Island. The range of community types, large number of species of concern, and minimal incidence of nonnative species, coupled with minimal human impact during the settlement era, make Isle Royale a suitable reference condition for other protected areas in the region.

It is essential that natural processes are permitted to function and remain the dominant method of change at the park to ensure that this fundamental resource is maintained on the island.



Other Important Resources and Values

Isle Royale National Park contains other resources and values that are not fundamental to the purpose of the park and may be unrelated to its significance, but are important to consider in planning processes. These are referred to as “other important resources and values” (OIRV). These resources and values have been selected because they are important in the operation and management of the park and warrant special consideration in park planning.

The following other important resources and values have been identified for Isle Royale National Park:

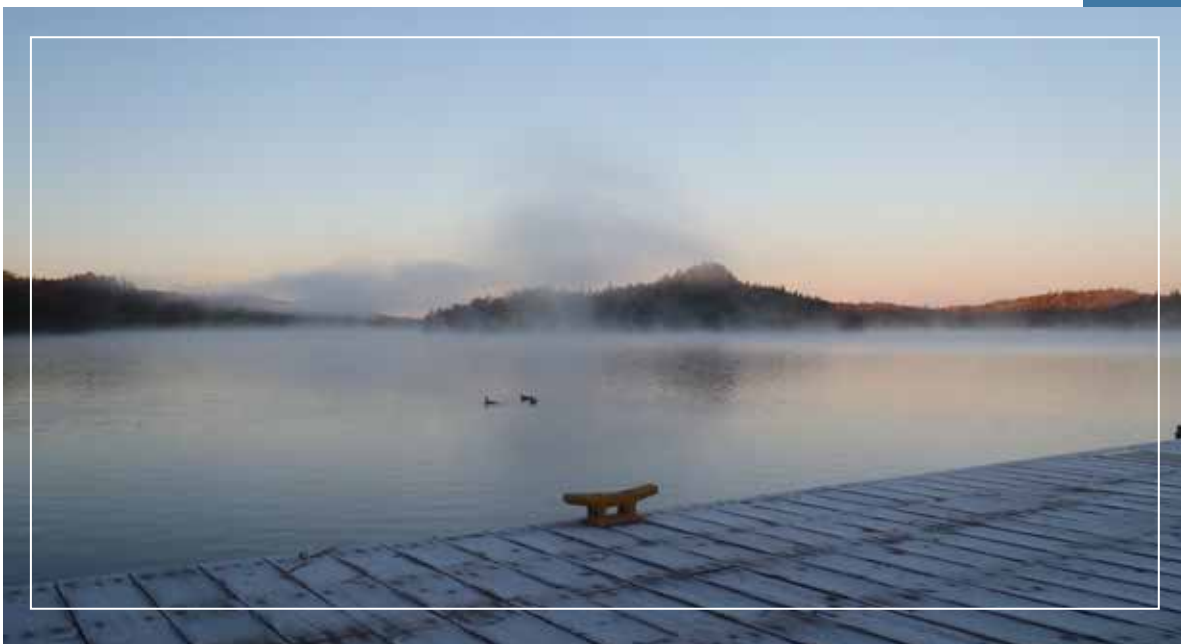
- **Living Laboratory**

The continued opportunity to use the park as a living laboratory and collections of resources that provide evidence of how the island has been used as a living laboratory are other important resources and values at Isle Royale. Separated from direct mainland contemporary human influences, Isle Royale provides a relatively wild environment where isolated natural processes and human cultures can be studied. The distance from shore and the generally undeveloped quality of the archipelago offers an unmatched opportunity to conduct scientific research and scholarship within a relatively pristine northern hardwoods-boreal forest ecotone.

The park has a number of established studies and long-term datasets that are unparalleled among the nation’s premier ecological research sites. With limited species diversity and few nonnative species, the park is an ideal laboratory in which to apply systems ecology to ascertain the mechanisms controlling the diversity and stability of natural landscapes.

A collection of resources that illustrate how the island has been used in the past and continues to be used as a living laboratory is essential to sustain this other important resource and value. This collection could include the herbarium collection from the 1940s, various published research reports, other specimen collections and temporal research activities, and research camps where physical evidence of research—possibly including objects, specimens, or other artifacts—provide tangible opportunities for visitors to witness and possibly experience active scientific research.

The continued use of Isle Royale as a living laboratory and research reserve is essential to sustain this other important resource and value.



- **American Marten**

Isle Royale National Park contains the only insular population of American marten (*Martes americana*) in the contiguous United States. Once common at Isle Royale, the marten experienced a population and probably a genetic bottleneck during the early 20th century. Now, after a 60-year apparent absence, their presence has been reconfirmed. Recent investigations of genetic isolation and distribution suggest that marten are rare on Isle Royale, causing considerable concern that the island could lose this population of forest mesocarnivores. This situation is exacerbated by the virtual impossibility of natural colonization from the mainland and by the absence of genetically similar source populations that meets NPS guidelines if introductions were warranted. Estimates of the long-term viability of marten at Isle Royale and management recommendations to sustain this nationally unique and genetically distinct population are needed. An understanding of marten demographics and resource use at Isle Royale in addition to predictive forest simulation modeling integrated within a population viability analysis is necessary to address this management concern.

- **Avian Resources**

Isle Royale is an Audubon Important Bird Area, for which the ornithological significance is that it “supports a very large number of nesting Merlins and common loons.” It is also recognized by the American Bird Conservancy as a Globally Important Bird Area, as one of the Migrant Concentration Important Bird Areas of the Upper Great Lakes, for being an important stopover for migrant birds and having at least 15 species of nesting warblers. Additionally, as a pristine and isolated area, Isle Royale can provide an ideal laboratory to evaluate changes in songbird numbers that may be related to changes in regions of winter habitat and to climate change.

- **Other National Register Listed or Eligible Properties**

Many of Isle Royale’s visitors in the late 1800s and early 1900s were drawn by the isolation and wilderness the island offered, which was in stark contrast to the hot, crowded, and dirty cities of the Midwest. Around the turn of the 20th century, tourism began to blossom at Isle Royale as transportation companies, looking for additional passengers, fostered the growth of tourism to Isle Royale, as they had successfully done in other places such as Yellowstone and Yosemite. Lodges and resorts opened at Washington Island, Belle Isle, Tobin Harbor, and Rock Harbor; enterprising commercial fishermen operated other smaller resort properties at their fisheries. The clean air and healthful attributes of the rustic island setting appealed to people looking for relief from hay fever. The opportunities for rugged forms of recreation were advertised to Americans learning to cope with the changing realities of modern life. Resort tourism thrived in the first three decades of the 20th century and helped give rise to the idea of making Isle Royale a national park.

Historically, some of the individuals who visited Isle Royale took advantage of the opportunity to purchase small tracts of land. They built summer cabins in places like Tobin Harbor, Rock Harbor, Barnum Island, and on the north shore of Isle Royale near Belle Isle resort. Small, protected islands and lakeshore plots were popular purchases and dozens of cabins were constructed. When the national park was established, cabin owners either sold their properties to the federal government and left the island or sold for a lesser amount and signed a life lease in order to continue using their cabins.

Evidence of the resort properties and recreational cabins still exist in the park, at Barnum and Washington Island, in Tobin Harbor and Rock Harbor, and along the north shore on Crystal Cove, Belle Isle, and Captain Kidd Island.

Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental and other important resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Isle Royale National Park:

- Isolation is a dynamic force that shapes the face of Isle Royale.
- The wilderness character of solitude, self-sufficiency, and discovery in a natural setting defines human experience on Isle Royale.
- Despite changing human values and cultures, the allure of Isle Royale's primeval character has been constant through time.
- Isle Royale's distinct geology formed by ancient geologic processes, massive glacial events, and billion year old lava flows defines all natural and human events on the archipelago.
- The challenging and unpredictable waters of Isle Royale protect and maintain the biodiversity of the Lake Superior fishery.
- The opportunity to study a relatively simple and pristine island system, protected in perpetuity, has driven the history of research on Isle Royale.
- The ecological, physical, and social landscape of Isle Royale creates layers of protection that insulate it in an evolving world.



Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates, administrative commitments, and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental and other important resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Isle Royale National Park.

Special Mandates Established by Treaty Specific to Isle Royale National Park

Treaty rights are exercised today in the Great Lakes region in various ways. In some instances tribes exercise their rights under federal court orders. In entering into these treaties, the tribes kept the right to hunt, fish, and gather on lands they sold to the US government in order to provide access to the foods and resources important to the lives of the tribal peoples.

Established Tribal Treaty Rights for hunting, fishing and gathering according to:

- **1783 Treaty of Paris** – Colonial territorial claims to Isle Royale ceded from Great Britain to the United States of America (Ojibwe not party to treaty)
- **1842 Treaty of La Pointe, October 4, 1842, [7 Stat. 591]** – Isle Royale included in the “Chippewa Indians of the Mississippi and Lake Superior” (Ojibwe) cession of lands “including all the islands in said lake” (“said Lake Superior”) to the United States of America (Grand Portage Band of the Ojibwe not party to treaty); Ojibwe retain rights for hunting, fishing, and gathering “. . .the right of hunting on the ceded territory, with the other usual privileges of occupancy, until required to remove by the President of the United States, . . .”
- **1844 Isle Royale Compact, August 20, 1844** – Compact/Treaty Amendment to incorporate the Grand Portage Band of the Ojibwe as part of the 1842 Treaty of La Pointe with regard to the cession of Isle Royale to the United States of America; Rights as stipulated in 1842 Treaty of La Pointe extended to and affirmed by the Grand Portage Band of the Ojibwe

Special Mandates Established by Federal Law for Isle Royale National Park

Land Area: The total gross acreage owned by the federal government is 571,790 as of 2013. Surface rights only are held by the federal government to approximately 438,008 acres of submerged lands to the 4.5-mile limit surrounding the island. There is no land within the present park boundaries under other ownership, although the US Coast Guard (USCG) has control and jurisdiction over two of the four lighthouses within Isle Royale National Park.

In 1939, the State of Michigan ceded exclusive jurisdiction to the United States over all territory “which is now or may hereinafter be included in the park” (act no. 8, p.a. 1939, Michigan). The federal government accepted the cession by the State of Michigan of Isle Royale lands by the act approved March 6, 1942, which made provision for court jurisdiction and rules and regulations (56 stat. 133). An act of the same date, March 6, 1942 (56 stat. 138), added Passage Island to the park, saving portions of it and all of Rock of Ages and Menagerie Islands for lighthouse right-of-way and boathouse purposes.

Siskiwit Islands Bird Reservation, which had been created by executive order of President Theodore Roosevelt in 1905, was abolished and made part of the park. The boundaries of Isle Royale National Park were extended to include 4.5 miles of submerged lands, to be accepted by donation at the discretion of the Secretary of the Interior. By the time the notice of acceptance was prepared, the Isle Royale Land Commission had been abolished and the Michigan State Attorney General held that no further taking could be allowed under the Act of 1939.

An amendment to Act number 8, PA 1939, was passed by the Michigan legislature in 1949 (Title Amendment 1949, Act 281). This legislation ceded exclusive jurisdiction over the lands to the 4.5-mile boundary, but in turn, withheld to the state all oil and mineral rights on these lands; the right of the state to tax persons and corporations; the right of the island residents to vote in all elections held in the state; the right of the state to control fishing in said waters to the 4.5-mile limit and the right of the state to serve civil and criminal process. Although there were many points about this legislation that did not meet the objectives of the National Park Service, the cession was accepted in January 1956.



In 1958, the park boundary was expanded to include land for a mainland headquarters site in Houghton, Michigan. In 1976, most of the island was designated wilderness and the park boundary was again expanded to include submerged lands within 4.5 miles of Passage Island and Gull Islands.

1931 Enabling Legislation for the Creation of Isle Royale National Park: March 3, 1931; Law (46 Stat. 1514) Isle Royale authorized with the enactment of H.R. 17005 (Feb. 10, 1931); To provide for the establishment of the Isle Royale National Park, in the State of Michigan, and for other purposes; includes Isle Royale and immediately surrounding islands.

Two mandates included in the original enabling legislation:

1. Lands shall be secured only by public or private donation and without cost to the United States
Status: fulfilled, no longer applicable
2. Provisions of the Federal Water Power Act (June 10, 1920) shall not apply to this park
Status: The application of the Federal Water Power Act has never surfaced as an issue

1932 Life Lease Stipulation: Passed into law under H.R. 4712: Dec. 8, 1931; Authorizes the Secretary of the Interior to accept title to lands tendered without cost to the United States within the area of Isle Royale and three other parks, subject to life leases on these lands to former owners of these lands and properties; and 47 Stat. 37: Feb. 4, 1932.

Status: As of January 2014, one life lease granted to Richard Edwards in 1938, is valid for the life of this said individual. This is the sole and last remaining life lease of many that were granted in the early years leading up to the establishment of Isle Royale National Park for residential use of recreational cabins.



1939 Cession of Exclusive Jurisdiction by State of Michigan: Act 8, Michigan Public Acts 1939: Feb. 27, 1939; Act of Michigan State Legislature; Provides for cession of jurisdiction over Isle Royale National Park to the United States.

1940 Official Establishment of Isle Royale National Park: Letter: April 3, 1940; Secretary of the Interior Ickes; Acceptance of deeds to all lands on Isle Royale that formally established the park (The federal government formally accepted the deeds to all Isle Royale in 1940. A letter was written by the Secretary of the Interior that specifically accepted the responsibility for “police powers” [law enforcement].)

1941 Bill Introduced to Accept Cession of Exclusive Jurisdiction from State of Michigan to the United States: H.R. 3014: Feb. 3, 1941; to accept the cession by the State of Michigan of exclusive jurisdiction over the lands embraced within the Isle Royale National Park, and for other purposes; State reserves right to serve civil or criminal process, right to tax, and gives park residents right to vote; States that US District Court has jurisdiction; Includes miscellaneous regulations; Provides for appointment of commissioner; States that Secretary of the Interior shall notify in writing the Governor of the State of Michigan of the passage and approval of this Act and that US assumes police jurisdiction over park as specified in Act of the State of Michigan.

The State of Michigan Reserves the following rights:

1. The right to tax persons and property in the park.
2. The residents’ right to vote as citizens of the State.
3. The right to serve (civil and criminal) processes on the Island.
4. Control of submerged minerals under Lake Superior waters within boundaries of the park.* (See also “Ref Manual 39 1 Shorelines.”)
5. Control of the fishing, both recreational and commercial, in the Lake Superior waters of the park. **(See also “Ref Manual 39 1 Shorelines.”)

*Note: For submerged minerals, 36 CFR 9.30 applies: “These regulations are designed to insure that activities undertaken pursuant to these rights are conducted in a manner consistent with the purposes for which the National Park System and each unit thereof were created, to prevent or minimize damage to the environment and other resource values, and to insure to the extent feasible that all units of the National Park System are left unimpaired for the enjoyment of future generations.”

**Note: Though the act retains the right of the state to regulate fishing in Lake Superior waters in the park, it is the opinion of the Solicitor that the National Park Service shares concurrent jurisdiction to *enforce* regulations. Also, under the Commerce and Property Clauses of the Constitution, the National Park Service might have power to regulate fishing in those Lake Superior waters overlying the submerged lands conveyed to the United States by Michigan in 1942 and 1976.

1942 Original Park Boundary: 56 Stat. 133& 138: March 6, 1942; Law; established original park boundary.

1944 Acceptance of Jurisdiction Cession: Accepted by letter from Secretary of the Interior to Governor of Michigan, May 19, 1944; *Amended by Act 281, MPA, 1949* (Letter [Published in Federal Register 9 FR 6367]: May 19, 1944; From Secretary of the Interior to Governor of Michigan; Acceptance of jurisdiction over park lands as required by 56 Stat. 133).

1949 Amendment to Original Cession to Expand Park Boundary to Include Submerged Lands 4 ½ Miles from Shoreline: Act 281, MPA, 1949: Sept. 23, 1949; Act of Michigan State Legislature; Amendment to Act 8, MPA, 1939 (Ref. 38) that cedes exclusive jurisdiction to US; Amends by including any submerged lands within four and one-half miles of the shoreline of Isle Royale and immediately surrounding islands, title of which is hereby conveyed to US; However, saves oil and mineral rights to these submerged lands to the State; States that fishing in these waters shall be conducted according to state laws; States (as in 1939) that jurisdiction shall not vest until US through the proper officer notifies Michigan that they assume police jurisdiction over the park.

1956 Acceptance of Cession Amendment and Expanded Park Boundary: Notice with related correspondence: Feb. 17, 1956; Secretary of the Interior to Governor of Michigan; Acceptance from State of Michigan of title and jurisdiction over submerged lands in accordance with Act 281, MPA, 1949; Reserves to State the right to regulate and control fishing in waters over these submerged lands; Reserves to US the right to regulate and control fishing in all other waters lying within the boundaries of Isle Royale National Park. Boundary Expansion states: “4 ½ miles from shoreline” (NPS definition of “shoreline” as the Ordinary High Water Mark may differ from how Michigan defines “shoreline”).

1958 Boundary Expansion: 72 Stat. 604: Aug. 14, 1958; Law; Boundary Expansion (H.R. 5450: Feb. 28, 1957; funds made available for Isle Royale National Park may be used for administrative headquarters site at Houghton and that any land acquisition funds made available to the Secretary of the Interior for the NPS may be used for acquisition of property authorized to be added to the headquarters site).

1970 Clean Air Act: Designation of Isle Royale National Park as a “Class I” area requiring more stringent Prevention of Significant Deterioration (PSD) regulations, primarily to preserve or restore visibility.

1976 Wilderness Designation and Boundary Expansion: (Public Law 94 - 567: Oct 20, 1976). Public Law 94-567 designated 132,018 acres as wilderness and 231 acres as potential wilderness additions in 1976. In 1983, 138 acres of the initial 231 acres of potential wilderness additions were converted to wilderness following the abandonment, dismantling, and removal of nonconforming power lines within two corridors (48 Fed. Reg. 12842). As of June 2013, designated wilderness acreage includes 132,156 acres and 93 acres of potential wilderness additions, to be converted to wilderness when the nonconforming uses in these areas cease.



Additional Jurisdiction Stipulations

The Department of the Navy, US Coast Guard maintains control and jurisdiction of four areas for the operation of lighthouses and light towers as aids to navigation. These areas are the Passage Island Lighthouse, Rock of Ages Lighthouse, Isle Royale Lighthouse, and Blake Point Light Tower. The acreage under control is 6.5 and 3.5 acres for Passage and Isle Royale Lights, respectively. Rock of Ages Light is unsurveyed, but the island on which it is situated is of negligible size as is Blake Point.

The US Coast Guard has three unmanned lighthouses and surrounding properties, two of which are under their exclusive control and jurisdiction. In addition, the National Park Service displays, at Windigo, a second order Fresnel lens, on loan from the US Coast Guard. In addition, they maintain several buoys and one other navigational beacon on shore. Park plans for development or resources management (cultural and natural) have to recognize continued Coast Guard use in these areas.

The Coast Guard has some jurisdiction over boating activities on the Lake Superior waters of the park as these are legally classified as navigable waters. It has responsibility for establishing and maintaining some of the aids to navigation on the Lake Superior portion of the park. The National Park Service has responsibility for private aids to navigation, under Coast Guard direction. NPS law enforcement activities have to be designed so there are no conflicts with Coast Guard enforcement activities.

The Coast Guard has major control over the commercial shipping that passes through the park. Some NPS regulations may be in conflict with Coast Guard regulations; for example, the regulations for dumping sewage are different. A major Great Lakes shipping lane runs through the park between the northeast corner of the main island and Passage Island. This lane carries freighter traffic between Thunder Bay, Ontario, and the lower Great Lakes.

The Coast Guard has limited responsibility for marine inspection of some of the vessels owned and operated by the National Park Service, depending on whether the pertinent public law covering any particular aspect of a marine operation exempts public (government) vessels or facilities, or not. Currently, the M/V Ranger III operation is regulated and inspected by the US Coast Guard, as are marine operations involving fueling such as the operation and movement of the NPS fuel barge, and maintenance of boat fuel facilities. The Coast Guard has responsibility for certain portions of concessions operations, such as licensing boat pilots, scenic tour boats, commercial boat rental, etc. It is responsible for licensing and inspecting commercial boats carrying over six passengers operating in the park. All NPS (by local policy) and concession boat operations must meet US Coast Guard standards. The Coast Guard has a legal responsibility for search and rescue on navigable waters, which would include the Lake Superior waters within the park, as does the National Park Service.

The US Army Corps of Engineers has certain legal responsibilities over establishment of harbors and mooring areas, dredging channels, etc. NPS management plans have to recognize the Corps' responsibility in certain areas. Activities such as dredging in a harbor must be approved by the US Army Corps of Engineers before any action is taken.

Regulations and Other Rulemaking Specific to Isle Royale National Park, Including Superintendent's Compendium

The NPS regulations are found at 36 *Code of Federal Regulations* (CFR) Chapter I. Most parts of the NPS regulations, especially those outlined in Parts 1–7, apply to the entire national park system and are often referred to as general regulations.

