



Treatments for Cultural Landscapes and Historic Structures of the Light Stations of Michigan, Outer, Devils, Long, and Sand Islands Environmental Assessment

March 2011



APOSTLE ISLANDS NATIONAL LAKESHORE

TREATMENTS FOR CULTURAL LANDSCAPES AND HISTORIC STRUCTURES OF THE LIGHT STATIONS OF MICHIGAN, OUTER, DEVILS, LONG, AND SAND ISLANDS

ENVIRONMENTAL ASSESSMENT

SUMMARY

Apostle Islands National Lakeshore (park) proposes to implement integrated treatments for cultural landscapes and historic structures at the light stations on Michigan, Outer, Devils, Long, and Sand islands (light stations) in the park. The light stations are the buildings and lands around the buildings that are associated with lighthouses built primarily in the late 1800s. The treatment elements include removing trees and tall shrubs to expand cleared areas; removing features from cultural landscapes and historic structures that do not contribute to the historic significance of the landscapes and buildings; preserving and rehabilitating historic structures to improve visitor access and use; repairing or improving a variety of structural features such as windows, roofs, and ventilation in historic structures; and removing or stabilizing hazardous materials.

This Environmental Assessment (EA) evaluates four alternatives: a no action alternative and three action alternatives, one of which is the preferred action alternative (preferred alternative). Under the no action alternative, the park would continue its current level of operations and maintenance at the light stations, and there would be no integrated approach to cultural landscape and historic structure treatments with the associated improvements to protection of cultural resources, visitor experience and access, or park operations. The proposed action is being considered to address the degradation of the features that contribute to the historic significance of the cultural landscapes and structures that has resulted from vegetation encroaching into the light stations, the deterioration of structures, and the addition of noncontributing features. The proposed action also would address existing limitations on visitor access to, and use of, the light station structures. Implementing the proposed work would protect cultural resources, improve visitor experience and access, improve public health and safety, and provide more consistent and effective management and use of the light stations.

This EA has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet objectives of the proposal, 2) evaluates potential issues and impacts to the park's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Impact topics evaluated in detail in this EA are geology and coastal processes; soils; vegetation; wildlife; special status species; wetlands; natural soundscape; historic structures and cultural landscapes; archeological resources; visitor experience; and public health, safety, and park operations. Some impact topics were dismissed because the project would result in no more than minor effects. No major effects were identified as a result of this project in an initial analysis of

SUMMARY

effects. The public, regulatory agencies, and other stakeholders will have an opportunity to comment on this EA. Comments received will be considered in the final evaluation of effects.

Public Comment

If you wish to comment on this EA, you may post comments online using the National Park Service Planning, Environment and Public Comment (PEPC) website at: <http://parkplanning.nps.gov>; or mail comments to: Superintendent; Apostle Islands National Lakeshore, Bayfield, Wisconsin 54814.

This EA will be on public review for 30 days. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made available to the public at any time. Although you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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Acronyms and Abbreviations

| | |
|-------------------------------|--|
| ACHP | Advisory Council on Historic Preservation |
| BMP | Best Management Practice |
| CEQ | Council on Environmental Quality |
| CLR | Cultural Landscape Report |
| Corps | U.S. Army Corps of Engineers |
| DO | Directors Order |
| Draft general management plan | Apostle Islands National Lakeshore Draft General Management Plan / Wilderness Management Plan / Environmental Impact Statement |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| FONSI | Finding of No Significant Impact |
| HSR | Historic Structure Report |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NPS | National Park Service |
| National register | National Register of Historic Places |
| Park | Apostle Islands National Lakeshore |
| PEPC | Planning, Environment, and Public Comment |
| SHPO | State Historic Preservation Officer |
| USCG | U.S. Coast Guard |
| USFWS | U.S. Fish and Wildlife Service |

APOSTLE ISLANDS NATIONAL LAKESHORE

TREATMENTS FOR CULTURAL LANDSCAPES AND HISTORIC STRUCTURES OF THE LIGHT STATIONS OF MICHIGAN, OUTER, DEVILS, LONG, AND SAND ISLANDS

ENVIRONMENTAL ASSESSMENT

INTRODUCTION

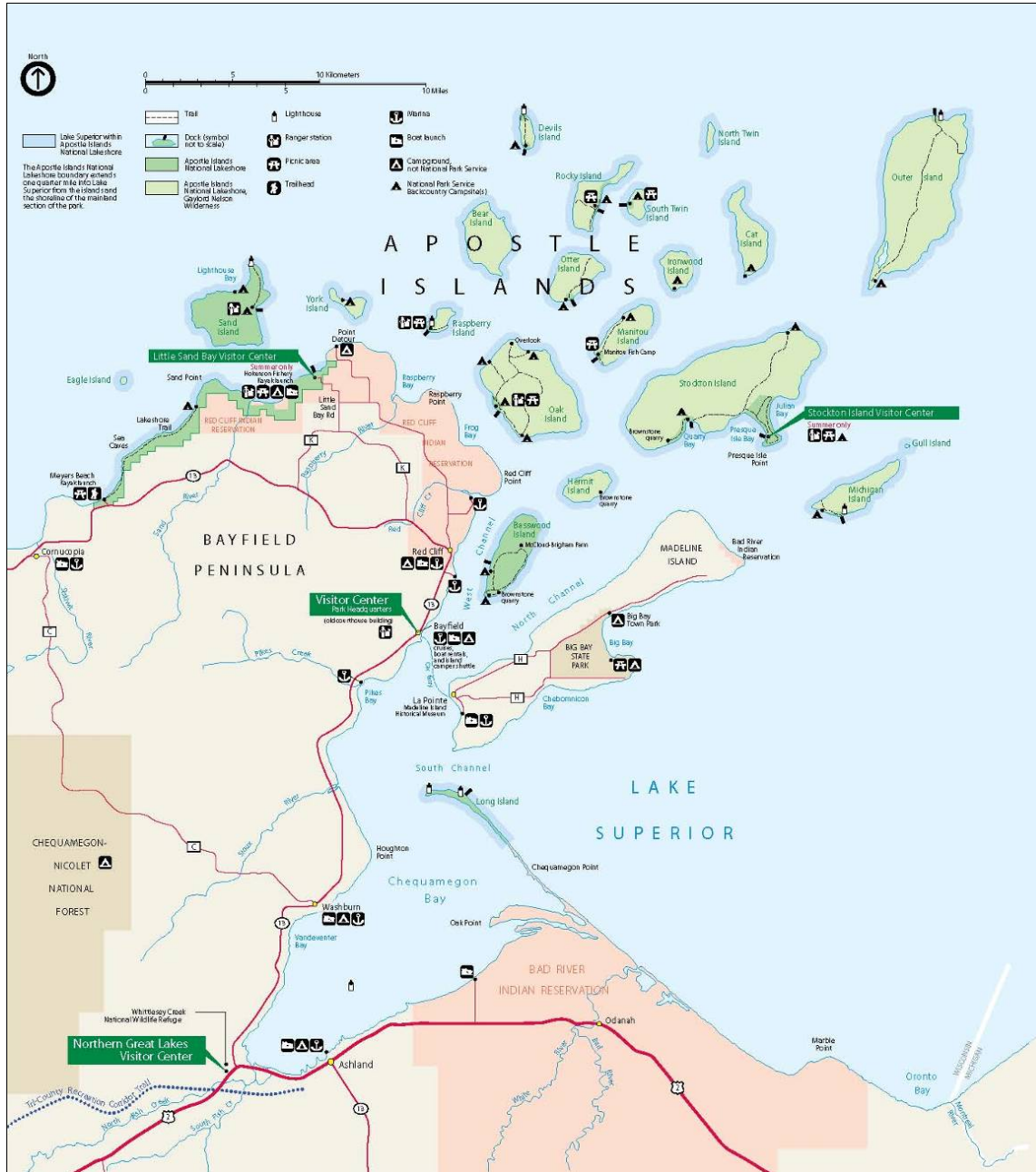
This Environmental Assessment (EA) examines proposed management actions at Apostle Islands National Lakeshore (park). These proposed actions focus on preserving the historic light stations at Michigan, Outer, Devils, Long, and Sand islands. The light stations include lighthouses, residences, support structures, and adjacent grounds built between 1856 and 1939. Proposed actions include:

- Removing encroaching trees and brush from historic grounds;
- Removing nonhistoric features from landscapes and structures;
- Rehabilitating historic structures to improve visitor access and use;
- Repairing structural elements, moisture mitigation, and improving ventilation; and
- Removing or stabilizing hazardous materials.

The proposed actions seek to preserve and partially restore historic structures and cultural landscapes. The proposed actions also address improvements to visitor access and use of the light stations. Implementing the proposed work would protect cultural and natural resources, improve visitor experience and access, improve public health and safety, and provide more effective management of the light stations within the park.

The park is also preparing a draft combined Cultural Landscape Report and Historic Structure Report (draft CLR/HSR) to document and evaluate the cultural landscapes and historic structures of the light stations of Michigan, Outer, Devils, Long, and Sand islands (light stations). The park is in Bayfield and Ashland counties, Wisconsin (Figure 1). The documentation served as a framework upon which alternatives were developed for the treatment and use of the historic structures and landscapes of the light stations. The final CLR/HSR will provide park managers with a comprehensive understanding of the physical evolution of the historic structures and landscapes and guidance for management of the resources.

FIGURE 1. PROJECT LOCATION



The treatment alternatives were combined into three alternatives with specific recommendations on structures and landscapes on each of the light stations. The draft CLR/HSR proposes a preferred treatment alternative that would include rehabilitating each island's cultural landscape and historic structures to best portray the continuum of navigational history that characterizes the Apostle Islands as a system of light stations. The preferred treatment alternative would restore some missing historic features, and repair or rehabilitate others, to better convey the full historical significance of the system. Examples of elements of the preferred treatment alternative include repairing mechanical and electrical systems, repairing and replacing roofs and gutters, painting, clearing vegetation, restoring plantings, investigating improving accessibility to some buildings with ramps and wider door openings, and rehabilitating some buildings for improved visitor use and interpretation.

This EA has been prepared to evaluate potential effects on environmental, socioeconomic, and cultural resources from the draft CLR/HSR's proposed treatment alternative (preferred alternative), the two other draft CLR/HSR treatment alternatives, and a no action alternative. This EA was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 and implementing regulations, 40 CFR Parts 1500-1508 and NPS Director's Order (DO) – 12 and Handbook, *Conservation Planning, Environmental Impact Analysis, and Decision-making*. This EA determines whether significant impacts would occur as a result of the preferred alternative and if an environmental impact statement (EIS) or finding of no significant impact (FONSI) would be required.

PROJECT PURPOSE AND NEED

Project Purpose

The purpose of the proposed project (implementing the preferred draft CLR/HSR treatment alternative) is to improve cultural resource protection and visitor experience by restoring or rehabilitating light stations on two islands (choosing from Michigan, Outer, or Sand islands) as described in the preferred alternative in Apostle Islands National Lakeshore Draft General Management Plan / Wilderness Management Plan / Environmental Impact Statement (draft general management plan) (NPS 2009a). This purpose would be accomplished on other islands by preserving the exteriors of structures and stabilizing and preserving cultural landscapes.

Implementing the preferred alternative would meet the following objectives:

Protect Cultural and Natural Resources

- Improve conditions of historic buildings and structures
- More accurately represent cultural landscape features
- More accurately represent historic clearing and associated viewshed
- Minimize erosion potential at sites
- Minimize impacts of exotic invasive species

Provide for Visitor Enjoyment and Safety

- Provide a high quality (authentic) visitor experience
- Minimize impacts to visitor experience during rehabilitation activities

Improve Efficiency of Park Operations

- Provide for basic staff needs at housing (e.g., water and restrooms)
- Minimize operational effort
- Reduce exposure to hazardous materials
- Minimize nonrenewable energy usage (and carbon footprint)

Project Need

The proposed project is being considered because of the need to address deficiencies in the condition of the light stations and safety concerns. The park's light stations were constructed between 1856 and 1891 to aid navigation through this portion of Lake Superior. The overall period of historic significance (1856 to 1978) reflects the 122 years from construction of the first light station on Michigan Island to the automation of the Devils Island Light Station and consequent departure of its U.S. Coast Guard (USCG) crew.

