TREATMENT ALTERNATIVES

This section first lists recommendations that are common for each light station under the three treatment alternatives, then generally describes each of the three treatment alternatives and lists specific recommendations for each light station under each alternative.

Recommendations Common to Treatment Alternatives for Each Light Station

The treatment alternatives for each light station include some treatment recommendations that are the same under each of the three alternatives. Because they are common to the three treatment alternatives, they are not used to differentiate between the alternatives and are listed below, rather than described under each alternative.

Michigan Island

- Preserve and maintain the Power House.
- Repair the tramway to a working condition with minor track and railing repair and replacement of the tram hoist.
- Retain the tram turntable in its current location and condition.
- Provide basic maintenance and repair of small scale features including: flagpole, radio antennae base and pole, cisterns, and concrete remnants.
- Remove noncontributing, noncompatible small scale features and vegetation.
- Establish meadow-like grasses in newly cleared areas.
- Remove noncontributing trees in the lawn area.
- Improve circulation at the light station by maintaining existing contributing concrete walks with minor leveling and vegetation removal.
- Improve accessibility at the light station by providing additional width to the existing concrete walks. Install new, compatible precast concrete sections alongside the existing concrete walks.
- Provide an accessible trail (precast concrete sections) to a new accessible NPS restroom.
- Maintain contributing landscape plantings with standard horticultural pruning and maintenance practices.
- Maintain the area of 'croquet lawn' on the light station.
- Address hazardous materials with bat guano abatement, water intrusion/mold mitigation, soil characterization (lead), asbestos sampling of materials to be preserved/stabilized, removing/stabilizing lead paint, and removing and replacing asbestos roofing. Hazardous material abatement in the buildings with housing would be to the level necessary to provide conditions suitable for use as basic housing for seasonal NPS staff.

Outer Island

- Preserve and maintain the Oil Storage Building and Privy.
- Maintain, monitor, and protect all existing slope stabilization measures along the shoreline embankment.
- Retain the boat dock in its current location and configuration.
- Repair the tramway to a working condition with minor track and railing repair and replacement of the tram hoist.
- Provide basic maintenance and repair of small scale features including: flagpoles, cistern, and concrete remnants.
- Improve circulation at the light station by maintaining existing contributing concrete walks with minor leveling and vegetation removal.
- Maintain contributing landscape plantings with standard horticultural and maintenance pruning practices.
- Remove noncontributing, noncompatible small scale features and vegetation in the lawn area.
- Locate a remnant cabin east of the Light Tower and Keepers Quarters and clear forest vegetation in the immediate area.
- Address hazardous materials with soil characterization (lead), asbestos sampling of materials to be preserved/stabilized, removing/stabilizing lead paint, and water intrusion mitigation. Hazardous material abatement in the buildings with housing would be to the level necessary to provide conditions suitable for use as basic housing for seasonal NPS staff.
- Replace damaged asbestos cement siding on the Fog Signal Building.

Devils Island

- Preserve Oil House No. 1, Oil House No. 2, Tramway Engine Building, and Boathouse. Basic measures include roofing, repainting, replacing missing features, and foundation work, where needed.
- Maintain low brush vegetation in the area between the shoreline and tram tracks by manually removing trees and large shrubs.
- Maintain boat dock features at the Boathouse. Measures include dock decking and framing repair and masonry wall repair.
- Provide basic maintenance and repair of small scale features and structures, including derrick footings, radio tower, cisterns, and pump house.
- Maintain all concrete walks with minor leveling and vegetation removal.
- Continue to maintain the cleared corridor (about 10 feet wide) for the path between the Light Station and Boathouse by removing and pruning vegetation.
- Clear vegetation along the tram tracks between the Keepers Quarters and Tramway Engine Building to maintain a width of approximately 10 feet.

- Address hazardous materials with soil characterization (lead), asbestos sampling of materials to be preserved/stabilized, removing/stabilizing lead paint, abatement of damaged asbestos cement siding, and field screening of the tank storage area for hydrocarbon characterization. Hazardous material abatement in the buildings with housing would be to the level necessary to provide conditions suitable for use as basic housing for seasonal NPS staff.

Long Island

- Preserve and maintain the oil buildings at the LaPointe and Original Lighthouse sites.
- Remove trees to create a 50-foot fire break from the LaPointe Tower, Triplex, and Chequamegon Point Tower.
- Remove the USCG culvert tower after the USCG agrees to have the light moved to the Chequamegon Point Tower.
- Remove forest vegetation and stabilize the Original Lighthouse ruin.
- Stabilize the root cellar by removing any vegetation immediately adjacent that may damage the structure.
- Provide lockable cover for the historic cistern at LaPointe.
- Provide basic maintenance and repair of small scale features, including concrete footings, flagpole, and pipe crib remnants.
- Maintain the Fog Signal foundation with minor concrete and masonry repair and vegetation removal.
- Retain all rubble piles and protect from vandalism.
- Improve circulation at the LaPointe site by maintaining existing contributing concrete walks with minor leveling and vegetation removal.
- Maintain the existing cleared corridor (4-foot width) for a path leading from the LaPointe site to Chequamegon Bay by pruning and removing encroaching vegetation. Retain the sheet metal covering on the path.
- Address hazardous materials with bat guano abatement, water intrusion/mold mitigation, soil characterization (lead), and asbestos and lead paint sampling of materials to be preserved/stabilized; replace damaged asbestos cement siding.

Sand Island

- Preserve and maintain the Oil Building and Privy.
- Improve accessibility at the light station by providing additional width to the existing concrete walks. Install new, compatible precast concrete sections alongside the existing concrete walks.
- Maintain the existing trail and trail corridor from the East Bay Landing to the light station.
- Provide an accessible trail to a new accessible NPS restroom.
- Remove the noncontributing tree in the lawn area.

- Retain and protect ruins, rubble piles, and dump sites.
- Address hazardous materials with intrusion/mold mitigation, soil characterization (lead), asbestos sampling of materials to be preserved/stabilized, removing/stabilizing lead paint, and general cleaning to remove lead dust. Hazardous material abatement in the buildings with housing would be to the level necessary to provide conditions suitable for use as basic housing for seasonal NPS staff.

Alternative 1

Alternative 1 proposes a primary treatment approach of preservation for each light station's cultural landscape and historic structures. This overall approach is intended to sustain each light station's existing form, maintain its integrity, and protect its features and materials. Current levels of staff housing would continue. Under this alternative, specific measures are recommended to stabilize, protect, and maintain existing cultural landscape features and historic structures that convey the light station's historical, cultural, and architectural values. Treatment measures allow for noncontributing, compatible features to be retained and preserved, and the removal or relocation of noncontributing, noncompatible features. In addition to the preservation efforts for cultural resources, actions are proposed to provide for improved visitor access, improved efficiency of park operational and maintenance activities, and to protect the natural systems of the light stations.

The following are general descriptions of the treatment recommendations for each light station under this alternative.

Michigan Island Light Station

Under alternative 1, the overall treatment approach of preservation at Michigan Island Light Station is primarily focused on 1) clearing and maintaining a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) stabilizing and repairing circulation features (tramway, tram tracks, concrete walks); 4) maintaining landscape plantings; 5) removing noncompatible features; and 6) preserving historic structures.

Treatment recommendations for Michigan Island Light Station generally include the following measures (Figures 14 and 15).

- Preserve and maintain all contributing buildings including: Old Michigan Island Lighthouse, Michigan Island Second Tower, Keepers Quarters, Assistant Keepers Quarters and Workshop, Shed, and Privy. Basic measures include reroofing, repairing existing contributing features, repainting, foundation repairs, and ventilation improvements, where needed.
- Clear and maintain a portion of the historic cleared area of Michigan Island Light Station by removing forest vegetation that has encroached into historically cleared areas. Clearing just over 1.3 acres of forest would produce an overall cleared area that is approximately 29% of the size of the original cleared area.
- Establish meadow-like grasses in newly cleared areas.
- Selectively cut and remove trees that obscure views to the light station from the lake within an area of about 0.4 acre along the south shoreline bluff of the light station.

- Remove vegetation and excess soil between the tram track rails and adjacent to the tracks so that the rails are clearly visible and to reduce further obscuring of the tracks by vegetation.
- Maintain the existing apple tree by pruning and clearing adjacent vegetation.
- Maintain the line of pine plantings at the north edge of the light station by pruning and shaping.

Outer Island Light Station

Under alternative 1, the overall treatment approach of preservation at Outer Island Light Station is primarily focused on 1) reestablishing views from the lake to the light station; 2) stabilizing and repairing circulation and small scale features (tramway, concrete walks); 3) maintaining landscape plantings; 4) removing noncompatible features; and 5) preserving historic structures.

Treatment recommendations for Outer Island Light Station generally include the following measures (Figures 16 and 17).

- Preserve and maintain all contributing buildings including: the Outer Island Light Tower, Keepers Quarters, Fog Signal Building,. Basic measures include repairing existing contributing features, repainting, masonry repairs, and ventilation improvements.
- Maintain the existing cleared area of Outer Island Light Station. The existing cleared area represents approximately 17% of the historic cleared area.
- Remove forest vegetation (approximately 1,000 square feet) east of the Light Tower and Keepers Quarters for fire prevention.
- Selectively cut and remove trees that obscure views to the light station from the lake within an area of approximately 0.8 acre along the north shoreline bluff of the light station.

Devils Island Light Station

Under alternative 1, the overall treatment approach of preservation at Devils Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) stabilizing and repairing circulation features (tram tracks, concrete walks); 3) maintaining landscape plantings; 4) removing noncompatible features; and 5) preserving historic structures.

Treatment recommendations for Devils Island Light Station generally include the following measures (Figures 18 and 19).

- Preserve and maintain all contributing buildings including: the Light Tower, Keepers Quarters, Assistant Keepers Quarters, and Fog Signal Building. Basic measures include reroofing where needed, repairing existing contributing features, repainting, foundation repairs, and ventilation improvements.
- Clear and maintain a portion of the historic cleared area of Devils Island Light Station by removing forest vegetation from the area between the Light Tower and Keepers

Quarters. Clearing about 4.0 acres would produce an overall cleared area that is approximately 42% of the size of the original cleared area.

- Remove vegetation and excess soil between the tram track rails and adjacent to the tracks so that the rails are clearly visible and to reduce further obscuring of the tracks by vegetation.
- Stabilize the stone tram terminal by removing vegetation.

Long Island Light Station

Under alternative 1, the overall treatment approach of preservation at Long Island Light Station is primarily focused on 1) restoring a portion of the historic cleared areas near the light towers and Original LaPointe Lighthouse ruin; 2) restoring views from the lake to the LaPointe Tower and Triplex; and 3) preserving ruins, structures, and site features.

Treatment recommendations for Long Island Light Station generally include the following measures (Figures 20 to 23).

- Preserve and maintain all contributing buildings including: the LaPointe Tower, Chequamegon Point Light Tower, Triplex, and oil buildings. Basic measures include reroofing, repairing existing contributing features, replacing missing features, repainting, foundation repairs, mitigation of hazardous materials, and ventilation improvements, where needed.
- Clear and maintain a portion of the historic cleared area at the LaPointe Tower by removing forest vegetation. Clearing about 1.8 acres would produce an overall cleared area that is approximately 31% of the size of the original cleared area.
- Clear and maintain a portion of the historic cleared area around the Original Lighthouse ruin by removing forest vegetation. Clearing approximately 0.8 acre would produce an overall cleared area that is approximately 25% of the size of the original cleared area.
- Construct a new boardwalk (approximately 170 linear feet) across the dune along the historic alignment at the LaPointe Tower leading from the Fog Signal foundation to the beach. Document and remove remnants of the historic boardwalk.
- Repair and maintain boat dock in current location.

Sand Island Light Station

Under alternative 1, the overall treatment approach of preservation at Sand Island Light Station is primarily focused on 1) maintaining the existing cleared area of the light station; 2) clearing forest vegetation in the nonextant garden area; 3) maintaining landscape features; and 4) preserving Sand Island Light Station Quarters and other historic structures.

Treatment recommendations for Sand Island Light Station generally include the following measures (Figures 24 and 25).

- Preserve and maintain Sand Island Light Station Quarters, Oil Building, and Privy. Basic measures include reroofing, repairing existing features, ventilation improvements, and repainting, where needed.
- Clear and maintain the historic garden area of Sand Island Light Station by removing and disposing of forest tree vegetation that has encroached into historically cleared areas. Clearing approximately 0.4 acre would produce an overall cleared area approximately 51% of the size of the original cleared area.
- Maintain all contributing landscape plantings.

Alternative 2 (Preferred Alternative)

Alternative 2 proposes a general approach of rehabilitation for each light station's cultural landscape and historic structures. This approach is intended to best portray the continuum of navigational history that characterizes the Apostle Islands as a system of light stations and to sustain each light station's existing form, maintain its integrity, and protect its features and materials. Under this alternative, an approach of rehabilitation would allow for repairs, alterations, and additions that are necessary to address the degradation of contributing features, and to preserve the characteristics and features that convey the light stations' historical, cultural, and architectural values. Treatment measures allow for noncontributing, compatible features to be retained and preserved, and removing or relocating noncontributing, noncompatible features. In addition to the rehabilitation efforts for cultural resources, actions are proposed to provide for improved visitor access, additional staff housing, improved efficiency of park operational and maintenance activities, and to protect the natural systems of the light stations.

The following are general descriptions of the treatment recommendations for each light station under this alternative.

Michigan Island Light Station

Under alternative 2, the overall treatment approach of rehabilitation at Michigan Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) repairing circulation features (tramway, tram tracks, concrete walks); 4) restoring missing landscape plantings; 5) removing noncompatible features; and 6) rehabilitating historic structures. While the overall treatment intent for the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features.

Treatment recommendations for Michigan Island Light Station generally include the following measures (Figures 26 and 27).

- Rehabilitate contributing buildings including, Old Michigan Island Lighthouse, Michigan Island Second Tower, Keepers Quarters, and Privy. Basic measures include repairing existing contributing features or adding compatible features to meet building codes, maintain safety, and improve visitor experience and accessibility. Work includes reroofing, repairing and replacing materials, repainting, ventilation improvements, framing, and repointing masonry.

- Preserve contributing buildings including, Assistant Keepers Quarters and Workshop, and Shed. Basic measures include repairing existing contributing features or adding compatible features to meet building codes, maintain safety, and improve visitor experience and accessibility. Work includes reroofing, repairing and replacing materials, repainting, ventilation improvements, framing, and repointing masonry, where needed.
- Clear and maintain a portion of the historic cleared area of Michigan Island Light Station by removing forest vegetation that has encroached into historically cleared areas. Clearing about 2.2 acres would produce an overall cleared area approximately 37% of the size of the original cleared area.
- Selectively cut and remove trees that obscure views to the light station from the lake within an area of about 1.8 acres along the south shoreline bluff of the light station.
- Repair the tram tracks to working condition by removing and replacing the timbers and bedding, replacing or straightening sections of damaged rails, and resetting existing rails.
- Restore the pattern of orchard planting at the light station by planting new fruit trees and pruning the extant apple tree.
- Restore the line of pine plantings at the north edge of the light station by removing and replanting the line of pines.
- Restore missing landscape plantings near the Keepers Quarters and Old Michigan Island Lighthouse including stone planters and perennial and annual plantings.
- Mark the line of the nonextant fence, indicating the maintained area prior to light station expansion, by installing 12-inch × 12-inch concrete squares, flush to the lawn, at approximately 10 feet on center.

Outer Island Light Station

Under alternative 2, the overall treatment approach of rehabilitation at Outer Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) maintaining all circulation features (tramway, tram tracks and concrete walks); 4) maintaining landscape plantings; 5) removing noncompatible features; and 6) rehabilitating or preserving historic structures. While the overall treatment intent for the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features.

Treatment recommendations for Outer Island Light Station generally include the following measures (Figures 28 and 29).

- Rehabilitate the Outer Island Light Tower, Keepers Quarters, Fog Signal Building. Basic measures include repairing existing contributing features, repainting, masonry repairs, and ventilation improvements, where needed.
- Clear and maintain a portion of the historic cleared area of Outer Island Light Station by removing forest vegetation that has encroached into historically cleared areas. Clearing about 1.2 acre would produce an overall cleared area approximately 29% of the size of the original cleared area.

- Establish meadow-like grasses in newly cleared areas.
- Selectively cut and remove trees along the shoreline slope that obscure views to the light station from the lake within an area of about 1.3 acre along the north embankment of the light station.

Devils Island Light Station

Under alternative 2 the overall treatment approach of rehabilitation at Devils Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) maintaining and stabilizing all circulation features (tram tracks and concrete walks); 3) removing noncontributing features; and 4) rehabilitating and preserving historic structures. While the overall treatment intent for the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features and the restoration of the tower.

Treatment recommendations for Devils Island Light Station generally include the following measures (Figures 30 and 31).