Special regulations, including those specific to Isle Royale are in 36 CFR § 7.38; Isle Royale National Park. Additional regulations specific to Isle Royale are located in 36 CFR §§ 20.1–20.4; Isle Royale National Park; Commercial Fishing. Lastly, Pursuant to 36 CFR §§ 1.5, 1.6, and 1.7(b), the Superintendent may clarify NPS regulations or designate, put conditions on, or relax uses or activities in park units in an annual "Superintendent's Compendium." The superintendent's compendium is mainly for actions that are temporary in nature or may change from year to year and compendium provisions have the force and effect of regulation.

36 CFR § 7.38; Isle Royale National Park:

(a) Aircraft, designated landing areas.

(1) The portion of Tobin Harbor located in the NE1/4 of sec. 4, T. 66 N., R. 33 W.; the SE1/4 of sec. 33, T. 67N., R. 33 W., and the SW1/4 of sec. 34, T. 67 N., R. 33 W.

(2) The portion of Rock Harbor located in the SE1/4 of sec. 13, the N1/2 of sec. 24, T. 66 N., R. 34 W., and the W1/2 of sec. 18, T. 66 N., R. 33 W.

(3) The portion of Washington Harbor located in the N1/2 of sec. 32, all of sec. 29, SE1/4 of sec. 30, and the E1/2 of sec. 31, T. 64 N., R. 38 W.

(b) Underwater diving. No person shall undertake diving in the waters of Isle Royale National Park with the aid of underwater breathing apparatus without first registering with the Superintendent.

(c) Mammals. Dogs, cats, and other mammals may not be brought into or possessed in the park area, except for guide dogs accompanying the blind.

[35 FR 7793, May 21, 1970, as amended at 42 FR 21777, Apr. 29, 1977]

36 CFR §§ 17.1 – 17.8— Conveyance of Freehold and Leasehold Interests on Lands of the National Park System

The Secretary of the Interior is authorized under Section 5(a) of the Act of July 15, 1968, [82 Stat. 354, 16 USC 4601–22(a)], under specified conditions, to convey a leasehold or freehold interest on federally owned real property acquired by the Secretary from non-Federal sources within any unit of the National Park System except national parks and those national monuments of scientific significance.

36 CFR §§18.1-18.12 – Leasing of Properties in Park Areas

The Director (or delegated officials) is authorized to lease certain federally owned or administered property located within the boundaries of park areas. All leases to be entered into by the Director under these authorities are subject to the requirements of this part [36 CFR Part 18], except that, proposed leases that were solicited pursuant to this part prior to January 28, 2002, may be executed in accordance with the terms of the solicitation.

36 CFR §§ 20.1-20.4; Isle Royale National Park; Commercial Fishing

Annual, revocable special use permits authorizing the use of Government-owned structures and facilities in the Park as bases for commercial fishing in the waters contiguous to the Park may be granted by the Director of the National Park Service, or the Regional Director if authorized by the Director, to bona fide commercial fishermen, where such structures and facilities were used for this purpose during the period from April 1, 1937, to December 31, 1939, inclusive, subject to the conditions outlined in 36 CFR Part 20 § 20.2 a-g, § 20.3 and § 20.4. (Currently no commercial fishing is taking place under this policy.)

Please refer to the Superintendent's Compendium for additional park-specific regulatory stipulations as the Compendium is updated on an annual basis (<http://www.nps.gov/isro>)

Administrative Commitments

The major concession contract is with Forever Resorts DBA Isle Royale Resorts. This concessioner provides all overnight facilities, food service, boat rental, guided boat tours, fishing guide service, sales of food supplies, camping supplies, fishing gear, souvenirs, gasoline sales, etc.

In addition, there are two concession contracts for boat transportation from the mainland and one for air transportation. Boat service is provided by Isle Royale Lines, Inc., and Grand Portage-Isle Royale Transportation Lines, Inc. Air transportation service is provided by Isle Royale Seaplanes.

As of 2014, there are four concession contracts: two boat transportation operators, the sea plane operator, and Forever Resorts.

There are eight special use permits for use of government-owned facilities and buildings throughout the park. Individual permits are listed in the Administrative Commitments table.

Utility agreements: There are several agreements or constraints imposed on the operation of some of the park's utilities. For example, the Federal Communications Commission has certain regulations for the operation of radios. The National Park Service has also allowed several other agencies to operate stations or monitor conditions within the park. Examples are: The US Geological Survey monitoring water quality and weather; and Michigan's Department of Natural Resources and the US Fish and Wildlife Service's monitoring of lamprey larval development in several of the park's inland rivers.

Great Lakes Water Quality Agreement of 1972. (as amended; renewed in 1978 and amended in 1987) Expresses the commitment of the United States and Canada (the Parties) to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem.

Convention on Great Lakes Fisheries. To facilitate coordinated, binational fisheries management, the governments of the United States and Canada negotiated and ratified the 1955 Convention on Great Lakes Fisheries which created the Great Lakes Fishery Commission. This bilateral agreement affirms the need for the two nations to collaborate on the protection and the perpetuation of the Great Lakes' fisheries resources.

Great Lakes Basin Compact. Created through the collective legislative action of states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin established the Great Lakes Commission, an interstate agency serving the above mentioned states. The Compact, which was also granted congressional consent through Public Law 90-419, includes nine articles that establish areas of responsibility for the Great Lakes Commission.



International Biosphere Reserve Designation by United Nations, 1980. Isle Royale National Park was designated an International Biosphere Reserve by the United Nations, giving it global scientific and educational significance. Biosphere reserves are internationally recognized terrestrial and coastal or marine areas where management seeks to achieve sustainable use of natural resources while ensuring conservation of the biological diversity of the areas.

The Ecosystem Charter for the Great Lakes – St. Lawrence Basin. Summarizes commonly held principles for pursuing an “ecosystem approach” to Great Lakes–St. Lawrence Basin management. It builds upon landmark agreements such as the US–Canada Boundary Waters Treaty of 1909 and the Great Lakes Water Quality Agreement of 1972/1978. Signatories, who include governmental agencies as well as nongovernmental organizations, agree to use the Charter as guidance in developing their own work plans and priorities, as a means to enhance communication and cooperation with others, and as a means for assessing progress toward a shared vision for the future. This vision incorporates the interdependent goals of environmental protection and economic development of the Great Lakes Region. The Charter is a nonbinding “good faith” agreement; it does not replace or affect implementation of existing laws, agreements and policies. It is a “living document” that will be periodically reviewed and revised to ensure it reflects current thinking on the ecosystem approach.

Great Lakes Charter of 1985 and Charter Annex of 2001. The Great Lakes states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin and Canadian provinces of Ontario and Quebec, through the Council of Great Lakes Governors, established the Great Lakes Charter in 1985. The Charter is a voluntary agreement to assist and guide the Great Lakes states and provinces in cooperative management of the Great Lakes Basin waters through a series of principles and procedures.

Great Lakes Toxics Substances Control Agreement, 1986. The governors of the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin signed the Great Lakes Toxics Substances Control Agreement in May 1986. The purpose of the agreement is to establish a framework for coordinated regional action to control toxic pollutants entering the Great Lakes system; to further the knowledge and understanding of toxic contaminants and ways to control them; and to establish common goals and redirect management practices and control strategies for toxic contaminants to ensure a cleaner Great Lakes ecosystem. The agreement presents a series of six principles to address toxic contaminants in the Great Lakes.



Administrative Commitments				
Name	Agreement Type	Start Date	Expiration Date	Purpose
Isle Royale Line, Inc	Concession contract, CC-ISRO001-10	01/01/10	12/31/19	Provide transportation services
Forever Resorts DBA as Isle Royale Resorts	Concession contract, CC-ISRO00-09	01/01/09	12/31/18	Provide lodging, food, marina services
Isle Royale Seaplanes	Concession contract, CC-ISRO006-16	1/01/16	12/31/25	Provide air transportation services
Grand Portage – Isle Royale Transport Line	Concession contract, CC-ISRO007-08	01/01/08	12/31/17	Provide transportation services from MN
Mary Ellen McKey	Special use permit	01/01/12	12/31/16	Residential use per 1977 SUP agreement
Frances Barnes	Special use permit	01/01/12	12/31/16	Residential use per 1977 SUP agreement
Gerald T Farmer	Special use permit	01/01/13	12/31/16	Residential use per 1977 SUP agreement
Louis Mattson	Special use permit	01/01/10	12/31/19	Residential use per 1977 SUP agreement
Mary Stepanek	Special use permit	01/01/10	12/31/19	Residential use per 1977 SUP agreement
Sally Orsborn	Special use permit	01/01/10	12/31/19	Residential use per 1977 SUP agreement
Grant Merritt	Special use permit	01/01/10	12/31/19	Residential use per 1977 SUP agreement
Mary Scheibe	Special use permit	01/01/10	12/31/19	Residential use per 1977 SUP agreement

Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. analysis of fundamental resources and values
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value.



Fundamental Resource or Value	Excellent Water Quality and Clarity
Related Significance Statements	1, 2, 4, and 5
Current Conditions and Trends	<ul style="list-style-type: none"> • Water resources comprise 75% of total park acreage including more than 200 inland lakes • Lake Superior is listed as an Outstanding International Resource Water (OIRW) and an Outstanding State Resource Water (OSRW) under the guidelines of the Clean Water Act • Lake Superior's temperature has increased during the 20th century up to the present day with an increased duration in summer thermal stratification • The park has been proactive with the ballast water management community in efforts to evolve treatment of ballast water prior to discharge to prevent introductions of invasive nonnative aquatic species. The park recently installed a ballast water treatment system on the <i>Ranger III</i>, the NPS boat that travels between Isle Royale and Houghton, Michigan, and is working with the US Coast Guard to have this method approved upon examination of efficacy • The international treaty on water removal, while currently stable, is always going to be subject to politics. Currently, it states the water shall not be less than the historic low water point. This is important given the 300-year water recharge rate for Lake Superior • According to the State of Michigan, in 2010 the waters of Lake Superior surrounding the park were impaired under section 303(d) of the Clean Water Act for chlordane, dioxin, mercury in fish tissue, and PCBs in fish tissue. Siskiwit Lake was also considered impaired for mercury in fish tissue and PCBs in fish tissue. For both water bodies, the state-designated beneficial use that is considered impaired is fish consumption / aquatic life harvesting. Both water bodies were listed as impaired by Michigan up to 10 years earlier, but no total maximum daily loads (TMDLs) have been prepared to date so they remain on Michigan's 303(d) impairment list • A fish consumption advisory has been issued for some sizes and species of Isle Royale fish by the State of Michigan • Groundwater at the park is sparing, bedrock at a depth of less than 150 feet does not yield sufficient water for a public supply, and water to be had at increased depths is likely to be of poor quality. However, overall surface and subsurface hydrology have not been thoroughly investigated • Isle Royale National Park receives up to 28 inches of precipitation per year and average annual runoff is 5 to 10 inches per year • The park has 13 major stream and 43 inland lake watersheds, with numerous other small lakes and ponds (162 lakes are > than 1 acre, 118 > 2 acres and 56 > 5 acres) • For Lake Superior waters, recent trends in water clarity, specific conductance, dissolved oxygen, and pH are either unchanged or have met standards. However, temperatures are increasing. Advance water quality parameters (major ions, dissolved silica, alkalinity, dissolved organic carbon, and nutrients) are within acceptable ranges for natural variation. With the exception of TP (total phosphorous), nutrient trends are also within the range of natural variation. TP levels are below the upper limit of 5 µg L⁻¹ set by the 1980 phosphorus management strategies. For inland waters, both water clarity and temperature show no significant trend or are within natural variation. Recent monitoring suggests there may be need for concern regarding specific conductance, dissolved oxygen and pH, and continued monitoring is warranted. The advance water quality parameters (alkalinity and dissolved organic carbon) are within acceptable ranges for inland waters. However, major ions, dissolved silica, chlorophyll-a, and nutrients all show recent trends requiring additional monitoring for these waters. Long-range transport of mercury and other persistent organic pollutants continues to be a source of these compounds in both Lake Superior and inland waters, although emissions in the basin are decreasing (see above for fish consumption advisories) • Harmful algal blooms are of increasing management concern for the inland lakes of the park where backpackers obtain drinking water via backpack water filters and at elevated levels blooms can create an anoxic environment toxic to biota (e.g., fish kills). The frequency of these blooms is increasing

Fundamental Resource or Value	Excellent Water Quality and Clarity
<p>Threats and Opportunities</p>	<p>Threats</p> <ul style="list-style-type: none"> • Atmospheric deposition of mercury (Hg) and other persistent organic pollutants or associated water pollution • Human usage – wastewater, fuels • Local pollutant sources such as polycyclic aromatic hydrocarbons from boat exhaust at marinas or risk of spills from freighters on Lake Superior (10,000 gallons is the “significance threshold”) • Human health concerns due to increasing algae/algal blooms • Aquatic invasive species: Two relatively high-profile invasive species (the zebra mussel and spiny water flea) are known to occur in the Lake Superior waters of Isle Royale. Another aquatic invasive, the organism that causes viral hemorrhagic septicemia in fish, has been documented in Lake Superior but not in Isle Royale. Both the zebra mussel and <i>viral hemorrhagic septicemia</i> are believed to have been introduced to the Great Lakes in ballast water discharged by large seagoing ships • The park is concerned about the introduction of invasive species via ballast water from ships in the Great Lakes • Smaller recreational boats are a vector for introducing new aquatic invasive species • Possible release of Lake Superior waters to supplement downstream needs, requests, or demands by US Army Corps of Engineers at locks and dams may also affect lake levels • Death of native sponges (and other species) due to lack of dormancy periods created by warming trends in water temperature • Shipping traffic in Lake Superior waters surrounding Isle Royale has the potential to cause damage related to oil spills and releases of other pollutants and contaminants <p>Issues</p> <ul style="list-style-type: none"> • Shipping lanes and the potential introduction of invasive species into park waters • Potential lower lake levels due to the effects of climate change • Climate change: Warming trends (air and water temperature) and associated evaporation/evapotranspiration (especially when not frozen over) <p>Opportunities</p> <ul style="list-style-type: none"> • The Great Lakes Restoration Initiative: Partnership between National Park Service and US Environmental Protection Agency (EPA) to assess water quality in Great Lakes parks • Opportunities to demonstrate and educate the public on effective methods of controlling invasive species, including contaminated ballast water • Implement planning and actions outlined in the 2012 Great Lakes Invasive Plant Management Plan • Monitoring, management, and mitigation planning for water resources • Identify baseline water quality and historic water quality to inform “clean water” targets • Pursuit of Outstanding National Resource Waters status (tier III) for park • Document, publish, and educate park staff, cooperating agencies, and the general public of current efforts to manage established aquatic invasive species and prevent new introductions

Fundamental Resource or Value	Excellent Water Quality and Clarity
<p>Data and/or GIS Needs</p>	<ul style="list-style-type: none"> • The official park boundary is 4.5 miles from the shoreline. This delineation comes from Michigan Legislation, Act 281 of 1949, and PL 94-567, October 20, 1976. "Shoreline" is defined as the ordinary high water mark. The State of Michigan defines the ordinary high water mark for Lake Superior at 601.5 feet above sea level based on the international Great Lakes datum of 1955. The National Park Service uses the National Oceanic and Atmospheric Administration (NOAA) definition of the term Ordinary High Water Mark (OHWM), or in some cases, Ordinary High Water Line (OHWL) to determine "shoreline" within the Great Lakes, which is not an elevation but is defined more on physical features such as the line of vegetation or the scoured line. While the discrepancy of these two definitions may never be an issue, a solicitor's opinion may be required in the event of a dispute over how the "shoreline" for Isle Royale is defined, especially as it relates to jurisdictional issues. • Identify and monitor potential changes in timing and magnitude of water movement through, or storage in, park surface and groundwater bodies. • Identification, inventory, and monitoring of general water quantity changes. For example, an assessment of the impacts of persistent water levels below the long-term average of Lake Superior is needed. • Identification, inventory, and monitoring water-dependent resources and values key to the park (fish-harvestable species and thermally sensitive species, e.g., cisco; core and advanced water quality parameters; bioaccumulation and its relationship to trophic interactions and fish consumption advisories). • Documentation of the types and function of wetlands and the services they provide. • Assessment of wetland-dependent flora and fauna and potential stressors. • Ambient air quality data (particulate matter, sulfur dioxide, nitrogen dioxide). • Atmospheric deposition and toxics data related to sensitive aquatic ecosystems. • Hydrology scoping report.
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Comprehensive water resources management plan (update as appropriate). • Climate change scenario plan update. Oil pollution contingency planning with the US Coast Guard for spills in Isle Royale National Park needs to be updated periodically.
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Michigan has designated Lake Superior an Outstanding International Resource Water— all water bodies of Isle Royale National Park are designated Outstanding State Resource Waters. • The Great Lakes Water Quality Agreement is an agreement between the United States and Canada protecting the ecosystem of the Great Lakes Basin; Annex 1 spells out the specific water quality objectives to be met, and when these objectives are not met, the area is listed as an area of concern for priority remediation. • Great Lakes Critical Programs Act – (USFWS) establish and implement a fishery resources restoration, development, and conservation program including hatchery production and conduct a wildlife species and habitat assessment survey in the lake's basin. • Great Lakes Water Quality Initiative – (USEPA) Final Water Quality Guidance for the Great Lakes system, also known as the Great Lakes Initiative, includes criteria for states to use when setting water quality standards for 29 pollutants, including bioaccumulative chemicals of concern, and prohibits the use of mixing zones for these toxic chemicals. • Water Resources Development Act(s) – (USACE) WRDA legislation provides the US Army Corps of Engineers with the authority to study water resource problems, construct projects, and make major modifications to projects. Great Lakes Legacy Act – (USEPA) The act authorizes \$270 million in funding over five years beginning in fiscal year 2004 to aid the remediation of contaminated sediment in "Areas of Concern located wholly or partially in the United States," including specific funding designated for public outreach and research components.

Fundamental Resource or Value	Excellent Water Quality and Clarity
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV (continued)</p> <ul style="list-style-type: none"> • Great Lakes Fish and Wildlife Restoration Act – (USFWS) Restoring and maintaining self-sustaining fish and wildlife resources, minimizing the impacts of contaminants on fishery and wildlife resources, protecting and restoring fish and wildlife habitat, including the enhancement and creation of wetlands, stopping illegal activities adversely impacting fishery and wildlife resources, restoring threatened and endangered species, protecting migratory birds • Boundary Waters Treaty of 1909 and related initiatives and orders – (US/Canada) establishing an International Joint Commission of Americans and Canadians to oversee any issue related to waters on the boundary between the United States and Canada • Convention on Great Lakes Fisheries – (US/Canada) commission coordinates fisheries research, controls the invasive sea lamprey, and facilitates cooperative fishery management among the state, provincial, tribal, and federal management agencies • Great Lakes Basin Compact • Compendium of Superintendent’s Regulations – Revised March 2012 – Discharge of Ballast Water: The discharge of any untreated ballast water that comes from outside park waters is prohibited within the boundaries of Isle Royale National Park • The State of Michigan Department of Environmental Quality provides a legal definition of “untreated ballast water” Legal requirements for treatment methods can be found in the State of Michigan Department of Environmental Quality, Ballast Water Control General Permit, Port Operations and Ballast Water Discharge Permit No MIG140000 • USCG and EPA Vessel General Permit for ballast water discharge



Fundamental Resource or Value	Archeological and Ethnographic Resources Illustrating the Interaction of Human Culture and Nature at Isle Royale
Related Significance Statements	2, 3, 5, and 7
Current Conditions and Trends	<ul style="list-style-type: none"> • Physical evidence of human culture within the natural landscape is still represented across the park • Archeological setting: Sites are mostly overgrown with native vegetation but are generally stable • Evidence of prehistoric cultural landscapes and cultural landscapes associated with historic Scandinavian-American folk fishing communities are gradually being obscured by encroaching vegetation growth and biophysical environmental changes • Wilderness designation and associated requirements affect period-specific cultural landscapes
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Looting archeological sites • Erosion of archeological sites due to natural processes and human foot traffic • Campgrounds and other contemporary sites that have been established on top of archeological sites and features <p>Opportunities</p> <ul style="list-style-type: none"> • The park is a place for associated American Indian tribes with ethnobotanical knowledge to engage in, share, and demonstrate traditional practices
Data and/or GIS Needs	<ul style="list-style-type: none"> • Assess the connection between cultural and historic fishery resources and natural lightscape • Characterization of human-caused sound/noise within the natural soundscape • Further identification of ethnobotanical resources • Continued and up to date inventories and surveys • Ethnographic overview and assessment
Planning Needs	<ul style="list-style-type: none"> • Cultural resources management plan • Ethnographic inventory and assessment • Traditional cultural property determination
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • 1842 Treaty of La Pointe: Ojibwe cession of lands within contemporary Wisconsin and western portion of the Upper Peninsula of Michigan with retention of hunting, fishing, and gathering rights within this region • 1844 Isle Royale Compact: Formal adhesion to the 1842 Treaty of La Pointe to include the Grand Portage Band • 1854 Treaty of La Pointe: This treaty ceded all Lake Superior Ojibwe lands to the United States in the Arrowhead Region of Northeastern Minnesota. Reservations for the Lake Superior Ojibwe in Wisconsin, Michigan, and Minnesota; Grand Portage Band were designated from within this land • Antiquities Act of 1906 • Archaeological Resources Protection Act of 1979