With the exception of Raspberry Island Light, which was recently restored, structural stabilization and/or rehabilitation work is needed for all of the other light stations. The lighthouses are kept "presentable" on the exterior, but the interiors are greatly in need of preservation. Decay in all of the light stations exceeds the park staff's ability to keep up with maintenance and repairs, and historic fabric is slowly deteriorating. A growing number of safety deficiencies (such as deteriorating or missing handrails) also are making it increasingly difficult to provide access into the structures. In addition, natural weathering and erosional processes have resulted in the deterioration of the light stations and associated resources, threatening the long-term structural and historical integrity of these properties. Vegetation is encroaching into formerly cleared areas around all of the light stations, contributing to the loss of some of the cultural landscape.

PURPOSE AND SIGNIFICANCE OF APOSTLE ISLANDS NATIONAL LAKESHORE

The park consists of 21 islands and a 12-mile-long segment of the Wisconsin mainland. The park encompasses 69,372 acres, of which 27,323 acres are submerged lands in Lake Superior; and the park boundary extends 0.25 mile from the shore of the mainland and from each island. Eighty percent of the land area of the park was designated as wilderness in December 2004. The islands range in size from 3-acre Gull Island to 10,054-acre Stockton Island. The park includes the largest collection of National Register of Historic Places (national register) lighthouses and lighthouse complexes in the national park system.

The purposes and reasons for significance of the park, as stated in the draft general management plan (NPS 2009a), underlie how the park is managed. The purposes tell why the park was set aside as a national park system unit. The significance of the park addresses why the area is unique—why it is important enough to our natural and/or cultural heritage to warrant national park designation, and how it differs from other parts of the country.

The purposes of Apostle Islands National Lakeshore are to:

- Conserve and protect the outstanding collection of scenic, scientific, biological, geological, historical, archeological, cultural, and wilderness features and values.
- Provide opportunities for the benefit, inspiration, education, recreational use, and enjoyment.
- Secure the benefits of an enduring resource of wilderness in the park's Gaylord Nelson Wilderness for present and future generations of Americans (NPS 2009a).

The park is significant for the following reasons:

- The Apostle Islands archipelago contains scientifically important geologic features, including a highly diverse and stunningly beautiful array of coastal landforms that retain a high degree of ecological integrity.
- Shaped and isolated by Lake Superior and located where northern hardwoods and boreal forests meet, the islands of the park sustain rare communities, habitats, and species of plants and animals. Some of these communities are remnants of ancient forests, providing a rare glimpse into the past.
- The Apostle Islands are the traditional home of the Ojibwe people and integral to their culture. They have used the natural resources of the Apostle Islands area for centuries to sustain their way of life, and continue to do so today.
- The isolation and remoteness of the archipelago has preserved an unparalleled variety of historic and archeological resources reflecting human response to the Great Lakes maritime environment.
- Apostle Islands National Lakeshore has the largest and finest collection of lighthouses in the country.
- Despite hundreds of years of human occupation and use, the Apostle Islands and Lake Superior remain among the wildest places in the Great Lakes, where the unbridled forces of nature prevail.
- The rare combination of remote but accessible scenery, geography, and both open and protected waters affords unparalleled freshwater sailing, boating, sea kayaking, and fishing opportunities.
- The "island experience" of the Apostle Islands, which includes quiet, relative solitude, and clear night skies, continues to provide, as it has for generations, a recreational and rejuvenating experience for people seeking relief from the stresses of their everyday lives (NPS 2009a).

RELATED PLANNING DOCUMENTS

Several previous planning project reports provided background and management information for this EA, including the park's draft general management plan (NPS 2009a) and *NPS Management Policies 2006*.

Apostle Islands National Lakeshore Draft General Management Plan / Wilderness Management Plan / Environmental Impact Statement

The draft general management plan for the park proposes management actions such as designating different management zones within the park and providing opportunities for more people to have an island experience. The draft general management plan indicates the need to restore or rehabilitate structures at two light stations for cultural resource preservation and interpretive opportunities. The associated cultural landscapes would be partially or fully rehabilitated. The draft general management plan also highlights the need to rehabilitate at least part of Long Island Light Station for NPS staff housing to increase resource protection and to provide at least limited information to visitors. Finally, the draft general management plan identifies the need for additional efforts to preserve the exteriors of structures on the remaining islands, and stabilizing and preserving the cultural landscapes in the immediate vicinity of the light stations.

Apostle Islands National Lakeshore Fire Management Plan and Environmental Assessment

The purpose of the fire management plan is to develop a long-range, comprehensive fire management direction for the park. The fire management plan addresses wildland fires and prescribed fire for ecological restoration purposes, maintenance of cultural landscapes, and reduction of any excessive fuel loadings. The specific goals for fire management in the fire management plan are consistent with, and are designed to help achieve the desired conditions related to, natural and cultural resource management and general park administration described in the draft general management plan.

Management Policies 2006

NPS *Management Policies 2006* provides guidance for all management decisions, including decisions related to cultural resources. Cultural resources, including cultural landscapes and historic structures, are addressed in section 5.0, which states the NPS cultural resources management program involves "...stewardship to ensure that cultural resources are preserved and protected, receive appropriate treatments (including maintenance) to achieve desired conditions, and are made available for public understanding and enjoyment." The policy goes on to state that "Each park's resource stewardship strategy will provide comprehensive recommendations about specific actions needed to achieve and maintain the desired resource conditions and visitor experiences for the park's cultural resources."

Impairment Standard

In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS *Management Policies 2006* (section 1.4) requires a determination of whether or not the effects of the proposed actions would impair a park's resources and values. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give NPS the management discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of the park. That discretion is limited by the

statutory requirement that NPS must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values (NPS *Management Policies* 2006). Whether an impact meets this definition depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated. Impairment may result from visitor activities; NPS administrative activities; or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park. Impairment findings are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, and park operations because impairment findings relate back to park resources and values. The draft determination of impairment for the preferred alternative is found in appendix A.

BACKGROUND

The park's light stations were constructed between 1856 and 1891 to aid navigation through this portion of Lake Superior. Five of the light stations (Michigan Island, Raspberry Island, Outer Island, Sand Island, and Devils Island) were collectively listed in the national register in 1977. LaPointe Light Station on Long Island was listed in the national register in 1983. The overall period of historic significance (1856 to 1978) reflects the 122 years from construction of the first light station on Michigan Island to the automation of Devils Island Light Station and consequent departure of its USCG crew.

The light stations are the most visible historic resources in the national lakeshore; they are viewed by many as icons inextricably linked to the region's cultural history. Visitation to the park has generally increased from the 1980s, with slight declines in visitation from 1984 to 1986, 1991 to 1992, and 1999 to 2004. Over the last few years, visitation has been on the rise, although there was a slight decrease from 2006 to 2007, from 189,000 recreation visits in 2006 to 182,000 in 2007. Park staff offer guided tours to visitors arriving in private boats from mid-June to September. These tours occur at several lighthouses. The 2,000 to 4,000 visitors arriving at Raspberry Island via sailboat, power boat, excursion boat, or sea kayak tour the lighthouse each summer. The Sand Island Lighthouse is toured by 1,500 to 2,500 visitors annually with the guidance of volunteer

INTRODUCTION

lighthouse keepers. The light stations at Devils and Michigan islands receive 1,000 to 1,500 visitors each, also with assistance from volunteer lighthouse keepers.

Raspberry Island Light Station is the most readily accessible and most frequently visited of the Apostle Island light stations. For Raspberry Island Light Station, NPS completed erosion-control measures in 2003 in response to severe shoreline erosion and slumping of the embankment that threatened the light station structures. These measures included placing a rock revetment across the base of the bluff below the station; regrading the slope to a stable angle; drainage improvements to divert runoff; and bioengineering using fascines, brush layering, and revegetation to anchor the soils. A rehabilitation project was undertaken in 2006 to address structural deterioration of the lighthouse and keeper's dwelling to improve its functional use for employee housing and enhance visitor interpretation. These measures included restoring (both interior and exterior) the southern half of the building to its early 20th century appearance, adaptive use of the northern half of the building for seasonal employee housing, water supply and electric power systems upgrades, and installing a septic system. Proposed light station treatments considered in this EA are intended to further improve safety and visitor experiences for the remainder of the light stations.

Scoping

Scoping is an early and open process to determine the breadth of issues and alternatives to be addressed in an environmental assessment. Park staff and resource professionals of NPS Denver Service Center and NPS Midwest Regional Office conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the preferred alternative to other planning efforts at the park.

The Lake Superior Tribe of Chippewa/Ojibwe Indians is traditionally associated with the area now containing the park. The tribe and independent Chippewa/Ojibwe tribal governments were sent an informational letter describing the project and asking for comments (Appendix B). The tribes and governments that received letters are:

- Red Cliff Band of Lake Superior Chippewa
- Bad River Band of Lake Superior Chippewa
- Mille Lacs Band of Ojibwe
- Fond du Lac Band of Lake Superior Chippewa
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- Lac Courte Oreilles Band of Ojibwe
- Keweenaw Bay Indian Community
- Sokaogon Chippewa Community
- St. Croix Chippewa Indians
- Lac Vieux Desert Band of Lake Superior Chippewa Indians

The National Historic Preservation Act (16 United States Code [USC] 470 et seq.); NEPA; NPS Organic Act; NPS *Management Policies* 2006; Director's Order (DO) – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001); and DO – 28: *Cultural Resources*

Management Guideline require the consideration of impacts on cultural resources, either listed in or eligible to be listed in, the national register. Park staff met with the Wisconsin State Historic Preservation Office (SHPO) on November 9, 2010 to discuss the proposed action. The park will continue to consult with the SHPO to determine the effects of the proposed alternatives on eligible historic resources and to develop mitigation for impacts to historical features, if any, from the preferred alternative. The SHPO concurred with a preliminary finding of “no adverse effect” for the potential undertaking (Appendix B).

IMPACT TOPICS

An important part of the decision-making process is seeking to understand the consequences of making one decision over another. This EA identifies the anticipated impacts of possible actions on certain resources, park visitors, and neighbors. The impacts are organized by topic, such as “vegetation” or “public health, safety, and park operations.” Impact topics serve to focus the environmental analysis and to ensure the relevance of impact evaluation. Impact topics were developed from the questions and comments brought forth during scoping. Some topics were dismissed from detailed analysis because the proposed alternatives would either have no effect on the impact topic or the effects would be negligible to minor. Some impact topics are retained even though the effects of the alternatives would be minor because the impact topic is a particularly sensitive resource, like wetlands, or was identified as an important topic in scoping. Issues identified in scoping that are evaluated in this EA are potential effects on geology and coastal processes; soils; vegetation; wildlife; special status species; water quality; wetlands; natural soundscape; historic structures and cultural landscapes; archeological resources; visitor experience; and public health, safety, and park operations. Table 1 discusses the retained impact topics; the reasons for retaining the topic; and relevant laws, regulations, and policies.