- Rehabilitate the Light Station Tower, Keepers Quarters, Assistant Keepers Quarters, and Fog Signal Building. Basic measures include repairing existing contributing features, framing repair, repainting, septic repair, and ventilation and electrical improvements, where needed.
- Clear and maintain a portion of the historic cleared area of Devils Island Light Station by removing forest vegetation from the area between the Light Tower and Keepers Quarters. Clearing about 9.0 acres would produce an overall cleared area approximately 74% of the size of the original cleared area.
- Remove vegetation and excess soil between the tram track rails and adjacent to the tracks so that the rails are clearly visible and to reduce further obscuring of the tracks by vegetation.
- Maintain boat dock features at the Boathouse. Measures include dock decking and framing repair and masonry wall repair.
- Repair the stone tram terminal by removing vegetation and stabilizing and repointing stone wall masonry.

Long Island Light Station

Under alternative 2, the overall treatment approach of rehabilitation at Long Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared areas near the light towers and Original LaPointe Lighthouse ruin; 2) reestablishing views from the lake to the LaPointe Tower and Triplex; 3) reestablishing circulation features (connecting corridor); 4) preserving ruins, structures and site features; and 5) rehabilitating and preserving historic structures. While the overall treatment intent for the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features.

Treatment recommendations for Long Island Light Station generally include the following measures (Figures 32 to 35).

- Rehabilitate the LaPointe Light Tower and Chequamegon Point Lighthouse. Basic measures for these structures include reroofing, repairing existing features, replacing missing features, repainting, foundation repairs, and electrical and ventilation improvements, where needed.
- Preserve the Triplex.
- Clear and maintain a portion of the historic cleared area at the LaPointe Tower by removing pine trees. Clearing about 2.5 acres would produce an overall cleared area that is about 45% of the size of the original cleared area.
- Clear and maintain a portion of the historic cleared area at the Original Lighthouse ruin by clearing forest tree vegetation. Clearing about 1.0 acre would produce an overall cleared area that is about 25% of the size of the original cleared area.
- Stabilize the Original Lighthouse privy by reroofing and repairing and securing the door.
- Install a floating boardwalk (approximately 170 linear feet) across the dune at the LaPointe Tower site that can be relocated to adapt to the changing shoreline conditions and avoid piping plover critical habitat, as determined by park staff.
- Preserve remnants of the historic boardwalk.
- Reestablish the cleared corridor (10-foot width) for a path between the LaPointe, Original Lighthouse, and Chequamegon Point sites. The corridor alignment would follow the historic alignment of concrete walk with adjustments to avoid wetlands.
- Repair and maintain boat dock in current location.

Sand Island Light Station

Under alternative 2, the overall treatment approach of rehabilitation Sand Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) reestablishing missing landscape features; and 4) restoring the Sand Island Light Station Quarters and preserving structures. While the overall treatment intent for the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features and restoring missing features.

Treatment recommendations for Sand Island Light Station generally include the following measures (Figures 36 and 37).

- Restore the Light Station Quarters. Basic measures include reroofing, repairing existing features, replacing missing features, ventilation and electrical improvements, and repainting, where needed.
- Provide accessibility improvements (ramp) at the Quarters.
- Clear and maintain a portion of the historic cleared area of Sand Island Light Station by removing forest tree vegetation that has encroached into historically cleared areas.

Clearing approximately 1.0 acre would produce an overall cleared area that is approximately 60% of the size of the original cleared area.

- Add missing fencing feature at garden area.

Alternative 3

Alternative 3 proposes a general approach of rehabilitation for each light station's cultural landscape and historic structures with an emphasis on reestablishing cultural landscape features. This approach is intended to best portray the continuum of navigational history that characterizes the Apostle Islands as a system of light stations and to sustain each light station's existing form, maintain its integrity, and protect its features and materials. Under this alternative an approach of rehabilitation would allow for repairs, alterations, and additions that are necessary to address the degradation of contributing features, and to preserve the characteristics and features that convey the light stations' historical, cultural, and architectural values. Treatment measures allow for reestablishing missing features where the significance of the feature or space outweighs the loss of existing features. In addition to the rehabilitation efforts for cultural resources, actions are proposed to provide for improved visitor access and additional staff housing, facilitate operational and maintenance needs, and protect the natural systems of the light stations.

The following are general descriptions of the treatment recommendations for each light station under this alternative.

Michigan Island Light Station

Under alternative 3, the overall treatment approach of rehabilitation at Michigan Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) repairing circulation features (tramway, tram tracks, concrete walks); 4) reestablishing missing landscape plantings; 5) removing noncompatible features; and 6) rehabilitating and preserving the historic structures of the light station. While the overall treatment intent is one of rehabilitation, many of the individual treatment measures for the cultural landscape and historic structures focus on repairing existing resources and restoring missing features.

Treatment recommendations for Michigan Island Light Station generally include the following measures (Figures 38 and 39).

- Rehabilitate the Old Michigan Island Lighthouse, Michigan Island Second Tower, Keepers Quarters, Assistant Keepers Quarters and Workshop, Shed, and Privy. Basic measures include repairing existing contributing features or adding compatible features to meet building codes, maintain safety, and improve visitor experience and accessibility. Work includes reroofing, repairing and replacing materials, repainting, ventilation improvements, framing, and repointing masonry, where needed.
- Provide accessibility improvements at the Old Michigan Island Lighthouse (ramp).
- Clear and maintain a portion of the historic cleared area of Michigan Island Light Station by removing and disposing of forest vegetation that has encroached into historically cleared areas. Clearing about 3.6 acres would produce an overall cleared area that is approximately 51% of the size of the original cleared area.

- Selectively cut and remove trees that obscure views to the light station from the lake within an area of about 1.4 acres along the south shoreline bluff of the light station.
- Remove vegetation and excess soil between the tram track rails and adjacent to the tracks so that the rails are clearly visible and to reduce further obscuring of the tracks by vegetation.
- Repair the tram tracks to working condition by removing and replacing the timbers and bedding, replacing or straightening sections of damaged rails, and resetting existing rails.
- Reestablish the pattern of orchard planting at the light station by planting new fruit trees and pruning the extant apple tree.
- Reestablish the line of pine plantings at the north edge of the light station by removing stumps and planting missing trees.
- Reestablish missing landscape plantings near the Keepers Quarters and Old Michigan Island Lighthouse including stone planters and perennial and annual plantings.

Outer Island Light Station

Under alternative 3, the overall treatment approach of rehabilitation at Outer Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) maintaining all circulation features (tramway, tram tracks, and concrete walks); 4) maintaining landscape plantings; 5) removing noncompatible features; 6) relocating compatible and noncontributing features; and 7) rehabilitating or preserving historic structures. While the overall treatment intent of the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features.

Treatment recommendations for Outer Island Light Station generally include the following measures (Figures 40 and 41).

- Rehabilitate the Outer Island Tower, Keepers Quarters (staff housing 2nd Floor), and Fog Signal Building. Basic measures include repairing existing contributing features, repainting, masonry repairs, removing noncompatible features, and plumbing and ventilation improvements, where needed.
- Clear and maintain a portion of the historic cleared area of Outer Island Light Station by removing and disposing of forest vegetation that has encroached into historically cleared areas. Clearing about 6.0 acres would produce an overall cleared area that is near 80% of the size of the original cleared area.
- Selectively cut and remove trees that obscure views to the light station from the lake within an area of about 1.8 acres along the north shoreline bluff of the light station.
- Relocate the solar panel and battery unit.

Devils Island Light Station

Under alternative 3, the overall treatment approach of rehabilitation at Devils Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station;

2) maintaining concrete walks; 3) repairing the tram tracks to a working condition; 4) removing noncompatible features; and 5) rehabilitating historic structures. While the overall treatment intent of the cultural landscape is one of rehabilitation, many of the individual treatment measures for the historic landscape focus on preserving existing site features.

Treatment recommendations for Devils Island Light Station generally include the following measures (Figures 42 and 43).

- Rehabilitate the Light Station Tower for guided visitor use. Basic measures include repairing existing contributing features, repainting, and ventilation and electrical improvements, where needed.
- Rehabilitate the Keepers Quarters, Assistant Keepers Quarters, and Fog Signal Building. Basic measures include repairing existing contributing features, framing repair, repainting, septic repair, and ventilation and electrical improvements, where needed.
- Clear and maintain a portion of the historic cleared area of Devils Island Light Station by removing and disposing of forest vegetation from the area between the Light Tower and Keepers Quarters. Clearing approximately 10.5 acres would produce an overall cleared area that is approximately 83% of the original cleared area.
- Repair the tram tracks to working condition by removing and replacing the timbers and bedding, replacing or straightening sections of bent rails, and resetting existing rails.
- Repair the stone tram terminal by removing vegetation and stabilizing and repointing stone wall masonry.

Long Island Light Station

Under alternative 3, the overall treatment approach of rehabilitation at Long Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared areas near the LaPointe Tower and Original LaPointe Lighthouse ruin; 2) reestablishing views from the lake to the LaPointe Tower and Triplex; 3) reestablishing circulation features (connecting corridor); 4) preserving ruins and site features; and 5) rehabilitating and preserving historic structures. While the overall treatment intent to the cultural landscape is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features.

Treatment recommendations for Long Island Light Station generally include the following measures (Figures 44 to 47).

- Rehabilitate the LaPointe Light Tower, Chequamegon Point Lighthouse, and Triplex (staff housing and group use). Basic measures for these structures include reroofing, repairing existing features, replacing missing features, repainting, foundation repairs, plumbing, and electrical and ventilation improvements, where needed.
- Clear and maintain a portion of the historic cleared area at the LaPointe Tower by removing pine trees. Clearing about 9.0 acres would produce an overall cleared area that is near 75% of the size of the original cleared area.

- Clear and maintain a portion of the historic cleared area at the Original Lighthouse ruin by clearing forest tree vegetation. Clearing about 2.5 acres would produce an overall cleared area that is near 60% of the size of the original cleared area.
- Stabilize the Original Lighthouse privy.
- Reestablish the cleared corridor (approximate 10-foot width) for a path between the LaPointe, Original Lighthouse, and Chequamegon Point sites. The corridor alignment would follow the historic alignment of the concrete walk with adjustments to avoid wetlands.
- Construct a new dock in the original landing location adjacent to the remnant landing crib. The new dock would be engineered to allow sediment to move along the shoreline. Remove the existing boat dock. Construct a new boardwalk (approximately 170 linear feet) across the dune along the historic alignment at the LaPointe Tower leading from the Fog Signal foundation to the beach. Document and remove remnants of the historic boardwalk.

Sand Island Light Station

Under alternative 3, the overall treatment approach of rehabilitation at Sand Island Light Station is primarily focused on 1) reestablishing a portion of the historic cleared area of the light station; 2) reestablishing views from the lake to the light station; 3) restoring missing landscape features; and 4) rehabilitating the Light Station Tower and Keepers Quarters. While the overall treatment intent for the cultural landscape of Sand Island Light Station is one of rehabilitation, many of the individual treatment measures for the cultural landscape focus on preserving existing site features and restoring missing features.

Treatment recommendations for Sand Island Light Station generally include the following measures (Figures 48 and 49).

- Rehabilitate the Sand Island Light Station Quarters for visitor access and staff housing. Basic measures include reroofing, repairing existing features, ventilation and electrical improvements, septic improvements, and repainting, where needed.
- Provide accessibility improvements at the kitchen level in the Quarters.
- Clear and maintain a portion of the historic cleared area of Sand Island Light Station by removing and disposing of forest tree vegetation that has encroached into historically cleared areas. Clearing about 2.3 acres would produce an overall cleared area that is approximately 79% of the size of the original cleared area.
- Reestablish missing landscape features in the garden area including the wood shed, tool shed, fencing, and landscape plantings.

Michigan Island Reservation Treatment Alternative 1

Michigan Island

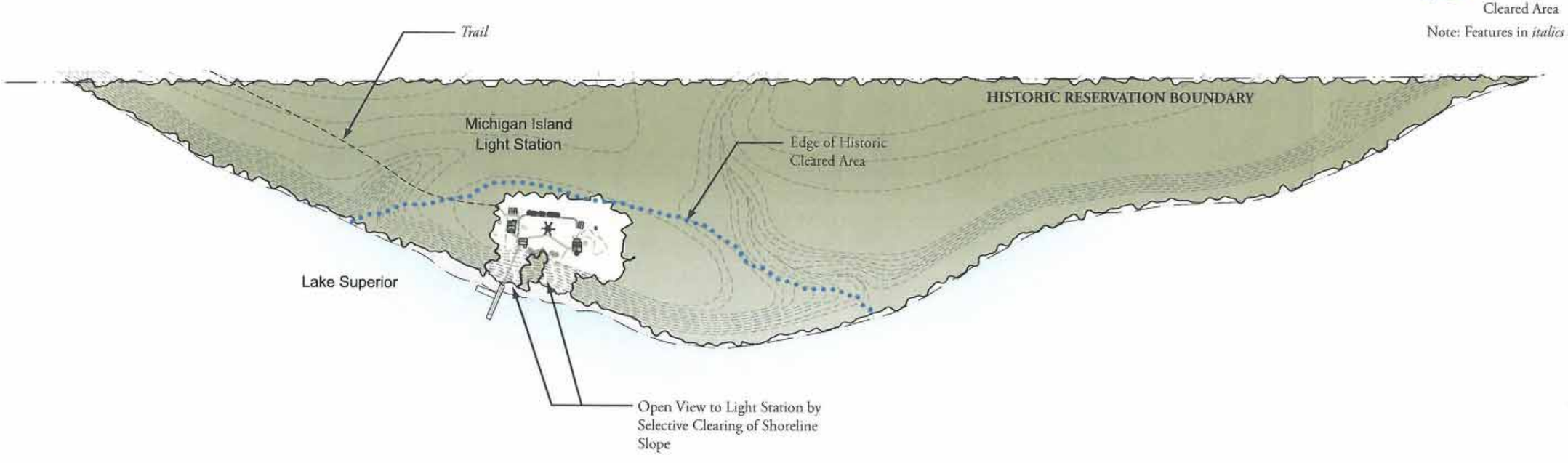
Legend

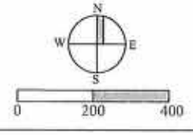
Cleared Area

Forest

Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing Cleared Area





UNITED STATES
DEPARTMENT OF THE INTERIOR

APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 14

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

Michigan Island
Treatment Alternative 1

Michigan Island

Legend

- Lawn Clearing
- Forest
- Meadow Clearing
- Low Brush Clearing
- Slope Stabilization
- Existing Edge of Forest

Note: Features in *italics* are Noncontributing

Widen Concrete Walks
Widen for Accessibility Where Shown

New Accessible NPS Restroom with Outdoor Accessible Route - Location to be Determined

Assistant Keepers Quarters/ Workshop

Retain Radio Antenna Pole and Base

Stabilize Tram Tracks

Maintain Pine Plantings

Stabilize Root Cellar

Preserve Shed

Relocate Solar Panel

Preserve Privy
Clear and Maintain as Low Brush

Trail

Preserve Assistant Keepers Quarters

Maintain Drainage System

Remove Tree

Preserve Keepers Quarters

Preserve Light Tower

Maintain Trees

Light Tower

Shed

Privy - 1

Keepers Quarters

Power House

Maintain Lawn Clearing

Preserve Old Michigan Island Lighthouse

Maintain Cistern

Maintain Cherry Tree

Relocated Solar Panel

Retain Fuel Tanks

Maintain Hedge

Maintain Croquet Lawn

Maintain Tree

Old Michigan Island Lighthouse

Clear Area of Former Orchard Maintain as Meadow

Maintain Concrete Footing of Original Flagpole

Prune Apple Tree

Preserve Power House

Repair Tramway to Working Condition

Remove Fire Pit

Retain Radio Antenna Pole and Base

Retain Tramway Turntable

Maintain Flagpole

Remove Cluster of Noncontributing Trees

Selectively Clear Trees on Slope to Reestablish Views to Light Station

Monitor and Stabilize Slope as Needed

Clear View

Clear View to Lighthouse

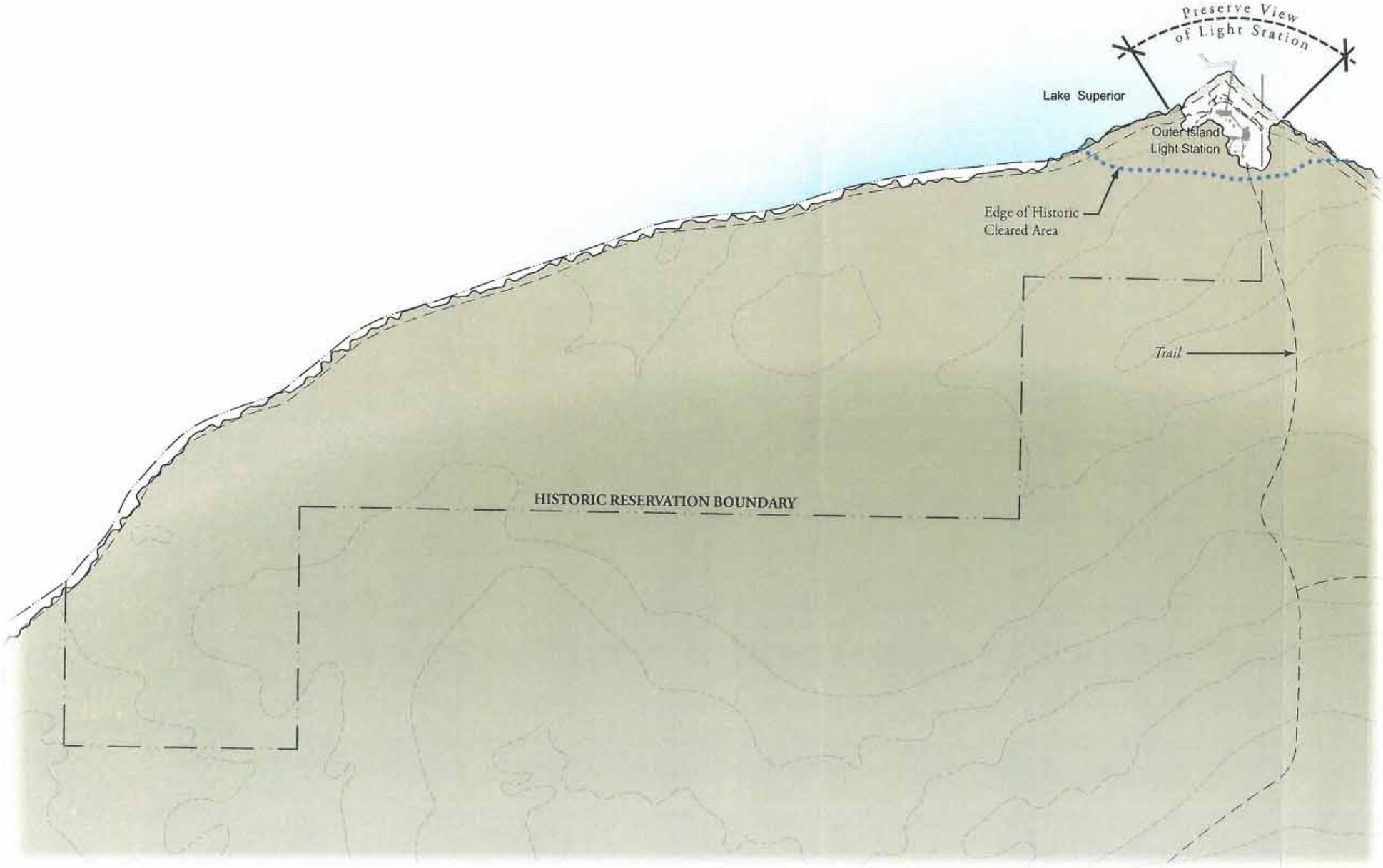
Retain Boat Dock Location

N
W E
S
0 30 60

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: MICHIGAN ISLAND LIGHT STATION
100% 3/18/11	NAME OF PARK: APOSTLE ISLANDS NATIONAL LAKESHORE REGION: MIDWEST · COUNTY: ASHLAND · STATE: WISCONSIN