Fundamental Resource or Value	Geologic Resources
Related Significance Statements	3, 5, 6, and 7
Current Conditions and Trends	<ul style="list-style-type: none"> • The geology of Isle Royale is relatively stable • Geomorphological processes continue to be relatively stable with minimal human influences or effects to the natural systems
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • National Park Service use of rock drills for construction activities, rock excavations for privy pits and other similar actions, and activities that alter park geologic resources create permanent negative impacts • Illegal gathering of rocks and minerals <p>Opportunities</p> <ul style="list-style-type: none"> • Increased education and appreciation
Related Resources and Values	<ul style="list-style-type: none"> • Keweenaw National Historical Park has the following direct relationship to Isle Royale National Park with regard to geologic resources: • Keweenaw National Historical Park preserves the natural and cultural resources related to the copper mining industry of the Keweenaw Peninsula in perpetuity and makes this valuable part of America’s heritage available to nearly 250,000 visitors each year for their experience, enjoyment, understanding, and appreciation • The significance of Keweenaw National Historical Park is the story of copper and its relation to the development of an industrialized society in the United States Corollary significance statements from Keweenaw National Historical Park identifies that: • The geologic events that formed the Keweenaw mining district include some of the oldest and largest lava flows on Earth resulting in the largest deposits of elemental copper currently known to exist

Fundamental Resource or Value	Geologic Resources
Related Resources and Values (continued)	<ul style="list-style-type: none"> • The Keweenaw Peninsula is significant to the story of copper because, the peninsula was a unique geologic occurrence in the world—it (and nearby Isle Royale) was the only area in the world where economically abundant quantities of pure, elemental copper occurred. The copper was found in three major geologic settings: fissures, amygdaloids, and conglomerates • The primary difference between Isle Royale and the Keweenaw Peninsula is: • The commercial abundance of copper on the [Keweenaw] peninsula ensured development of electrically based applications that large, inexpensive quantities of copper could be available, thus helping to launch a fundamental change in American society. Isle Royale was not easily accessible and the relative quantities of copper deposits were lower compared to what was available on the Keweenaw Peninsula; therefore, the island was not mined to the same extent that the Keweenaw Peninsula was modified and developed as part of historic mining operations
Data and/or GIS Needs	<ul style="list-style-type: none"> • Identification of location and extent of significant geologic features and geologic processes • Identification of geologic features (soil, physical, chemical, and biological properties) and the sensitivity of these features and properties to change • Evaluation of surface resiliency, stability, and integrity (including soils, slope stability, and shoreline and fluvial processes) and related geologic hazards • Overview of park's soil and geologic resource issues, including theft of semi-precious stones and erosion due to increased access to an area • There is a need to identify and map the near surface fracture system to facilitate the understanding of surface and groundwater flow regimes • Analysis of contaminants, structures, or alterations to the land that may pose a monetary or safety liability to the National Park Service at abandoned mines and hazardous waste sites, including underground storage tanks • Further research on native copper chemistry, molecular structure, and specific locale signature attributes • Submerged geomorphology. Approximately two-thirds of the park is below the water level of Lake Superior. Many subaqueous habitats exist at Isle Royale National Park. Environments can change in a few meters of water. Traditional surficial mapping does not include submerged geology and US Geological Survey maps extend to a depth of only 15 feet (5 meters) offshore. Data requirements for better characterizing the submerged geomorphology of the park include LiDAR surveys, satellite imagery, multibeam mapping, bathymetry, water quality and circulation, shoreline change data, and storm data • Ancient shorelines—when the last glaciers retreated from the area less than 10,000 years ago, the fluctuation of the level of Lake Superior formed a series of relict shorelines. Relict shoreline features include beach deposits, wave-cut cliffs, terraces, and benches. Identifying and mapping shorelines will provide important information for understanding how they formed and assist in identifying sites of early American Indian use and occupation • Abandoned mine sites—historic copper mining, mainly for copper, occurred mostly in the mid- to late 1800s and evidence of precontact mining by American Indians covers several thousand years. Native copper is widely distributed on Isle Royale, but compared to the Keweenaw Peninsula and other areas of the Great Lakes there are no large lode deposits. About 80% of the park is unsurveyed for abandoned mine sites. Two mines of note are the Island and Minong mines, both representing the last sustained extraction efforts on Isle Royale
Planning Needs	<ul style="list-style-type: none"> • No planning needs identified
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Further analysis and determination may be required as it relates to possible state-retained subsurface mineral rights identified in letters between the governor and Secretary of the Interior as part of formal cession of lands by the State of Michigan to the United States

Fundamental Resource or Value	Native Fish Populations
Related Significance Statements	1, 2, 3, 4, and 5
Current Conditions and Trends	<ul style="list-style-type: none"> • The State of Michigan Department of Natural Resources monitors lake trout populations on a five-year interval in the Lake Superior waters of Isle Royale. Trends from this effort are forthcoming subsequent to the completion of future survey cycles. Data are lacking to assess trends for inland lake fisheries. • There are 54 species of fish native to the park, including two species for which occurrence in the park has not been established. This represents a diverse fish fauna present in the lake and the park. Coaster brook trout, a strain of brook trout unique to Lake Superior, is present in the park and has been the subject of a restoration program. There is also information that suggests that Isle Royale waters support phenotypically distinct populations of lake trout that may also be genetically distinct and/or adapted to use different aquatic habitats and conditions. • Commercial fishing operations/activities have ceased in park waters. • The transfer of traditional environmental knowledge related to Isle Royale-specific native fish populations from traditional and/or historic fishing activities is dwindling as small-scale commercial fishing operations are no longer active in Isle Royale waters. • USCG Marine Safety Office in Duluth has designated Isle Royale National Park as a worst case discharge area for a vessel. The contingency plan has been updated based on the Oil Pollution Act of 1990 requirements, and will be updated as needed.
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Invasive species (both in Superior and interior waters): The park has been active in addressing ballast water, although this is just one of many ways invasive species may be introduced. • Ten species of nonnative fish are in the park, including one species (sea lamprey) widely considered to be invasive. Six of the nonnative fishes that are present in Isle Royale National Park waters were originally introduced outside park boundaries and are maintained through non-NPS stocking programs outside Isle Royale waters to support recreational fishing. • Potential impacts from unregulated or unmonitored fishing and harvest. • Atmospheric deposition (acid, mercury, etc.). • Commercial fishing operations adjacent to park boundary (although this is not a current issue). • Lack of baseline data related to genetics and stock levels (historic catch data provides limited information). • Coaster brook trout population numbers are low and disease occurrence could have significant impacts on the population. • Climate change: Temperature changes (increases in air and water temperature) and the associated influences to lake ice cover and lake level. • Land uses and associated activities at campgrounds, developed areas, etc., could degrade streams, and impact water quality and anadromous fish populations. • Environmental impacts associated with past land uses, such as copper smelting, previous fish introductions, and changing climate conditions influencing Lake Superior fish stocking plans could affect ratios between native and nonnative fish. • Michigan, Wisconsin, and Minnesota state departments of natural resources as well as Canadian fishery management actions in Lake Superior directly, indirectly, and cumulatively affect Isle Royale fish populations. • Lake level changes can influence fish habitat. • Shipping lanes can serve as a vector for invasive species, disease, pollutants, and other impacts that may influence fish populations. • Shipping traffic in Lake Superior waters surrounding Isle Royale has the potential to cause damage related to oil spills and releases of other pollutants and contaminants. • Lack of analysis of data submitted to Michigan DNR from assessment fisheries.

Fundamental Resource or Value	Native Fish Populations
Threats and Opportunities	<p>Opportunities</p> <ul style="list-style-type: none"> • Points of discharge in Lake Superior are far fewer than in other Great Lakes. As a result of this, and the relatively clean quality of water, changes in conditions can be easily detected. For example, mercury levels associated with recent mining activity is measurable. • Fishing records filed with the Michigan Division of Natural Resources are available for the park to help determine past fish population baselines.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Determination of interdependent ecological functions and the relationships of other park resources and processes to fish populations. • A more complete understanding of the relationships between conditions and processes that created and sustain wetland habitats (e.g., successional processes, fire, fluvial processes, water table depths and durations, water sources, water quality) and associated effects on fish populations is needed. • Air quality deposition data and relationship to sensitive aquatic ecosystems (water and aquatic biota). • Further research on ethnographic associations with fish and fish habitats. • A better understanding of the impacts of transportation systems on fish is needed. • Comprehensive agency review of Isle Royale's existing regulations and management activities regarding recreational fishing is needed to determine if existing regulations are adequate to ensure that native species and ecosystem functions are protected from unacceptable impacts leading to impairment. • NPS <i>Management Policies 2006</i> state that parks will maintain all fish native to park ecosystems (4.4.1, 4.4.2) and must monitor the use of fisheries resources to determine that harvest will not unacceptably impact natural distributions, densities, age-class distributions, or behaviors of native harvested or nonharvested species (4.4.3). Research is needed to determine the impacts on fish populations from the various types of fishing and fishing groups in Lake Superior including but not limited to recreation and sport fishing, tribal fishing, and varying scales of commercial fishing operations.
Planning Needs	<ul style="list-style-type: none"> • Fisheries management plan, currently in draft, needs to be completed. • In the case of nonnative sport fish planning and management and the effects on native fish populations, efforts should be conducted cooperatively with the states of Michigan, Wisconsin, and Minnesota, and with Canada, as each have fishery management programs within Lake Superior. • Climate change scenario plan update.
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • 36 CFR Part 20: Commercial fishing is permitted on a limited basis in Isle Royale National Park waters. • 1955: NPS Director's Order/Policy allows commercial fishing to continue on a modest, but representative scale; authorizes special use permits for continuation of commercial fishing bases at specific fisheries. • NPS fishing regulations consist of 36 CFR section 2.3, nonconflicting state regulations adopted as a part of 36 CFR section 2.3, and any special regulations established under 36 CFR section 1.5 and listed under 36 CFR section 7 and/or in the Superintendent's Compendium. • The State of Michigan retains the right to regulate fishing in Isle Royale waters.

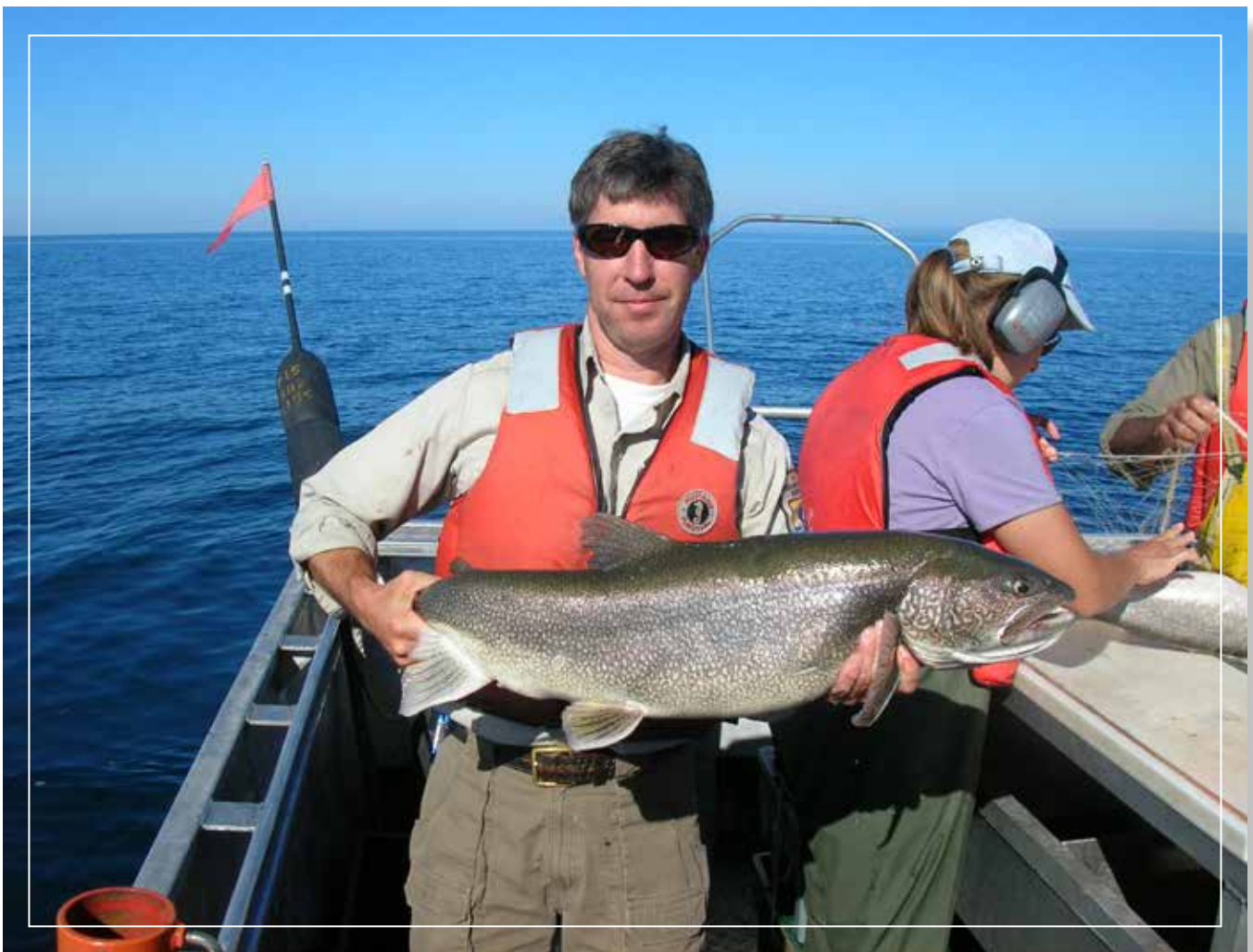


Fundamental Resource or Value	Maritime Character
Related Significance Statements	1, 2, 4, and 5
Current Conditions and Trends	<ul style="list-style-type: none"> • Gradual loss of historic maritime culture, knowledge, and island-specific construction techniques such as boats, docks, reuse of housing components, etc • Relevant traditional environmental knowledge includes the following: <ul style="list-style-type: none"> • Navigational skills associated with specific island bathymetry • Specific island weather conditions and patterns • Island-specific sensory navigation: inherent sensory echo location boaters use in the fog by being attuned to the environmental setting and being able to differentiate the wave sounds in each location and the various distinct smells of individual places • Gradual loss of mid-19th to mid-20th century knowledge of the endemic, island-specific vernacular boat designs due to (1) the diminished activities related to their continued use, and (2) loss through physical deterioration • Shipwrecks are deteriorating slowly due to Lake Superior weather and environmental conditions, although the cold, clean waters of the lake have a moderating effect on the relative rate of deterioration • Lighthouses are generally stable (the two NPS- and two USCG-owned) although continued long-term maintenance and immediate short-term environmental hazard mitigation is required for three lighthouse properties • Most historic buildings and structures associated with Isle Royale fishing culture were primarily ephemeral by nature and character as most were only ever intended for seasonal use. This general condition, combined with the choice of material types, construction methods, and severe climatic conditions, has meant that all buildings and structures have deteriorated and will continue to deteriorate over time, regardless of ownership. Fishery buildings may therefore represent the most temporary of all historic island buildings because individual fishing boats and site-specific fishery locations were more important than the individual buildings themselves • The historic seasonal use of land and waters as a “fishery” has declined almost to a point of obscurity with regard to visibility and building conditions • The general lack of modern development, change, and “improvements” in Isle Royale buildings since park designation has created a condition where most fishing buildings and structures are “frozen in time” relative to other similar fishing-related, Great Lakes-based cultural landscapes from the same era • Historic and traditional seasonal uses of structures by previous users and former owners are declining and administrative use is increasing. Isle Royale-specific traditional knowledge and understanding of vernacular boat building is declining
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Shipping traffic between the main island and Passage Island presents several issues including: potential introduction of invasive species, such as zebra mussels, into relatively pristine park waters and “clean” shipwrecks • Recreational boating, concession operations, and contracted boat services could potentially introduce invasive species • Loss of traditional ethnographic resources (people, music, stories, and culture in general) as they relate to the island maritime lifestyle • Loss of Isle Royale-specific vernacular boat building knowledge, skills, designs, and practices, and the overall traditional environmental knowledge related to maritime culture • Continued deterioration of commercial fishery buildings intended for seasonal uses • Administrative changes and changing uses of historic commercial fishery buildings • Physical loss of historic commercial fishery sites

Fundamental Resource or Value	Maritime Character
Threats and Opportunities	<p>Threats (continued)</p> <ul style="list-style-type: none"> • The natural night sky of the maritime setting of Isle Royale is threatened by light pollution from light sources originating outside park boundaries. Additionally, general light pollution from sources both in and outside park boundaries potentially threatens traditional cultural values of the natural night sky as viewed from within park boundaries. • Deterioration of historic light stations and USCG decommissioning operating lights within existing lighthouses. • Shipping traffic in Lake Superior waters surrounding Isle Royale has the potential to cause damage related to oil spills and releases of other pollutants and contaminants. • Gradual loss of mid-19th to mid-20th century knowledge of the endemic, island-specific vernacular boat designs due to (1) the diminished activities related to their continued use, and (2) loss through physical deterioration. <p>Opportunities</p> <ul style="list-style-type: none"> • Work with interested local native tribal members to preserve and document maritime cultural activities such as fishing practices, stories and legends (i.e., Mishipeshu). • Formal vernacular boat building partnerships to maintain traditions. • Boat building school and partnership to keep the culture alive. • Sailing and navigation skills school. • All-inclusive traditional skills fishing practice such as net tying and general fishing apprenticeships. • Renewed small-scale demonstration fisheries provide opportunities to promote and preserve traditional environmental knowledge, scientific creel information, visitor experience opportunities, and potentially economically sustainable fish sales to visitors. • Preservation partnerships using traditional skills to maintain historic buildings. • The minimum tool requirement for maintenance of historic resources that contribute to the wilderness character (where applicable) also helps to ensure that traditional methods, tools, skills, and processes are used, continued, and thus preserved. However, overly restrictive minimum requirements analyses could negatively impact the economic feasibility of maintaining historic structures.
Related Resources and Values	<ul style="list-style-type: none"> • Lightscape and night skies as related resources to maritime character in terms of traditional celestial navigation opportunities.
Data and/or GIS Needs	<ul style="list-style-type: none"> • Ethnographic research and documentation. • Documentation of historic and prehistoric vernacular technology and traditional skills specific to the island and surrounding waters. • Side scan sonar documentation of other submerged maritime resources and sites. • Comprehensive GIS/LiDAR documentation of shipwrecks using latest technology. • Shipwreck monitoring plan. • Understanding of how the public experiences and values the “social functions” of fish and fishing (e.g., recreational fishing activities, enjoyment of eating fish, educational and interpretive opportunities, historic or cultural significance).
Planning Needs	<ul style="list-style-type: none"> • Partnership planning and coordination for various potential activities such as lighthouse preservation, light keepers-in-residence, artist-in-residence, and vernacular boat building schools. • Comprehensive demonstration fishing plan. • Historic structure reports completed for lighthouses. • Historic structure reports for fishing-related resources. • Cultural landscape reports for fishing-related resources and lighthouses.

**Fundamental
Resource or Value**
Maritime Character
**Laws, Executive
Orders, and
Regulations That
Apply to the FRV,
and NPS Policy-level
Guidance**
Laws, Executive Orders, and Regulations That Apply to the FRV

- 36 CFR Part 20: Commercial fishing is permitted in Isle Royale National Park waters
- General laws and policies with specific application at Isle Royale National Park include: Rivers and Harbors Act, National Maritime Heritage Act of 1994, National Historic Lighthouse Preservation Act of 2000, Clean Water Act, and more
- The National Park Service has adopted many USCG regulations under 36 CFR 3 2(a), nonconflicting Michigan boating laws and regulations under 3 2(b), and regulation of boating generally under 36 CFR part 3 and 1 5
- June 16, 1955: Director's Order/policy detailing commercial fishing activities
- NPS fishing regulations consist of 36 CFR section 2 3, nonconflicting state regulations adopted as a part of 36 CFR section 2 3, and any special regulations established under 36 CFR section 1 5 and listed under 36 CFR section 7 and/or in the Superintendent's Compendium
- Special regulations in 36 CFR part 20,
- Resource Manual 39 (and the pending Director's Order 39) for Ocean and Coastal Resource Management



Fundamental Resource or Value	Scenic Resources
Related Significance Statements	1, 2, 3, and 6
Current Conditions and Trends	<ul style="list-style-type: none"> • Lack of a formal scenic resource inventory and prescriptive scenery management objectives has impacted these resources negatively in some contexts. The relatively undeveloped character of Isle Royale scenery is one of a kind and unusually memorable within the region. Flora, fauna, and landform have the general appearance of being undisturbed, or are relatively undisturbed and may include relict plant communities. Most historic and prehistoric human modification/disturbance of the natural environment is largely unnoticeable. • Visually striking and intriguing natural features and processes on Isle Royale have remained as dominant landscape features since designation. • The use of modern or contemporary materials, construction methods, and styles in continued administrative developments greatly contrast the natural setting and are generally highly visible. • Any disturbance or change in an ecosystem composition, structure, or function directly or indirectly caused by humans is considered a human impact or human influence. Cultural modifications related to scenic resources are defined as any human-caused change in the land form, water form, vegetation, or the addition of a structure that creates a visual contrast in the basic elements (form, line, color, texture) of the naturalistic character of a landscape. • Some cultural modifications add favorably to visual variety of the scenery where introduced elements enhance and promote visual harmony with characteristic elements, while others are visually unobtrusive where vegetation has grown up and materials have naturally weathered. • Other cultural modifications adversely influence the characteristic, undeveloped, wild natural condition the park was established to protect by introducing discordant visual elements that starkly contrast with the natural processes and setting. • Air quality visibility trends: Visibility is monitored at Isle Royale National Park from data that is collected off-island. Data show that vistas in the park are sometimes obscured by pollution-caused haze. Using NPS Air Resources Division-recommended metrics, average visibility is 5 deciviews above estimated natural conditions and visibility impairment is a moderate concern in this park. Ten-year trends show that the “hazy” days remain unchanged at the park; however, the “clean days” are improving. • The park provides an outstanding opportunity to appreciate a natural nighttime lightscape (stars, reflection of night sky off water) with only modest intrusion of anthropogenic light. The park retains most of the natural aspects of a dark night sky, including the ability to observe faint features of the night, see detail in the Milky Way, and for visitors to have the experience of fully dark-adapting their eyesight. Lights from internal park developments are easily visible from many areas of the park and present the opportunity to further mitigate the lighting. Additionally, nearby light sources such as the city of Thunder Bay are visible from the park. Because of its setting, Isle Royale is probably more vulnerable to stray light than other areas due to it being surrounded by water (which reflects light at low angles of incidence), the propensity for docks and harbors to use bright and misdirected outdoor lighting, and the sensitivity of the ecosystem. • Growing populations in nearby cities and newer technology lamps that are brighter than previously available have resulted in a downward trend in resource condition. Current resource conditions have the potential for improvement through the use of best management practices and new approaches in both NPS lands and in surrounding communities.