TABLE 1. IMPACT TOPICS RETAINED AND RELEVANT LAWS, REGULATIONS, AND POLICIES

| Impact Topic | Reasons for Retaining Impact Topic | Relevant Laws, Regulations, and Policies |
|--------------------------------------|---|---|
| Geology and Coastal Processes | Boardwalk and boat dock work and selectively removing trees on shoreline bluffs may affect coastal processes. Such changes would be of concern to visitors, the public, and park managers; therefore, this topic was retained for further analysis. | NPS Organic Act; NPS <i>Management Policies 2006</i> |
| Soils | Because the EA alternatives have the potential to affect soils and because the park identified soil erosion as an ongoing management concern, this topic was retained for further analysis. | NPS Organic Act; NPS <i>Management Policies 2006</i> |
| Vegetation | Vegetation disturbance could occur and the introduction of invasive nonnative species is possible from ground-disturbing activities during construction and from disposal of logs and other vegetative materials removed from cleared areas. Because the EA alternatives have the potential to affect vegetation, this topic was retained for further analysis. | NPS Organic Act; NPS <i>Management Policies 2006</i> ; Resource Management Guidelines (NPS-77); Federal Noxious Weed Control Act; Executive Order (EO) 13112, “Invasive Species” (1999) |

| Impact Topic | Reasons for Retaining Impact Topic | Relevant Laws, Regulations, and Policies |
|--|---|--|
| Wetlands | The proposed alternatives may have effects on wetlands, which are an important and sensitive resource, so this topic was retained for further analysis. | Clean Water Act sections 401 and 404; NPS <i>Management Policies 2006</i> ; NPS DO-77-1; EO 11990, "Protection of Wetlands" |
| Wildlife | Construction activities, vegetation management, and increased visitor use could affect wildlife in the project area. Because the EA alternatives have the potential to affect wildlife and wildlife is an important and sensitive resource, this topic was retained for further analysis. | NPS Organic Act; enabling legislation; NPS <i>Management Policies 2006</i> |
| Special Status Species | Piping plover designated critical habitat is present in the Long Island portion of the project area. In recent years, piping plovers have successfully and consistently nested on Long Island. Gray wolf is also an occasional transient species in the park. Available survey data and interviews with park staff indicate that state threatened and endangered plant species occur near the light stations, especially at Devils and Outer islands. Because the EA alternatives have the potential to affect piping plover gray wolf and several state threatened and endangered plant species, this topic was retained for analysis. | Endangered Species Act; NPS <i>Management Policies 2006</i> |
| Natural Soundscape | There could be at least local temporary increases in noise associated with the EA alternatives. Because the EA alternatives have the potential to affect the soundscape, this topic was retained for further analysis. | NPS <i>Management Policies 2006</i> ; DO – 47: <i>Soundscape Preservation and Noise Management</i> |
| Historic Structures and Cultural Landscapes | The future of the light stations and their historic structures and cultural landscapes is a key issue of the draft general management plan. Changes to historic structures and the cultural landscapes that could result from implementing one or more of the alternatives would be of concern to visitors, the public, the tribes, the SHPO, and NPS managers; therefore, this topic was retained for further analysis. | Sections 106 and 110 of the National Historic Preservation Act; Advisory Council on Historic Preservation's (ACHP) implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO/NPS-28: <i>Cultural Resources Management Guideline</i> ; NPS <i>Management Policies 2006</i> ; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> ; National Environmental Policy Act; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996) |

| Impact Topic | Reasons for Retaining Impact Topic | Relevant Laws, Regulations, and Policies |
|---------------------------------|---|--|
| Archeological Resources | Ground-disturbing construction activities and vegetation removal associated with the EA alternatives have the potential to impact archeological resources and, therefore, this topic was retained for further analysis. | Sections 106 and 110 of the National Historic Preservation Act; ACHP implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO/NPS-28: <i>Cultural Resources Management Guideline</i> ; <i>Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> ; <i>NPS Management Policies 2006</i> ; National Environmental Policy Act; DO – 28A: <i>Archeology</i> (2004) |
| Visitor Experience | The EA alternatives could affect overall visitor understanding of the park, particularly pertaining to the light stations, including interpretive and educational opportunities and, therefore, this topic was retained for further analysis. | NPS Organic Act; <i>NPS Management Policies 2006</i> |
| Public Health and Safety | The EA alternatives could affect visitor safety with regard to hazardous materials, and, therefore, this topic was retained for further analysis. | <i>NPS Management Policies 2006</i> ; DO – 50C: <i>Public Risk Management Program</i> |
| Park Operations | Park operations could be affected by the EA alternatives, including facility construction and facility or infrastructure maintenance and, therefore, this topic was retained for further analysis. | <i>NPS Management Policies 2006</i> |

Impact Topics Dismissed from Further Consideration

The following impact topics or issues were eliminated from consideration because effects, if any, would be negligible to minor.

Floodplains. EO 11988: *Floodplain Management* requires an examination of impacts to floodplains and potential risks involved in placing facilities within floodplains. *NPS Management Policies 2006* and DO – 77-2: *Floodplain Management* provide guidelines for proposed actions in floodplains. The action alternatives propose work on the boardwalk and dock at Long Island LaPointe Light Station, which are located within the 100-year floodplain of Lake Superior. Under alternative 1, a new boardwalk would be constructed in the location of the historic boardwalk and in alternative 2, the preferred alternative, a new boardwalk would be constructed in the alignment of the existing boardwalk. In both alternatives, the proposed activities would consist of constructing a new boardwalk that would extend to approximately the ordinary high water mark of the lake, and maintenance and repair of the existing dock. Because the work would not include constructing new permanent structures (the boardwalk would float away in a flood) or discharge of fill material into the floodplain, alternatives 1 and 2 would have no effect on the floodplain. Under alternative 3, the existing dock would be replaced with a new dock just east of the existing dock in the location of the historic dock. The new dock would be similar in size, materials, and form to the existing dock. Additionally, a new boardwalk would be constructed that would extend from the shoreline to the new dock. Replacing the existing dock with a similar dock in a slightly different location and constructing the new boardwalk would have, at most, a negligible effect on the floodplain.

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The proposed alternatives would result in a negligible change in natural floodplain values (e.g., river processes or aquatic habitat) and the ability of the floodplain to function naturally. There would be essentially no increase in risk to life or property. Because there would be negligible effects on floodplains, this impact topic was dismissed from further analysis in this EA.

Water Resources. The Clean Water Act; section 10 of the Rivers and Harbors Appropriation Act; EO 12088, “Federal Compliance with Pollution Control Standards”; and NPS *Management Policies 2006* direct NPS to avoid or minimize human-caused pollution of waters or to obstruct the navigable capacity of waters of the U.S. Lake Superior’s clean waters are one of the park’s fundamental resources and navigation in the lake is important to recreation and commercial uses. The lake’s clean water supports the park’s natural ecosystems and is important for recreational activities including fishing, boating, swimming, wading, and kayaking.

Under the action alternatives, there would be small areas of excavation, grading, and exposure of soil material, which would increase the potential for sediment to enter Lake Superior until work is complete and vegetation is reestablished. Selectively thinning trees on the shoreline bluffs on Michigan and Outer islands has the potential to increase erosion, with associated effects on water quality. Under Alternative 3, sediment in Lake Superior would be temporarily disturbed during removal and reconstruction of the LaPointe dock. The transport of sediment to and disturbance of sediment in Lake Superior would be minimized by using best management practices (BMPs) to contain sediment and control erosion. Effects of the proposed alternatives on the water quality of Lake Superior would be negligible because of the use of BMPs and because any sediment contributions to the lake would be very minor in relation to the supply of sediment and erosion naturally occurring in this watershed.

The proposed alternatives would not have any new effects on the navigable capacity of Lake Superior. The no action alternative and alternatives 1 and 2 would not result in any work in or discharge of fill material into navigable waters. Alternative 3 would replace the existing Long Island dock with a new dock in a slightly different location, but there would be no more than negligible effects because the location, size, and form of the new dock would be similar to the existing dock that would be removed. Because the alternatives would have no more than negligible effects on water resources, this impact topic was dismissed from further analysis in this EA.

Prime or Unique Farmland. In 1980, the Council on Environmental Quality (CEQ) directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the United States Department of Agriculture, Natural Resources Conservation Service (NRCS). Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; and specialty crops such as fruits, vegetables, and nuts.

Three soil map units that occur in the park are prime farmlands, and two map units are prime farmland if drained. Most of the prime farmlands are on Outer and South Twin islands. There are no unique farmlands where the light stations are located. Because there are no prime or unique farmlands in the project area, this topic was dismissed from further analysis.

Air Quality. The park is classified as a Class II area under the Clean Air Act. This air quality classification is designed to protect the majority of the country from air quality degradation. Hydrocarbons, nitrogen oxide, sulfur dioxide, and particulates would be emitted from the use of equipment and boats during project activities and burning slash piles under the action

alternatives, resulting in localized effects on air quality. Emissions from equipment and vehicles and wood smoke would be rapidly dissipated; and visibility, deposition, and other air quality-related values are not expected to be appreciably impaired. Neither overall park air quality nor regional air quality would be more than negligibly affected by the local short-term increase in emissions. Because the effects of the proposed alternatives would be no more than negligible, this impact topic was dismissed from further analysis in this EA.

Climate Change. Some greenhouse gases, such as carbon dioxide, also would be emitted from the use of construction equipment and boats and from burning slash piles. These emissions would have a negligible short-term adverse effect on climate change. Changes in visitor use following implementation of the action alternatives would not result in a substantial increase in traffic to the island or associated vehicle emissions. Because the proposed alternatives would result in no more than negligible parkwide and regional short-term adverse effects on climate change, this impact topic was dismissed from further analysis in this EA.

Lightscape. In accordance with *NPS Management Policies 2006*, NPS strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. The actions proposed in the alternatives could result in the expanded use of buildings for employee housing, some of which could necessitate some nighttime lighting. However, the effects of this lighting would be localized and minimized. Only a small area would be affected by the facilities. In addition, future expansion of lighting is strongly limited by the lack of power at most locations. It is expected that these few developments would have a negligible impact on the night sky. Therefore, lightscape was dismissed as an impact topic in this EA.

Paleontological Resources. *NPS Management Policies 2006* directs NPS to protect, preserve, and manage paleontological resources. Because the park is not known to contain scientifically important paleontological resources, it is unlikely there would be any effects on paleontological resources. Therefore, paleontological resources was dismissed as an impact topic in this EA.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights. The order represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. None of the lands of the park are trust resources according to this definition. In addition, any Indian titles to such lands now within the park have been extinguished through cession or sale. Therefore, Indian trust resources was dismissed as an impact topic in this EA.

Ethnographic Resources. Ethnographic resources are defined by NPS as any “site, subsistence, or other significance in the cultural system of a group traditionally associated with it” (DO – 28). The Lake Superior Tribe of Chippewa/Ojibwe Indians is traditionally associated with the park. NPS will forward this EA to the tribal contacts and independent tribal governments for their review and comments. If issues or concerns are identified, appropriate consultations would be undertaken. According to NPS professional staff and the draft general management plan (NPS 2009a), to date no ethnographic resources within the park have been determined eligible for listing in the national register. Because it is unlikely that ethnographic resources would be affected by the proposed project, and because appropriate steps would be taken to protect any ethnographic resources that are inadvertently discovered, ethnographic resources was dismissed as an impact topic in this EA.

Museum Collections. Museum collections include historic artifacts, natural specimens, and archival and manuscript material. These collections may be threatened by fire, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventative conservation, supplemented by conservation treatment, when necessary. The primary goal is preservation of artifacts in the most stable condition possible to prevent damage and minimize deterioration. The proposed activities associated with the light station treatments would not affect the current museum objects of the park. The proposed activities would likely produce some new museum accessions including archeological objects, samples of original fabric and paint, and newly acquired archival materials including official project records. These new accessions would make minor contributions to the understanding of the park's natural and cultural resources. Because the effects on the museum collection would be minor, museum collections was dismissed as an impact topic in this EA.

Socioeconomics. The local economy and most businesses within the communities adjacent to the park are based on professional services, construction, tourism, and light industry. The proposed project would improve the overall quality of the visitor experience, which is beneficial to the local economy. Construction-related spending also would provide a short-term benefit to the economy through employment and purchase of construction materials and services. There would be no beneficial socioeconomic effects under the no action alternative. No adverse socioeconomic effects were identified; therefore, socioeconomics was dismissed as an impact topic in this EA.

Environmental Justice. EO 12898: *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is the

...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

The goal of 'fair treatment' is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects, and identify alternatives that may mitigate these impacts. No actions in the alternatives would have disproportionate health or environmental effects on minorities or low-income populations or communities as defined in the Environmental Protection Agency's "Draft Environmental Justice Guidance" (July 1996); therefore, environmental justice was dismissed as an impact topic in this EA.

Wilderness. The Wilderness Act and NPS *Management Policies 2006* (section 6.2.1, NPS 2006) require that all lands administered by NPS be evaluated for their suitability for inclusion within the National Wilderness Preservation System. Areas suitable for wilderness designation are those that generally have the qualities of being untrammeled, natural, undeveloped, and offering solitude or a primitive and unconfined type of recreation. Following a positive evaluation of the

park's suitability for designation as wilderness, about 80% of the park was designated in 2004 as the Gaylord Nelson Wilderness. The light station reservations were excluded from the wilderness designation, but they abut wilderness on Michigan, Outer, and Devils islands. Sand and Long islands have no designated wilderness.