FIGURE 15

Outer Island Reservation
Treatment Alternative 1



Outer Island

Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing

N W E S

0 300 600

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 16

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Outer Island
Treatment Alternative 1

Retain Dock Functionality in Existing Location and Configuration

Maintain View to Light Station

Maintain Tram Tracks

Retain Stone Revetment

Repair Tramway and Tramway Railing (East) to Working Condition

Remove Propane Tanks

Maintain Original Flagpole

Maintain Tram Tracks

Preserve Fog Signal Building

Maintain Lilac

Maintain all Concrete Walks

Maintain Swale and Drain System

Preserve Keepers Quarters and Tower

Selectively Clear Trees on Slope to Open Views to Light Station

Fog Signal Building

Light Tower and Keeper's Quarters

Oil Storage

Privy

Relocated Fire Pit

Maintain Concrete Foundation

Preserve Fog Signal Building

Stabilize Cistern

Maintain Wood Structure

Remove Plantings

Retain Fuel Tank

Maintain Second Flagpole

Maintain Forest Edge at Existing Line

Preserve Oil Storage

Maintain Landscape Plantings South of Keeper's Quarters

Remove Clothesline

Remove Posts

Relocate Firepit to Northwest

Repair Ladder Stand

Remove Horseshoe Pegs

Edge of Historic Cleared Area

Clear Trees for Fire Buffer

Retain Solar Panel and Battery Unit

Retain Well Marker

Maintain Lawn Clearing to Existing Edge

Retain Footing

Preserve Privy

New Accessible NPS Restroom- Location to be determined

Area of Further Investigation - Locate Remnant Cabin

Outer Island

Legend

- Lawn Clearing
- Forest
- Slope Stabilization
- Existing Edge of Forest
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 17

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Devils Island Reservation Treatment Alternative 1

Maintain View of Light Station

Mitigate Areas where Wetlands May Occur

Tramway Area

Rock Outcroppings

Devils Island Light Station

Wilderness Boundary

Edge of Historic Cleared Area

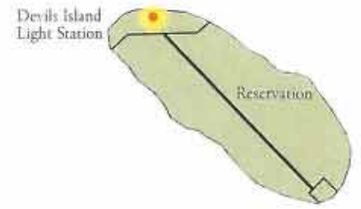
Trail to West Landing (10' width)

Provide an Outdoor Accessible Route to a New NPS Accessible Restroom. Location to be Determined.

Maintain Road Corridor as Trail (10' width)

Wilderness Boundary

Boathouse Site
- Repair Boat Dock
- Maintain Jetty
- Maintain Stone Wall
- Preserve Boathouse



Devils Island

Legend

Cleared Area

Forest

Edge of Historic Cleared Area

Wilderness Boundary

Note: Features in *italics* are Noncontributing

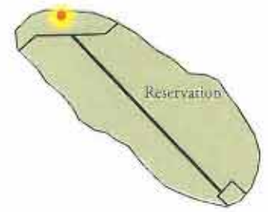
N E S W

0 300 600

UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE	FIGURE 18 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
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

Devils Island
Treatment Alternative 1

Rock Outcroppings
Edge of Cliff
Maintain Trail (Clear Vegetation)
Stabilize Derrick Footings
Maintain as Low Brush
Stabilize Pump House
Maintain all Concrete Walks
Remove Fence
Stabilize Tram Terminal
Maintain Radio Tower
Maintain Fog Signal Frame
Stabilize Tram Tracks
Maintain Rosebush
Preserve Oil House
Remove Wooden Post
Area of Nonextant Wood Structure
Area of Nonextant Storehouse
Area of Nonextant Original Tower
Preserve Fog Signal Building
Fog Signal Building
Maintain Tram Track Corridor (10' width)
See Inset for Tramway Area
Oil House-2
Oil House-1
Maintain Trail to West Landing
Maintain all Concrete Walks
Maintain Basin and Footings
Preserve Light Tower
Preserve Oil House
Retain Oil Tank Footings
Maintain Flagpole
Maintain Well Head
Area of Nonextant Keepers Quarters
Retain Propane Tank
Area of Nonextant Barn
Keepers Quarters
Maintain as Lawn Clearing
Clear Trees and Maintain as Low Brush
Light Tower
Maintain Trail
Maintain Lilac
Preserve Keepers Quarters
Preserve Assistant Keepers Quarters
Assistant Keepers Quarters
Maintain as Lawn Clearing
Maintain Trail to West Landing
Historic Edge of Cleared Area
Location of Nonextant Privies and Walks
Wilderness Boundary
Maintain Road Corridor as Trail (10' width)



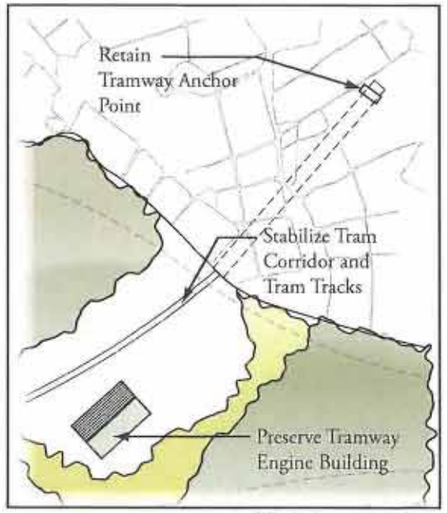
Devils Island

N

Legend

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

Note: Features in *italics* are Noncontributing



Tramway Area

0 30 60

FIGURE 19

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 DEVILS ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

Long Island Reservation Treatment Alternative 1

Long Island

Legend

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

Note: Features in *italics* are Noncontributing

Lake Superior

HISTORIC RESERVATION BOUNDARY

Retain Overhead Electric Line and Poles

Line of Original Cross-Island Walk

Chequamegon Point Site

Original LaPointe Lighthouse Site

Retain Overhead Electric Line and Poles

HISTORIC RESERVATION BOUNDARY

Chequamegon Bay

Line of Original Cross-Island Walk

LaPointe Site

HISTORIC RESERVATION BOUNDARY

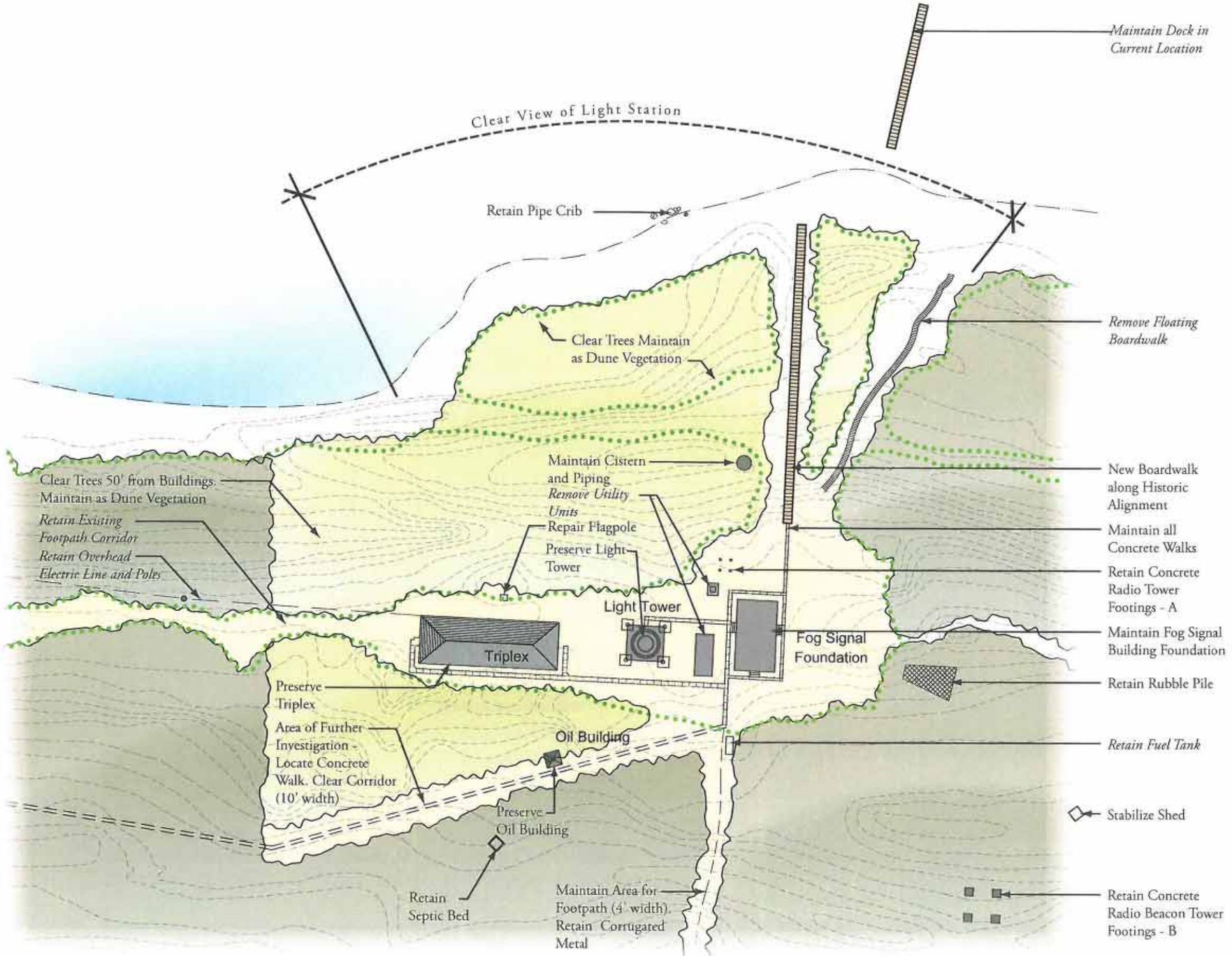
N W E S

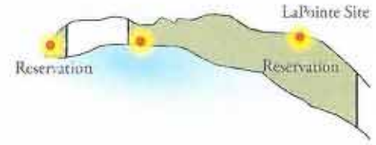
0 250 500

FIGURE 20

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

Long Island
LaPointe Site
Treatment Alternative 1



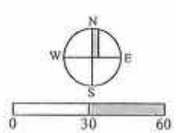


Long Island

Legend

- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Existing Edge of Vegetation
- Forest
- Sand

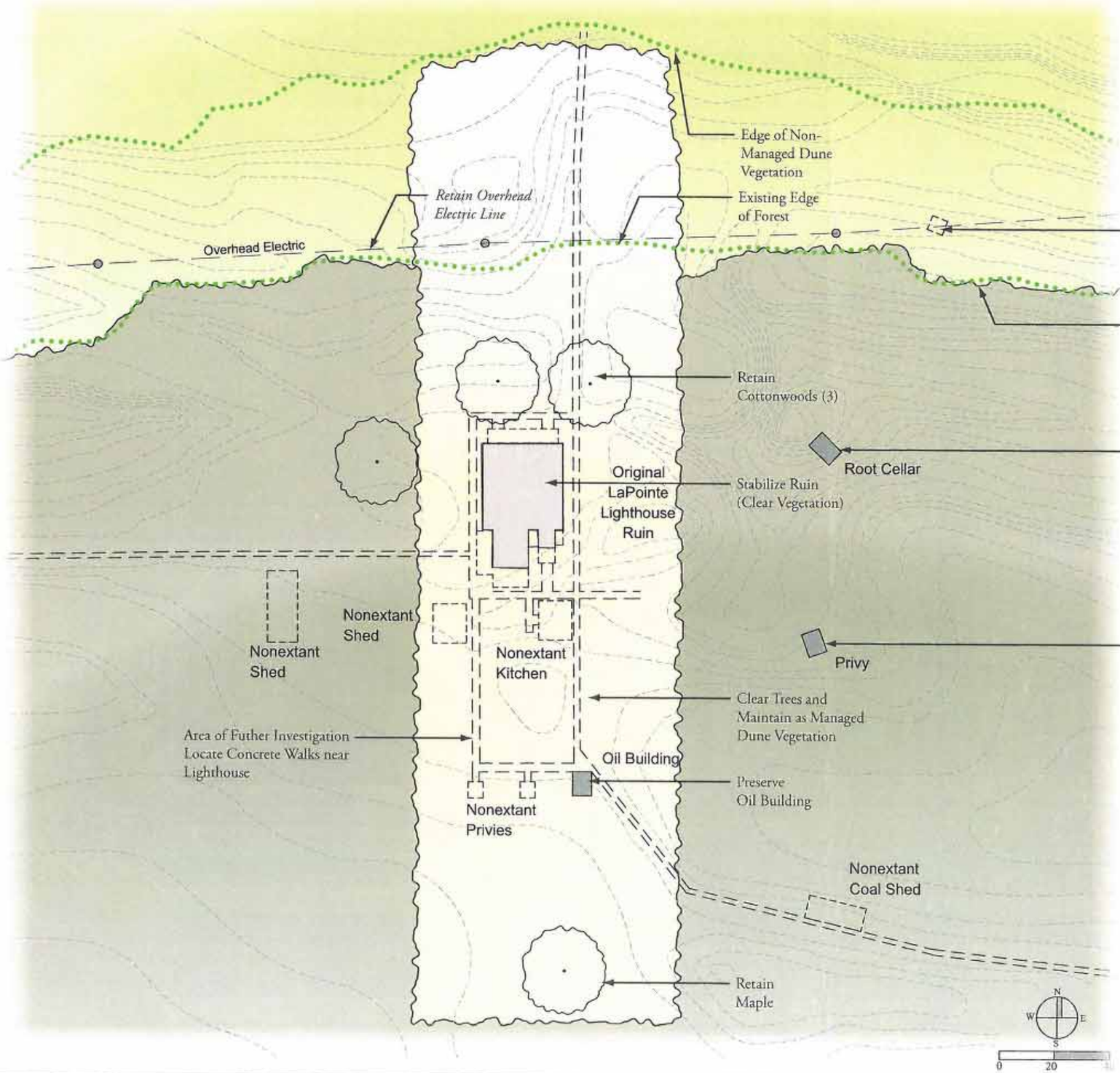
Notes:
1.) Features in *italics* are Noncontributing
2.) New Accessible NPS Restroom to be added. Location to be determined



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 LONG ISLAND - LAPOINTE LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