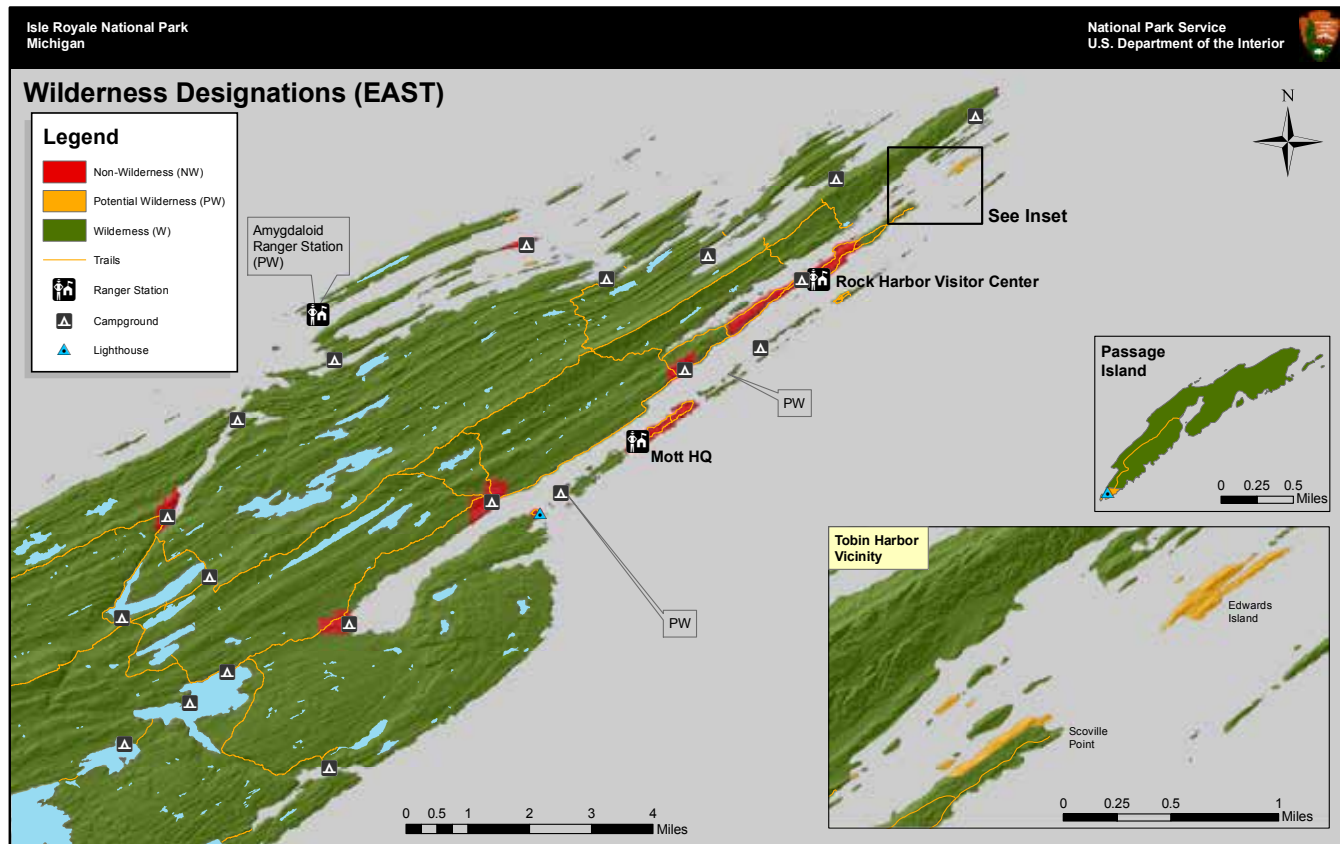
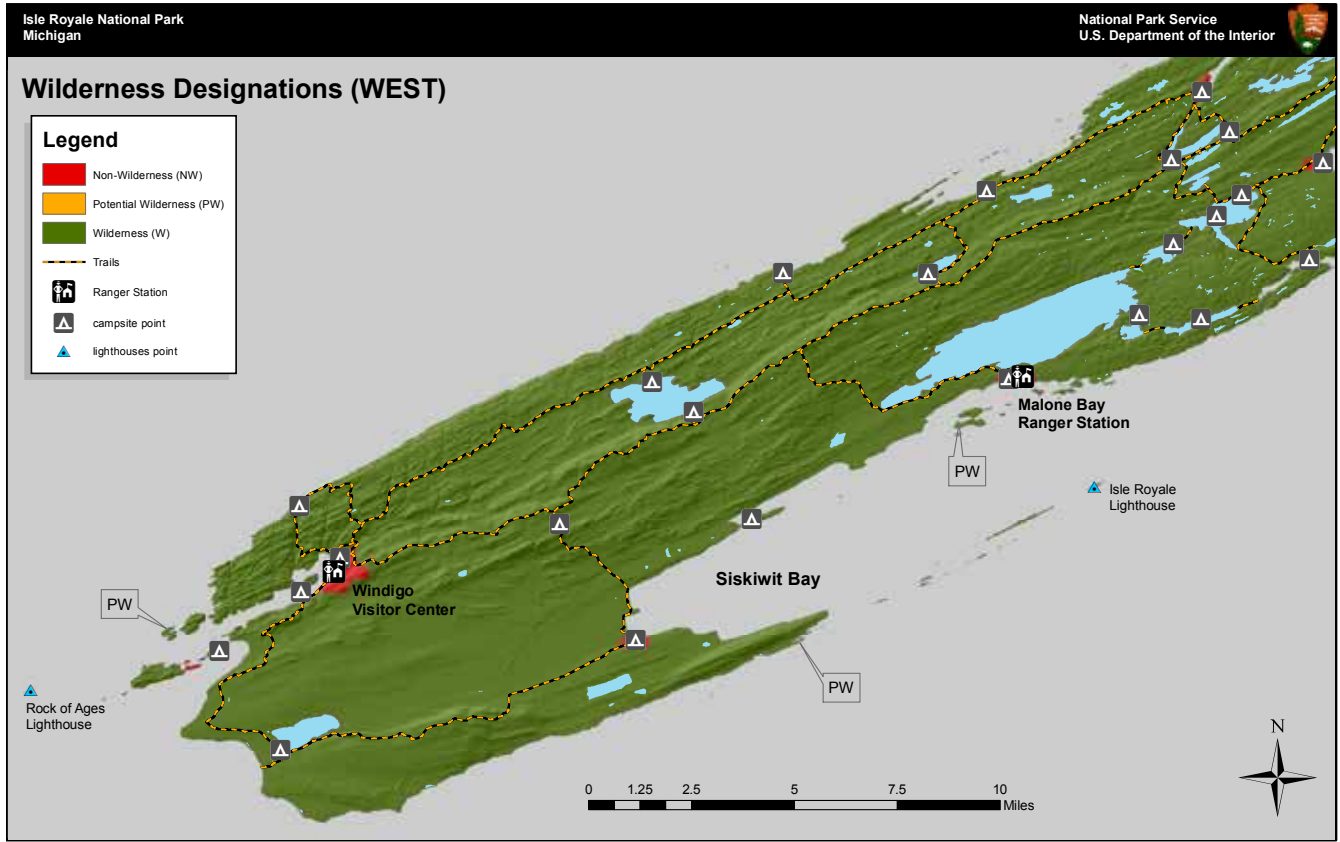
Fundamental Resource or Value	Scenic Resources
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Introduction of discordant, unnatural, visually contrasting developments and other physical activities within or modifications of the natural setting • Air pollution obscures scenic views, impacting visitor enjoyment of the area • Wildfires degrade visibility for short-term episodes • Human introduction of new light sources • Climate change: Increase in air and water temperature and associated influences on lake ice cover, flora, and fauna <p>Opportunities</p> <ul style="list-style-type: none"> • Prescriptive scenic management zoning delineation following the scenery conservation system process to provide direction for all future administrative actions and associated development • Advanced interpretation of scenery and shoreline and how these systems are influenced by changes in climate • The night sky at Isle Royale is relatively dark compared to the experience of the populace that visits the island. This provides outstanding opportunities for star gazing, watching the aurora borealis, meteor showers, etc. Additionally, the night sky provides a contemplative backdrop that enhances many other aspects of the parks, including solitude, the appreciation of natural sounds at night, the impression of a wild landscape, connection with traditional stories and native peoples, the frontier heritage of the area, and the appreciation of astronomical phenomena—particularly the aurora borealis. The scenic aspect of the night integrates with the interpretive theme of isolation.
Data and/or GIS Needs	<ul style="list-style-type: none"> • A formal visual/scenic resource inventory leading to defined scenery conservation management classes (prescriptive zones) is needed for incorporation into future long-range, comprehensive management plans • Continued monitoring of visibility impacts, including the addition of in-park visibility monitoring, from particulate matter, nitrogen oxides, and sulfur dioxides • Vegetation impacts from ozone • Formal quantitative baseline inventory of sky brightness in park • Theoretical natural brightness of night sky incorporating solar flux, climate, elevation, and atmospheric properties is needed to help establish natural night sky baseline • Natural variability in night sky brightness • Correlation between quantitative measures and experience and perception of the night by visitors • Visitor surveys and outreach to determine use and value of night sky by the public and generally about scenery related to public values • Viewshed analysis of wilderness and key scenic areas • Qualitative indices of night sky • An air quality visibility station (or stations) needs to be established within park boundaries
Planning Needs	<ul style="list-style-type: none"> • Formal identification of scenery conservation management classes including associated prescriptive class/zone objectives and permitted activities and adoption of a formal visual resource contrast rating process for proposed actions (by agency or other entity) • Climate change scenario plan update
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Class I Airshed status under Clean Air Act

Fundamental Resource or Value	Wilderness
Related Significance Statements	1, 2, and 6
Current Conditions and Trends	<ul style="list-style-type: none"> • A total of 132,018 acres were designated as wilderness and 231 acres were designated as potential wilderness additions in 1976 (Public Law 94-567) Within the original 231 acres of potential wilderness additions, 138 acres consisting of two powerline corridors were converted to wilderness in 1983 (48 Fed Reg 12842) following the abandonment, dismantling, and removal of the nonconforming powerlines • Total designated wilderness acreage in June 2013 includes 132,156 acres and 93 acres of potential wilderness additions that may be converted upon termination of nonconforming uses Nonconforming recreational and administrative uses of buildings and structures exist within both designated wilderness and potential wilderness additions • Isle Royale National Park is composed of 571,790 total acres including both emergent terrestrial and submerged lands No portion of Lake Superior is designated as wilderness Approximately 99% of the terrestrial land area of the park is designated wilderness Designated wilderness is therefore approximately 23% of the entire park acreage considering terrestrial and submerged areas together • The wilderness character at Isle Royale reveals all the qualities, opportunities, values, and features identified in the Wilderness Act, including natural, untrammeled, and undeveloped qualities, opportunities for solitude or primitive and unconfined recreation, and features of, scientific, scenic, and historical value These qualities are more fully described in appendix D • Baseline assessments for wilderness character have not been completed and so no trend information is available • Both moose and wolves are relatively recent additions to the island, arriving in the early and mid-20th century Their abundance has fluctuated over time as documented by the long-term research conducted by Michigan Technological University • Approximately 15,000 people visit Isle Royale annually, and of those 15,000, approximately 85% stay on the island overnight, with an average stay of 4.5 nights Of those, 83% are camping, mostly in designated campgrounds in wilderness Approximately 3,000 backcountry camping permits are issued each year Day visitors make up about 11% of total visitation to the park Overnight access to the wilderness requires a backcountry camping permit While overall visitation, as well as overnight backcountry stays, has generally decreased since 2003, park staff note that shoulder season visitation is increasing as is the average group size Visitation fluctuates and may increase in the future • Access and visitation to the island by members of the general public is prohibited during the winter months (November to mid-April) Only scientists and park staff engaged in wolf-moose winter study research activities (the longest running predator-prey study in the world) are permitted access and residence on Isle Royale for several weeks each winter
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Climate change: Increases in air and water temperature, including that of Lake Superior, will probably result in alteration of many of the natural processes, species, and the associated influences on wilderness character This is part of a larger philosophical discussion about “natural” vs “ecological” conditions in wilderness areas • Removal of moose skulls and skeletal parts from the natural setting, or the practice of leaving stacked/piled moose remains in designated areas following categorizing efforts associated with research practices • Wilderness character: Areas of the wilderness that may seem isolated and wild during the daytime can often appear substantially altered by the works of man during the night Outdoor lights can be visible for tens of miles, far beyond the visibility of the associated structure during the day A scene not dominated by artificial lights is part of the primeval character of wilderness areas as referenced in the 1963 master plan The city of Thunder Bay is visible from many locations within the park at night Ontario, Canada, is visible from most areas of the park during the night (either directly or by its light dome during cloudy conditions), belying the isolated nature of the island

Fundamental Resource or Value	Wilderness
<p>Threats and Opportunities</p>	<p>Threats (continued)</p> <ul style="list-style-type: none"> • Threats to the natural quality include introduced nonnative terrestrial and aquatic species and extirpations of native species. Threats to the untrammelled quality include deliberate manipulations of some animal populations (e.g., genetics of Coaster brook trout), removal of invasive plants, and suppression of natural fire ignitions. • Threats to the undeveloped quality include established and maintained trails, use of mechanized or motorized equipment or transport for both emergency and nonemergency purposes, administrative installations such as research plots and instrumentation, fire towers, weather stations and communication systems. This quality is also degraded by the presence of several structures and installations in wilderness and potential wilderness additions as well as the ongoing human occupation of some of those structures. • Threats to opportunities for solitude or primitive and unconfined recreation include sights and sounds of developed areas within or adjacent to wilderness, depreciative visitor behaviors in wilderness, and requirements for camping in designated campsites within designated wilderness. <p>Opportunities</p> <ul style="list-style-type: none"> • Rejuvenate the Park Wilderness Committee and formalize the minimum requirements decision process, including an analysis of impacts on wilderness character. • Improve organizational capacity for preserving wilderness character through staff training and engagement with park partners. • Expand visitor education efforts focused on Leave No Trace to reduce unintentional visitor impacts on wilderness resources. • Terminate nonconforming uses where no longer necessary within potential wilderness additions and convert those lands to wilderness as provided for in Public Law 94-567.
<p>Data and/or GIS Needs</p>	<p>Because most of the park's land base has been officially designated wilderness, most other fundamental resources and values will be within designated wilderness or within proximity to designated wilderness. Consequently, many aspects of the other fundamental resources and values may either contribute to or degrade wilderness character. A full analysis of these interrelationships is needed.</p> <p>Establish an ongoing wilderness character monitoring effort that includes:</p> <ul style="list-style-type: none"> • selection of indicators and measures • defining baseline conditions • assessing trends over time <p>Many of the data to inform this effort are already available; however, the following data gaps exist:</p> <ul style="list-style-type: none"> • Compile and analyze visitor use statistics to evaluate changes in user demographics, length of stay, primary destinations, group size, user preferences, and other variables. • Determine baseline visibility conditions and associated impacts from airborne particulates, nitrogen oxides, and sulfur dioxides. • Determine baseline ozone metrics and associated impacts on sensitive vegetation. • Evaluate current and future air quality metrics relative to the national ambient air quality standards to help assess health impacts to visitors and employees. • Establish a quantitative baseline inventory of sky brightness in the park and develop a theoretical natural brightness of night sky incorporating solar flux, climate, elevation, and atmospheric properties. • Determine a correlation between quantitative measures and experience and perception of the night by visitors potentially through the use of visitor surveys and outreach to determine use and value of night sky by the public. • Complete visual resource inventory and viewshed analysis of key observation points as seen from wilderness and externally looking toward wilderness.

Fundamental Resource or Value	Wilderness
<p>Planning Needs</p>	<ul style="list-style-type: none"> • Complete a comprehensive park wilderness stewardship plan. This plan would include an evaluation of potential wilderness additions with regard to existing nonconforming uses and determine possible avenues for official conversions of these lands to designated wilderness, as well as an evaluation of commercial services activities in wilderness using an “extent necessary determination.” • Climate change scenario plan update • Address unique challenges and opportunities for cultural resources in wilderness via the cultural resources management plan or other means • Review and update existing trail management plan(s), including maintenance standards and techniques • Develop a research strategy that considers wilderness character, identifies research priorities, and establishes consistent criteria by which research in wilderness is evaluated and permitted. Include wilderness character considerations in the next five-year update to the fire management plan
<p>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</p>	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • Public Law 94-567 in 1976 designated the Isle Royale Wilderness and identified potential wilderness additions to be included in wilderness when their nonconforming uses are terminated







Fundamental Resource and Value	Island Biogeography and Ecology
Related Significance Statements	1, 2, 4, and 5
Current Conditions and Trends	<ul style="list-style-type: none"> • General warming trend • Changes and fluctuations in island species composition with particular note of animal impacts to plant assemblages and changes in aquatic ecosystem species assemblages
Threats and Opportunities	<p>Threats</p> <ul style="list-style-type: none"> • Nonnative/invasive species outcompeting and/or displacing native species and assemblages • Oil spills, illegal collection of resources, management actions, visitor uses • Arctic disjunct plants occupy a delicate zone, tenuously clinging to many shoreline locations and are therefore highly vulnerable to the effects of climate change • Anthropogenic light is known to affect many species, and is suspected of playing an important role as an environmental cue and potential stressor for most nocturnal species and some diurnal ones. Aquatic habitats and wetlands are thought to be more sensitive to anthropogenic light due to their open nature and the species that reside there • The threat of human intervention into the natural island biogeography processes • Effects of climate change on park species and ecosystem <p>Opportunities</p> <ul style="list-style-type: none"> • Continued opportunities for Isle Royale to provide the necessary setting and conditions for the characteristics of island biogeography to carry on
Data and/or GIS Needs	<ul style="list-style-type: none"> • Rarity ranking and ecoregional context (e.g., common, endemic, peripheral) of species and communities • Successional stages and abiotic controls on ecosystem development including quantitative information on natural disturbances to the system • Comprehensive list of native indicator species • Species interactions with other organisms and environment • Natural range of variation of primary production, herbivory, disturbances, erosion, etc • An understanding of biological and ecological characteristics of the species and ecosystem including range of natural variability and relative condition • An understanding of population status and distribution of the species or communities • Evaluation of conditions and status across multiple levels of ecological hierarchy • Ecological evaluation related to the topic of “natural” vs “human-influenced natural processes” • Definition of “island integrity” as it relates to the concept of island biogeography as a baseline standard
Planning Needs	<ul style="list-style-type: none"> • Climate change scenario plan update
Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance	<p>Laws, Executive Orders, and Regulations That Apply to the FRV</p> <ul style="list-style-type: none"> • None identified

Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental resources and values. For example, a key issue may pertain to the potential for a fundamental resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but that still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Isle Royale National Park and the associated planning and data needs to address them:

1. Status of potential wilderness additions and nonconforming uses (in progress in the wilderness stewardship plan).
2. Comprehensive assessment of park assets, including conditions, need for maintenance and operational challenges; *Ranger III*, and mainland resources included (in progress).
3. Planning for National Park Service acquisition of three US Coast Guard-owned lighthouses within the designated park boundary including immediate environmental mitigation related to hazardous contaminants and long-term operation and maintenance planning of these structures once acquired. Currently, one lighthouse has been acquired and the other two are in progress.
4. Visitor use and management plan to address user capacity issues (in progress in the wilderness stewardship plan and concessions management plan).
5. Need comprehensive visitor survey to determine where visitors are from, desired expectations, etc.
6. Long-range interpretive plan update as last plan completed in 2000.
7. Need long-term comprehensive plan for ungulate and vegetation management (in progress in moose-wolf-vegetation management plan).

Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

Planning Needs – Where a Decision-Making Process Is Needed			
Related to an FRV?	Planning Needs	Priority (H, M, L)	Notes
Y	Wilderness stewardship plan	H	Ongoing; complete and implement a wilderness stewardship plan aimed at addressing operational issues and preserving wilderness character This plan would include an evaluation of potential wilderness additions with regard to existing nonconforming uses and determine possible avenues for official conversions of these lands to designated wilderness, as well as an evaluation of commercial services activities in wilderness using an “extent necessary determination ” Develop a research strategy, that considers wilderness character, identifies research priorities, and establishes consistent criteria by which research in wilderness is evaluated and permitted
Y	Cultural resources management plan	H	Ongoing; address unique challenges and opportunities for cultural resources in wilderness via the cultural resources management plan or other means
Y	Comprehensive water resources / aquatic resources management plan	H	Update needed; last plan completed in 2005
Y	Fisheries management plan	H	A fisheries management plan was started years ago but was never completed and is still needed In the case of nonnative sport fish planning and management and the effects on native fish populations, efforts should be conducted cooperatively with the states of Michigan, Wisconsin, and Minnesota, and with Canada, as each have fishery management programs within Lake Superior
Y	Partnership preservation plan for various cultural and ethnographic resources and values identified in comprehensive planning efforts	M-H	Partnership planning and coordination for various potential cultural resources preservation activities such as lighthouse preservation, light keepers-in-residence, artist-in-residence, vernacular boat building schools
Y	Commercial services management plan	M	
Y	Visitor use management plan and visitor experience and resource protection analysis	M	Visitor use and management plan to address user capacity issues Some aspects of visitor use capacity issues are addressed in the ongoing wilderness stewardship plan
Y	Long-range interpretive plan	M	Update needed; last plan completed in 2000
Y	Visual resource inventory and scenery conservation class management zone update	M	Formal identification of scenery conservation management classes to be incorporated into all future management plans and actions
Y	Shipwrecks management plan	M	

Planning Needs – Where a Decision-Making Process Is Needed

Related to an FRV?	Planning Needs	Priority (H, M, L)	Notes
Y	Historic structure reports	M	Building from ongoing cultural resources management plan, identify and prioritize individual historic structure reports Historic structure reports are needed for lighthouses that are projected for acquisition
Y	Cultural landscape reports	M	Building from ongoing cultural resources management plan, identify and prioritize individual cultural landscape reports
Y	Comprehensive demonstration fishing plan*	M	GMP notes Edisen Fishery as the site for demonstration fishery The CRMP will identify the appropriate locations for a continued demonstration fishery should it be determined to continue this interpretive practice
Y	Trail management plan	M	Review and update existing trail management plan(s), including maintenance standards and techniques
Y	Climate change scenario plan update	L	Completed (should be updated as needed): Climate change scenario planning allows the park to explore the range of climate futures that are possible based on the latest modeled projections and identify the associated impacts and management implications Isle Royale National Park completed a climate change scenario planning effort with the NPS Climate Change Response Program The climate change information developed for the project provides greater detail on the understanding of climate change trends and impacts (threats)
Y	Fire management plan	L	Update needed; last plan completed in 2004; include wilderness character considerations in the next five-year update to the fire management plan
Y	Aviation management plan	L	Last plan completed in 2008
Y	Park administrative history	L	



Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Ambient air quality data (particulate matter, sulfur dioxide, nitrogen dioxide)	H	
Y	Air quality deposition data and relationship to sensitive aquatic ecosystems (water and aquatic biota)	H	
Y	Develop comprehensive list of native indicator species	H	
Y	Determination of interdependent ecological functions and the relationships of other park resources and processes to fish populations	H	
Y	Nearshore water quality data are needed to address vital signs of sediment analysis, toxic concentrations in sediments, benthic invertebrates, algae, nutrient dynamics and biogeochemistry, geomorphology, primary productivity, zooplankton, and indices of biological integrity	H	
Y	Bathymetric assessments, habitat mapping, and biological inventories including nearshore fish surveys of Lake Superior nearshore waters are needed	H	
Y	Baseline core and advanced water quality testing is needed	H	
Y	Frequent monitoring of nearshore waters and bays for invasive species is needed, especially dreissenid mussels	H	
Y	Continued study and evaluation of any threats to remnant Coaster brook trout populations at Isle Royale National Park	H	
Y	Monitor atmospheric deposition, especially for nitrogen, and to assess impacts on aquatic and terrestrial components of the Isle Royale National Park ecosystem; research to evaluate the relative impact of local versus regional or global sources of atmospheric contaminants at Isle Royale National Park; continuation of work in additional scattered Isle Royale National Park watersheds with particular attention to how climate warming may affect the cycling of nutrients and organic carbon in Isle Royale National Park watersheds	H	
Y	Continuation of water quality monitoring activities and programs already in place	H	

Data Needs – Where Information Is Needed Before Decisions Can Be Made

Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Evaluate current and future air quality metrics relative to the national ambient air quality standards to help assess health impacts on visitors and employees	H	
Y	Determine baseline visibility conditions and associated impacts from airborne particulates, nitrogen oxides, and sulfur dioxides	H	Include strategy for continued monitoring of visibility impacts from particulate matter, nitrogen oxides, and sulfur dioxides
Y	Determine baseline ozone metrics and associated impacts on sensitive vegetation	H	Approximately two-thirds of the park is below the water level of Lake Superior. Many subaqueous habitats exist at Isle Royale National Park. Environments can change in a few meters of water. Traditional surficial mapping does not include submerged geology and USGS Survey maps extend to a depth of only 15 feet (5 meters) offshore. Data requirements for better characterizing the submerged geomorphology of the park include LiDAR surveys, satellite imagery, multibeam mapping, bathymetry, water quality and circulation, shoreline change data, and storm data.
Y	Assessment of natural resource conditions	H	
Y	Determine natural range of variation of primary production, herbivory, disturbances, erosion, etc	H	
Y	An understanding of biological and ecological characteristics of the species and ecosystem including range of natural variability and relative condition	H	
Y	Ecological evaluation related to the topic of “natural” vs “human-influenced natural processes”	H	
Y	Further genetics investigations of lake trout are necessary to determine if there are different stocks around the island and if potential over-exploitation could be possible due to low numbers of some stocks	H	
Y	Mammalian assessment	H	Priority should be given to monitoring and evaluating the mammalian community (especially the American marten) because it has limited dispersal capacity and so is vulnerable to stressors such as climate change
Y	Metrics have not been defined for the vital signs of special habitats; biotic diversity; trophic relations; health, growth, and reproductive success; lichens and fungi; or primary productivity	H	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Scenario and adaptation planning for climate-driven impacts on aquatic systems	H	
Y	Comprehensive agency review of Isle Royale's existing regulations and management activities regarding recreational fishing is needed to determine if existing regulations are adequate to ensure that native species and ecosystem functions are protected from unacceptable impacts leading to impairment	H	
Y	A better understanding of the impacts of transportation systems on fish is needed	H	
Y	Analysis of contaminants, structures, or alterations to the land that may pose a monetary or safety liability to the National Park Service at abandoned mines and hazardous waste sites, including underground storage tanks	H	
Y	Perform ethnographic overview and assessment	H	
Y	Archeological resources survey	H	
Y	Comprehensive, up-to-date survey, identification, and inventory of historic and prehistoric archeological resources such as native copper mines and abandoned mine sites	H	Historic mining, mainly for copper, occurred mostly in the mid- to late 1800s and evidence of mining by American Indians prior to 1492 covers several thousand years. Native copper is widely distributed on Isle Royale, but compared to the Keweenaw Peninsula and other areas of the Great Lakes there are no large lode deposits. About 80% of the park is unsurveyed for abandoned mine sites. Two mines of note are the Island and Minong mines, both representing the last sustained extraction efforts on Isle Royale.
Y	More information is needed on the status of the Isle Royale National Park boreal forest and the abundance of each successional stage relative to its historic range and variability	H	In progress
Y	Ancient shoreline identification: comprehensive, up-to-date survey and inventory of historic and prehistoric archeological resources such as interior and relict shoreline areas	H	In progress: When the last glaciers retreated from the area less than 10,000 years ago, the fluctuation of the level of Lake Superior formed a series of relict shorelines. Relict shoreline features include beach deposits, wave-cut cliffs, terraces, and benches. Identifying and mapping shorelines will provide important information for understanding how they formed as well as indicating the sites of ancient human settlements and artifacts.

Data Needs – Where Information Is Needed Before Decisions Can Be Made

Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Rarity ranking and ecoregional context (e.g., common, endemic, peripheral) of species and communities	H	In progress
Y	Further identification of ethnobotanical resources	H	
Y	Determine how ethnographic interactions with traditionally associated individuals can be better accommodated and/or provided	H	In progress as a consideration in cultural resources management plan
Y	Continued and up-to-date ethnographic inventories and surveys	H	
Y	Continue further research on ethnographic associations with fish and fish habitats	H	
Y	Ethnographic research and documentation	H	
Y	A full analysis of the interrelationships between designated wilderness and all of the other fundamental resources and values is needed	M-H	Because most of the park's land base has been officially designated wilderness, most other fundamental resources and values will be within designated wilderness or within proximity to designated wilderness. Consequently, many aspects of the other fundamental resources and values may either contribute to or degrade wilderness character
Y	Determination, delineation, and verification of "shoreline" as it relates specifically to Isle Royale National Park and associated park boundary; identify and monitor potential changes in timing and magnitude of water movement through, or storage in, park surface and groundwater bodies	M	
Y	Identification, inventory, and monitoring of general water quantity changes; for example, an assessment of the impacts of persistent water levels below the long-term average of Lake Superior is needed	M	
Y	Documentation of the types and function of wetlands and the services they provide	M	Comprehensive wetlands inventory is incomplete and inventories for wetland biota other than plants are generally lacking
Y	Assessment of wetland-dependent flora and fauna and potential stressors	M	
Y	Hydrology scoping report	M	
Y	Identification of location and extent of significant geologic features and geologic processes	M	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Identification of geologic features (soil, physical, chemical, and biological properties) and the sensitivity of these features and properties to change	M	
Y	Evaluation of surface resiliency, stability, and integrity (including soils, slope stability, and shoreline and fluvial processes) and related geologic hazards	M	
Y	Overview of park's soil and geologic resource issues, including theft of semi-precious stones and erosion due to increased access to an area	M	
Y	There is a need to identify and map the near surface fracture system to help understand surface and groundwater flow regimes	M	Watershed identification and mapping of the near surface fracture system to help understand surface and groundwater flow regimes
Y	Further research on native copper chemistry, molecular structure, and specific locale signature attributes	M	
Y	A more complete understanding of the relationships between conditions and processes that created and sustain wetland habitats (e.g., successional processes, fire, fluvial processes, water table depths and durations, water sources, water quality) and associated effects on fish populations is needed	M	
Y	Successional stages and abiotic controls on ecosystem development including quantitative information on natural disturbances to the system	M	
Y	An understanding of population status and distribution of various species or communities	M	
Y	Evaluation of conditions and status across multiple levels of ecological hierarchy	M	
Y	Definition of "island integrity" as it relates to the concept of island biogeography as a baseline standard	M	
Y	Comprehensive geodatabase to assist agency in management and outside research pursuits and promote scientific inquiry in a living laboratory for scientific research	M	
Y	Assessment of threats to park resources that originate far beyond park boundaries and a planning mechanism is needed to address this challenge	M	

Data Needs – Where Information Is Needed Before Decisions Can Be Made

Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Routine inland lake fish assessments	M	
Y	Continuation, and expansion if necessary, of monitoring for nonnative plants along trails and in other human use areas	M	
Y	Further monitoring and mapping of the possible presence and abundance of nonnative earthworms in the various forest types should be considered	M	
Y	Identify the role of night sky in enabling legislation of park, core resources of park, or unique resources	M	
Y	Determine theoretical natural brightness of night sky incorporating solar flux, climate, elevation, and atmospheric properties is needed to help establish natural night sky baseline	M	
Y	Determine natural variability in night sky brightness	M	
Y	Establish a quantitative baseline inventory of sky brightness in park and develop a theoretical natural brightness of night sky incorporating solar flux, climate, elevation, and atmospheric properties	M	
Y	Determine a correlation between quantitative measures and experience and perception of the night by visitors potentially through the use of visitor surveys and outreach to determine use and value of night sky by the public	M	Visitor surveys and outreach to determine use and value of night sky by public and generally about scenery related to public values
Y	Identification of acoustically representative areas within park	M	
Y	Characterization of human-caused sound/noise within the natural soundscape	M	
Y	Side scan sonar surveys of other submerged maritime resources and sites	M	
Y	Comprehensive GIS/LiDAR surveys of shipwrecks	M	
Y	Shipwreck monitoring plan	M	

Data Needs – Where Information Is Needed Before Decisions Can Be Made			
Related to an FRV?	Data and GIS Needs	Priority (H, M, L)	Notes, Including Which Planning Need This Data Need Relates To
Y	Understanding of how the public experiences and values the “social functions” of fish and fishing (e.g., recreational fishing activities, enjoyment of eating fish, educational and interpretive opportunities, historic or cultural significance) is needed	M	
Y	Formal visual/scenic resource inventory	M	An inventory is needed to define scenery conservation management classes (prescriptive zones) for incorporation into future long-range, comprehensive management plans
Y	Establish an ongoing wilderness character monitoring effort that includes selection of indicators and measures defining baseline conditions assessing trends over time	M	In progress as a component of the wilderness stewardship plan
Y	Wilderness: compile and analyze visitor use statistics to look at changes in user demographics, length of stay, primary destinations, group size, user preferences, and other variables	M	
Y	Campground monitoring analysis	M	Update needed; last assessments completed in the years 1996–2002
Y	Visitor crowding survey (in campgrounds and on trails)	M	Update needed; last survey completed in 2000
Y	Common loon territory atlas	M	Update needed; last assessment completed 1998–2000
Y	Study of effects on loon nesting success	M	Update needed; last assessment completed in 2003
Y	Evaluation of camping impacts and management	M	Update needed; last assessment completed in 1998
Y	Complete visual resource inventory and viewshed analysis of key observation points as seen from wilderness and externally looking toward wilderness	L	
Y	Built environment design guidelines	L	Guidance for park development addressing best management practices and scenery conservation principles
Y	Campground expansion feasibility survey	L	Update is needed; last survey completed in 2002

Part 3: Contributors

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and Landscapes
Liz Valencia, Chief Interpretation and Cultural Resources
Lucas Westcott, Park Ranger, Interpretation

Reviewers

NRSS Environmental Quality Division

NRSS Biological Resources Management Division

NRSS Water Resources Division

NRSS Night Skies and Natural Sounds Division

NRSS Climate Change Program

NRSS Air Resources Division

Midwest Region Planning Division

Midwest Region Cultural Resources Division

Midwest Region Natural Resources Division

Midwest Region Partnerships Division

Midwest Region Operations Division (including Law Enforcement and Education / Interpretation)

Midwest Region Concessions Program

WASO Park Planning and Special Studies



Appendixes

Appendix A: Enabling Legislation and Legislative Acts for Isle Royale National Park

LAWS FOR NAT. PARK SERVICE, PARKS, & MONUMENTS

7. Isle Royale National Park

An Act To provide for the establishment of the Isle Royale National Park, in the State of Michigan, and for other purposes, approved March 3, 1931 (46 Stat. 1514)

Isle Royale National Park, Mich.

Establishment, etc.

Proviso. Lands to be secured without Federal cost.

Acceptance of title.

Administration by National Park Service.

Vol. 39, p. 535. See p. 9.

Proviso. Federal Water Power Act not applicable. Vol. 41, p. 1063.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That when title to all alienated lands within Isle Royale in Lake Superior, Keweenaw County, Michigan, and immediately surrounding islands as shall be designated by the Secretary of the Interior in the exercise of his judgment and discretion as necessary or desirable for national-park purposes, shall have been vested in the United States and exclusive jurisdiction over the same shall have been ceded by the State of Michigan to the United States, said area shall be, and is hereby, established, dedicated, and set apart as a public park for the benefit and enjoyment of the people, and shall be known as the Isle Royale National Park: *Provided,* That the United States shall not purchase by appropriation of public moneys any lands within the aforesaid area, but such lands shall be secured by the United States only by public or private donation. (U.S.C., 6th supp., title 16, sec. 408.)

SEC. 2. The Secretary of the Interior is hereby authorized, in his discretion and upon submission of evidence of title satisfactory to him, to accept on behalf of the United States title to any lands located on said islands offered to the United States, without cost, as may be deemed by him necessary or desirable for national-park purposes. (U.S.C., 6th supp., title 16, sec. 408a.)

SEC. 3. The administration, protection, and development of the aforesaid park shall be exercised under the direction of the Secretary of the Interior by the National Park Service, subject to the provisions of the Act of August 25, 1916 (39 Stat. 535), entitled "An Act to establish a National Park Service, and for other purposes," as amended: *Provided,* That the provisions of the Act approved June 10, 1920, known as the Federal Water Power Act, shall not apply to this park. (U.S.C., 6th supp., title 16, sec. 408b.)

1931 Memorandum from Director Horace M. Albright to Secretary of the Interior Ray L. Wilbur supporting the establishment of Isle Royale National Park, Senate Congressional Record Text:

ESTABLISHMENT OF ISLE ROYALE NATIONAL PARK, MICHIGAN

A memorandum on the subject that has been submitted by Director Albright of the National Park Service. After a review of the proposed measure, I agree with Mr. Albright.

Very truly yours,

RAY LYMAN WILBUR, Secretary.

DEPARTMENT OF THE INTERIOR,
NATIONAL PARK SERVICE,
Washington, February 25, 1931.

Reference is made to letter, dated February 24, from the chairman of the Committee on Public Lands and Surveys, United States Senate, inclosing for report a copy of S. 6221, Seventy-first Congress, third session, entitled, "A bill to provide for the establishment of the Isle Royale National Park, in the State of Michigan, and for other purposes."

Isle Royale is the largest island in Lake Superior, located just inside the International boundary about 25 miles north and west of Keweenaw Point in Michigan. It lies in Keweenaw County of that State. It is approximately 44 miles long with an average width of 5 miles. Its area is estimated at approximately 205 square miles. Twelve square miles of this are composed of inland lakes, 24 in number leaving 193 square miles, or approximately 123,520 acres net of land area. To this may be added about 2,000 acres on the immediately surrounding smaller islands which should be included in the project. It is accessible by boat from about May 1 to November 15. For the remainder of the year it is ice bound. During the open season boats from Duluth, Minn., Houghton, Mich., and Port Arthur, Ontario, provide transportation. A good many people now fly over the island. It has no telegraph or telephone connections with the mainland. The last census indicated only 23 registered voters, mostly trappers, fishermen, or miners, who live scattered throughout the area. It is used on a very small scale for summer resort purposes, a small lodge being available at Rock Harbor on the eastern end.

The topography of the island is quite broken, and can perhaps be best described as a moss and forest covered mass of gigantic rocks, the result of a volcanic upheaval. It has the appearance of being almost entirely in its primeval state, for, due to the rugged formation lumbermen have left its tree growth alone. The island is said to have burned over in the remote past, and evidences of such fires can be seen in places. However, in such instances nature has restored conditions well. There are many marvelous beauty spots in their primitive condition, thus offering perfect examples of nature's textbooks for the study of scientist and student. Especially is this the case on the smaller islands surrounding the main Isle Royale. The exquisite, rugged beauty of the cliffs of the shore lines, indented with countless small bays and mouths of trout streams that may be enjoyed by sailing along the narrow deep fjords or channels, constitutes a particularly fascinating contribution to the scenic offerings of the park.

Due to the peculiar combinations of inland lakes and forested terrain, these factors may be held accountable for the preservation and increase of the wild life of the island. Without this sheltering cover of balsam, spruce, beech, birch, poplar, and pine, Isle Royale today doubtless would not be the home of moose, woodland caribou, beaver, deer and other wild life. It is considered no exaggeration to estimate 2,000 moose and 400 woodland caribou on the island, the latter an animal not encountered elsewhere within the confines of the mainland of the United States. Moose may now be seen with little effort by any visitor. This in itself will present an unusually fine wild-life spectacle. Botanists report a wealth of flora, equaling in season the finest flower displays or the other national parks. The flora and fauna of the island, said to be entirely foreign to the neighboring shores of the lake and to be sub-Arctic in character due to the perpetually cold waters by which Isle Royale is surrounded, have long been the object

of scientific curiosity. The waters of the island and the surrounding lake abound with fish so that the sport of fishing would be one of the outstanding attractions of the park. The island group are considered the greatest breeding grounds for the herring gull in the Great Lakes. The proposed park thus offers large opportunities for study and enjoyment to the lover of bird, animal, and fish life under most favorable conditions.