NPS is directed to protect the wilderness character of designated wilderness areas by restricting motorized vehicles, equipment, and motorboats; roads; structures; and most commercial enterprises. Protecting the wilderness characteristic of solitude also means limiting distractions such as large groups, signs and other modern artifacts, and unnatural noise. The Wilderness Act does not offer protection from sights or sounds originating outside of wilderness. The park's draft general management plan includes general directions for management of the Gaylord Nelson Wilderness, including protecting and maintaining cultural resources in the wilderness.

The no action alternative would have no new effects on wilderness character or values. The proposed action alternatives include removing and managing vegetation contiguous with wilderness areas. Removing and managing vegetation would temporarily increase the presence of humans and noise levels, but these changes would be occurring outside of designated wilderness. These conditions may have short term, minor effects on the ability of people in the wilderness to experience solitude, but there would be no permanent effect on wilderness character or values. Because the effects would be no more than minor and temporary, wilderness was dismissed from further analysis in this EA.

Wild and Scenic Rivers. No rivers in the park are included in the nationwide rivers inventory, or proposed for wild and scenic river study; therefore, wild and scenic rivers was dismissed as an impact topic in this EA.

ALTERNATIVES

INTRODUCTION

This section describes the no action alternative and three action alternatives, including the preferred alternative, for cultural landscapes and historic structures treatments. The no action alternative would not restore or rehabilitate any historic structures or cultural landscapes, and would continue the present level of use, management, operations, and maintenance. The action alternatives were developed to address the purpose and need for the project to rehabilitate each park island's cultural landscape and historic structures in ways consistent with the park's draft general management plan and other relevant laws, regulations, policies, and guidance.

The preferred alternative presents NPS's preferred management action and defines the rationale for the action in terms of resource protection and management; visitor use, operations, and cost; and other applicable factors. Other alternatives that were considered are discussed in this section. Also included in this section is a comparison of how well the alternatives meet project objectives, and a summary comparison of the environmental effects of each of the alternatives.

Initial concepts for treatments began with a planning workshop in February 2010, where three overall approaches were identified. The results of the planning workshop provided direction for the Value Analysis that was completed in May 2010 (NPS 2010).

The objectives of the Value Analysis were to select a preferred treatment alternative for cultural landscapes and historic structures at the light stations. The project objectives used to guide the evaluation of a full range of alternatives were the same as those for the project as a whole, which are to:

- **Protect Cultural and Natural Resources**
 - Improve conditions of historic buildings and structures
 - More accurately represent cultural landscape features
 - More accurately represent historic clearing and associated viewshed
 - Minimize erosion potential at sites
 - Minimize impacts of exotic invasive species
- **Provide for Visitor Enjoyment and Safety**
 - Provide a high quality (authentic) visitor experience
 - Minimize impacts to visitor experience during rehabilitation activities
- **Improve Efficiency of Park Operations**
 - Provide for basic staff needs at housing (e.g., water and restrooms)
 - Minimize operational effort
 - Reduce exposure to hazardous materials
 - Minimize nonrenewable energy usage (and carbon footprint)

The treatment alternatives were evaluated using the Choosing by Advantages process, where the decisions are based on the importance of advantages between the alternatives. The evaluation

involves the identification of the attributes or characteristics of each alternative relative to the evaluation criteria, a determination of the advantages for each alternative within each evaluation factor, and then weighing the importance of each advantage.

Three treatment alternatives were evaluated in the Value Analysis (NPS 2010). The alternatives included a range of approaches, including preservation, restoration, and rehabilitation. The alternatives also included a range of the number of buildings and cultural landscape features that would be addressed, number of buildings open to visitors, number of safety improvements, and number of improved water and waste water facilities. The preferred alternative provided the best combination of features that met project objectives. The preferred alternative preserves and improves historic buildings, structures, and cultural landscapes; reestablishes clearings and viewsheds that more accurately represent historic conditions; improves public health and safety by removing or stabilizing hazardous materials and adding safety features; and improves park operation by providing a clear and integrated approach to the repair, maintenance, and improvements to historic cultural resources at the light stations.

While all of the alternatives considered had different advantages, the preferred alternative had the best overall combination of features that met the project objectives. The alternative preferred in the Value Analysis is the preferred alternative in this EA.

DEFINITIONS

The descriptions of the alternatives include a number of words that have specific meaning when used in the context of historic structures and cultural landscapes.

National Register of Historic Places

NPS administers the national register. The national register is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. National register properties have significance to the history of their community state, or the nation.

Contributing Feature

A contributing feature is a building, site, structure, or object adding to the historic significance of a property, structure, or cultural landscape.

Treatment Approaches

The Secretary of the Interior has developed four nationally accepted treatment approaches for addressing historic resources. Each treatment approach has associated guidelines and standards for how it is applied to historic resources. The four treatment approaches are:

Preservation standards require retention of the greatest amount of historic fabric, including the landscape's historic form, features, and details as they have evolved over time. Limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work is permitted.

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Rehabilitation standards acknowledge the need to alter or add to a building or cultural landscape to meet continuing or new uses while retaining the site's historic character. Rehabilitation allows for repairs, alterations, restoration of missing features, and additions necessary to enable a compatible use for a property as long as the portions or features which convey the historical, cultural, or architectural values are preserved.

Restoration standards allow for the depiction of a building or landscape at a particular time in its history by preserving materials from the period of significance and removing materials from other periods.

Reconstruction standards allow for depicting, by means of new construction, the form, features, and detailing of a nonsurviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Treatment Terminology

The following terms are used in the descriptions of alternatives:

Alter – is to change in some fashion from the existing condition.

Maintain – are those standard maintenance practices (mowing, pruning, thinning vegetation or painting, cleaning small scale features) that are necessary to retain the features or area as a contributing resource. Maintenance activities are usually not classified as repair, however, minor repair such as replacing posts or railings or segments of paving are included. Limited and sensitive upgrading of systems (mechanical, electrical, plumbing) and other code related work is appropriate.

Plant –removing and replanting landscape plantings and vegetation as part of maintenance activities.

Protect – short term and minimal measures used to stabilize and protect features, such as fencing around landscape features.

Reestablish – measures necessary to depict a landscape feature as it occurred historically. Reestablish may include replacing a missing feature, such as replacing a pattern of planting, or a replacing missing quality, such as the reestablishment of a view.

Relocate –removing and resetting noncontributing features.

Remove –removing nonhistoric features.

Repair – are those measures necessary to maintain a building or portion of a building in place using the same materials that exist, or with very minimal addition of new materials. Repairs are more extensive than regular maintenance. Features that are repaired will match the old in design, color, texture, and if possible, material. Replacement work will only occur when historic fabric is deteriorated beyond repair. Evaluation of restoration and low-impact options must be exhausted before replacement is considered feasible.

Restore – are those measures necessary to depict a feature or area as it occurred historically. Restoration may include repairing a feature so that it appears as it did historically or it may include replacing missing features (such as replacing a section of a historic fence) or quality (restoring a view). Restoration is undertaken when a "period of significance" is determined and that period of significance (original construction or a succeeding period representing a continuum of change for the property) becomes a project goal. Restoration is only recommended when restorative details can be substantiated by documentary and physical evidence. Without indisputable evidence restorative work risks conjectural decision making, leading to inaccurate and inappropriate historical appearance. Restoration must avoid the creation of a false sense of historical development.

Retain – are those actions that are necessary to allow for a feature (contributing or noncontributing) to remain in place in its contributing current configuration and condition. Retention of historic fabric is the primary tenet for preservation treatment of historic properties. The extent of historic fabric represents historic integrity which is fundamental to the recognition and status of historic properties.

Stabilize – immediate measures (more than standard maintenance practices) are needed to prevent deterioration, failure, or loss of features.

NO ACTION ALTERNATIVE

The no action alternative provides a basis for comparison with the action alternatives, including the preferred alternative, and the respective environmental consequences. Under the no action alternative, there would be the fewest changes to the existing landscape, and generally, it perpetuates the current conditions at the light stations (Figures 2 to 13). This alternative would preserve existing forms and materials through as-needed stabilization, ongoing preservation maintenance, and repairing historic materials and features. Historic small scale features in the landscape, pedestrian circulation, lawn and gardens, and historic clearing would persist through on-going maintenance. The existing views from the light stations to the lake and from the lake to the light stations would be maintained.

Examples of continuing conditions on each island include:

Michigan Island. Guided visitor access to the Old Michigan Island Lighthouse and Second Tower would continue and staff housing would continue to be provided in the Keepers Quarters. The currently cleared area would remain at about 1.6 acres, which is about 16% of the historically cleared area. Buildings would continue to experience excessive moisture. Hazardous materials, including asbestos, mold, and bat guano, would remain unabated. The operability of the tramway would continue to decline due to the unavailability of parts.

Outer Island. Self-guided access would continue to be offered for Outer Island building exteriors. Limited housing for NPS seasonal staff would continue to be provided in the Keepers Quarters. The currently cleared area would remain at about 1.6 acres, which is about 17% of the historically cleared area. Buildings would continue to experience excessive moisture and mold. Hazardous materials, primarily lead-based paint, would remain unabated. The tramway would remain inoperable.

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Devils Island. Guided access would continue to be provided to the tower and Keepers Quarters and the Keepers Quarters would be used for NPS seasonal staff housing. The currently cleared area would remain at about 3.0 acres, which is about 18% of the historically cleared area. Buildings would continue to experience excessive moisture. Hazardous materials, primarily lead-based paint, would remain unabated.

Long Island. Self-guided access would continue to be offered for Long Island building exteriors. There would be no staff housing. The currently cleared area would remain at about 1.5 acres, which is about 11% of the historically cleared area. Buildings would continue to experience excessive moisture. Hazardous materials, including lead-based paint, bat guano, and mold, would remain unabated.

Sand Island. Limited guided visitor access and staff housing would continue to be provided at the Light Station Tower and Keepers Quarters. The currently cleared area would remain at about 3.0 acres, which is about 45% of the historically cleared area. Buildings would continue to experience excessive moisture. Hazardous materials, primarily lead-based paint, would remain unabated.

Michigan Island Reservation Existing Conditions

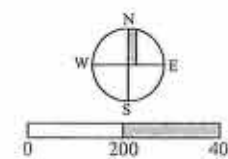
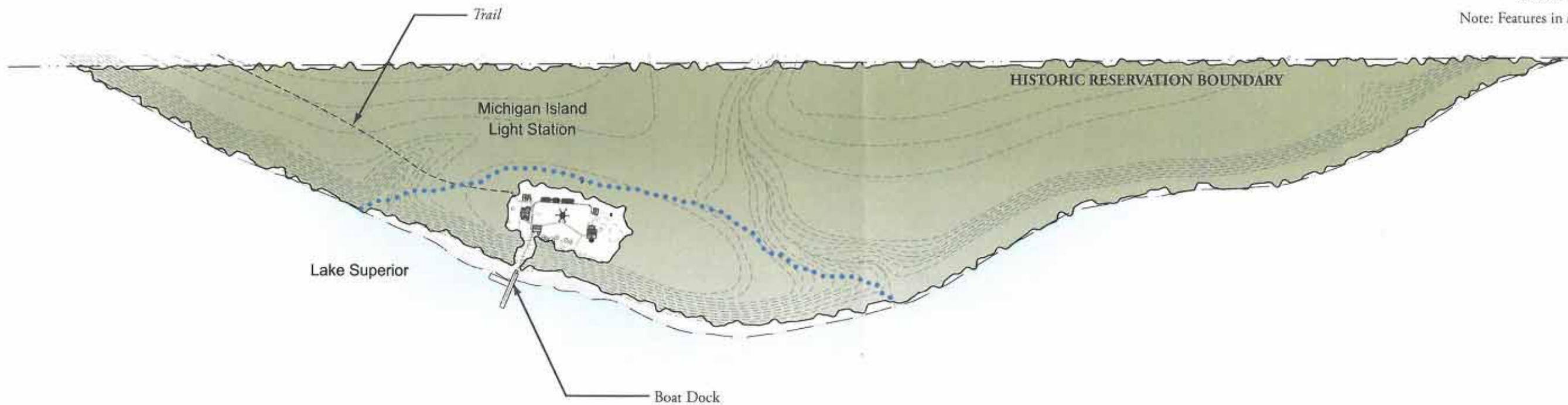