FIGURE 21

Long Island Original LaPointe Lighthouse Treatment Alternative 1



Long Island

Legend

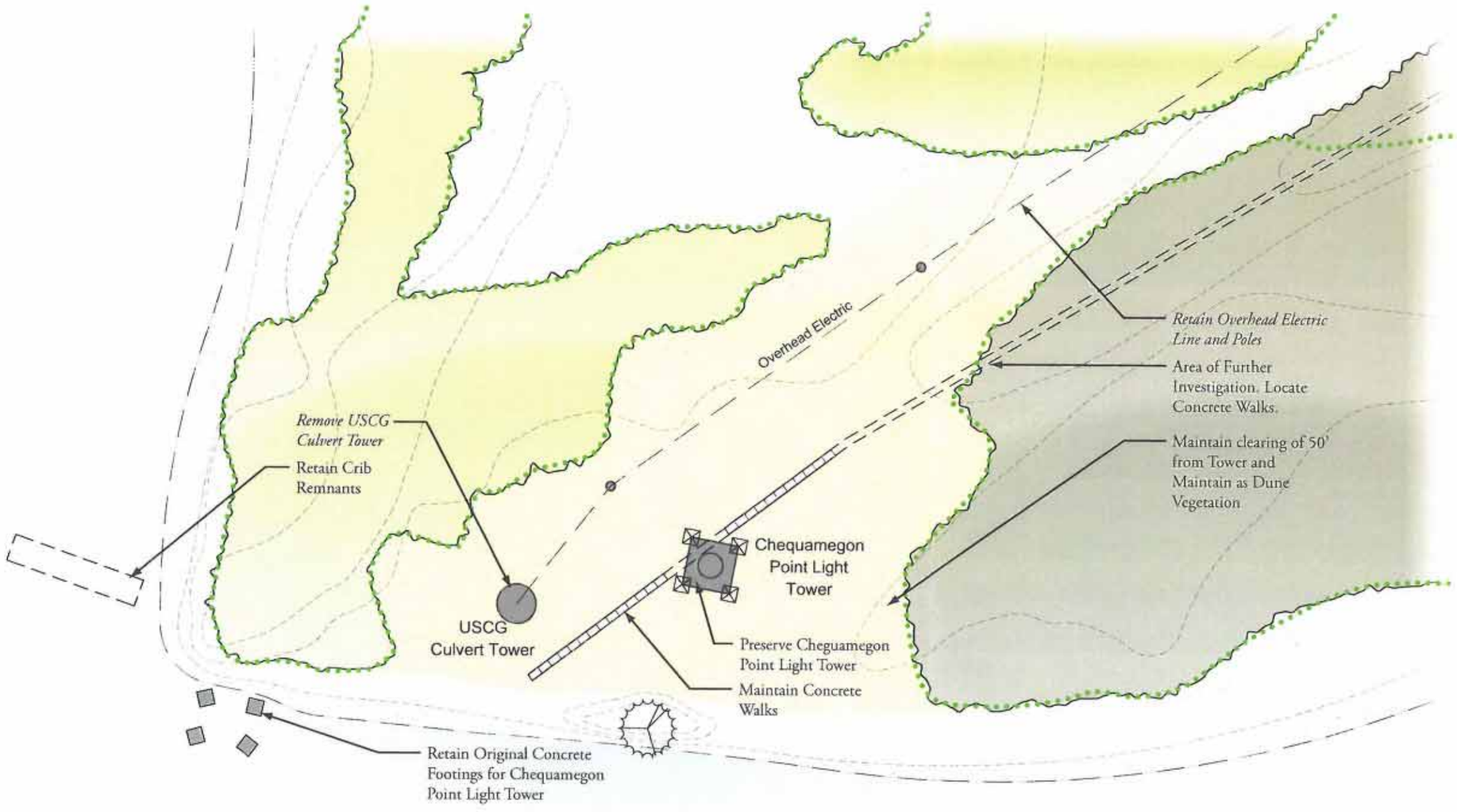
- Dune Vegetation (not managed)
- Forest
- Managed Dune Vegetation
- Existing Edge of Vegetation

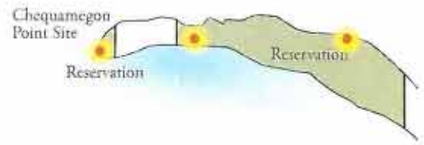
Note: Features in *italics* are Noncontributing

FIGURE 22

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 LONG ISLAND-ORIGINAL LAPOINTE LTHOUSE SITE
100% 3/18/11	NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
	REGION: MIDWEST; COUNTY: ASHLAND; STATE: WISCONSIN

Long Island
Chequamegon Point
Treatment Alternative 1





Long Island

Legend

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

Note: Features in *italics* are Noncontributing

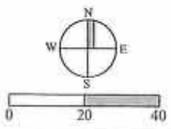
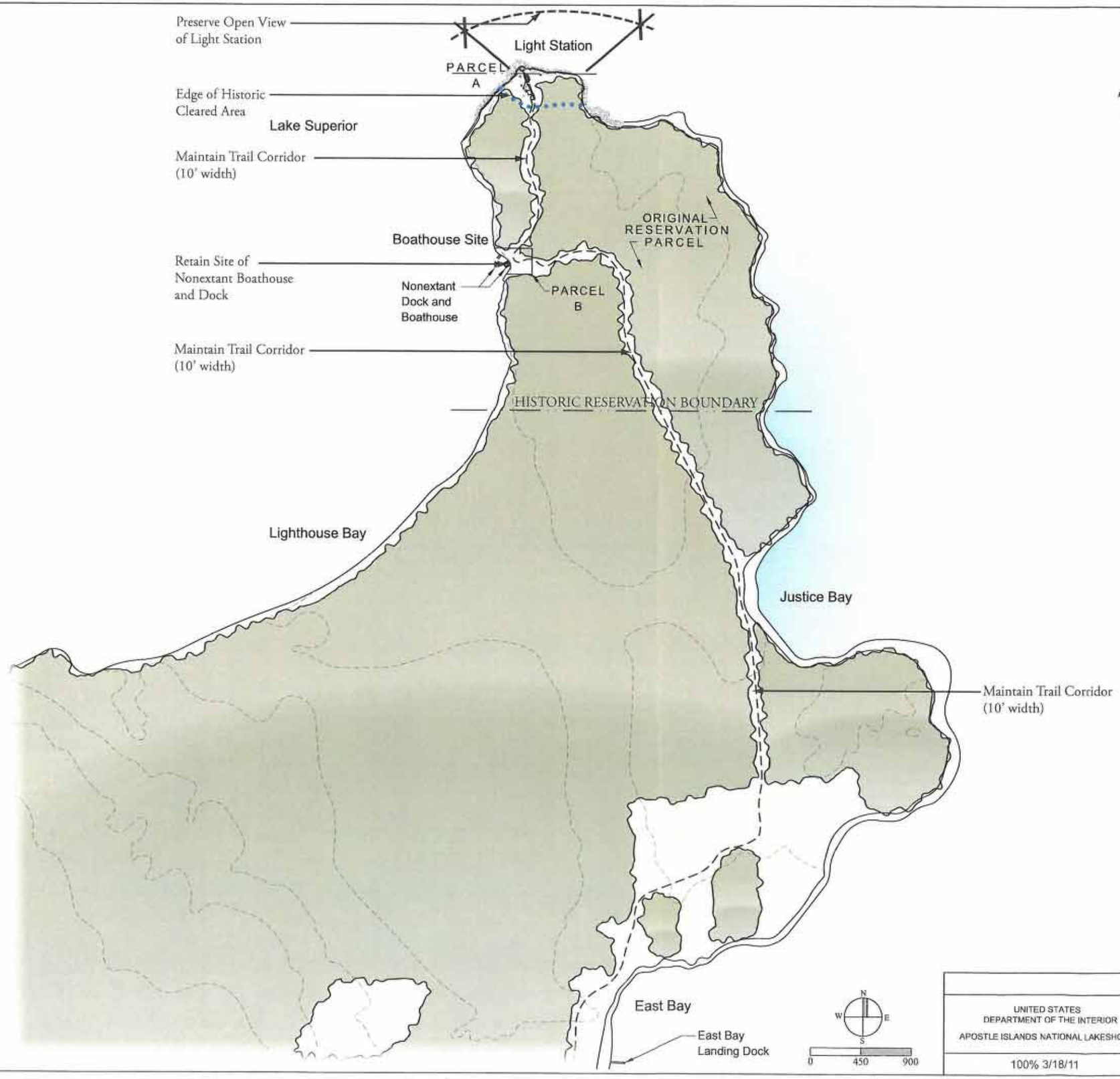


FIGURE 23

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

Sand Island Reservation Treatment Alternative 1

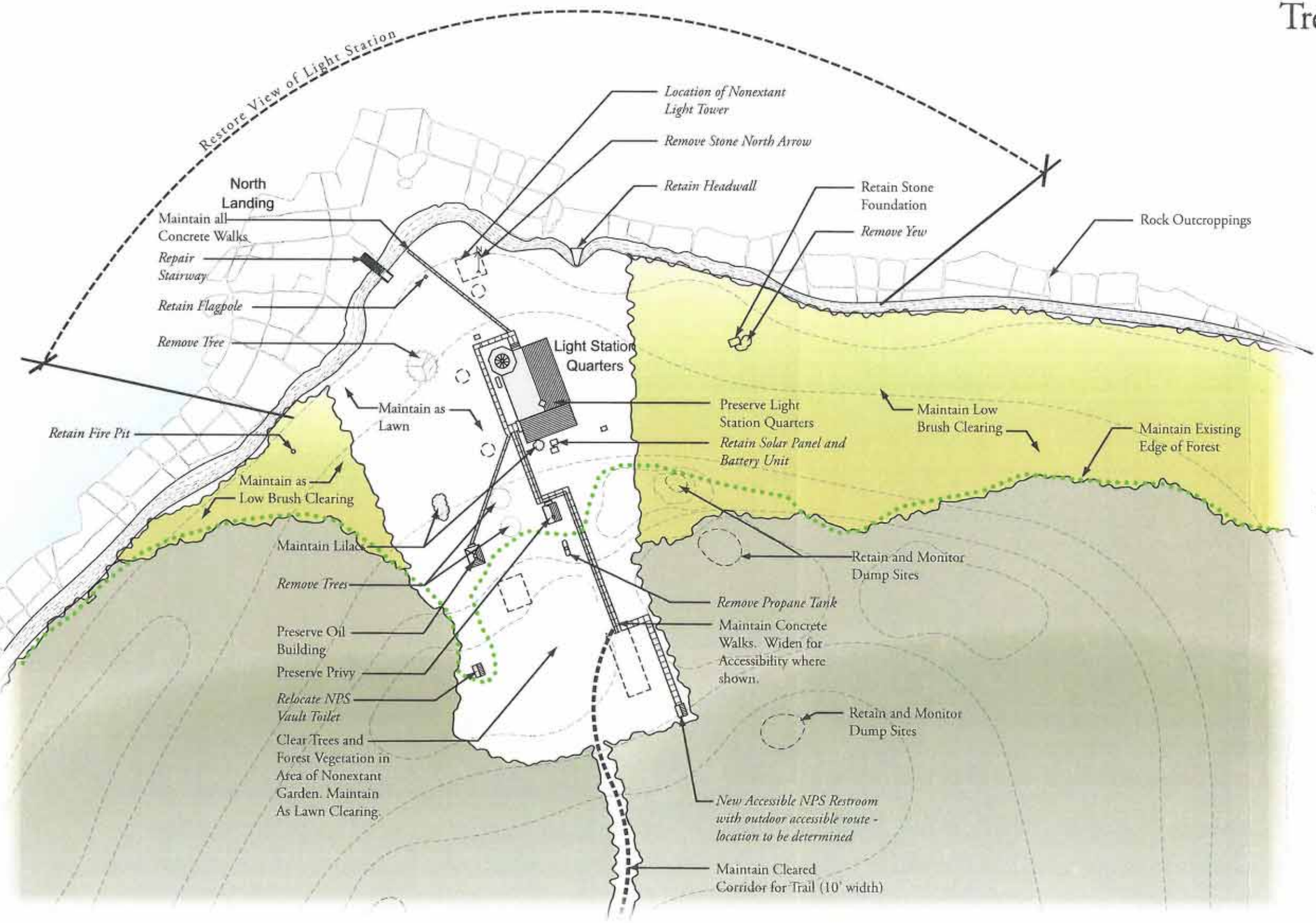


Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE	FIGURE 24 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
100% 3/18/11	REGION: MIDWEST; COUNTY: BAYFIELD; STATE: WISCONSIN

Sand Island
Treatment Alternative 1



Legend

- Lawn Clearing
- Forest
- Low Brush Clearing
- Existing Edge of Forest
- Former location of Lilacs/Garden Bed

Note: Features in *italics* are Noncontributing

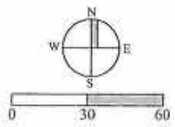


FIGURE 25

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

TITLE OF PROJECT
HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT
TREATMENT ALTERNATIVES

TITLE OF DRAWING
SANDISLAND LIGHT STATION

NAME OF PARK
APOSTLE ISLANDS NATIONAL LAKESHORE

REGION	COUNTY	STATE
MIDWEST	BAYFIELD	WISCONSIN

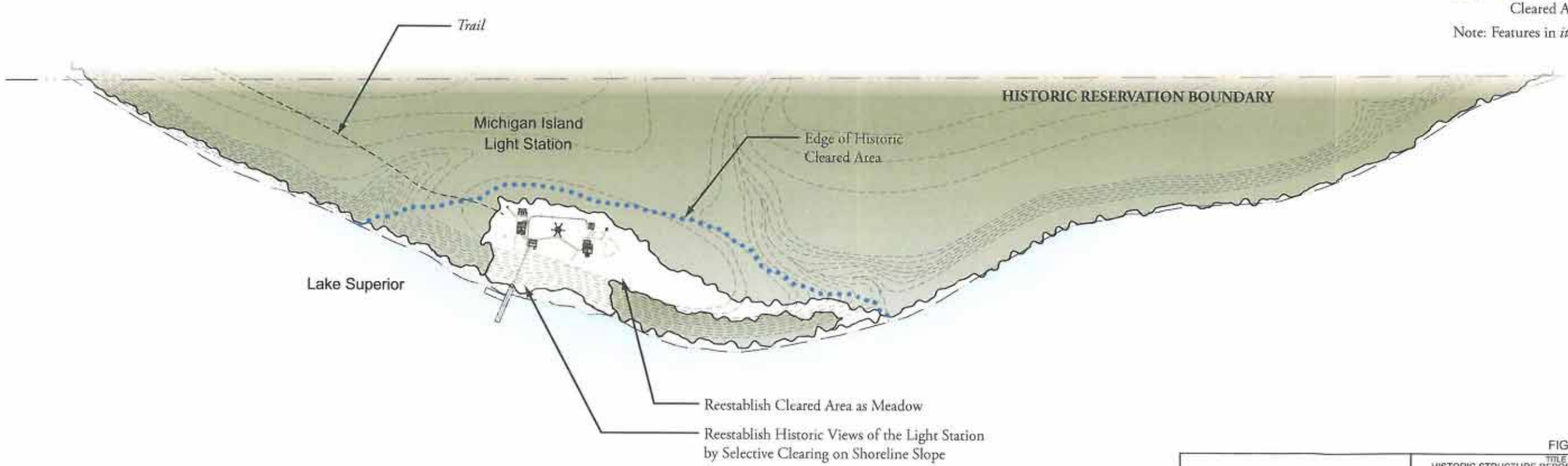
Michigan Island Reservation Treatment Alternative 2 (Preferred)

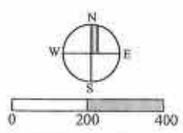
Michigan Island

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

100% 3/18/11

FIGURE 26

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

Michigan Island
Treatment Alternative 2
(Preferred)