Another most interesting feature of the island is the archaeological remains. In two remote sections, one on the northern shore, and the other in the south Siskiwit Bay, district, extensive mining operations of ancient days have been uncovered. How far back into our history these go has not yet been definitely determined. On the old Minong workings, near McCargoes Cove, great piles of stone hammers, crude large stone steps leading to the water's edge and other stone implements have been uncovered. Whether these represent the operations of ancient white men or began with their Indian antecedents is unknown. However, there are remains of literally thousands of open pit mines from which, in aboriginal times, the early inhabitants of these regions obtained practically all of the copper that was used in aboriginal America. From here and the adjacent mainland where all of this copper was obtained, it found its way by the trade routes into other parts of North America, and all of the copper, so far as can be determined, which has been found in mounds in the south and elsewhere, was originally obtained from this immediate vicinity. Here at and near the head of McCargoes Cove, therefore, may be said on good authority to be the real seat of this great ancient mining industry.

It is, therefore, evident that from a scenic, recreational, scientific and educational standpoint, here is presented one of the outstanding opportunities for the establishment of a great island national park, unique of its kind in the system, and measuring up to the high standards that have been prescribed for such establishment. Its type of scenery, utterly distinct from anything now found in our national park system, its primitiveness, its unusual wild life and interesting flora, its evidences of possible prehistoric occupation, all combine to make Isle Royale and its neighboring islands of national park caliber.

It is this very unusualness which will also present unusual problems for development, if and when created as a national park. Complete protection, of course, is the prime object aimed at. The island appears peculiarly adapted for the building of a simple system of horse and hiking trails from one end of the island to the other, following ridges or partly at lower elevations near the shores with other trails, crossing over and connecting the longer parallel trails. From these pathways unending and ever-changing scenes of marvelous beauty would be unfolded, without disturbing the wilderness character of the area or the wild life. Such development of the inner section of the park would be paralleled by the boat routes through the channels surrounding the island.

The matter of establishing the national park was first seriously brought to the attention of the department in 1924 through the interest of Michigan conservation associations which were actively pushing the matter and exerting themselves toward securing the private holdings on the island in order that they could be offered to the Federal Government. The area was carefully inspected in 1925 by former Director Mather of the National Park Service, who gave it his unqualified approval. He was much impressed and very enthusiastic over the possibilities. It has been visited and reported on by other outstanding men of authority, notably this past summer by Harlan P. Kelsey, of Salem, Mass., a botanist and conservationist, as collaborator for the service, and Dr. Frank R. Oastler, of New York City, outstanding in conservation circles and a member of the advisory board on educational problems in national parks, both of whom were high in their praise of the area from a scenic and scientific standpoint. The area was also studied in 1930 by Senator Walcott, chairman of the Special Committee on the Conservation of Wild Life Resources of the United States Senate, and other members of that committee. In all discussions of the possible creation of this park, the department and the service, while being favorable to the project, have taken the stand that the only condition under which the project would be acceptable under established policies would be that all the area required should be conveyed to the Federal Government without cost, as was the policy approved by Congress for the establishment of the three proposed Southern Appalachian Parks.

It may be pertinent to observe at this point that, while all except 9,121 acres of the island, which are public land, are in private or State ownership, the head of one of the large copper companies owning considerable acreage on the island has indicated that some 21,000 acres of their holdings would be turned over to the park project without cost, in the event of the establishment of the park, and that this gift may be increased to 45,000 acres. The Conservation Commission of the State of Michigan stands ready to deed 2,240 acres of land under its jurisdiction toward the project. Altogether commitments have been made to turn over approximately 56,000 acres of the total required for the park, leaving the rest still to be acquired by local authorities.

Under the provisions of S. 6221, the actual establishment of this national park is based upon the condition that the land deemed necessary be turned over to the United States without cost for acquisition.

Several slight amendments are desirable in the form of the attached bill, namely:

- (1) Strike out the words "such area of" at the end of line 3, page 1.
- (2) After the syllable "gan" in the fifth line, first page, insert the words "and immediately surrounding islands." A glance at the map of the island shows that the main body of the island is surrounded by innumerable smaller islands, which are necessarily a part of this island group and should be included.
- (3) Change the word "land" in line 8, page 2, to "lands" so as to make this word read uniformly in the plural in this sentence.
- (4) Change the figures "26, 1916" immediately at the beginning of line 16, page 2, to "25, 1916," the actual date of the act of Congress referred to.

With these changes made, I heartily recommend that this bill be given favorable consideration and enacted into law.

HORACE M. ALBRIGHT, Director.



Appendix B: Related Federal Legislation, Regulations, and Executive Orders

APPENDIX B: WILDERNESS LEGISLATION (Oct 20, 1976)

NATIONAL PARKS

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11. Isle Royale

An Act to designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes. (90 Stat. 2692) (P.L. 94-567)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act.

* * * * *

(f) Isle Royale National Park, Michigan, wilderness comprising one hundred and thirty-one thousand eight hundred and eighty acres, and potential wilderness additions comprising two hundred and thirty-one acres, depicted on a map entitled "Wilderness Plan, Isle Royale National Park, Michigan", numbered 139-20,004 and dated December 1974, to be known as the Isle Royale Wilderness.

* * * * *

Sec. 4. The boundaries of the following areas are hereby revised, and those lands depicted on the respective maps as wilderness or as potential wilderness addition are hereby so designated at such time and in such manner as provided for by this Act:

(a) Isle Royale National Park, Michigan:

The Act of March 6, 1942 (56 Stat. 138; 16 U.S.C. 408e-408h), as amended, is further amended as follows:

(1) Insert the letter "(a)" before the second paragraph of the first section, redesignate subparagraphs (a), (b), and (c) of that paragraph as "(1)", "(2)", "(3)", respectively, and add to that section the following new paragraph:

"(b) Gull Islands, containing approximately six acres, located in section 19, township 68 north, range 31 west, in Keweenaw County, Michigan."

(2) Amend section 3 to read as follows:

"Sec. 3. The boundaries of the Isle Royale National Park are hereby extended to include any submerged lands within the territorial jurisdiction of the United States within four and one-half miles of the shoreline of Isle Royale and the surrounding islands, including Passage Island and the Gull Islands, and the Secretary of the Interior is hereby authorized, in his discretion, to acquire title by donation to any such lands not now owned by the United States, the title to be satisfactory to him."

Sec. 2. A map and description of the boundaries of the areas designated in this Act shall be on file and

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available for public inspection in the office of the Director of the National Park Service, Department of the Interior, and in the office of the Superintendent of each area designated in the Act. As soon as practicable after this Act takes effect, maps of the wilderness areas and descriptions of their boundaries shall be filed with the Interior and Insular Affairs Committees of the United States Senate and House of Representatives, and such maps and descriptions shall have the same force and effect as if included in this Act: *Provided*, That correction of clerical and typographical errors in such maps and descriptions may be made.

SEC. 3. All lands which represent potential wilderness additions, upon publication in the Federal Register of a notice by the Secretary of the Interior that all uses thereon prohibited by the Wilderness Act have ceased, shall thereby be designated wilderness.

SEC. 6. The areas designated by this Act as wilderness shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act governing areas designated by that Act as wilderness areas, except that any reference in such provisions to the effective date of the Wilderness Act shall be deemed to be a reference to the effective date of this Act, and, where appropriate, any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

* * * * *

Approved October 20, 1976.



Appendix C: Legislative History – Isle Royale National Park

Brief Descriptions of Legislative Documents

Reference Number

1. Executive Order (unnumbered): April 4, 1853 – President Reserves 10 acres near Rock Harbor for lighthouse purposes (See refs. 2, 5, 6, 8, & 74)
2. Departmental Order: April 28, 1853; Secretary of the Interior; temporarily withdraws certain lands near Rock Harbor to enable the selection of 10 acres as a site for a lighthouse (See refs. 1, 5, 6, 8, & 74)
3. Executive Order: April 29, 1871; President Reserved Gull Islands for lighthouse purposes; Revoked by Public Land Order 1724 (See refs. 74 & 98)
4. Executive Order 357C: Oct. 10, 1905; President T. Roosevelt; Sets aside Siskiwit Islands Reservation as a preserve and breeding ground for native birds (See refs. 39)
5. Departmental Order: Feb. 16, 1906; Secretary of the Interior; Reserves two islands for lighthouse purposes to mark entrance to Rock Harbor; Revoked by Public Land Order 1724 (See refs. 1, 2, 6, 8, & 74)
6. Executive Order: March 27, 1906; President T. Roosevelt; Reserved some lands at the entrance to Rock Harbor for lighthouse purposes; Revoked by Public Land Order 1724 (See refs. 1, 2, 5, 8, & 74)
7. Executive Order 529: Dec. 10, 1906; President T. Roosevelt; Rock of Ages Island reserved for lighthouse purposes (See ref. 39)
8. Executive Order 701: Oct. 21, 1907; President T. Roosevelt; Returns of the unappropriated lands that were temporarily withdrawn by Executive Order of April 4, 1853 for selecting a site for a lighthouse in the vicinity of Rock Harbor (See refs. 1 & 2)
9. Act 326, MPA, 1913: May 13, 1913; Act of Michigan State Legislature; An Act to provide for the leasing, control, and taxation of certain lands owned and controlled by the state, and the improvements thereon, and other purposes
10. H.R. 8625: Oct. 11, 1921; Representative James; To provide for the cession to the State of Michigan of certain public lands in the county of Isle Royale, State of Michigan; Includes nine small islands totaling about 34 acres; Amended to change county from “Isle Royale” to “Keweenaw” (See refs. 11, 12, 13, & 14)
11. Executive Order 3658: April 4, 1922; President Harding; Temporary withdrawal of lands included in H.R. 8625, pending legislation embodied in that Bill (See refs. 10, 12, 13, & 14)
12. Report No. 1528: Feb. 3, 1923; to accompany H.R. 8625 (See ref. 10)
13. H.R. 8625: Feb. 19, 1923; “An Act” (See ref. 10)
14. Report No. 1246: Feb. 28, 1923; to accompany H.R. 8625 (“An Act”) (See refs. 10, 11, 12, & 13)
15. Executive Order 3976: March 22, 1924; President Coolidge; Withdraws public lands in Isle Royale in the State of Michigan pending determination of advisability of including such lands in a national monument; Revoked by Public Land Order 1724 (See ref. 74)
16. H.R. 17005: Feb. 10, 1931; Representative Cramton; To provide for the establishment of the Isle Royale National Park, in the State of Michigan, and for other purposes; Includes Isle Royale and immediately surrounding islands (See refs. 17, 18, 19, 20, & 41)
17. S. 6221: Feb. 17, 1931; Senator Vandenberg; Companion Bill to H.R. 17005 (See ref. 16)

18. Report No. 1794: Feb. 17, 1931; to accompany S. 6221 (See ref. 17)
19. Report No. 2880: Feb, 24, 1931; to accompany H.R. 17005 (See ref. 16)
20. 46 Stat. 1514: March 3, 1931; Law; for brief description of contents see reference 16 of Part II (See additional refs. 17, 18, 19, & 41)
21. Act 175, MPA, 1931: May 27, 1931; Act of Michigan State Legislature; An Act to create the Isle Royale National Park Commission, and for other purposes; Repealed by Act 111, MPA, 1945 (See ref. 61)
22. H.R. 4712: Dec. 8, 1931; Representative Temple; To establish a minimum area for the Shenandoah National Park, for administration, protection, and general development by the National Park Service, and for other purposes; Authorizes the Secretary of the Interior to accept title to lands tendered without cost to the United States within the area of Isle Royale and three other parks, subject to life leases on these lands (See refs. 23, 24, 25, 26, 27, & 81)
23. S. 1089: Dec. 9, 1931; Senator Swanson; Companion Bill to H.R. 4712 (See ref. 22)
24. Report No. 104: Jan. 15, 1932; to accompany S. 1089 (See ref. 23)
25. Report No. 192: Jan. 20, 1932; to accompany H.R. 4712 (See ref. 22)
26. Report No. 192- Part 2: Jan. 22, 1932; Supplemental Report to Report 192 (See ref. 25)
27. 47 Stat. 37: Feb. 4, 1932; Law; for brief description of contents see reference 22 of Part II (See additional refs. 23, 24, 25, 26, & 81)
28. Executive Order 6724: May 28, 1934; President F. D. Roosevelt; Authorizes the purchase or rental of land for emergency conservation work (See refs. 29, 30, 31 & 36)
29. Executive Order 7129: Aug. 6, 1935; President F. D. Roosevelt; Authorizes the acquisition of land on Isle Royale for emergency conservation work (See refs. 28, 30, 31, & 36)
30. Executive Order 7190: Sept. 25, 1935; President F. D. Roosevelt; Amends Executive Order 7129 slightly (See refs. 28, 29, 31, & 36)
31. S. 2000: March 29, 1937; Senator Brown; Addition to park of lands acquired with funds made available by Executive Order (See refs, 28, 29, 30, 32, 33, 34, 35, & 36)
32. H.R. 7826: July 12, 1937; Representative DeRoven; Companion Bill to S. 2000 (See ref. 31)
33. Report No. 1280: July 21, 1937; to accompany H.R. 7826 (See ref. 32)
34. H.R. 7826: Jan. 5, 1938; "An Act" (See refs. 31, & 32)
35. Report No. 1658: April 20, 1938; to accompany H.R. 7826 "An Act" (See ref. 34)
36. 52 Stat. 785: June 20, 1938; Law; for brief description of contents see reference 31 of Part II (See additional refs. 28, 29, 30, 32, 33, 34, & 35)
37. Bill No. 82, House Enrolled Act: Nov. 6, 1939; Michigan State Representatives Guggisberg & Higgins; for brief description of contents see reference 38 of Part II
38. Act 8, Michigan Public Acts 1939: Feb. 27, 1939; Act of Michigan State Legislature; Provides for cession of jurisdiction over Isle Royale National Park to the United States; Accepted by letter from Secretary of the Interior to Governor of Michigan, May 19, 1944; Amended by Act 281, MPA, 1949 (See refs. 37, 60, 67, & 68)

39. S. 3317: Feb. 8, 1940; Senator Brown; Died; Provides for addition of certain lands to the proposed Isle Royale National Park, in the State of Michigan, and for other purposes; Lands to be added included (1) Houghton Headquarters land, (2) Passage Island, (3) Siskiwi Islands Bird Reservation, (4) submerged lands within 4 miles of shore of Isle Royale, and (5) immediately surrounding islands; All federally owned lands within the boundaries of proposed park shall be part of park upon its establishment except Secretary of the Treasury shall retain control and jurisdiction, for lighthouse purposes, over Menagerie Island and Rock of Ages Island; Same Bill, without Houghton Headquarters land, submitted as S. 1248 and H.R. 4386 in 1942 and became law (see refs. 4, 7, 40, 42, 44, 46, 47, 50, 52, & 53)
40. H.R. 8648: Feb. 26, 1940; Representative Hook; Died; Companion Bill to S. 3317 (See ref. 39)
41. Letter: April 3, 1940; Secretary of the Interior Ickes; Acceptance of deeds to all lands on Isle Royale that formally established the park (See refs. 16, 17, 18, 19, & 20)
42. H.R. 2614: Jan. 22, 1941; Representative Hook; Died; Same as S. 3317 & H.R. 8648 (See refs. 39 & 40)
43. H.R. 3014: Feb. 3, 1941; Representative Hook; to accept the cession by the State of Michigan of exclusive jurisdiction over the lands embraced within the Isle Royale National Park, and for other purposes; State reserves right to serve civil or criminal process, right to tax, and gives park residents right to vote; States that US District Court has jurisdiction; Includes miscellaneous regulations; Provides for appointment of commissioner; States that Secretary of the Interior shall notify in writing the Governor of the State of Michigan of the passage and approval of this Act and that US assumes police jurisdiction over park as specified in Act of the State of Michigan (See refs. 38, 45, 48, 49, 51, 54, 60, 67, & 68)
44. S. 1248: March 27, 1941; Senator Brown; To provide for the addition of certain lands to the Isle Royale National Park, in the State of Michigan, and for other purposes; Same as S. 3317 (See ref. 39), except Houghton Headquarters land is omitted from this Bill (See additional refs, 4, 7, 40, 42, 44, 46, 47, 50, 52, & 53)
45. S. 1249: March 27, 1941; Senator Brown; Companion Bill to H.R. 3014 (See ref. 43)
46. H.R. 4386: April 16, 1941; Representative Hook; Companion Bill to s. 1248 (See ref. 44)
47. Report No. 935: July 14, 1941; to accompany H.R. 4386 (See ref. 46)
48. Report No. 937: July 14, 1941; to accompany H.R. 3014 (See ref, 43)
49. H.R. 3014: Aug. 5, 1941; “An Act” (See ref. 43)
50. H.R. 4386: Aug. 5, 1941; “An Act” (See ref. 46)
51. Report No. 1129: Feb. 23, 1942; to accompany H.R. 3014 (“An Act”) (See refs. 43 & 49)
52. Report No. 1130: Feb. 23, 1942; to accompany H.R. 4386 (“An Act”) (See ref. 50)
53. 56 Stat. 138: March 6, 1942; Law; for brief description of contents see reference 44 of Part II (See additional refs. 4, 7, 40, 42, 46, 47, 50, 52, & 53)
54. 56 Stat. 133: March 6, 1942; Law; for brief description of contents see reference 43 of Part II (See additional refs. 38, 43, 45, 48, 49, 51, 60, 67, & 68)
55. S. 2362: March 10, 1942; Senator O’Mahoney; Amends 56 Stat. 138 (Ref. 50) by changing “Secretary of the Treasury” to “Secretary of the Navy”
56. Report No. 1399: May 26, 1942; to accompany S. 2362 (See ref. 55)
57. S. 2362: May 28, 1942; “An Act” (See ref. 55)
58. Report No.2327: July 9, 1942; to accompany S. 2362(“An Act”) (See ref. 57)

59. 56 Stat. 722: July 27, 1942; Law; for brief description of contents see reference 55 of Part II
60. Letter (Published in Federal Register 9 FR 6367): May 19, 1944; From Secretary of the Interior to Governor of Michigan; Acceptance of jurisdiction over park lands as required by 56 Stat. 133 (Ref. 54) (See additional refs, 38, 67, & 68)
61. Act 111, MPA, 1945: April 19, 1945; Act of Michigan State Legislature; Repeals Act No. 175 of MPA of 1931 and thereby abolishes the Isle Royale National Park Commission (See ref. 21)
62. H.R. 2645: March 20, 1947; Representative Barrett; Provides for appointments of U. S. Commissioners for Isle Royale and three other parks (See refs. 63, 64, 65, & 66)
63. Report No. 861: July 10, 1947; to accompany H.R. 2645 (See ref. 62)
64. H.R. 2645: July 22, 1947; “An Act” (See ref. 62)
65. Report No. 1052: April 2, 1948; to accompany H.R. 2645 (“An Act”) (See ref, 64)
66. 62 Stat. 196: April 21, 1948; Law; for brief description of contents see reference 62 of Part II (See additional refs. 63, 64, & 65)
67. Act 281, MPA, 1949: Sept. 23, 1949; Act of Michigan State Legislature; Amendment to Act 8, MPA, 1939 (Ref. 38) that cedes exclusive jurisdiction to US; Amends by including any submerged lands within four and one-half miles of the shoreline of Isle Royale and immediately surrounding islands, title of which is hereby conveyed to US; However, saves oil and mineral rights to these submerged lands to the State; States that fishing in these waters shall be conducted according to state laws; States (as in 1939) that jurisdiction shall not vest until US through the proper officer notifies Michigan that they assume police jurisdiction over the park (See refs, 37, 38, 43, 53, 60, & 68)
68. Notice w/related correspondence: Feb. 17, 1956; Secretary of the Interior to Governor of Michigan; Acceptance from State of Michigan of title and jurisdiction over submerged lands in accordance with Act 281, MPA, 1949; Reserves to State the right to regulate and control fishing in waters over these submerged lands; Reserves to US the right to regulate and control fishing in all other waters lying within the boundaries of Isle Royale National Park (See refs. 37, 38, 43, 53, 60, & 67)
69. H.R. 4745: Feb. 14, 1957; Representative Bennett; Died; To authorize enlargement of Houghton Headquarters site by acquiring two tracts of land – (1) Houghton Flour Mill property, and (2) Carroll Estate (See ref. 70)
70. H.R. 5450: Feb. 28, 1957; Representative Bennett; Same as H.R. 4745 (Ref. 66) before being amended; Amendments (1) delete Houghton Flour Mill property from Bill and (2) state that funds made available for Isle Royale National Park may be used for administrative headquarters site at Houghton and that any land acquisition funds made available to the Secretary of the Interior for the NPS may be used for acquisition of property authorized to be added to the head quarters site (See refs. 69, 71, 72, & 73)
71. Report No. 2059: June 30, 1950; to accompany H.R. 5450 (See ref. 70)
72. H.R. 5450: July 1958; “An Act” (See ref. 70)
73. 72 Stat. 604: Aug. 14, 1958; Law; for brief description of contents see reference 70 of Part II (See additional refs. 69, 71, & 72)
74. Public Land Order 1724: Aug. 27, 1958; Secretary of the Interior; Partly revokes Executive Orders of April 29, 1871, and March 27, 1906; Revokes Executive Order No. 3976 of March 22, 1924, and Departmental Order of Feb. 16, 1906 (Isle Royale National Park); Various sections refer to parts of Rock Harbor and to Gull Islands being no longer reserved for lighthouse purposes (See refs, 1, 2, 5, 6, 15, & 98)