Michigan Island

Legend

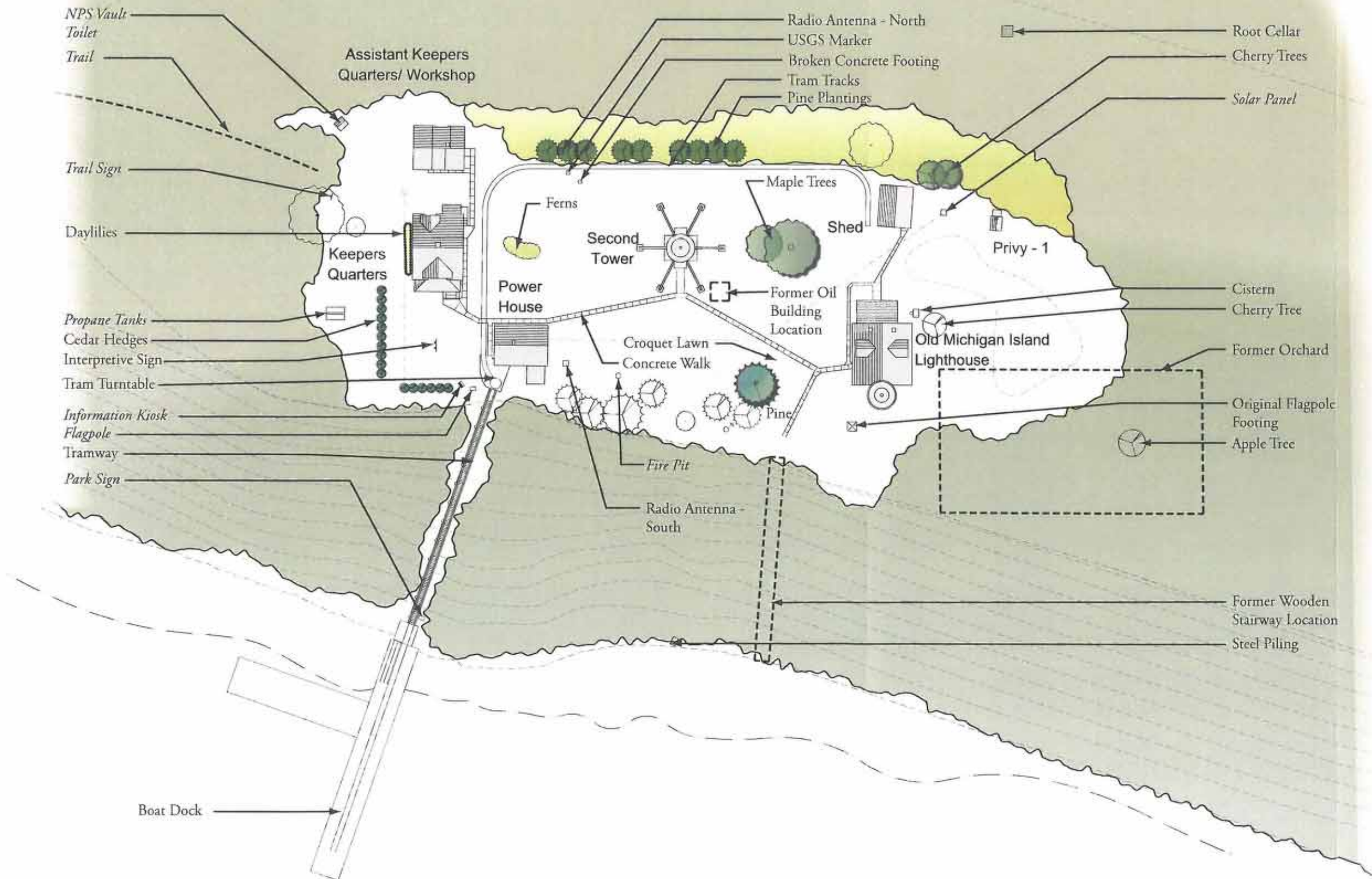
- Cleared Area
- Forest
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing



| | | | |
|---|--|---|--|
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | FIGURE 2 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING MICHIGAN ISLAND - RESERVATION BOUNDARY NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION COUNTY STATE MIDWEST ASHLAND WISCONSIN | |
| 100% 3/18/11 | | | |

Michigan Island Existing Conditions

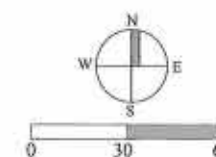


Michigan Island

Legend



Note: Features in *italics* are Noncontributing



| | |
|---|-------------------|
| FIGURE 3 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES | |
| TITLE OF DRAWING MICHIGAN ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE | |
| REGION MIDWEST | COUNTY ASHLAND |
| STATE WISCONSIN | |
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | |
| 100% 3/18/11 | |

Outer Island Reservation Existing Conditions

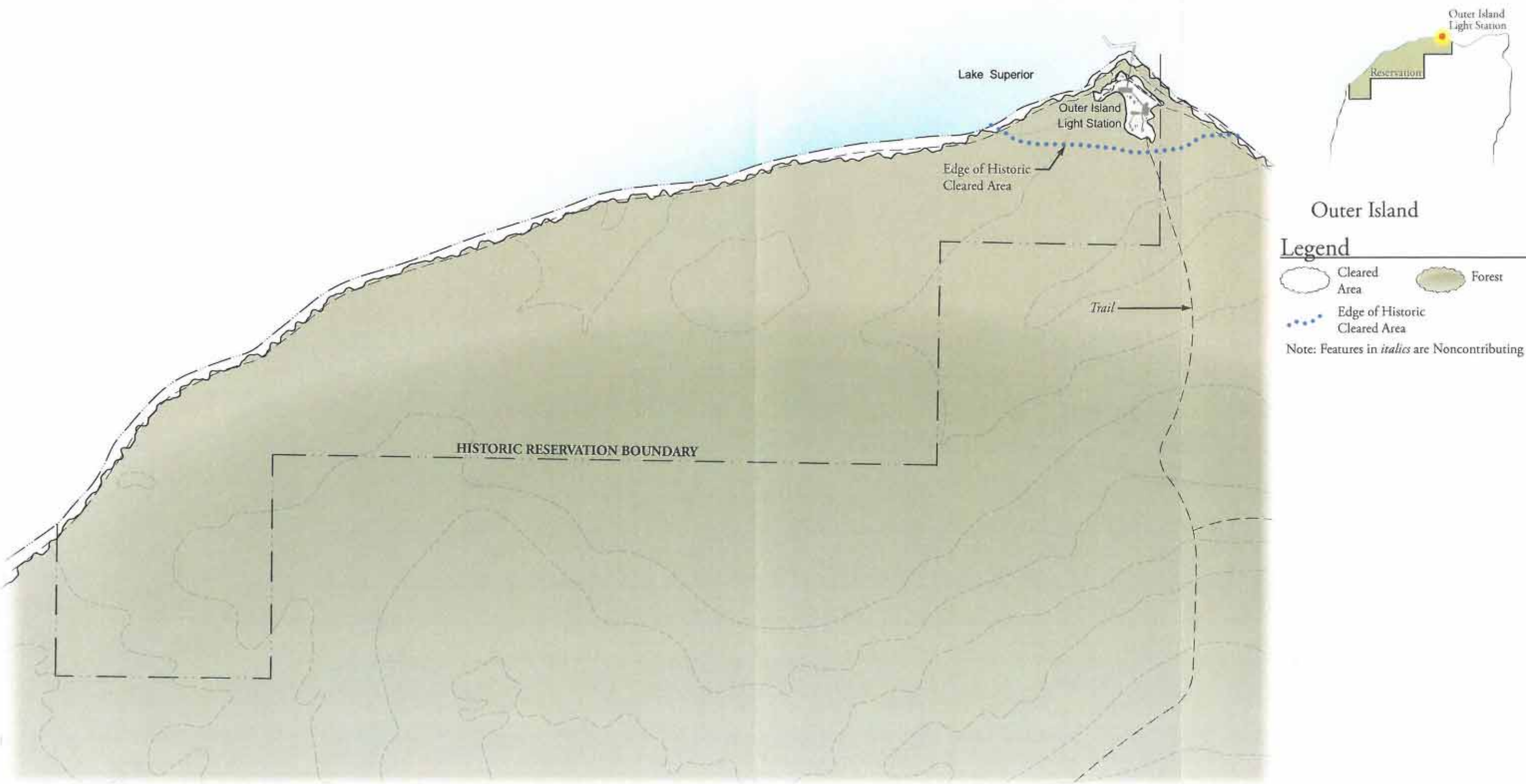
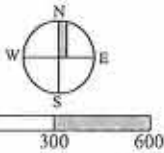


FIGURE 4



| | | | |
|---|--|-------------------|--------------------|
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES | | |
| | TITLE OF DRAWING OUTER ISLAND - RESERVATION BOUNDARY | | |
| | NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE | | |
| | REGION MIDWEST | COUNTY ASHLAND | STATE WISCONSIN |
| 100% 3/18/11 | | | |

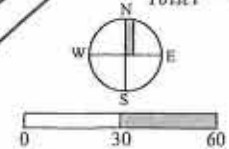
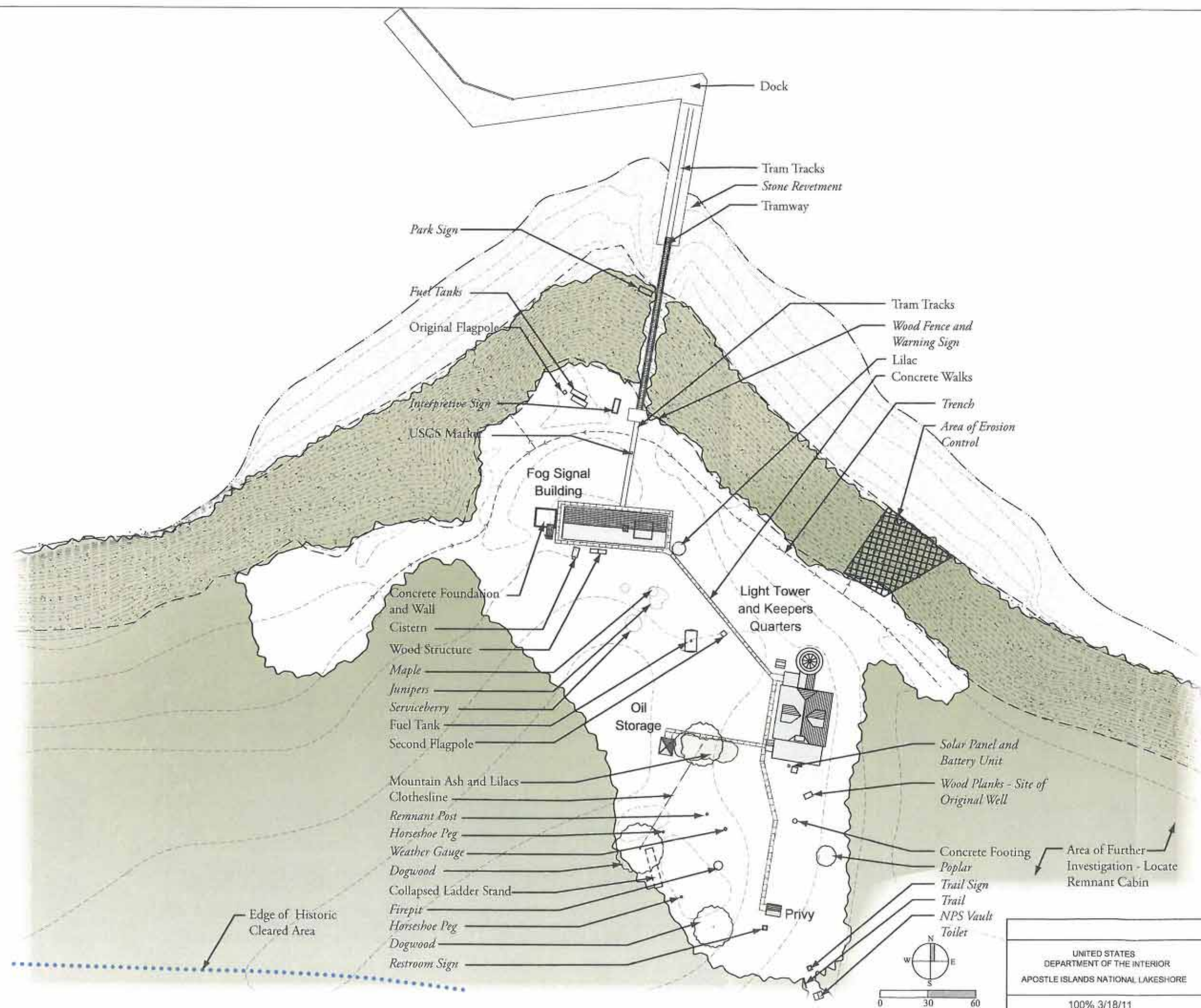
Outer Island Existing Conditions