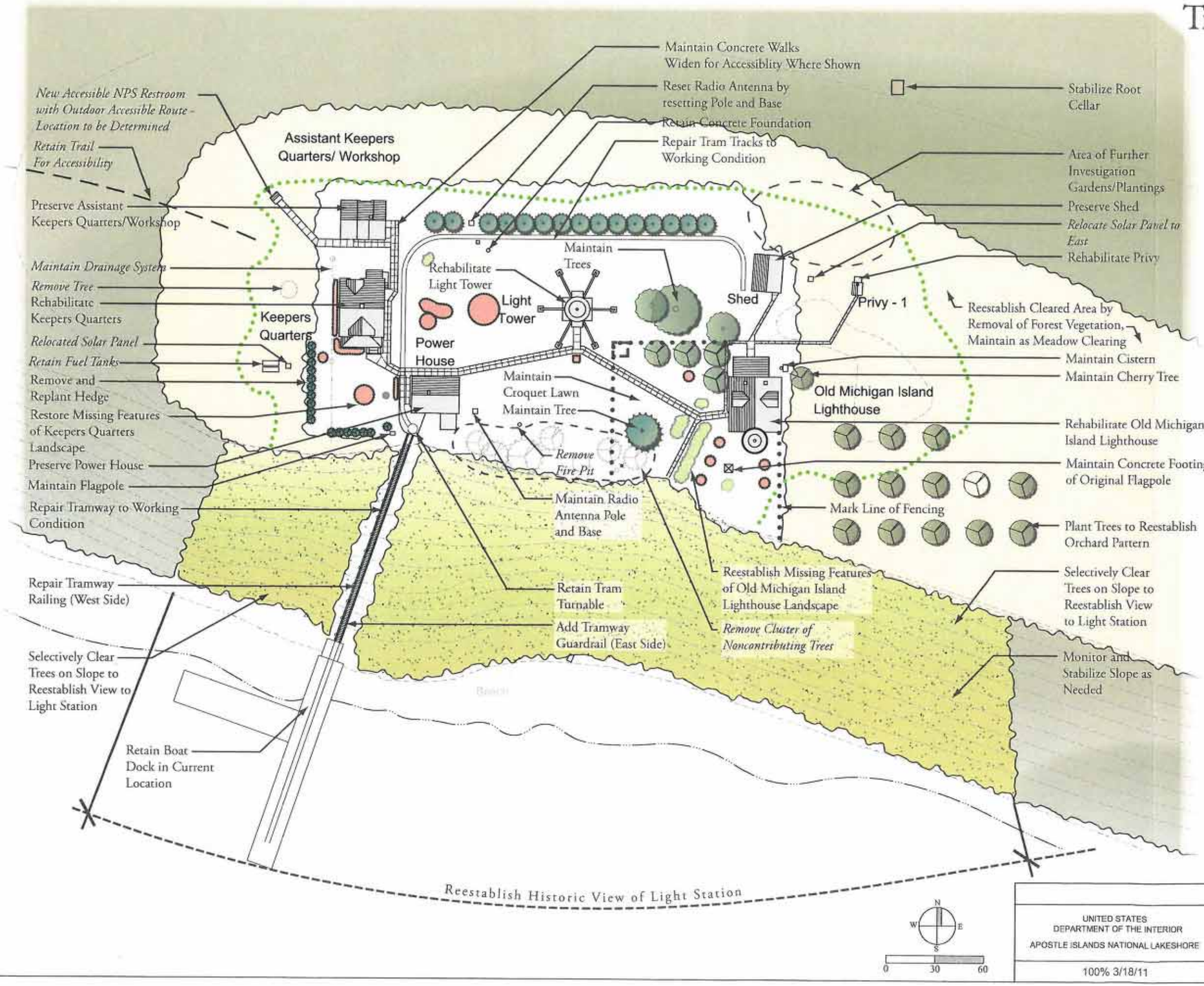
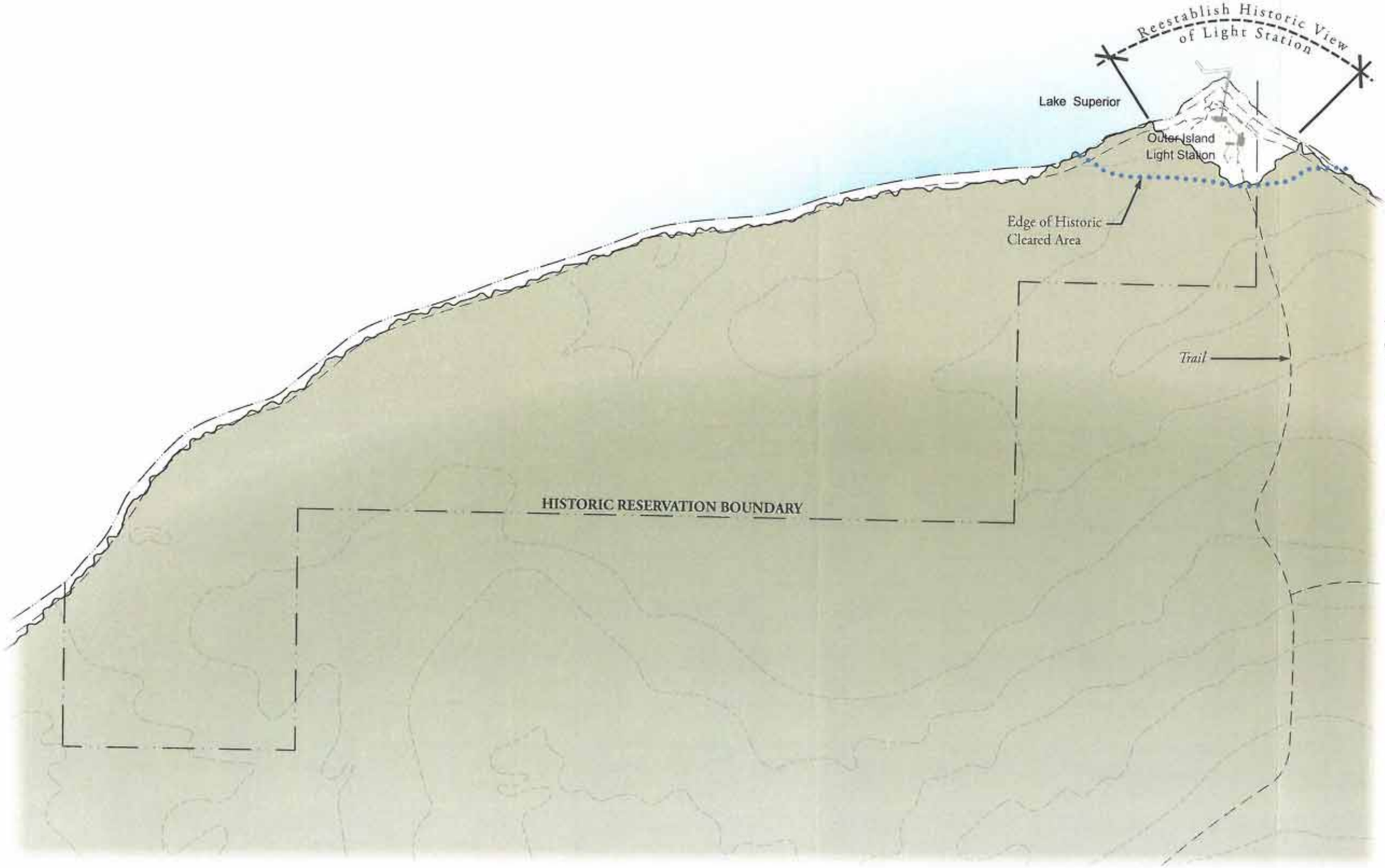


FIGURE 27

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 MICHIGAN ISLAND LIGHT STATION NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

Outer Island Reservation Treatment Alternative 2 (Preferred)



Outer Island

Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing

N W E S

0 300 600

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

FIGURE 28

Outer Island
Treatment Alternative 2
(Preferred)

Retain Dock Functionality in Existing Location and Configuration

Maintain Tram Tracks

Retain Stone Revetment

Reestablish Historic View of Light Station

Remove Propane Tanks

Repair Original Flagpole

Repair Tramway Railing (East) & Add Railing (West)

Repair Tramway to Working Condition

Maintain Tram Tracks

Maintain Lilac

Maintain all Concrete Walks

Selectively Clear Trees on Slope to Reestablish Views to Light Station

Maintain Swale and Drain System

Fog Signal Building

Maintain Concrete Foundation

Rehabilitate Fog Signal Building

Stabilize Cistern

Maintain Wood Structure

Remove Plantings

Retain Fuel Tank

Maintain Second Flagpole

Light Tower and Keepers Quarters

Clear Trees and Maintain as Meadow Clearing

Relocated Fire Pit

Clear Trees Maintain as Meadow

Oil Storage

Preserve Oil Storage

Maintain Landscape Plantings South of Keeper's Quarters

Remove Clothesline

Relocate Firepit to Northwest

Repair Ladder Stand

Remove Horseshoe Pegs

Edge of Historic Cleared Area

Maintain Lawn Clearing

Rehabilitate Keepers Quarters and Tower

Retain Solar Panel and Battery Unit

Mark Location of Nonextant Well

Remove Wood Posts and Concrete Footing

Preserve Privy

New Accesible NPS Restroom - Location to be Determined

Privy

Area of Further Investigation - Locate Remnant Cabin

Outer Island

Legend

- Lawn Clearing
- Forest
- Slope Stabilization
- Existing Edge of Forest
- Meadow Clearing
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 29

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Devils Island Reservation Treatment Alternative 2 (Preferred)

Reestablish Historic View of Light Station

Devils Island Light Station

Mitigate Areas where Wetlands May Occur

Tramway Area

Rock Outcroppings

Improve East Landing

Wilderness Boundary

Edge of Historic Cleared Area

Trail to West Landing (10' width)

Provide an Outdoor Accessible Route to a New NPS Accessible Restroom. Location to be Determined.

Maintain Road Corridor as Trail (10' width)

Wilderness Boundary

Boathouse Site
- Repair Boat Dock
- Maintain Jetty
- Maintain Stone Wall
- Preserve Boathouse

Devils Island

Legend

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

Note: Features in *italics* are Noncontributing

N E W S

0 300 600

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 30

TITLE OF PROJECT
HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT
TREATMENT ALTERNATIVES

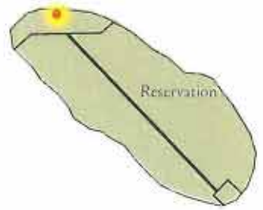
TITLE OF DRAWING
DEVILS ISLAND

NAME OF PARK
APOSTLE ISLANDS NATIONAL LAKESHORE

REGION	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Devils Island Treatment Alternative 2 (Preferred)

Rock Outcroppings
Edge of Cliff
Maintain Trail (Clear Vegetation)
Maintain as Low Brush
Stabilize Derrick Footings
Maintain Pump House
Maintain All Concrete Walks
Remove Fence
Repair Masonry Tram Terminal
Maintain Radio Tower
Maintain Fog Signal Frame
Stabilize Tram Tracks
Maintain Rosebush
Preserve Oil House
Retain Wooden Post
Area of Nonextant Wood Structure
Area of Nonextant Storehouse
Area of Nonextant Original Tower
Rehabilitate Fog Signal Building
Fog Signal Building
Maintain Tram Track Corridor (10' width)
Maintain Trail to West Landing
Oil House-2
Oil House-1
Preserve Oil House
Retain Oil Tank Footings
Maintain Flagpole
Maintain Well Head
Mark Location of Nonextant Asst. Keepers Quarters
Retain Propane Tank
Area of Nonextant Barn
Maintain all Concrete Walks
Maintain Basin and Footings
Clear Trees and Maintain as Low Brush
Maintain as Lawn Clearing
Light Tower
Rehabilitate Light Tower
Maintain Hiking Trail
Keepers Quarters
Maintain Lilac
Rehabilitate Keepers Quarters
Maintain as Lawn Clearing
Rehabilitate Assistant Keepers Quarters
Assistant Keepers Quarters
Maintain Trail to West Landing
Historic Edge of Cleared Area
Wilderness Boundary
Location of Nonextant Privies and Walks
Maintain Road Corridor as Trail (10' width)
See Inset for Tramway Area



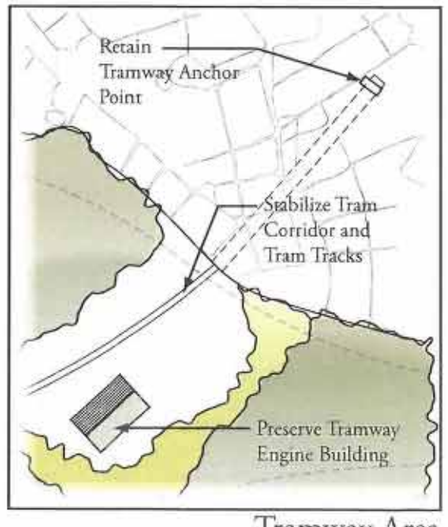
Devils Island

N

Legend

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

Note: Features in *italics* are Noncontributing



Tramway Area

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 31

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Long Island Reservation Treatment Alternative 2 (Preferred)

Long Island

Lake Superior

Original LaPointe Lighthouse Site

HISTORIC RESERVATION BOUNDARY

Retain Overhead Electric Line and Poles

HISTORIC RESERVATION BOUNDARY

Retain Overhead Electric Line and Poles

LaPointe Site

Reestablish Corridor (10' width) for Cross-Island Path

Chequamegon Point Site

Chequamegon Bay

Reestablish Corridor (10' Width) for Cross-Island Path

HISTORIC RESERVATION BOUNDARY

Legend

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

Note: Features in *italics* are Noncontributing

N W E S

0 250 500

FIGURE 32

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

Long Island
LaPointe Site
Treatment Alternative 2 (Preferred)

Reestablish Historic View of Light Station

Maintain Dock in Current Location

Retain Pipe Crib

Clear Trees Maintain as Dune Vegetation

Retain Floating Boardwalk. Allow for Removal and Replacement as Dunes Shift.

Maintain Cistern and Piping. Provide Lockable Cover to Prevent Safety Hazards.

Retain Remnant Boardwalk

Maintain Cleared Corridor in Historic Boardwalk Alignment

Clear Trees 50' from Buildings. Maintain as Dune Vegetation

Remove Utility Units

Repair Flagpole

Rehabilitate LaPointe Light Tower

Repair all Concrete Walks

Retain Concrete Radio Tower Footings - A

Retain Overhead Electric Line and Poles

Light Tower

Triplex

Fog Signal Foundation

Maintain Fog Signal Building Foundation

Retain Rubble Pile

Preserve Triplex

Reestablish Corridor (10' width) for Cross Island Path

Oil Building

Remove Fuel Tank

Area of Further Investigation - Locate Concrete Walk

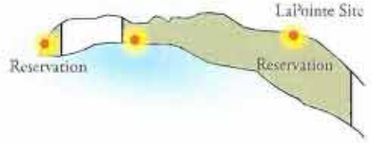
Preserve Oil Building

Stabilize Shed

Retain Septic Bed

Maintain Area for Path (4' width). Retain Corrugated Metal

Retain Concrete Radio Beacon Tower Footings - B



Long Island Legend

- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Existing Edge of Vegetation
- Forest
- Sand

Notes:
1.) Features in *italics* are Noncontributing
2.) New Accessible NPS Restroom to be added. Location to be determined

N W E S

0 30 60

FIGURE 33

UNITED STATES DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11

TITLE OF PROJECT: HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT TREATMENT ALTERNATIVES

TITLE OF DRAWING: LONG ISLAND - LAPOINTE LIGHT STATION

NAME OF PARK: APOSTLE ISLANDS NATIONAL LAKESHORE

REGION: MIDWEST | COUNTY: ASHLAND | STATE: WISCONSIN

Long Island Original LaPointe Lighthouse Treatment Alternative 2 (Preferred)

Existing Edge of Dune Vegetation

Retain Overhead Electric Line and Poles

Overhead Electric

Retain Remnant Shed

Existing Edge of Forest

Maintain Cottonwoods (3)

Reestablish Historic Cleared Area by Removal of Trees. Maintain as Dune Vegetation

Reestablish Historic Cleared Area by Removal of Trees. Maintain as Dune Vegetation

Stabilize Ruin (Clear Vegetation)

Original LaPointe Lighthouse Ruin

Root Cellar

Stabilize Root Cellar

Reestablish Corridor (10' width) for Cross-Island Path

Nonextant Shed

Nonextant Shed

Nonextant Kitchen

Privy

Stabilize Privy

Area of Further Investigation Locate Concrete Walks Near Lighthouse

Oil Building

Preserve Oil Building

Nonextant Privies

Reestablish Corridor (10' width) for Cross-Island Path

Nonextant Coal Shed

Maintain Maple

Long Island

Legend

- Dune Vegetation (not managed)
- Forest
- Managed Dune Vegetation
- Existing Edge of Vegetation

Note: Features in *italics* are Noncontributing

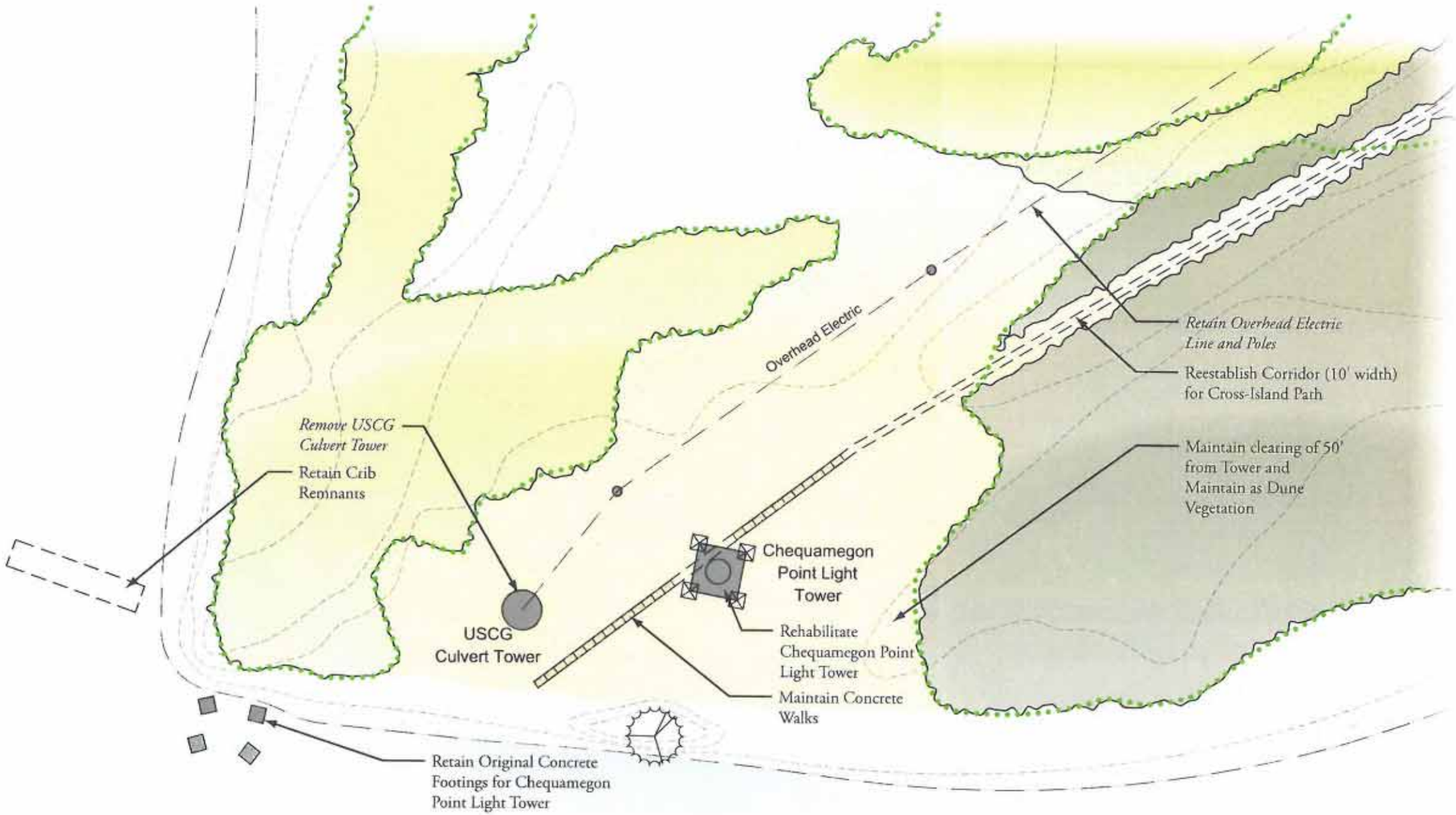
N W E S

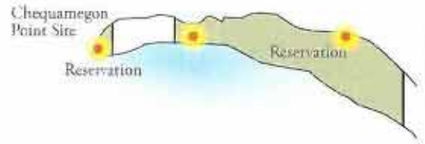
0 20 40

FIGURE 34

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 LONG ISLAND-ORIGINAL LAPOINTE LTHOUSE SITE NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