75. S. 503: Jan. 24, 1963; Senator Hart; Died; Companion Bill to H.R. 4152 (See ref. 76, 77, & 78)

76. H.R. 4152: Feb. 25, 1963; Representative Bennett; Died; To authorize addition of certain donated lands to the administrative headquarters site, Isle Royale National Park; This would have authorized acceptance of six acres of donated land in Houghton to be used as a housing area for park employees; House Committee on Interior and Insular Affairs recommended enactment; However, companion Bill S. 503 died in Senate Committee (See refs. 75, 71, & 78)

77. Report No. 235: April 24, 1963; to accompany H.R. 4152 (See ref. 76)

78. Correspondence re: S. 503: Jan. & Feb. 1964; (See refs. 75, 76, & 77)

79. H.R. 17421: May 4, 1970; Representative Ruppe; Died; to authorize acquisition of Houghton Flour Mill property; same legislation in Omnibus Bills later (See refs. 80 & 96)

80. H.R. 1099: Jan. 22, 1971; Representative Ruppe; Died; Same as H.R. 17421 (See ref. 79)

81. S. 3139: 1969 or 1970; to enable Grant J. Merritt and Mary Merritt Bergson to have their names placed on a life lease with Glen Merritt and others (See ref. 22)

82. H.R. 8626: May 20, 1971; Representative McClure: Omnibus wilderness Bill; to designate certain lands as wilderness; 120,588 acres of Isle Royale Included (See refs. 83, 84, 87, 88, 89, 97, & 98)

83. H.R. 9761: July 13, 1971; Representative Ruppe; to designate as wilderness certain lands within Isle Royale National Park in the State of Michigan; 120,588 acres of Isle Royale included (See refs. 82, 84, 87, 88, 89, 97, & 98)

84. H.R. 9965: July 21, 1971; Representatives Saylor, Ford, & Kyl; Omnibus Wilderness Bill; To designate certain lands as wilderness; 120,588 acres of Isle Royale included; Superseded by H.R. 10752; see reference 88 (See additional refs. 82, 83, 87, 89, 97, & 98)

85. H.R. 10086: July 26, 1971; Representatives Taylor & Skubitz; Omnibus Bill; To provide for increases in appropriation ceilings and boundary changes in certain units of the National Park system and for other purposes; Includes addition of approximately 0.52 acre to Isle Royale National Park (Houghton Flour Mill property) (See refs. 79, 80, 86, 90, 91, 92, 93, 94, 95, & 96)

86. H.R. 10110: July 27, 1971; Representatives Kyl, Clausen & Terry; Omnibus Bill; Identical to H.R. 10086 (See ref. 85)

87. S. 2453: Aug. 5, 1971; Senators Jackson & Allott; Omnibus Wilderness Bill; to designate certain lands as wilderness; 120 588 acres of Isle Royale included (See refs. 82, 83, 84, 87, 88, 89, 97, & 98)

88. H.R. 10752: Sept. 16, 1971; Representatives Saylor, Latta & Mailliard; Omnibus Wilderness Bill; To designate certain lands as Wilderness; Supersedes H.R. 9965 (see ref. 84); 132,700 acres of Isle Royale included; Also provides for "Designated Additions, Isle Royale Wilderness, Michigan"; These are areas that have certain temporary non-conforming uses and will be designated as wilderness subject only to the ultimate removal of such uses (See additional refs. 82, 83, 87, 89, 97, & 98)

89. S. 2539: Sept. 17, 1971; Senators Hart & Griffin; To designate certain lands in the Isle Royale National Park in Michigan as wilderness; Essentially the same as the Isle Royale portion of the Omnibus Bill H.R. 10752 (see ref. 88) 132,700 acres of Isle Royale included (See additional refs. 82, 83, 84, 87, 88, 97, & 98)

90. S. 2650: Oct. 4, 1971; Senators Mansfield, Jackson & Allott; Omnibus Bill; Companion to H.R. 10086 and H.R. 10110 (See refs. 85 & 86)

91. S. 2601: Nov. 1971; Omnibus Bill; Supersedes S. 2650 (see ref. 90); Isle Royale portion remains the same, however

92. Report No. 92-452: Nov. 15, 1971; to accompany S. 2601 (See ref. 91)
93. S. 2601: Nov. 29, 1971; “An Act” (See ref. 91)
94. H.R. 10086: Dec. 10, 1971; Reported with amendment; Omnibus Bill; Amendment does not affect Isle Royale portion of Bill (See ref. 85)
95. Report No. 92-743: Dec. 10, 1971; to accompany H.R. 10086 (See ref. 94)
96. 86 Stat. 120: April 11, 1972; Law; Omnibus Bill passed; for brief description of contents see reference 85 of Part II (See additional refs. 79, 80, 86, 90, 91, 92, 93, 94, & 95)
97. Draft Bill: Oct. 16, 1972; Sent to Senator Church; “To designate certain lands in the Isle Royale National Park, Michigan, as wilderness”; This reflects the Department of the Interior revision to wilderness proposals for NPS based upon new guidelines for wilderness proposals promulgated by Assistant Secretary Reed on June 24, 1972; Includes 129,573 acres of Isle Royale for immediate wilderness designation and 177 acres as “Potential Wilderness Additions”; Allows shelters and docks in wilderness and an underground power line near Rock Harbor and Mt. Ojibway; Allows a program of prescribed burning (See refs, 82, 83, 84, 87, 88, 89, & 98)
98. Draft Amendment to S. 2539: 1972; this would include Gull Islands as a part of Isle Royale National Park and designate these islands as wilderness (See refs. 3, 74, 82, 83, 84, 87, 88, & 89)
99. S. 452: Jan. 18, 1973; Senators Hart, Griffin, Bayh, Hartke, Humphrey, Mondale, Nelson, Percy, Proxmire, Saxbe, Stevenson, and Taft; Companion to H.R. 4859 and H.R. 5462 (See refs. 100, 102, and 106)
100. H.R. 4859: 1973; A Bill to designate certain lands in the Isle Royale National Park in Michigan as wilderness, and for other purposes; Boundaries extended to include any submergded lands within the territorial limits of the US within 4 miles of shoreline (Passage Island and Gull Islands) (See refs. 99, 102, 106); Also includes hearings on H.R. 3568; 6552; 4859; 4860; 5462
101. H.R. 4860: Feb. 27, 1973; Representative Ruppe; to designate certain lands in the Isle Royale National Park as wilderness; 129,573 acres depicted on map entitled “Wilderness Plan, Island Royale National Park”, numbered NP-IR/MP-11-E, dated Sep. 1972
102. H.R. 5462: Mar. 12, 1973; Representative Ford (See refs. 99, 100, and 106)
103. H.R. 5474: Mar. 12, 1973; Representative Saylor; To designate certain lands as wilderness; 120,583 acres within Isle Royale National Park, depicted on map entitled “Recommended Wilderness, Isle Royale National Park,” numbered NP-IR/MP-11-D, dated Jan. 1970
104. H.R. 2726: Feb. 4, 1975; Representative Ruppe; to designate certain lands in the Isle Royale National Park, Michigan, as wilderness; 131,938 acres depicted on map entitled “Wilderness Plan, Isle Royale National Park,” numbered 139-20-004, dated December 1974
105. S. 1085: Mar. 7, 1975; Senators Haskell, Jackson, and Fannin; To designate as wilderness certain lands within Isle Royale National Park, in the State of Michigan; 120,588 acres depicted on map entitled “Recommended wilderness, Isle Royale National Park,” numbered NP-IR/MP-11-D, dated Jan. 1970
106. H.R. 5823: Apr. 9, 1975; Representative Seiberling; to designate certain lands in the national park system as wilderness, and for other purposes (See refs. 99, 100, and 102)
107. S. 1675: May 7, 1975; Senators Hart, Griffin, Bayh, Hartke, Humphrey, Mondale, Nelson, Percy, Proxmire, and Stevenson (See S. 452, ref. 99)
108. H.R. 13160: Apr. 9, 1976; Representatives Taylor, Johnson, Kastenmeier, Kazen, Stephens, Bingham, De Lugo, Byron, Heeds, Sebelius, Skubitz, Clausen, Ruppe, Bauman, Lagomarsino,

Evans, Udall, Pettis, Lujan, and Talcott; To designate certain lands within units of the national park system as wilderness; to revise the boundaries of certain of those units; and for other purposes; 131,880 acres, and potential wilderness additions comprising 231 acres, depicted on map entitled “Wilderness Plan, Isle Royale National Park,” numbered 139-20,004, dated December 1974; Amend Act of March 6, 1942 (56 Stat. 138; 16 USC 408e-408h) to include approximately six acres (Gull Islands); Amend to include any submerged lands within the territorial jurisdiction of the US within 4 miles of the shoreline of Isle Royale, including Passage Island and the Gull Islands

109. Public Law 94 - 567: Oct. 20, 1976; Same as H.R. 13160 (See ref. 108)

110. House Report 94 - 1427 (accompany H.R. 13160)

111. Public Law 96-514, title I, section 100, 94 Stat. 2960: Dec. 12, 1980; provided for revenues received from recreation fee collections by Federal agencies to be paid into the Land and Water Conservation Fund and to be available for appropriation for any and all authorized purposes

112. Public Law 97-88, title I, section 100, 95 Stat. 1136: Dec. 4, 1981; related to special recreation use fees collected by, and deposited in the Treasury by the Corps of Engineers, prior to repeal by Pub. L. 100-203, title V, section 5201(d) (3), Dec. 22, 1987, 101 Stat. 1330-267

113. Public Law No. 100-203: Dec. 22, 1987; Omnibus Budget Reconciliation Act of 1987; [section 460l-5a. Repealed]; (Pub. L. 100-203, title V, section 5201(d)(1) 101 Stat. 1330-266); Isle Royale National Park began collecting entrance fees in 1987, however, beginning in 1988, due to P.L. 100-203, Isle Royale is now prohibited from collecting entrance fees

114. Public Law 103-451: Nov. 2, 1994; National Maritime Heritage Act of 1994

115. Public Law 106-355, 114 Stat. 1386: Oct. 24, 2000; National Historic Lighthouse Preservation Act of 2000; in authorizing the conveyance of historic light stations, provides that historic light stations located within the exterior boundary of a unit of the national park system shall be conveyed or sold only with the approval of the Secretary





Appendix D: Wilderness Character Narrative

A wilderness character narrative is a positive and affirming description of what is unique and special about wilderness on Isle Royale.

Overview

Isle Royale is a remote wilderness island in one of the planet's most unforgiving lakes, Lake Superior. Isle Royale was born of fire and smoke from lava pouring from a crack in the earth's crust a billion years ago. The island was shaped of ice and water from glaciers that piled rich soils in the southwest and scoured the island bare in the northeast. Today, the island is a corrugated series of ridges and valleys that follow its long central axis. The Greenstone flow, one of the largest single lava flows in the history of the Earth, forms the island's main ridge. Isle Royale is mostly green with boreal forest, speckled with blue inland lakes, and rimmed in the dark gray basaltic rocks that separate it from Lake Superior.

Isle Royale is isolated. The nautical distance from shore and the natural setting of the rugged Isle Royale archipelago starkly contrasts the usual sights, sounds, and modifications of an increasingly populous and mechanized civilization, providing an exceptional opportunity to experience solitude and isolation. The island is separated from the nearest land mass by about 15 miles of icy waters. Isle Royale is further protected by fog, ice, wind, waves, and storms. A visit to Isle Royale requires passage across a vast and often turbulent open expanse of water. Just offshore, just beneath the surface, the archipelago is littered with the wooden and iron bones of no fewer than a dozen ships from past maritime endeavors.

Humans have had an episodic, but long-standing connection to Isle Royale. For more than 4,000 years, American Indians crossed Lake Superior and, with stone tools, chipped out the malleable pure copper, fished, hunted, and gathered plants. In the 19th and 20th centuries, the island attracted hunters, maple sugar harvesters, loggers, greenstone collectors, sports and commercial fishermen, recreationalists, miners, fur trappers, and families. Today, Isle Royale is seasonally used for wilderness recreation and extensive and unique scientific research endeavors. The evidence of these episodic human uses is woven into the harbors and lands of Isle Royale Wilderness.

While 99% of the island is designated wilderness, there are a few discrete areas of the island that were identified through legislation to serve as administrative or developed areas of the national park. However, the overwhelming majority of the island feels like wilderness as contrasted to many large parks with relatively smaller areas designated as wilderness. In this way, the term "island" will often be used interchangeably with "wilderness" because much of the 1% of nonwilderness retains the qualities of the surrounding designated wilderness.

This narrative describes five tangible and measurable qualities of wilderness character: (1) natural, (2) untrammled, (3) undeveloped, (4) solitude or primitive and unconfined recreation, and (5) features of historical, scientific, and scenic value that collectively comprise Isle Royale Wilderness. Understanding and accurately describing the qualities of wilderness character at Isle Royale provides a basis from which informed decisions concerning park planning, monitoring, management, and stewardship can be made.

Natural Quality

Wilderness ecological systems are substantially free from the effects of modern civilization.

Isle Royale emerges from the deep, cold expanse of Lake Superior as an isolated, rocky archipelago encompassing hundreds of individual islands where natural processes, individual microclimates, and change are constant influencing factors. This dominating and dynamic natural environment is characterized by an intricate, interdependent land, water, and atmospheric interface where clear air and waters envelop and shape the rugged coastline and expansive forests.

The overall climate of Isle Royale is insulated from seasonal extremes by the surrounding immensity of Lake Superior. The vast lake chills the summer and warms the winter, such that environmental conditions on Isle Royale are noticeably different than conditions on the adjacent mainland. The island embodies a transitional assortment of climatic regimes and environmental variations both east to west, upslope and down and along the interface of land and water, creating rich and diverse microclimates and habitat types. The northeast end of the main island is characterized by boreal forest of balsam fir, quaking aspen, white spruce, and white birch, while the more temperate southwest end, with deeper soils, is characterized by old-growth maple and yellow birch forests.

Island ecology is often explained by the theory of island biogeography and Isle Royale has long been examined under this lens. The coming and going of species to an island is a natural occurrence influenced by many factors, including: degree of isolation, size of the island, climate, serendipity, and human activity. Some species have been extirpated from Isle Royale, such as the lynx, caribou, and coyote; meanwhile, others may have come and gone without our knowledge. Human activity has greatly influenced the species composition of Isle Royale. Trapping and hunting led to the extirpation of lynx and caribou, respectively, and it appears that climate change may lead to the loss of the cisco, a cold water-adapted fish in a few inland lakes. Even the most celebrated and studied members of Isle Royale's fauna, the wolves and moose, have a storied and uncertain origin on the island. Wolves have both migrated to and been introduced by humans to the island at different times. Moose may have made the swim to the island or may have been introduced along with white-tailed deer. The legacy of Isle Royale's flora and fauna is rich and shapes what we see today. With the exception of climate change, atmospheric pollution, and invasive species, the island remains relatively free from the overt effects of modern civilization.

The isolated Isle Royale waters are home to some of the healthiest native fish populations in the Great Lakes, including lake trout and one of the few remaining naturally reproducing populations of coaster brook trout. The inland lakes span a wide range in size and depth, providing further diverse habitat for native fish, waterfowl, freshwater sponges, and remarkable densities of native mussels, all in a Northwoods lacustrine environment.

The natural quality of wilderness character is degraded by the presence of introduced plant and animal species, as well as alteration of natural vegetation dynamics by suppression of natural ignitions in fire-dependent forests. While the park has an active invasive species prevention program, the arrival of visitors by boat and seaplane also provide the opportunity for unintentional introductions of new species that may have vast and far reaching impacts on many aspects of the natural system. Canine parvovirus was introduced to the island and is believed to have suppressed the gray wolf population.

This quality is also degraded by impacts on physical resources such as air quality, which originates from urban and industrial sources on the mainland. Water quality and dark night skies are impacted by sources both near (the island's developed areas) and far (distant urban centers). Some inland water bodies may be particularly susceptible to water quality impacts as evidenced by an increasing frequency of algae blooms on inland lakes, introductions of aquatic invasive species, and the potential for over-fishing certain species.

Scientific activities, such as the removal of scientific specimens and invasive data collection methods, will degrade the natural quality.

Climate change impacts include an increase in extreme weather events, warming of aquatic habitats that will alter their species composition, and warming of Lake Superior such that it is less likely to support the seasonal formation of an ice bridge to provide episodic connectivity to mainland populations.

Untrammelled Quality

Wilderness is essentially unhindered and free from the intentional actions of modern human control or manipulation.

In Isle Royale Wilderness, natural processes continue and are generally allowed to occur without overt manipulation. The wild, untamable forces of nature act at their will. Powerful storms and capricious weather humble even the most skilled boater and turn what would be a hike across the island into a mud-soaked slog. Wildlife is unrestricted to wander about the island and are free to cross back to the mainland during episodic ice bridge formation. Vegetation prospers in the summer and dies back in the cold, harsh winters.

The untrammelled quality of wilderness at Isle Royale is preserved in several ways. Overall, preferred research methods in the wilderness involve nondestructive, noninvasive sampling. Likewise, many conditions are monitored on the island but not actively manipulated such as the decision not to cut trees for the preservation of specific viewsheds. There is a focus on prevention rather than treatment of many invasive species and visitors are educated regarding aquatic vegetation in lakes and about the presence of mosquitos and insects, rather than control of those organisms that tend to diminish recreational pursuits.

This quality of wilderness character is degraded by deliberate actions to manipulate the biophysical environment. One such action is treating some invasive plant species using a variety of methods and across much of the wilderness. This action is typically concentrated in disturbed areas such as trails and campgrounds. Scientific endeavors, including the long-running wolf and moose study of predator-prey dynamics, have used various techniques over the years. These hands-on and hands-off approaches result in varying impacts on the untrammelled quality of wilderness and include collaring wolves, 100% take of encountered moose skulls, and the clustering of moose bones to signify previously visited carcasses. The reintroduction or augmentation of wildlife to replace depleted populations would also threaten the untrammelled quality of wilderness. Management of the coaster brook trout population is part of an interagency effort to preserve the species through genetic and population manipulations within the Lake Superior basin. Although the blanket of humidity provided by Lake Superior dampens the frequency of wildfire significantly, there have also been some past alterations to the forest composition and stand resulting from historic mining and logging, which resulted in significant fire events burning nearly 20% of the island.



Undeveloped Quality

Wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern human occupation.

The physical size and intricacy of this wild, largely undeveloped archipelago distinguishes Isle Royale from most other similar locations and settings within this region. Abundant bays, inlets, and narrow channels unfold from hidden locations within the rugged and intricate rocky shoreline. The Isle Royale Wilderness is entirely managed by the National Park Service with no private inholdings. The relative lack of development, in contrast to the mainland, provides a cohesive wholeness to the island and reinforces it as a place unto itself.

Minimal development on the island reinforces the need for personal preparedness with the recognition that modern human use of the island is largely dependent on provisioning from the mainland. A network of constructed trails serves both recreational and administrative purposes and largely follows natural contours that accommodate overland travel. The trails used today often represent a continuum in time where prehistoric, historic, and modern routes of travel are overlaid, one on top of the other, changing in purpose from foot trails to mining roads and then back to foot trails. Over time, many bridges on the trail system have been removed by either rerouting short sections of trail to avoid the need for bridging, or by providing stepping stones or other more natural approaches to aid people across obstacles and reduce the impact to natural resources. Such actions serve to enhance the undeveloped quality of wilderness character by the removal of unnecessary improvements.

The undeveloped quality is degraded by the presence of some installations and structures. Structures in designated wilderness at Isle Royale include three fire towers (one of which includes communications installations) as well as the Bangsund Research Station with associated utilities and buildings. The Bangsund Research Station is a former fish camp that now hosts the wolf-moose researchers during the summer months. Structures in potential wilderness additions at Isle Royale include the Davidson Island Boreal Research Station, Amygdaloid Ranger Station (which also includes communications installations), and more than 60 recreational cabins and associated outbuildings at Tobin Harbor, Crystal Cove, Edwards Island, and Johns and Captain Kidd Islands. Likewise, there are about a dozen standing structures in historic fish camps at Wright Island, Fisherman's Home, and Johnson Island that are in potential wilderness additions. Many of these structures are historic. Installations in designated wilderness include concentrations of scientific instrumentations at Wallace Lake environmental monitoring site and scattered research plot markers and instrumentation (including wildlife collaring) and two herbivory exclosure fences that are used by external researchers and NPS resource managers to gain knowledge of the impacts of moose herbivory on park resources.

The existing constructed trail system, even though it follows natural contours, degrades the undeveloped quality. This quality is also degraded by the use of motorized equipment and mechanized travel, even though such uses may be allowable as the minimum requirement for the administration of the area as wilderness. Such uses include the authorized use of chainsaws until June 15 each year for the purpose of pre-season trail clearing and the use of power tools to repair and maintain campground facilities in wilderness. Rarely, emergency aircraft landing or wheeled litters are employed during search and rescue operations. Chainsaws and water pumps may be used during fire suppression if such action is deemed necessary in wilderness.

Qualities of Solitude or a Primitive and Unconfined Type of Recreation

Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.

The island wilderness is an insular place, surrounded by the vastness of Lake Superior that serves as a buffer from mainland influences and the connection of the island to the mainland. The human journey to the island is often transformative, where visitors leave behind the mental and physical trappings of modern life to immerse themselves in an essential life based on the natural rhythms of the island and its human and nonhuman inhabitants.