Outer Island

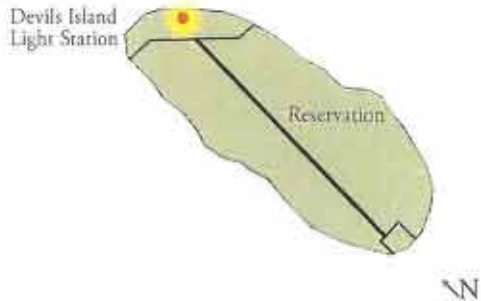
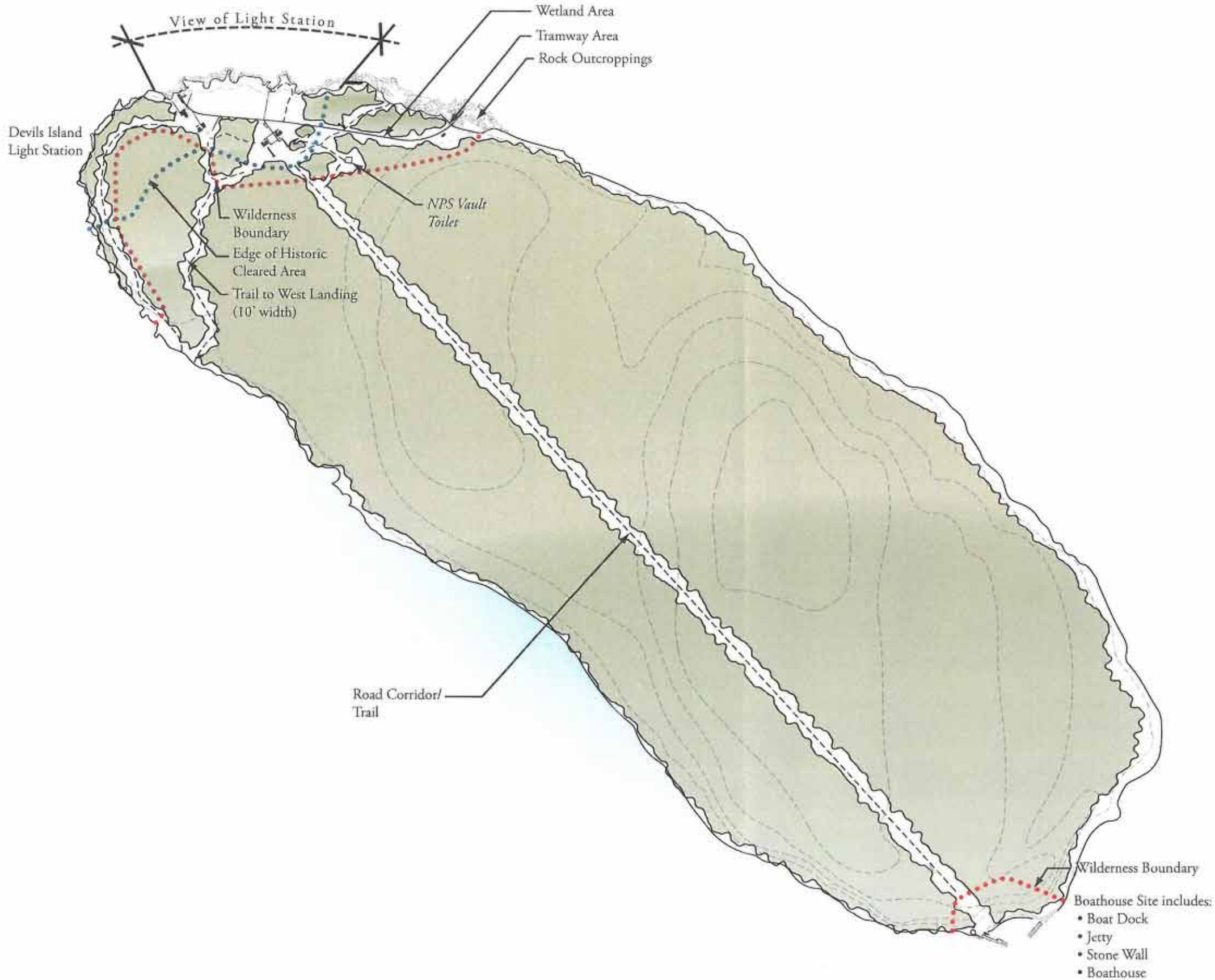
Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area
- Note: Features in *italics* are Noncontributing



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| <p>UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE</p> | | <p>FIGURE 5 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING OUTER ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY ASHLAND STATE WISCONSIN</p> | |
| <p>100% 3/18/11</p> | | | |

Devils Island Reservation Existing Conditions

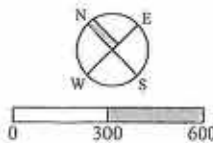


Devils Island

Legend

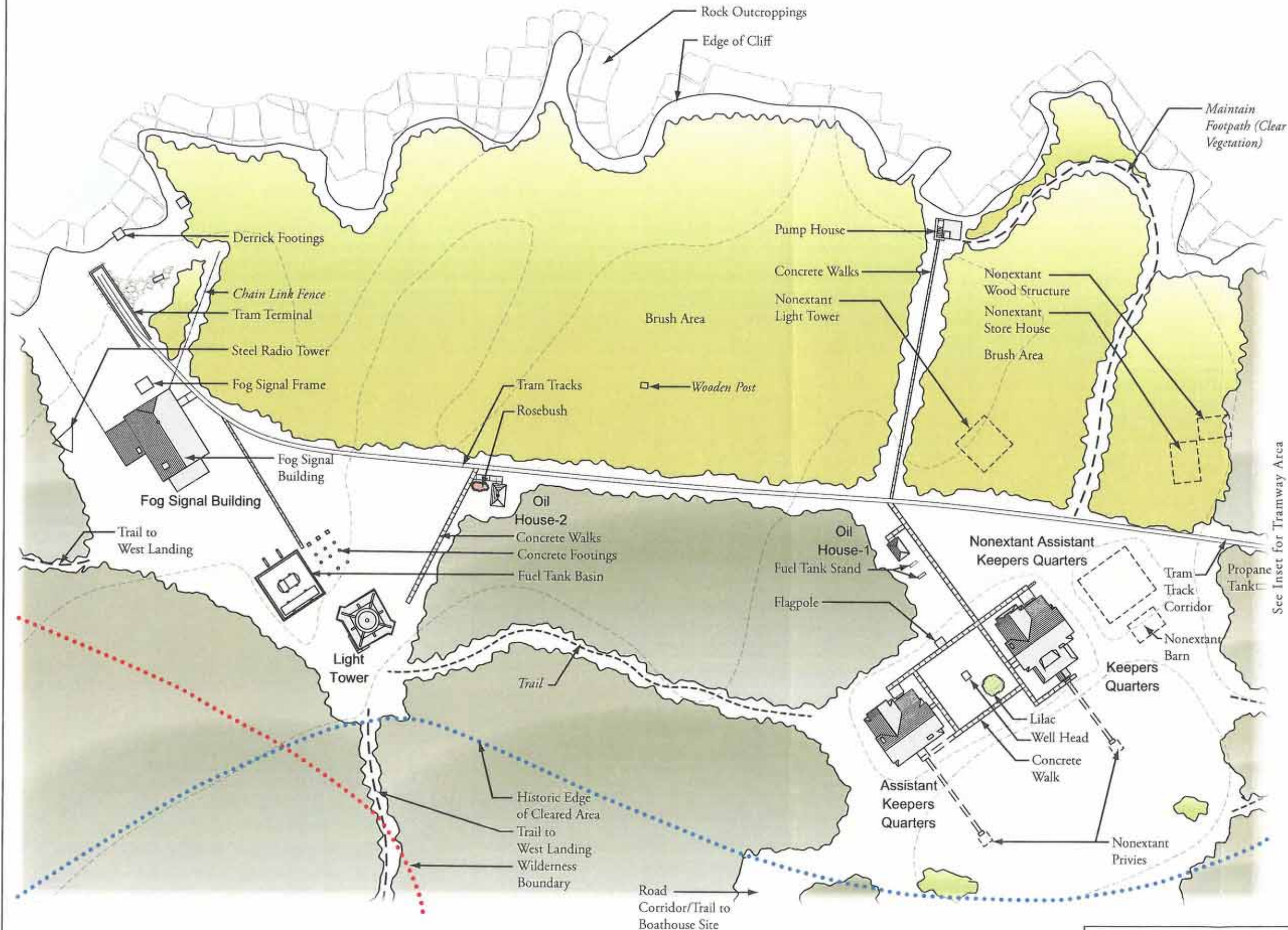
- Cleared Area
- Forest
- Edge of Historic Cleared Area
- Wilderness Boundary

Note: Features in *italics* are Noncontributing



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|---|--|--|---|--|--|
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | | FIGURE 6 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING DEVILS ISLAND NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY ASHLAND STATE WISCONSIN | | |
| 100% 3/18/11 | | | | | |

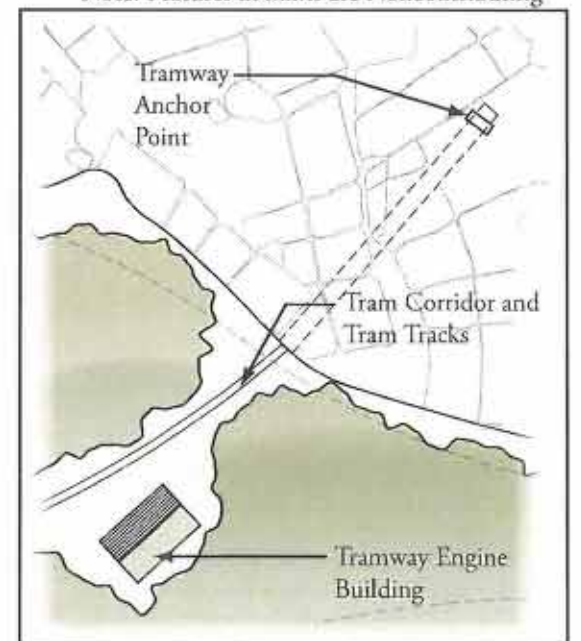
Devils Island Existing Conditions



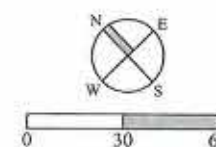
Legend

- Lawn Clearing
- Low Brush Clearing
- Edge of Historic Cleared Area
- Forest
- Wilderness Boundary
- Existing Edge of Forest