Long Island
Chequamegon Point
Treatment Alternative 2
(Preferred)



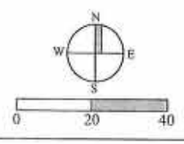


Long Island

Legend

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

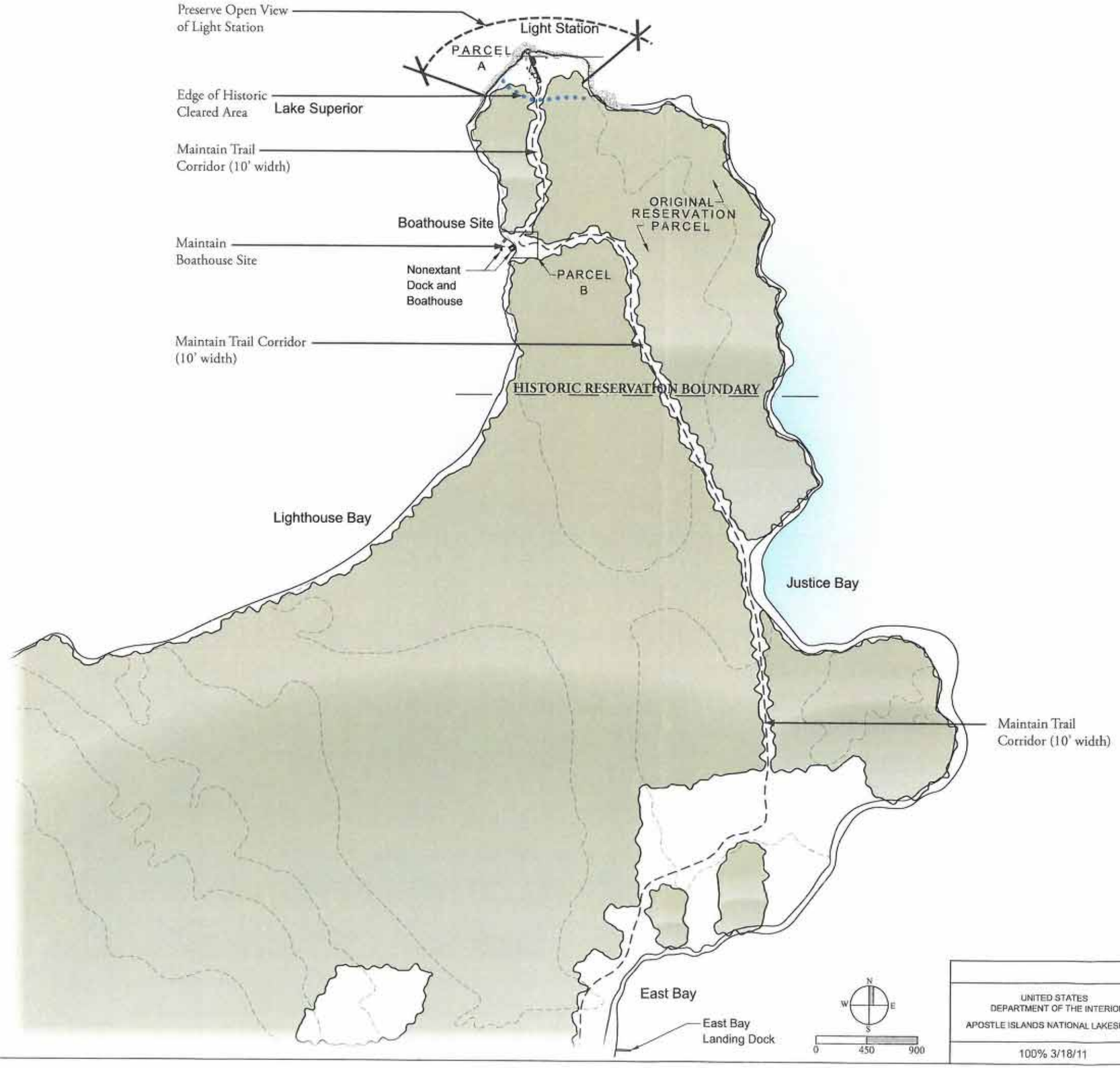
Note: Features in *italics* are Noncontributing



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

FIGURE 35

Sand Island Reservation Treatment Alternative 2 (Preferred)



Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

FIGURE 36

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 SAND ISLAND - RESERVATION BOUNDARY NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION: MIDWEST; COUNTY: BAYFIELD; STATE: WISCONSIN

Sand Island
Treatment Alternative 2
(Preferred)

Reestablish Historic View of Light Station

North Landing

Repair Wooden Staircase

Remove Flagpole

Location of Nonextant Light Tower

Remove Stone North Arrow

Maintain all Concrete Walks

Retain Stone Foundation

Remove Yew

Rock Outcroppings

Remove and Replace Headwall

Light Station Quarters

Restore Light Station Quarters

Maintain Lilacs

Relocate Solar Panel and Battery Unit

Maintain Low Brush Clearing

Remove Tree

Relocate Fire Pit to Southwest

Maintain Lilacs

Preserve Privy

Remove Propane Tank

Relocated Fire Pit

Remove Trees

Clear Area of Garden

Reestablish Missing Fencing at Garden

Preserve Oil Building

Location of Nonextant Wood Shed

Maintain Concrete Walks. Widen for Accessiblility where shown

Reestablish Historic Cleared Area by Removal of Trees Maintain as Low

Recolate NPS Vault Toilet

Location of Nonextant Tool Shed

Clear and Maintain as Low Brush Clearing

Retain and Monitor all Dump Sites

Maintain Lawn Clearing Around Light Station Quarters and Garden Area

New Accessible NPS Restroom with outdoor accessible route - location to be determined

Maintain Cleared Corridor for Trail (10' width)

Sand Island

Legend

- Lawn Clearing
- Forest
- Low Brush Clearing
- Existing Edge of Forest
- Former location of Lilacs/Garden Bed

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

FIGURE 37

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

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	COUNTY	STATE
MIDWEST	BAYFIELD	WISCONSIN

Michigan Island Reservation Treatment Alternative 3

Michigan Island

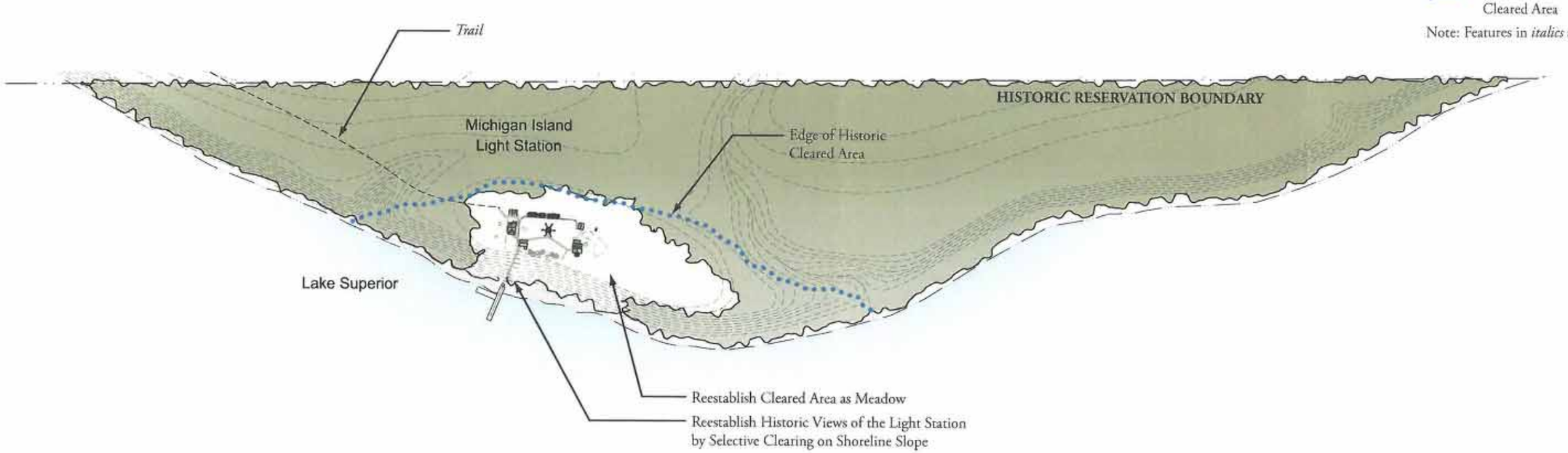
Legend

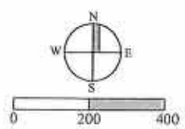
Cleared Area

Forest

Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing





UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 38

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

Michigan Island
Treatment Alternative 3

Rehabilitate Assistant Keepers Quarters/ Workshop

New Accessible NPS with Outdoor Accessible Route - Location to be Determined

Trail

Maintain Drainage System

Remove Tree

Rehabilitate Keepers Quarters

Remove and Replant Cedar Hedge

Retain Fuel Tanks

Preserve Power House

Restore Missing Features of Keepers Quarters Landscape

Repair Tramway to Working Condition

Repair and Alter Tramway Railings (repair west side; and new railing east side).

Selectively Clear Trees on Slope to Reestablish View to Light Station

Retain Dock in Historic Location

Assistant Keepers Quarters/ Workshop

Keepers Quarters

Power House

Widen Concrete Walks
Widen for Accessibility Where Shown

Reset Radio Antenna Pole and Base

Repair Tram Tracks to Working Condition

Maintain Pine Plantings, Plant Missing Pines

Rehabilitate Light Tower

Light Tower

Maintain Lawn Clearing

Maintain Contributing Trees

Shed

Mark Location of Former Oil Building

Maintain Croquet Lawn

Maintain Pine

Remove Fire Pit

Maintain Radio Antenna Pole and Base

Maintain Flagpole

Reestablish Missing Features of Landscape

Remove Cluster of Noncontributing Trees

Stabilize Root Cellar

Rehabilitate Shed

Relocate Solar Panel To East

Rehabilitate Privy

Relocated Solar Panel

Privy - 1

Install compatible fencing to reestablish character of the 1938 landscape.

Maintain Cistern

Maintain Cherry Tree

Old Michigan Island Lighthouse

Reestablish Cleared Area by Removal of Forest Vegetation Maintain as Meadow Clearing

Rehabilitate Old Michigan Island Lighthouse

Maintain Concrete Footing of Original Flagpole

Plant Trees to Reestablish Orchard Pattern

Selectively Clear Trees on Slope to Reestablish View to Light Station

Monitor and Stabilize Slope as Needed

Reestablish Historic View of Light Station

Michigan Island

Legend

- Lawn Clearing
- Forest
- Meadow Clearing
- Existing Edge of Forest
- Slope Stabilization
- Landscape Plantings - (Shrubs, Perennials, Annuals)

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 39

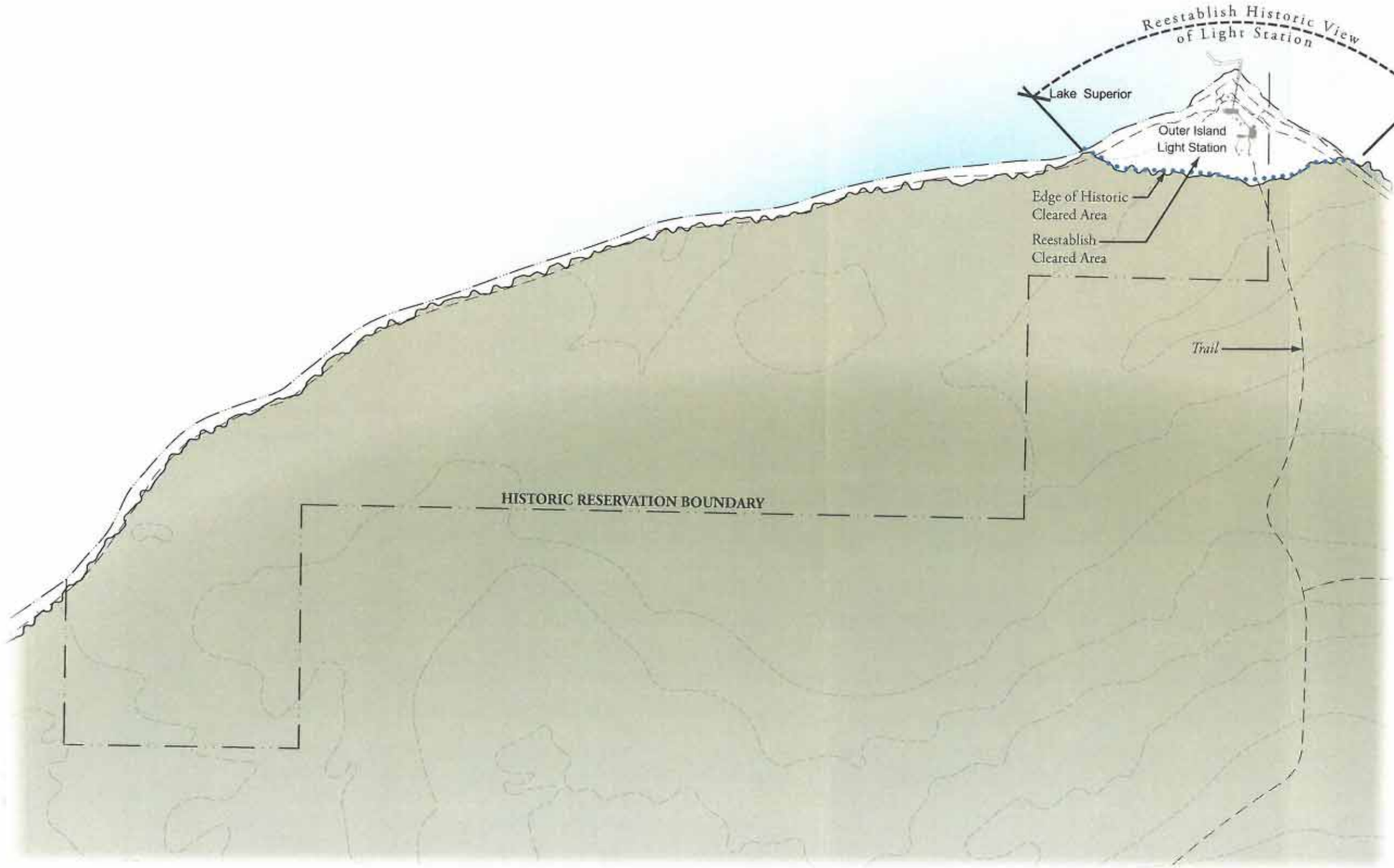
TITLE OF PROJECT
HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT
TREATMENT ALTERNATIVES

TITLE OF DRAWING
MICHIGAN ISLAND LIGHT STATION

NAME OF PARK
APOSTLE ISLANDS NATIONAL LAKESHORE

REGION	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Outer Island Reservation
Treatment Alternative 3

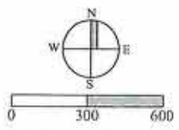


Outer Island

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

FIGURE 40

Outer Island
Treatment Alternative 3

Retain Dock Functionality in Existing Location and Configuration

Maintain Tram Tracks

Retain Stone Revetment

Reestablish Historic View of Light Station

Remove Propane Tanks

Repair Original Flagpole

Repair Tramway Railing (East) Add New Railing (West)

Repair Tramway to Working Condition

Maintain Tram Tracks

Maintain Lilac

Maintain all Concrete Walks

Selectively Clear Trees on Slope to Reestablish Views to Light Station

Maintain Swale and Drain System

Clear Trees and Maintain as Meadow Clearing

Fog Signal Building

Maintain Concrete Foundation

Light Tower and Keepers Quarters

Relocated Solar Panel and Battery Unit

Relocated Fire Pit

Clear Trees Maintain as Meadow

Rehabilitate Fog Signal Building

Stabilize Cistern

Maintain Wood Structure

Remove Plantings

Retain Fuel Tank

Maintain Second Flagpole

Preserve Oil Storage

Maintain Landscape Plantings South of Keepers Quarters

Remove Clothesline

Remove Posts

Relocate Firepit to Northwest

Repair Ladder Stand

Remove Horseshoe Pegs

Edge of Historic Cleared Area

Oil Storage

Maintain Lawn Clearing

Privy

Rehabilitate Keepers Quarters and Tower

Relocate Solar Panel and Battery Unit

Mark Location of Nonextant Well

Remove Footing

Preserve Privy

New Accessible NPS Restroom -Location to be determined

Area of Further Investigation - Locate Remnant Cabin

Outer Island

Legend

- Lawn Clearing
- Forest
- Slope Stabilization
- Existing Edge of Forest
- Meadow Clearing
- Edge of Historic Cleared Area

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 41

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Devils Island Reservation Treatment Alternative 3

Reestablish Historic View of Light Station

Devils Island Light Station

Mitigate Areas where Wetlands May Occur

Tramway Area

Rock Outcroppings

Improve East Landing

Wilderness Boundary

Edge of Historic Cleared Area

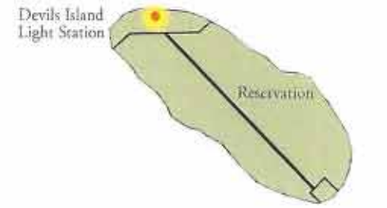
Trail to West Landing (10' width)

Provide an Outdoor Accessible Route to a New NPS Accessible Restroom. Location to be Determined.