The wilderness is both expansive and intimate. One can stand on the shore of the island and contemplate the miles of rippling Lake Superior waters and vast skies. Turning around and retreating inland finds you immediately enveloped in dense and towering, dew-soaked vegetation. Solitude abounds for those who seek it and the size and ruggedness of the island offers wildness enough for discovery and adventure. The scale of the island is large enough to find escape, yet small enough to know and to understand. Surface topography of ridges and valleys covered in lush vegetation provides an infinite number of niches to call your own for a short time.

Lake Superior separates the island from the modern, urban environs and this geographic separation means that night skies are relatively unpolluted by ambient human-generated light. Soundscapes are typically dominated by the sounds of nature and the absence of most air pollutants allowing people to breathe deeply, sleep soundly, and smell the earth.

Once ashore, outside the main developed areas, visitors must rely on primitive modes of travel, whether on foot or paddling a canoe or kayak. Thus the pace of the journey is much slower than what most people experience in modern life, providing a valuable opportunity to tune in to the natural environment and engage a variety of primitive recreational pursuits.

Opportunities for solitude or primitive and unconfined recreation are degraded by the presence of recreational facilities, the NPS management of these facilities, and attendant visitor use regulations pertaining to their use. Although the wilderness is in part preserved in order to provide opportunities for visitors to experience solitude and engage in primitive and unconfined recreation, it is often the sheer number of visitors, their inevitable concentration at backcountry campsites and along trails, and their impacts on the biophysical and cultural resources and on each other that must be carefully managed. In the context of the finiteness of the island wilderness, these attributes that are most valued could become diminished.



Opportunities for primitive and unconfined recreation are widely available and, though tempered by the unavoidable geographic confines of the island and its finite ability to absorb the presence of people, one can hike or paddle all day without seeing another person. Yet when arriving at a wilderness campsite at the end of the day, one will probably find visitors nearby. Wilderness campsites and communal campgrounds may include visitor facilities such as metal fire rings, pit toilets, tent pads, tables and benches, boat docks, and shelters that diminish opportunities for unconfined recreation. Approximately 3,000 backcountry camping permits are issued each year, with peak use in summer months and no visitor or administrative use allowed in winter with the exception of the wolf-moose researchers. Yet, during that short summer season, Isle Royale reports more backcountry/wilderness overnight stays per acre than any other NPS unit with designated wilderness. This intensity of use gives rise to numerous visitor use restrictions that are in effect to manage human use and occupation of a finite space, but such permit requirements and area use closures also serve to inhibit the unconfined nature of the recreational opportunities.

The presence of numerous recreational cabins and other structures in potential wilderness additions, fire towers in wilderness, and other such installations that are essentially unavoidable when traveling around the islands, may negatively impact opportunities for solitude or primitive and unconfined recreation. Many of these features are concentrated into small, but often visited areas of the island, and visitor encounters are frequent in these locations. However, when one is free to discover and explore these sites without the presence of others, it may contribute to the opportunities for solitude.

Visitors in wilderness may also experience sights and sounds of humans in areas outside of wilderness. For example, generators from nearby park developed areas, motorized boats (National Park Service, concessions, and private) on the waters surrounding the islands, and aircraft (commercial, private, and administrative) overhead.



Other Features of Wilderness Values

Section 2(c) of the Wilderness Act states that a wilderness “may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.” This quality captures important elements of wilderness that are not covered in the other four qualities. The other features of value may or may not be linked directly to one of the first four qualities of wilderness character, but may contribute to wilderness character in their own right.

Historical Value

Wilderness areas hold the histories and stories of ordinary people and nonmainstream cultural groups and the tangible and intangible resources that convey these histories and stories. Features with historical value and their embedded stories represent our fundamental cultural connections to America’s preeminent natural landscapes. These historical values are manifest as spiritual places; traditional practices; traditional and historical stories; archeological sites, ruins, and landscapes that have been shaped by human cultural and historical practices; travel corridors; structures; and buildings.

For more than four millennia, Isle Royale has been an isolated place of discovery, identification, and recollection of collective cultural values bestowed upon this island. Throughout recorded history, the island has been known as a place qualitatively different than the surrounding mainland. For many Anishinaabegs, the island was a place of difficult waters, spring fogs, and specially endowed with large fish and woodland caribou. European Americans saw the island as a place endowed with large fish, native copper sources, and valued the island for its recreation opportunities. Evidence of prehistoric use of the island is widespread but mainly concentrated where sought-after resources were nearby: copper, fish, special plants, woodland caribou, safe harbors, and travel corridors. To the Anishinaabegs, the island was called “Minong” meaning “the good place.” Despite challenging access, Isle Royale was a homeland to some and a summer residence to others.

Prior to the creation of Isle Royale National Park, the island was frequented by many despite the daunting journey. These people included precontact and historic copper miners, lumbermen, lighthouse keepers, Anishinaabeg hunters and fishermen, summer vacationers, fishermen whose lives were dictated by Lake Superior, and the contemporary Anishinaabeg who retain treaty rights to Isle Royale as part of their ancestral homeland.

Evidence of use and interaction between these humans and the natural environment, including the complex influences each has had on the other, is well-preserved on Isle Royale and can range from subtle to dramatic indications of cultural uses or alterations within the natural landscape. Despite high levels of human use and disturbance having occurred throughout time, remarkable examples of precontact and historic use and environmental interactions remain intact in many locations.

These precontact and historic resources preserved in the island wilderness include plants and plantings of human origin such as old apple trees and other ornamental varieties and plantings. There are traces of roads and trails, some of which continue to serve as modern paths of travel. Subtle forest clearings and openings exist that are of human origin. There are boat remnants on shore that reflect the local ingenuity of design and the necessary trappings of island living. Scattered prospect pits and waste rock piles that speak to the abandoned labors of historic copper mining are found. There are surface pits and hammer stones associated with millennia of precontact copper mining. Cemeteries, some with grave markers obscured by lichen, exist as a testimony to life and death on Isle Royale.

Some of these resources, particularly the archeological sites related to occupation and past use, the small-scale mining sites, and the limited remains of constructed buildings at mines, fishing camps, and decaying watercraft, define the wilderness as a place where it is hard to make a living. These resources may be places of important traditional environmental knowledge as well, passed down through generations ranging from island fish types, populations, locations, and uses to landscapes, places, and stories associated with traditional Anishinaabeg beliefs. Some native

plants growing throughout Minong are of cultural importance to the Anishinaabeg. Discovering these remnants often aids the visitors' understanding of the limits of living on the island and fosters an appreciation of the efforts of our predecessors to make a go of it.

These remnant resources are often organically connected to the island, in that they were developed using resources from the island and are generally of small scale compared to the extended island and its immense Lake Superior boundary. They are subtle and fit lightly into the landscape compared to more modern, industrial, and mechanized intrusions or larger or more complete structures and complexes. Often the boundaries between areas of cultural use and undisturbed wilderness are blurred or not apparent to most observers. Even where many of the resources have deteriorated through time, these resources provide important educational opportunities for reflection upon life cycles, the fleeting nature of visible human intervention in wild lands, and the robust ability of nature to rewild itself. Select cultural resources, such as the ancient and small-scale copper mining pits on the Minong Ridge and small-scale historic sites such as Long Point, are exemplars of the historical values of wilderness resources.

The preservation of one quality may come to the detriment of another. The active removal of historic resources of value would enhance the undeveloped, natural, and solitude qualities of wilderness character, but would do so to the detriment of the untrammelled quality and historical value. Many have already been removed and if removal or neglect continues, these resources will cease to contribute to the historical value entirely. Active management for preservation of these resources would add to the historical value of the Isle Royale Wilderness, but would detract from the natural, untrammelled, undeveloped, and solitude qualities.

Isle Royale wilderness character is diminished by the loss of cultural resources of value. Such causes for degradation include the illegal taking of cultural artifacts. Other threats include loss of traditional knowledge and understanding of life on the island, including ethnographic resources as they relate to the island and knowledge of endemic, island-specific vernacular boat design.



Scientific Value

The study of wilderness resources is of value for the preservation of wilderness. This quality is preserved or improved when science activities are the minimum necessary for the administration of wilderness and yield information pertaining to the preservation of wilderness character.

Isle Royale, even before becoming a park, has long served to inspire scientific inquiry and the contemplation and understanding of natural places. The island wilderness has been the focal point of generations of scientists who learned the lessons of Isle Royale in pursuit of advancing a collective understanding of the natural and cultural world. Geological inquiry began immediately after the 1842 Treaty of La Pointe. Beginning as early as the mid-1860s, the research and scholarly publications of Foote, Adams, Cowles, Cooper, and others established Isle Royale as a laboratory for the ecological sciences making significant contributions to our collective understanding of forest ecology and wildlife biology, among other disciplines. For the last several decades, Isle Royale has served as a premier location for the longest running predator-prey study documented in the world, which examines the complex interactions between the wolf and moose populations on the island, by default, island biogeography.

Attempting to explain prehistoric copper mining has also produced another continuing thread of scientific pursuit on Isle Royale, with publications beginning as early as 1850. The scientific value of the island is further evidenced by the 1980 designation of the park as an International Biosphere Reserve by the United Nations, partly due to the “outstanding possibilities for research in a remote ecosystem where human influences are limited.” A collection of resources associated with scientific research illustrate how the island has been used in the past and continues to be used as a living laboratory. This collection includes the herbarium collection from the 1940s, various published research reports and other specimen collections, and temporal research activities where physical evidence of research including objects, specimens, or other artifacts provide further evidence of a long-standing history of research within the wilderness. The process of scientific inquiry can be compatible with wilderness resources and the subsequent gains in knowledge afforded to future generations contribute to wilderness character.

The park has a number of established studies and long-term datasets that are unparalleled among the nation’s premier ecological research sites. With limited species diversity and few nonnative species, the wilderness is an ideal laboratory in which to apply systems ecology to determine the mechanisms controlling the diversity and stability of natural landscapes.

As with all the qualities of wilderness character, furthering the scientific value of Isle Royale Wilderness may often come to the detriment of other qualities of wilderness character. In particular, active scientific research in wilderness or the reintroduction or augmentation of wildlife to replace depleted populations would degrade the untrammeled quality. Removal of scientific specimens and invasive scientific methods will degrade the natural quality.

Threats to the scientific value of Isle Royale Wilderness could include the loss of data from past studies and changes in the biophysical environment that would impact scientific study, including climate change, intrusive scientific methods, introduction of nonnative invasive species, and loss of the natural lightscape.

Scenic Value

Wilderness scenic resources are typically unimpaired by anthropogenic influences and retain a primeval character. This quality is preserved when anthropogenic influences are subtle and unobtrusive on the landscape.

Visitors are drawn to the Isle Royale Wilderness year after year, or even generation after generation, to enjoy the wild and primeval beauty of the island. The island has a timeless quality where the relatively unhindered natural order and process of growth and decay continues as it has for centuries.

The wilderness harbors a multitude of stunning sites in their primitive condition. The exquisite rugged beauty of the cliffs along miles of shoreline, countless small bays, and the mouths of trout streams. The bare weathered rocky north shore, with numerous jeweled inland lakes and petite outlying islands—it is this interface of water meeting the shore that attracts and inspires. The island wilderness is uniquely endowed with shorelines of the 450 islands and the main island of the archipelago.

Spectacular views are also available from the high ridgetops serving as the backbone of the island. One of the highest points of Isle Royale is the summit of Mount Ojibway, a flattened crest above the trees where eagles nest, winds buffet, and wild berries grow. Canada is visible from this location and visitors can watch the strident white caps of Lake Superior pound the rocky shores.

The brilliant, saturated, diverse, and naturally contrasting colors, forms, and textures are further modified by the dynamic environment and ever-changing climatic conditions and seasonal variations to create a beautiful, naturally scenic setting rarely diminished by development.

Threats to the scenic value of Isle Royale Wilderness include poor air quality, boat and air traffic, and developments such as docks, campgrounds, and administrative structures. Additionally, while many of the historical resources of the wilderness contribute to the historical value, they may detract from the scenic value.



Appendix E: Federal and State Laws with Relevance to or Direct Bearing on Isle Royale National Park

The US Fish and Wildlife Service has certain legal responsibilities concerned with threatened and endangered species of animals and plants that either now live on the island or have been there in the past and are being considered for reintroduction. It also has general responsibility over the program to control sea lampreys in Lake Superior.

Several other federal agencies have legal responsibilities within the park in certain situations. Examples would be: US Public Health Service concerned with inspection of water, sewer, and commercial eating facilities; Office of Aircraft Services dealing with government contract aircraft; Occupational Safety and Health Administration concerning health and safety issues; Environmental Protection Agency; Customs and Immigration and Naturalization Service dealing with entry into the United States from Canada.

Section 106 of the National Historic Preservation Act of 1966, as implemented by the procedures of the Advisory Council on Historic Preservation (36 CFR 800), applies to cultural resources.

The primary state agency having legal responsibility and authority within the park is the Michigan Department of Natural Resources. They have legal jurisdiction over recreational and commercial fishing on Lake Superior, as well as the submerged minerals in the Lake Superior waters of the park. The park must work very closely with the agency in enforcement of fishing and boating regulations such as boat numbering, boat safety, water pollution, etc.

Section 307 (federal consistency) of Public Law 92-583, the Coastal Zone Management Act of 1972, as amended, requires that the park consult with the state of Michigan and comply with the state's Coastal Zone Management Program to the maximum extent practicable for all development projects, including major maintenance projects that affect, or are likely to affect, the coastal zone or the waters of Lake Superior.

Per NPS policy and the Clean Water Act, all park water and sewage treatment facilities must be designed and operated in accordance with state laws and requirements.

In 1994 the State of Michigan enacted the **Natural Resources and Environmental Protection Act (Act 451)** to codify, revise, consolidate and classify laws relating to the environment and natural resources of the state.

The Wilderness Act, [Public Law 88-577, September 3, 1964]; Isle Royale National Park was designated part of the National Wilderness Preservation System on October 20, 1976.

Endangered Species Act, 1973; The purpose of the Act is to “conserve the ecosystems upon which endangered and threatened species depend” and to conserve and recover listed species. The law is administered by the Interior Department's US Fish and Wildlife Service and the Commerce Department's National Marine Fisheries Service. The US Fish and Wildlife Service has the primary responsibility for terrestrial and freshwater organisms including Lake Superior.

The Coastal Zone Management Act, 1972; enables coastal states, including Great Lakes states, to develop a coastal management program to improve protection of sensitive shoreline resources, identify coastal areas appropriate for development, designate areas hazardous to development and improve public access to the coastline.

Michigan was among the first states to have its coastal program approved in 1978. The program, administered by the Michigan Department of Environmental Quality, includes local pass-through grants, administration of coastal sections of Michigan's Natural Resource and Environmental Protection Act of 1994, and review of federal agency activities for consistency with Michigan's approved program.

The Clean Air Act, 1970; regulates airborne emissions of a variety of pollutants from area, stationary, and mobile sources. Specifically, Isle Royale National Park is designated a “Class I” area requiring more stringent Prevention of Significant Deterioration regulations, primarily to preserve or restore visibility. Additionally, the Clean Air Act gives federal land managers the responsibility of protecting “air quality related values,” including vegetation, water bodies, soils and wildlife.

The Federal Water Pollution Control Act (Clean Water Act) 1972; as amended (1977, 1987, and 1990); This law’s purpose is to restore and maintain the chemical, physical and biological integrity of the nation’s waters, including the waters of the national park system. As part of the act, the US Congress recognized the primary role of the states in managing and regulating the nation’s water quality. A state’s anti-degradation policy is a three-tiered approach to maintaining and protecting various levels of water quality. The third level provides protection of the state’s highest quality waters where ordinary use classifications may not suffice; these are classified as Outstanding National Resources Waters (ONRW). In Michigan, the Department of Environmental Quality (DEQ) designates Outstanding State Resource Waters (OSRW). All waters of Isle Royale National Park have been designated OSRW under the act.

Rivers and Harbors Appropriations Act (as amended), 1899; the US Army Corps of Engineers have jurisdiction and authority over the protection of navigable waters. Navigable waters of the US are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. US Army Corps of Engineers permits are required under section 10 of the act for structures and/or work in or affecting navigable waters of the US.

Great Lakes Critical Programs Act, 1990; amends part of the Federal Water Pollution Control Act (Clean Water Act) by putting into place requirements for the US EPA’s Great Lakes National Program Office to implement Great Lakes programs such as the Great Lakes Water Quality Agreement of 1978.

Great Lakes Water Quality Initiative (GLI); The Great Lakes states agreed in 1989 to work with the Environmental Protection Agency to develop uniform pollution limits to protect the lakes and implement the Clean Water Act.

Water Resources Development Act (WRDA) of 1986 (Section 1109) (as amended); prohibits any new or increased diversion of water by any state, federal agency or private entity from any portion of the Great Lakes within the United States or from any Great Lakes tributary within the United States for use outside of the Great Lakes basin without the approval of each of the governors of the Great Lakes states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.

Executive Orders

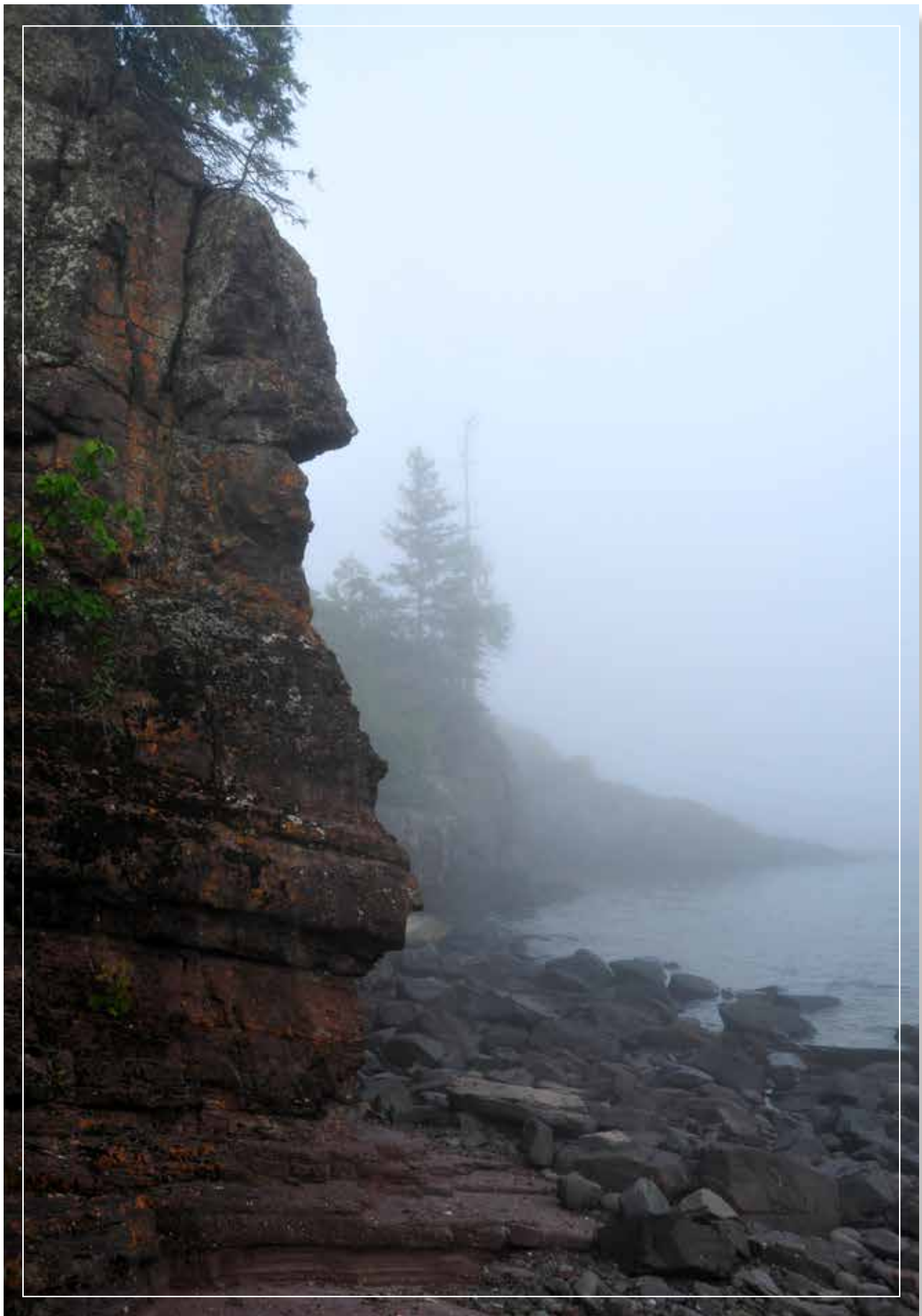
Executive Order 11988, “Floodplain Management”

Executive Order 11990, “Protection of Wetlands”

Executive Order 13112, “Invasive Species”

Executive Order 13340, “Establishment of Great Lakes Interagency Task Force and Promotion of a Regional Collaboration of National Significance for the Great Lakes”





Midwest Region Foundation Document Recommendation
Isle Royale National Park
January 2016

This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Midwest Regional Director

Phyllis A. Green

1/12/16

RECOMMENDED

Phyllis Green, Superintendent, Isle Royale National Park

Date

Cameron H. Sholly

1/20/16

APPROVED

Cameron H Sholly, Regional Director, Midwest Region

Date



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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