Note: Features in *italics* are Noncontributing

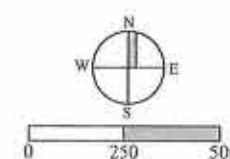
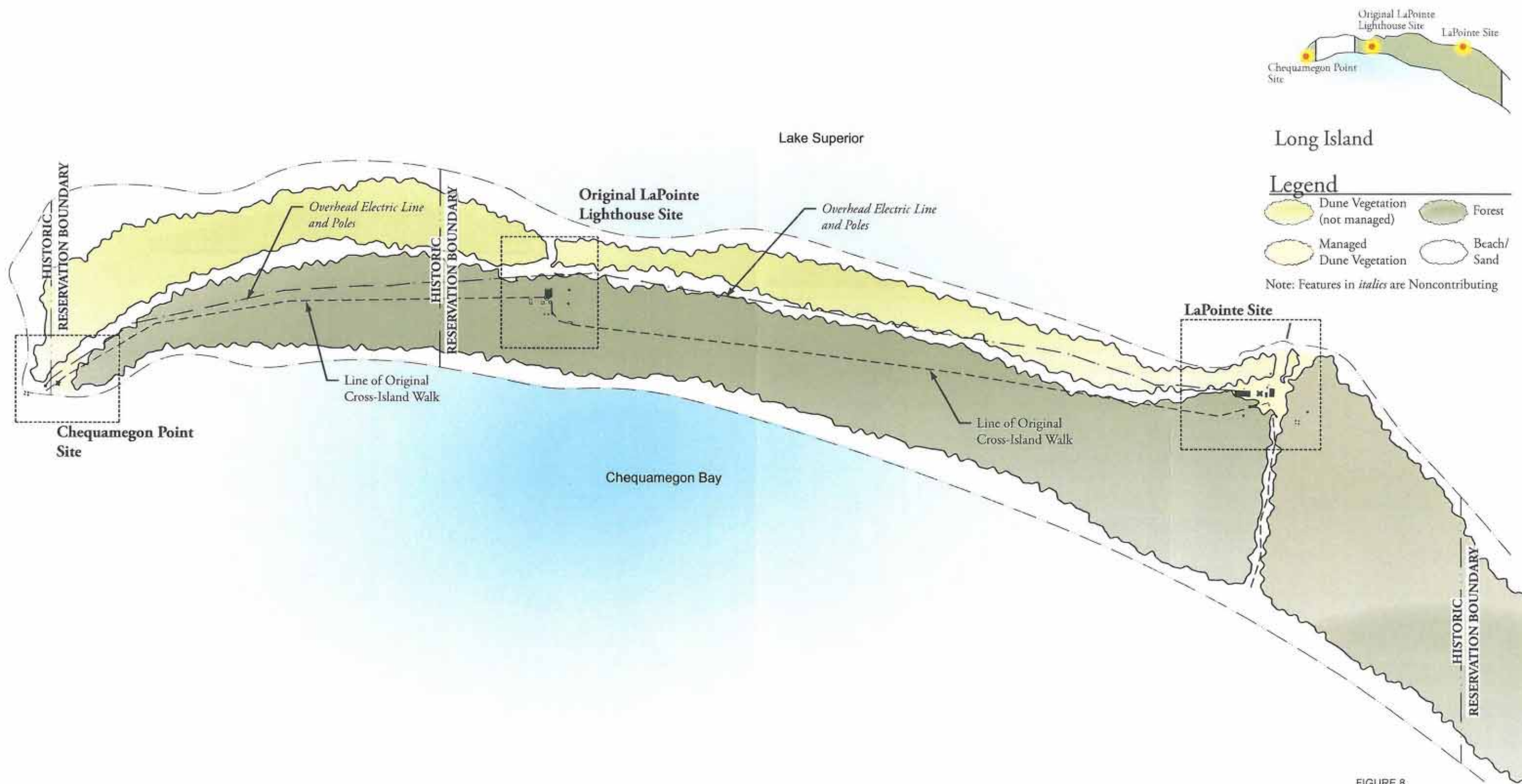


Tramway Area



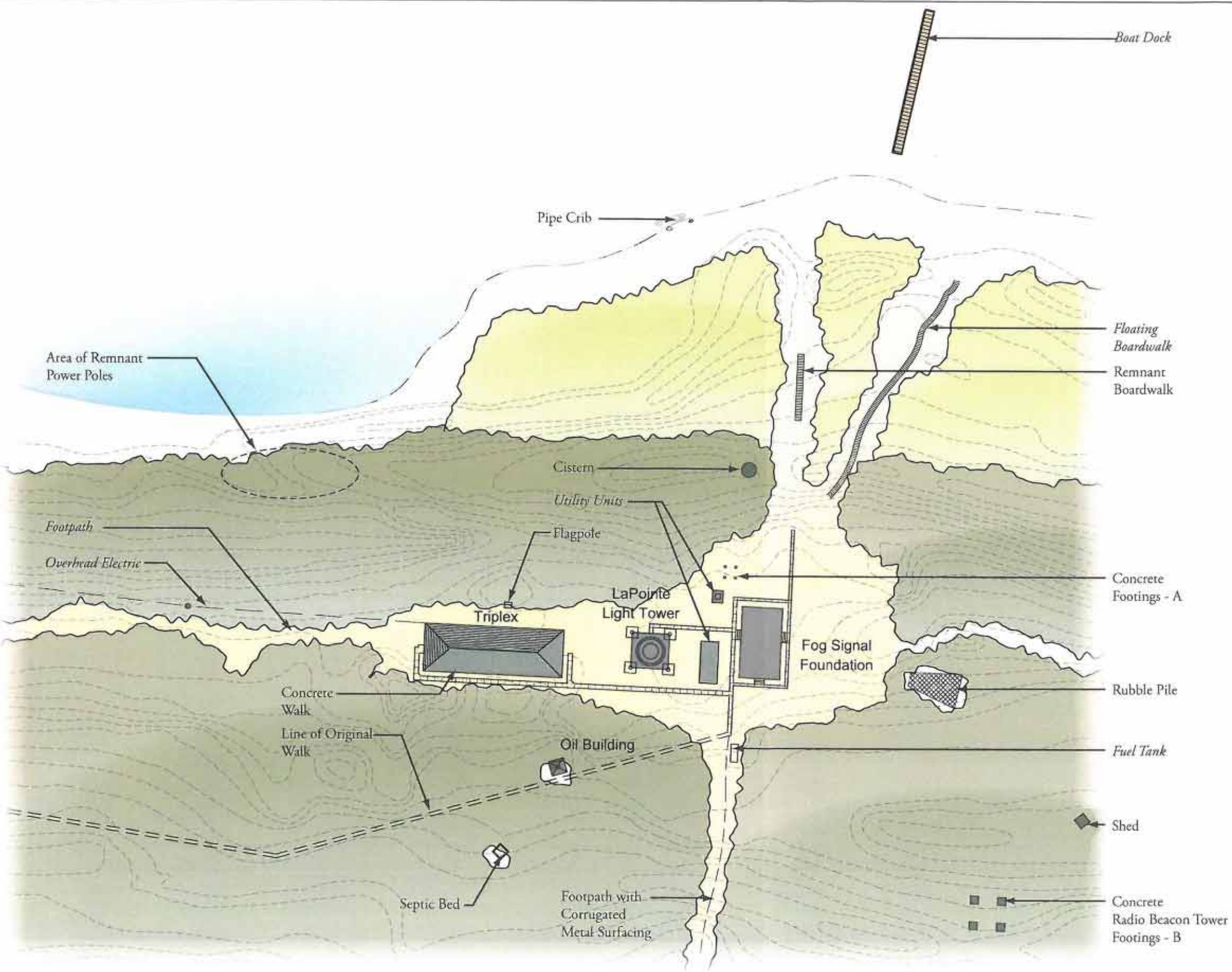
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| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | FIGURE 7 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING DEVILS ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY ASHLAND STATE WISCONSIN |
| 100% 3/18/11 | | |

Long Island Reservation Existing Conditions



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| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | FIGURE 8 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING LONG ISLAND - RESERVATION BOUNDARY NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY ASHLAND STATE WISCONSIN |
| 100% 3/18/11 | | |

Long Island LaPointe Light Station Existing Conditions

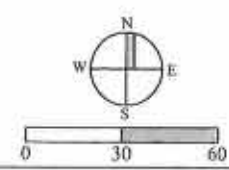


Long Island

Legend

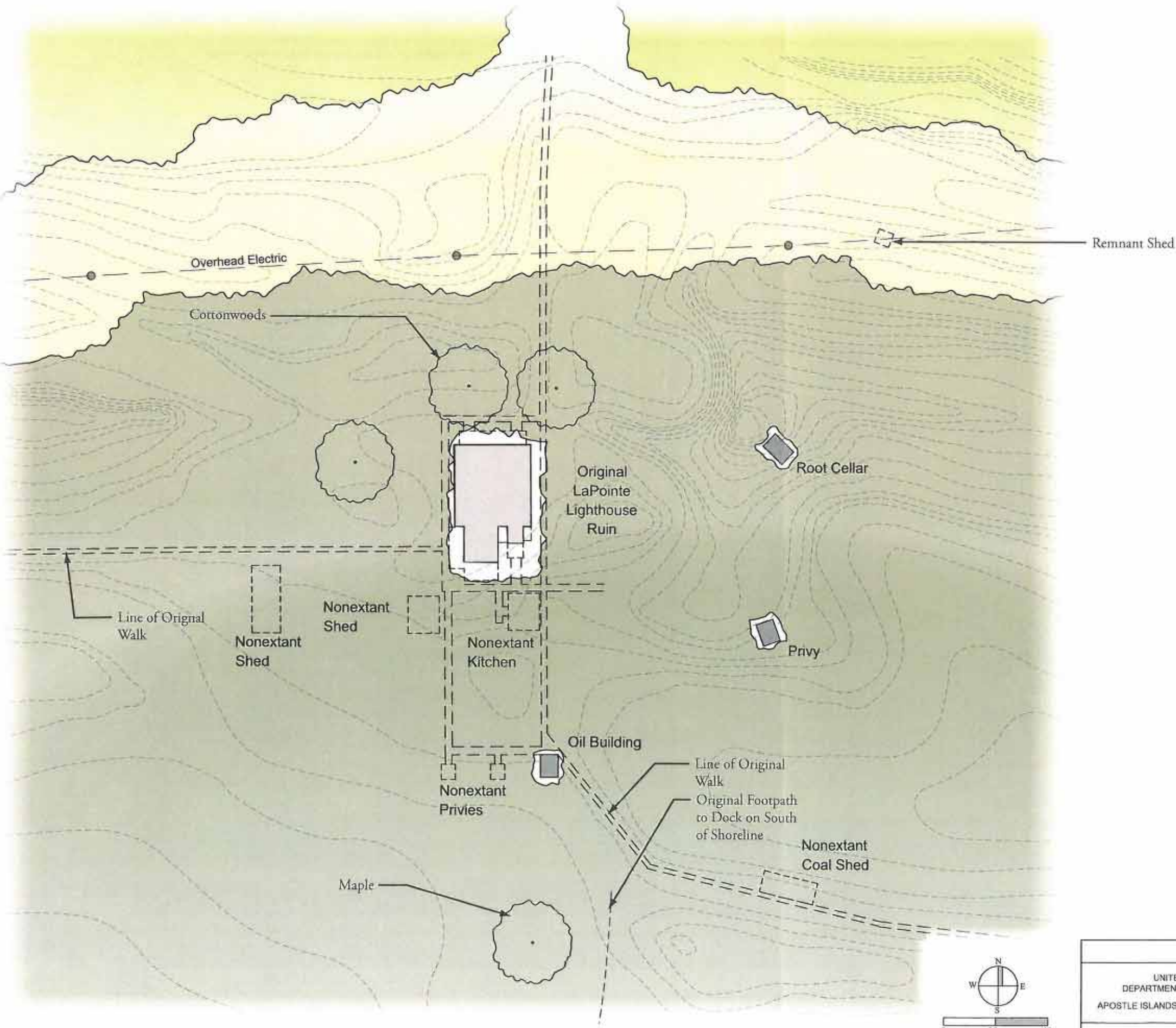
- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Forest
- Beach/Sand

Note: Features in *italics* are Noncontributing



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| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | FIGURE 9 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES | | |
| | TITLE OF DRAWING LONG ISLAND - LAPOINTE SITE | | |
| | NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE | | |
| | REGION MIDWEST | COUNTY ASHLAND | STATE WISCONSIN |
| 100% 3/18/11 | | | |