Maintain Road Corridor as Trail (10' width)

Wilderness Boundary

Boathouse Site
- Repair Boat Dock
- Maintain Jetty
- Maintain Stone Wall
- Preserve Boathouse



Devils Island

Legend

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

Note: Features in *italics* are Noncontributing

N E W S

0 300 600

FIGURE 42

UNITED STATES DEPARTMENT OF THE INTERIOR

APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

TITLE OF PROJECT
HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT
TREATMENT ALTERNATIVES

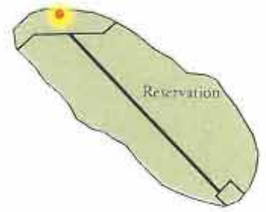
TITLE OF DRAWING
DEVILS ISLAND

NAME OF PARK
APOSTLE ISLANDS NATIONAL LAKESHORE

REGION	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Devils Island
Treatment Alternative 3

Rock Outcroppings
Edge of Cliff
Maintain Trail (Clear Vegetation)
Maintain as Low Brush
Maintain Derrick Footings
Maintain Pump House
Remove Fence
Repair Masonry Tram Terminal
Maintain Radio Tower
Maintain Fog Signal Frame
Repair Tram Tracks to working condition
Remove Wooden Post
Maintain Rosebush
Reestablish Cleared Area of Nonextant Original Tower
Preserve Oil House
Restore Concrete Walk
Reestablish Cleared Area of Nonextant Storehouse and Wood Structure
Rehabilitate Fog Signal Building
Fog Signal Building
Oil House-2
Oil House-1
Maintain Tram Track Corridor (10' width)
Maintain Trail to West Landing
Maintain all Concrete Walks
Clear Trees and Maintain as Low Brush
Preserve Oil House
Retain Oil Tank Footings
Maintain Flagpole
Maintain Well Head
Maintain All Concrete Walks
Mark Location of Nonextant Asst. Keepers Quarters
Retain Propane Tank
Maintain as Lawn Clearing
Maintain Basin and Footings
Light Tower
Rehabilitate Light Tower
Maintain Trail
Keepers Quarters
Area of Nonextant Barn
Rehabilitate Keepers Quarters
Maintain Lilac
Rehabilitate Assistant Keepers Quarters
Assistant Keepers Quarters
Maintain as Lawn
Maintain Trail to West Landing
Historic Edge of Cleared Area
Wilderness Boundary
Location of Nonextant Privies and Walks
Maintain Road Corridor as Trail (10' width)
See Inset for Tramway Area



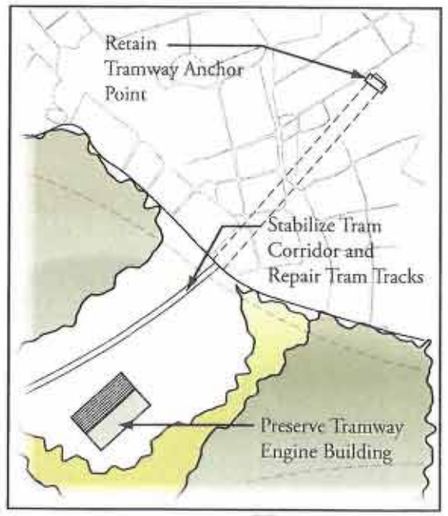
Devils Island

N

Legend

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

Note: Features in *italics* are Noncontributing



Tramway Area

N E W S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 43

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	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Long Island Reservation Treatment Alternative 3

Long Island

Lake Superior

Chequamegon Bay

Original LaPointe Lighthouse Site

Chequamegon Point Site

LaPointe Site

HISTORIC RESERVATION BOUNDARY

Retain Overhead Electric Line and Poles

Reestablish Corridor (10' width) for Cross-Island Path

Legend

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

Note: Features in *italics* are Noncontributing

0 250 500

FIGURE 44

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

Long Island
LaPointe Site
Treatment Alternative 3

Reestablish Historic View of Light Station

New Functional Dock in Historic Landing Crib Location

Remove Existing Boat Dock

Repair Remnant Cribbing

Retain Pipe Crib

Clear Trees Maintain as Dune Vegetation

Remove Floating Boardwalk

New Boardwalk along Historic Alignment

Maintain Cistern and Piping

Remove Utility Units

Repair Flagpole

Add New Walks for Accessibility

Rehabilitate Light Tower

Retain Overhead Electric Line and Poles

Light Tower

Triplex

Fog Signal Foundation

Repair all Concrete Walks

Retain Concrete Radio Tower Footings - A

Maintain Fog Signal Building Foundation

Retain Rubble Pile

Rehabilitate Triplex

Oil Building

Reestablish Corridor (10' width) for Cross Island Path

Remove Fuel Tank

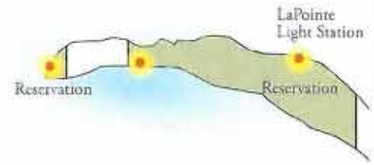
Preserve Oil Building

Stabilize Shed

Retain Septic Bed

Maintain Area for Path (4' width). Retain Corrugated Metal

Retain Concrete Radio Beacon Tower Footings - B



Long Island

Legend

- Dune Vegetation (not managed)
- Managed Dune Vegetation
- Existing Edge of Vegetation
- Forest
- Sand

Notes:
1.) Features in *italics* are Noncontributing
2.) New Accessible NPS Restroom to be added. Location to be determined

N W E S

0 30 60

FIGURE 45

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

TITLE OF PROJECT
HISTORIC STRUCTURE REPORT, CULTURAL LANDSCAPE REPORT & ENVIRONMENTAL ASSESSMENT
TREATMENT ALTERNATIVES

TITLE OF DRAWING
LONG ISLAND - LAPOINTE LIGHT STATION

NAME OF PARK
APOSTLE ISLANDS NATIONAL LAKESHORE

REGION	COUNTY	STATE
MIDWEST	ASHLAND	WISCONSIN

Long Island Original LaPointe Lighthouse Treatment Alternative 3

Existing Edge of Dune Vegetation

Retain Overhead Electric Line and Poles

Overhead Electric

Retain Remnant Shed

Existing Edge of Forest

Maintain Cottonwoods (3)

Reestablish Historic Cleared Area by Removal of Trees. Maintain as Dune Vegetation

Stabilize Ruin (Clear Vegetation)

Original LaPointe Lighthouse Ruin

Stabilize Root Cellar

Root Cellar

Reestablish Corridor (10' width) for Cross-Island Path

Reestablish Historic Cleared Area by Removal of Trees. Maintain as Dune Vegetation

Nonextant Shed

Nonextant Shed

Nonextant Kitchen

Stabilize Privy

Privy

Area of Futher Investigation- Locate Concrete Walks Near Lighthouse

Oil Building

Preserve Oil Building

Nonextant Privies

Reestablish Corridor (10' width) for Cross-Island Path

Nonextant Coal Shed

Maintain Maple

Reestablish Footpath to South Shoreline (4' width)

N W E S

0 20 40

Long Island

Legend

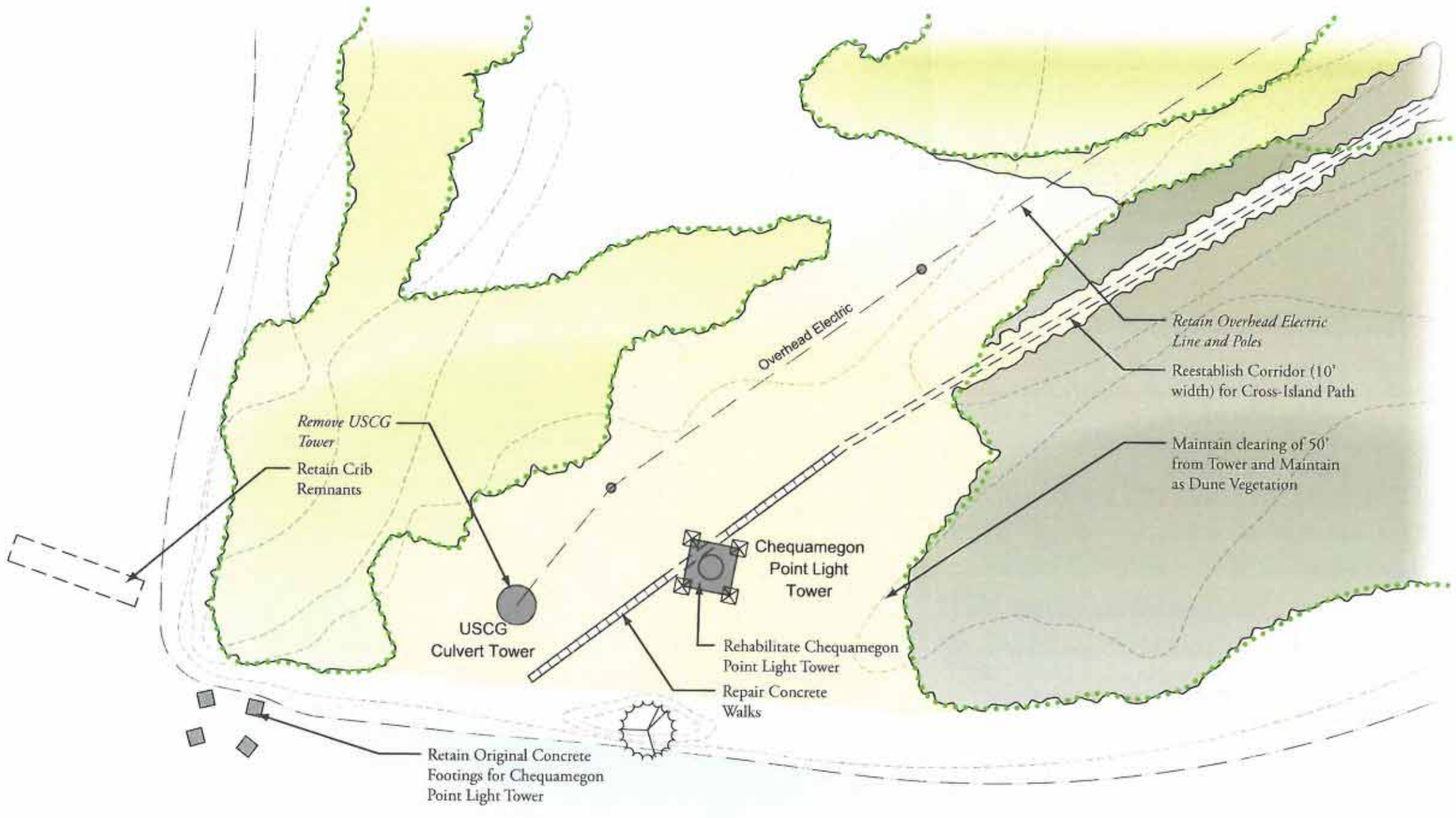
- Dune Vegetation (not managed)
- Forest
- Managed Dune Vegetation
- Existing Edge of Vegetation

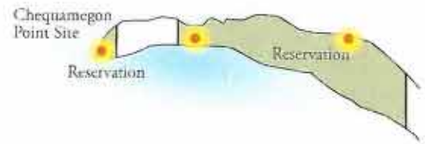
Note: Features in *italics* are Noncontributing

FIGURE 46

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

Long Island
Chequamegon Point
Treatment Alternative 3





Long Island

Legend

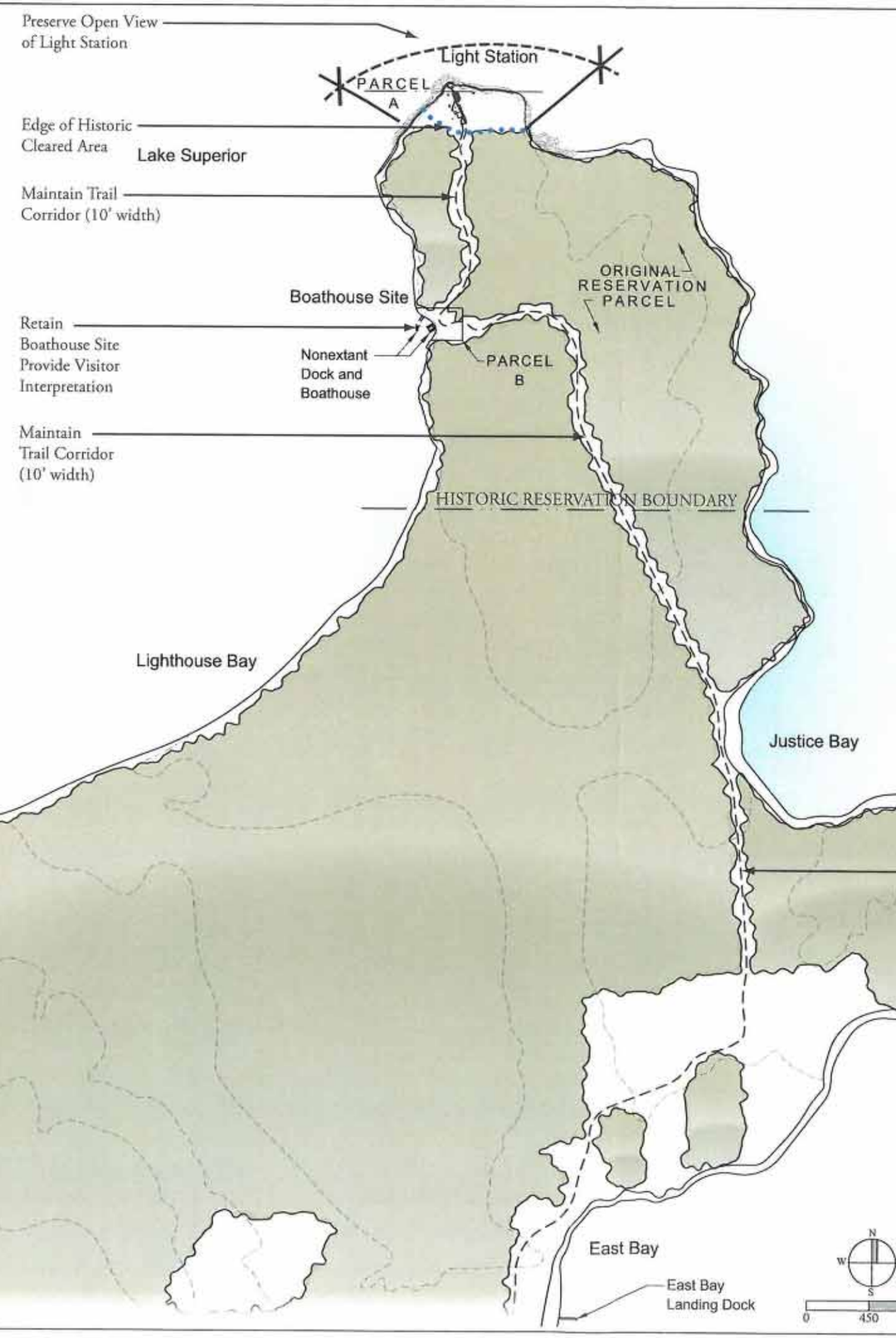
- Dune Vegetation (not managed)
- Sand/ Beach
- Managed Dune Vegetation
- Forest
- Existing Edge of Vegetation