Long Island Original LaPointe Lighthouse Existing Conditions

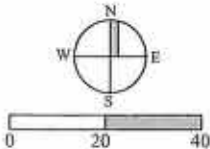


Long Island

Legend

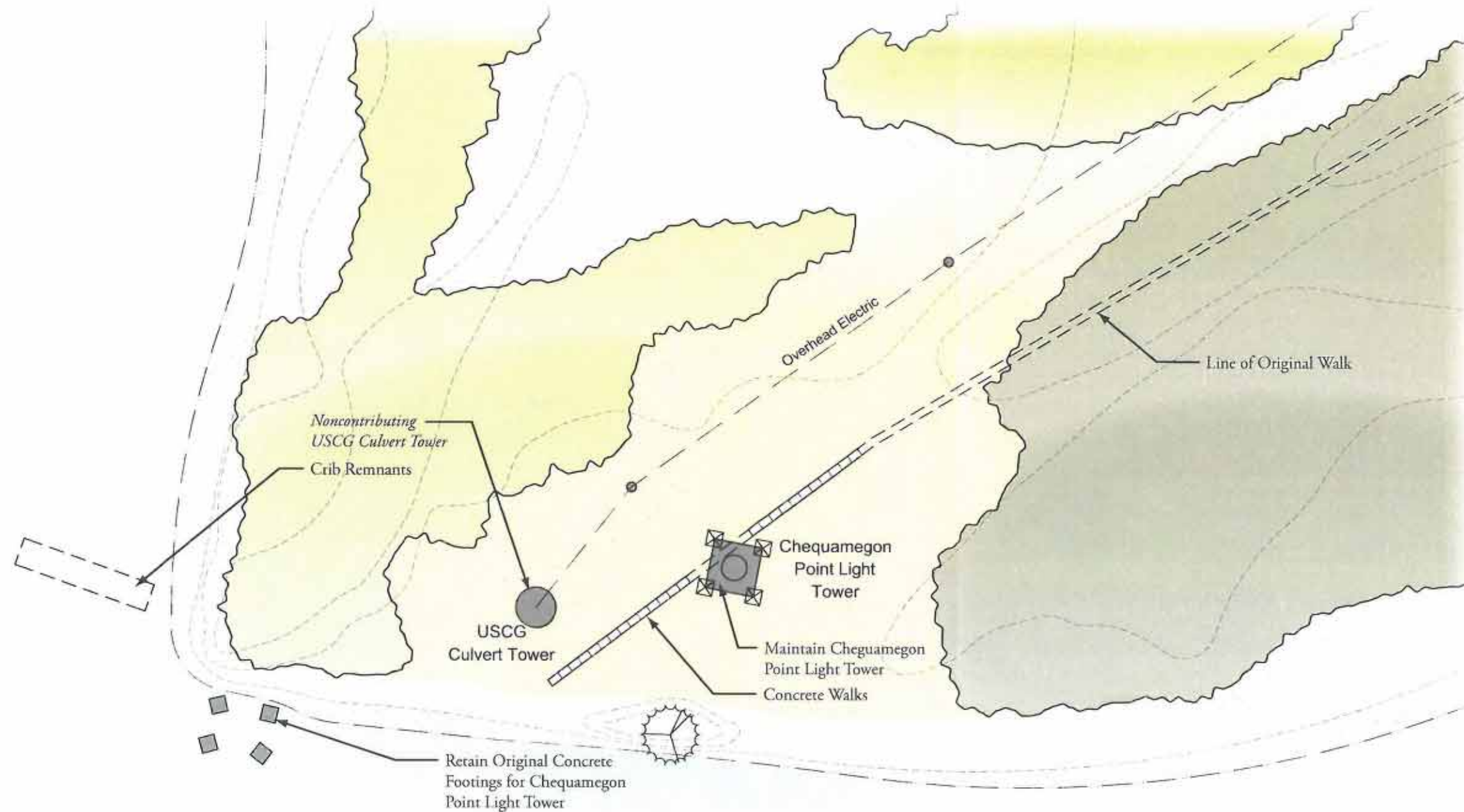
- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Forest
- Beach/Sand

Note: Features in *italics* are Noncontributing



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| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | FIGURE 10 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING LONG ISLAND-ORIGINAL LAPOINTE LTHOUSE SITE NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY ASHLAND STATE WISCONSIN | |
| 100% 3/18/11 | | | |

Long Island Chequamegon Point Existing Conditions

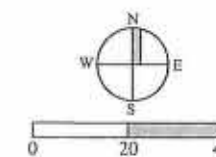


Long Island

Legend

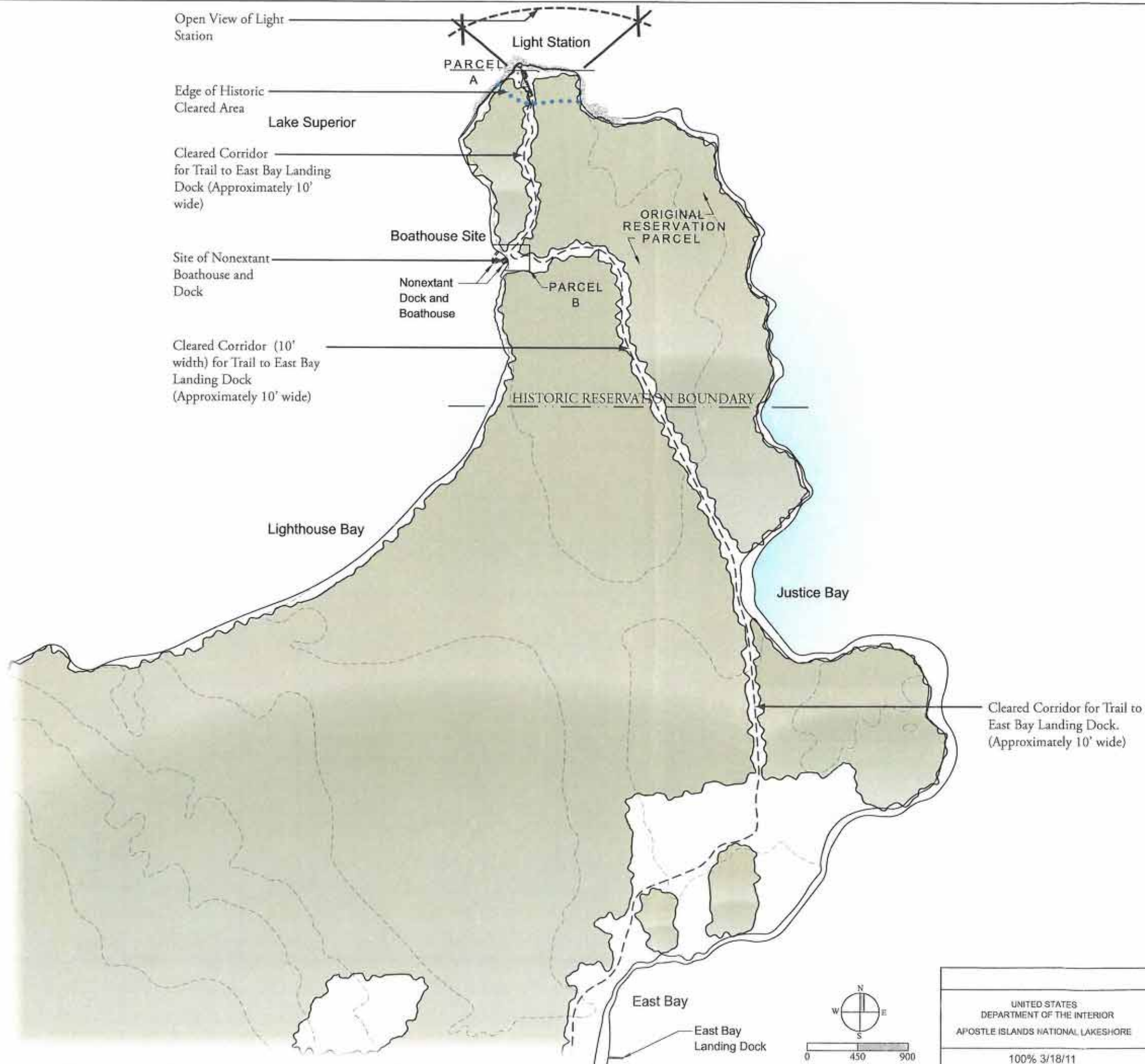
- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Forest
- Beach/Sand

Note: Features in *italics* are Noncontributing



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| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | FIGURE 11 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING LONG ISLAND - CHEQUAMEGON POINT SITE NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION COUNTY STATE MIDWEST ASHLAND WISCONSIN |
| 100% 3/18/11 | | |

Sand Island Reservation Existing Conditions

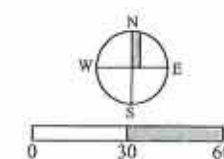
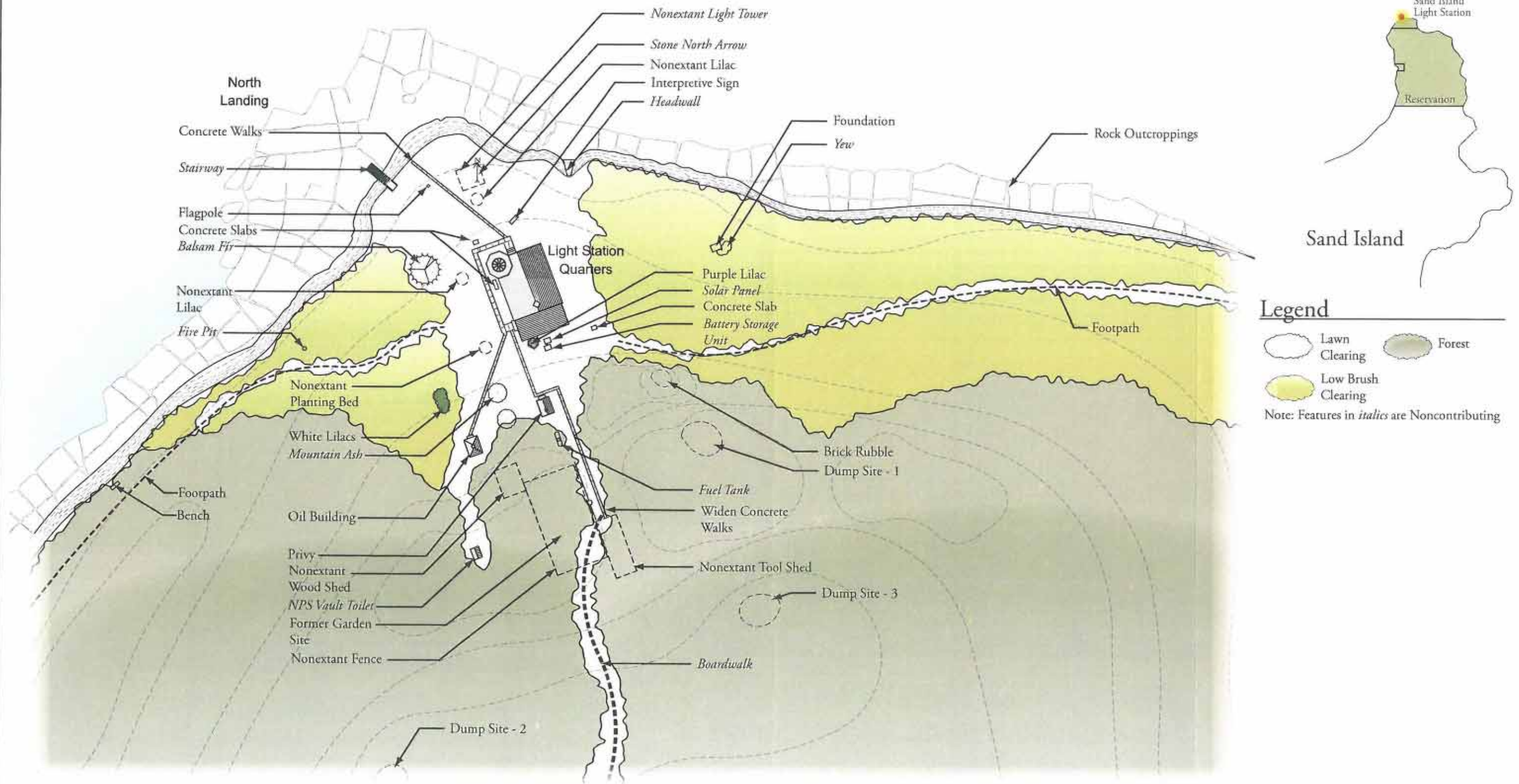


Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

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| FIGURE 12 | | |
| TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES | | |
| TITLE OF DRAWING SAND ISLAND - RESERVATION BOUNDARY | | |
| NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE | | |
| REGION MIDWEST | COUNTY BAYFIELD | STATE WISCONSIN |
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE | | |
| 100% 3/18/11 | | |

Sand Island Existing Conditions



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| FIGURE 13 TITLE OF PROJECT HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES TITLE OF DRAWING SAND ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE REGION MIDWEST COUNTY BAYFIELD STATE WISCONSIN | | |
| UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE 100% 3/18/11 | | |