Note: Features in *italics* are Noncontributing

N
W E
S
0 20 40

UNITED STATES DEPARTMENT OF THE INTERIOR APOSTLE ISLANDS NATIONAL LAKESHORE	FIGURE 47 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
100% 3/18/11	REGION MIDWEST · COUNTY ASHLAND · STATE WISCONSIN

Sand Island Reservation Treatment Alternative 3



Legend

- Cleared Area
- Forest
- Edge of Historic Cleared Area

FIGURE 48

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 SAND ISLAND - RESERVATION BOUNDARY
	NAME OF PARK APOSTLE ISLANDS NATIONAL LAKESHORE
100% 3/18/11	REGION: MIDWEST; COUNTY: BAYFIELD; STATE: WISCONSIN

Sand Island
Treatment Alternative 3

Preserve Historic View of Light Station

North Landing

Remove Flagpole

Location of Nonextant Light Tower

Remove Stone North Arrow

Remove and Replace Wooden Headwall

Retain Stone Foundation

Remove Yew

Rock Outcroppings

Maintain all Concrete Walks

Repair Wooden Staircase

Remove Tree

Relocate Fire Pit to Southwest

Light Station Quarters

Rehabilitate Light Station Quarters

Relocate Solar Panel/ Battery Unit

Maintain Low Brush Clearing

Maintain Concrete Walks. Widen for Accessiblility where shown

Preserve Privy

Remove Fuel Tank

Reestablish Missing Wood Shed

Plant Lilacs

Replant Garden

Reestablish Missing Fencing and Landscape Plantings at Garden

Plant Lilacs

Reestablish Missing Tool Shed

Retain and Monitor all Dump Sites

Relocated Fire Pit

Maintain Lilacs

Remove Trees

Preserve Oil Building

Clear Trees and Maintain as Low Brush Clearing

Relocate NPS Vault Toilet

Maintain as Lawn Clearing Around Light Station Quarters and Garden Area

Existing Edge of Forest

Clear Trees and Maintain as Low Brush Clearing

New Accessible NPS Restroom with outdoor accessible route - location to be determined

Maintain Trail Corridor (10' width)

Legend

- Lawn Clearing
- Forest
- Low Brush Clearing
- Existing Edge of Forest
- Former location of Lilacs/Garden Bed

Note: Features in *italics* are Noncontributing

N W E S

0 30 60

UNITED STATES
DEPARTMENT OF THE INTERIOR
APOSTLE ISLANDS NATIONAL LAKESHORE

100% 3/18/11

FIGURE 49

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	COUNTY	STATE
MIDWEST	BAYFIELD	WISCONSIN

ALTERNATIVES COMPARISON TABLES

A comparison of the alternatives and the degree to which each alternative fulfills the needs and objectives of the proposed project is summarized in Table 2. Treatment recommendations for contributing and noncontributing features by alternative are summarized in Table 3.

TABLE 2. ALTERNATIVES COMPARISON

Comparison Factor	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
General Treatment Approach	The no action alternative stresses maintaining and stabilizing existing resources to retard rapid deterioration and prevent catastrophic loss. Repairs are prioritized according to greatest need according to cyclical risk assessments. Weatherproofing methods and emergency repair takes precedence over restoration and rehabilitation.	This approach demonstrates greater commitment to preserving resources with more aggressive application of Secretary of Interior Standards to preservation treatments. Preservation is aimed a longer range protection and attention to restorative work. A more robust maintenance program is a result. The focus is on physical resources with no, or limited, integration of interpretive program objectives and rehabilitation work.	This approach features long range treatments leading to final restoration and rehabilitation of the structures and landscapes of each site. Full compliance with Secretary of Interior Standards for Preservation Treatment of Historic Resources, including more research and analysis in advance of construction. Project outcomes would satisfy the draft general management plan goals as final stage work. Work on sites and facilities would be prioritized based on overall park phasing plan and funding to implement work.	This approach seeks full and final reversal of site and facility impacts. Like Alternative 2, adherence to Secretary of Interior Standards is paramount. The outcome represents the full integration of partner goals for this park and project, including environmental restoration, interpretive effects, rehabilitated uses, and park operations support. Solutions represent compatibility among a diverse set of site use agendas and impacts into the future.
Treatment Elements				
Number of Buildings Open to the Public (including guided, self-guided, limited, and Plexiglas visibility)	6	6	13	17
Structures Suitable for Use as Park Staff/Volunteer Housing	4	4	4	5

Comparison Factor	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Number of Full Time Equivalent (FTE) Maintenance and Interpretive Staff Required Above Baseline	0	0.6	1.2	1.9
Additional Water and Sanitation	0	0	1	3
Contributing Landscape Features Preserved, Rehabilitated, or Restored and Noncontributing Landscape Features Removed	0	124	135	145
Total Acres Cleared to Represent Historically Cleared Areas (percent of total historically cleared areas)	10.7 acres (19%) (current conditions)	19 acres (34%)	27.6 acres (49%)	44.7 acres (79%)
Acres of Selective Tree Removal on Shoreline Bluffs to Manage for Views to Buildings	0	1.15 acre	3.1 acres	3.2 acres
Extent to Which Each Alternative Meets Treatment Objectives				
Protect Cultural and Natural Resources • **Improve conditions of historic buildings and structures** • **Accurately represent cultural landscape features** • **Accurately represent historic clearing and associated viewsheds** • **Minimize erosion potential at sites** • **Minimize impacts of exotic invasive species**	The no action alternative would not adequately fulfill this project objective. The conditions of historic buildings and structures would not be improved. Cultural landscape features and historic viewsheds would not be accurately represented. The no action alternative would have a minimal effect on erosion and impacts from exotic invasive species.	Alternative 1 would partially fulfill this objective because historic buildings and structures would be improved by preservation measures, but structures would not be restored. Standards and guidelines would be in place for repairs, maintenance, and improvements to historic structures and cultural landscapes. Cultural landscape features and the historic clearing and viewsheds would not be accurately represented. Includes the lowest increased risk of erosion and impacts from exotic species.	Alternative 2 would meet this objective by preserving and rehabilitating historic buildings and structures. Standards and guidelines would be in place for repairs, maintenance, and improvements to historic structures and cultural landscapes. Cultural landscapes and historic viewsheds would be represented in a substantially accurate way. Includes increased risk of erosion and impacts from exotic species that is higher than alternative 1 and about the same as alternative 3.	Alternative 3 would meet this objective by preserving and rehabilitating historic buildings and structures. Standards and guidelines would be in place for repairs, maintenance, and improvements to historic structures and cultural landscapes. Cultural landscapes and historic viewsheds would be represented in a substantially accurate way. Includes increased risk of erosion and impacts from exotic species that is higher than alternative 1 and about the same as alternative 2.

Comparison Factor	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Provide for Visitor Enjoyment and Safety • **Provide a high quality (authentic) visitor experience** • **Minimize impacts to visitor experience during rehabilitation activities**	The no action alternative would not fulfill this objective because there would be no changes to historic buildings, structures, cultural landscapes, or viewsheds that would provide a more authentic experience for the public.	Alternative 1 would partially meet this objective by making minor improvements to the authenticity of the representation of cultural landscapes and historic viewsheds. This would improve visitor experience. Alternative 1 would have some potential to have short-term effects on visitor experience during the work, but by timing work to off peak seasons as much as practicable, impacts to visitors would be minimized.	Alternative 2 would meet this objective. Historic structures and buildings would be preserved and restored to substantially authentic conditions. A variety of buildings would be open to visitors, which would provide a quality experience. Cleared areas and viewsheds would be substantially restored to represent historic conditions. Alternative 2 would have the potential to have short-term effects on visitor experience during the work, but by timing work to off peak seasons as much as practicable, Alternative 2 would minimize impacts to visitors during implementation.	Alternative 3 would meet this objective. Historic structures and buildings would be preserved and rehabilitated to substantially authentic conditions. A variety of buildings would be open to visitors, which would provide a quality experience. Cleared areas and viewsheds would be substantially restored to represent historic conditions. The length of time necessary to implement this alternative would have the highest probability of short-term effects on visitors during work, but by timing work to off peak seasons as much as practicable, impacts would be minimized.

Comparison Factor	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Improve Efficiency of Park Operations • **Minimize operational effort** • **Reduce exposure to hazardous materials** • **Provide basic staff amenities at housing** • **Minimize nonrenewable energy usage (and carbon footprint)**	The no action alternative partially meets this objective. It would minimize operational effort and use of nonrenewable energy, but it would not reduce exposure to hazardous materials, and staff amenities would remain primitive. Under the no action alternative, there would be no increase in the use of nonrenewable energy.	Alternative 1 partially meets this objective. Operational efforts would increase by about 0.6 FTEs above baseline conditions. There would be some reduction in exposure to hazardous materials. Staff amenities would remain primitive. The use of nonrenewable energy would be similar to the no action alternative because trips for improvements and maintenance would be similar to current conditions. Use would be minimized by combining trips to the islands and using hand tools when possible.	Alternative 2 partially meets this objective. Operational efforts would increase by about 1.2 FTE. Exposure to hazardous materials would be substantially reduced and staff amenities would be added at one location. The use of nonrenewable energy would be higher than the no action alternative because additional trips for improvements and maintenance would necessary. Use would be minimized by combining trips to the islands and using hand tools when possible.	Alternative 3 partially meets this objective. Operational efforts would increase by about 1.9 FTEs above baseline conditions. Exposure to hazardous materials would be substantially reduced and staff amenities would be added at three locations. The use of nonrenewable energy would be highest under this alternative because additional trips for improvements and maintenance would necessary and additional propane would be used for staff housing. Use would be minimized by combining trips to the islands and using hand tools when possible.

TABLE 3. TREATMENT OF CONTRIBUTING FEATURES AND NONCONTRIBUTING FEATURES BY ALTERNATIVE

Michigan Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Contributing Features				
Old Michigan Island Lighthouse		Preserve	Rehabilitate	Rehabilitate
Michigan Island Second Tower		Preserve	Rehabilitate	Rehabilitate
Keepers Quarters		Preserve	Rehabilitate	Rehabilitate
Assistant Keepers Quarters and Workshop		Preserve	Preserve	Rehabilitate
Power House		Preserve	Preserve	Preserve
Shed		Preserve	Preserve	Rehabilitate
Privy		Preserve	Rehabilitate	Rehabilitate
Light Station Cleared Area		Restore (1.3 acres)	Restore (2.2 acres)	Restore (3.6 acres)
Selective Tree Removal on Shoreline Bluffs		Restore (0.4 acre)	Restore (1.8 acres)	Restore (1.4 acres)
Tramway		Repair	Repair	Repair
Tram Tracks		Preserve/Stabilize	Repair	Repair
Tram Turntable		Repair	Rehabilitate	Retain
Concrete Walks		Maintain/Rehab.	Maintain/Rehab.	Maintain/Rehab.
Root Cellar		Stabilize	Stabilize	Stabilize
Radio Antenna Poles/Bases		Retain	Maintain	Maintain
Cistern		Maintain	Maintain	Maintain
Flagpole		Maintain	Maintain	Maintain
Landscape Plantings		Maintain	Restore Features	Restore Features
Orchard Plantings		Maintain	Restore Pattern	Restore Pattern
Noncontributing Features				
Boat Dock		Retain location	Retain location	Retain location
NPS Contemporary Vault Toilet		Retain	Retain	Retain
Solar Panel		Relocate	Relocate	Relocate
Park Signs		Retain	Retain	Retain
Fuel Tanks		Retain	Retain	Retain
Fire Pit		Remove	Remove	Remove
Hiking Trail		Retain	Retain	Retain
Noncontributing Trees		Remove	Remove	Remove

Outer Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Contributing Features				
Outer Island Tower		Preserve	Rehabilitate	Rehabilitate
Keepers Quarters		Preserve	Rehabilitate	Rehabilitate
Fog Signal Building		Preserve	Rehabilitate	Rehabilitate
Oil Storage		Preserve	Preserve	Preserve
Privy		Preserve	Preserve	Preserve
Boat Dock		Retain	Retain	Retain
Remnant Cabin		Preserve	Preserve	Preserve
Tramway		Repair	Repair	Repair
Tram Tracks		Maintain	Maintain	Maintain
Concrete Walks		Maintain	Maintain	Maintain
Light Station Cleared Area		Restore (< 0.1 acre)	Restore (1.2 acres)	Restore (6 acres)
Selective Tree Removal on Shoreline Bluffs		Restore (0.8 acre)	Restore (1.3 acres)	Restore (1.8 acres)
Fuel Tank		Retain	Retain	Retain
Concrete Foundation		Maintain	Maintain	Maintain
Cistern		Stabilize	Stabilize	Stabilize
Original Flagpole		Maintain	Repair	Repair
Ladder Stand		Repair	Repair	Repair
Landscape Plantings		Maintain	Maintain	Maintain
Noncontributing Features				
Drainage Swale		Maintain	Maintain	Maintain
NPS Contemporary Vault Toilet		Replace	Replace	Replace
Solar Panel		Retain	Retain	Relocate
Propane Tanks		Remove	Remove	Remove
Park Signs		Retain	Retain	Retain
Fire Pit		Relocate	Relocate	Relocate
Clothesline		Remove	Remove	Remove
Noncontributing Plantings		Remove	Remove	Remove

Devils Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Contributing Features				
Light Station Tower		Preserve	Rehabilitate	Rehabilitate
Keepers Quarters		Preserve	Rehabilitate	Rehabilitate
Assistant Keepers Quarters		Preserve	Rehabilitate	Rehabilitate
Fog Signal Building		Preserve	Rehabilitate	Rehabilitate
Oil House #1		Preserve	Preserve	Preserve
Oil House # 2		Preserve	Preserve	Preserve
Tramway Engine Building		Preserve	Preserve	Preserve
Boathouse		Preserve	Preserve	Preserve
Boat Dock		Repair	Repair	Repair
Pump House		Stabilize	Maintain	Maintain
Light Station Cleared Area		Restore (4.0 acres)	Restore (9.0 acres)	Restore (10.5 acres)
Tram Tracks		Preserve/Stabilize	Preserve/Stabilize	Rehabilitate
Tramway Anchor Point		Retain	Retain	Retain
Stone Tram Terminal		Stabilize	Repair	Repair
Road Corridor		Maintain	Maintain	Maintain
Concrete Walks		Maintain	Maintain	Maintain/Restore
Derrick Footings		Stabilize	Stabilize	Maintain
Radio Tower		Maintain	Maintain	Maintain
Beacon Light		Maintain	Maintain	Maintain
Concrete Basin/Fuel Tanks/Footings		Maintain	Maintain	Maintain
Oil Tank Footings		Retain	Retain	Retain
Well Head		Maintain	Maintain	Maintain
Flagpole		Maintain	Maintain	Maintain
Landscape Plantings		Maintain	Maintain	Maintain
Noncontributing Features				
NPS Contemporary Vault Toilet		Replace	Replace	Replace
Solar Panel		Relocate	Relocate	Relocate
Park Signs		Retain	Retain	Retain
Chain Link Fence		Remove	Remove	Remove
Hiking Trail		Maintain	Maintain	Maintain
Wooden Post		Remove	Remove	Remove
Noncontributing Trees		Remove	Remove	Remove

Long Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Contributing Features				
Cleared Area		Restore (2.8 acres)	Restore (3.5 acres)	Restore (11.5 acres)
Connecting Corridor Between Stations		No Action	Reestablish	Reestablish
LaPointe				
LaPointe Light Tower		Preserve	Rehabilitate	Rehabilitate
Chequamegon Point Lighthouse		Preserve	Rehabilitate	Rehabilitate
Triplex		Preserve	Preserve	Rehabilitate
Oil Building		Preserve	Preserve	Preserve
Boat Dock		Maintain	Maintain	Remove and Replace
Fog Signal Building Foundation		Maintain	Maintain	Maintain
Shed		Stabilize	Stabilize	Stabilize
Flagpole		Repair	Repair	Repair
Concrete Walks		Maintain	Repair	Repair
Footpath to Bay		Maintain	Maintain	Maintain
Boardwalk		Remove	Remove	Remove
Concrete Footings		Retain	Retain	Retain
Cistern		Maintain	Maintain	Maintain
Pipe Crib		Retain	Retain	Retain
Rubble Piles		Retain	Retain	Retain
Original Lighthouse				
Original Lighthouse Ruin		Stabilize	Stabilize	Stabilize
Oil Building		Preserve	Preserve	Preserve
Root Cellar		Stabilize	Stabilize	Stabilize
Privy		Stabilize	Stabilize	Stabilize
Footpath to Bay		No Action	No Action	Reestablish
Chequamegon Point				
Concrete Walks		Maintain	Maintain	Repair
Crib Remnants		Retain	Retain	Retain
Concrete Footings		Retain	Retain	Retain

Long Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Noncontributing Features				
Culvert Light Tower (Chequamegon Point)		Remove	Remove	Remove
Floating Boardwalk (LaPointe)		Remove	Retain/Relocate	Remove
Electric Line and Poles		Retain	Retain	Retain
Utility Unit		Remove	Remove	Remove
Fuel Tank		Retain	Remove	Remove

Sand Island	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2	Treatment Alternative 3
Contributing Features				
Sand Island Light Station Quarters		Preserve	Restore	Rehabilitate
Oil Building		Preserve	Preserve	Preserve
Privy		Preserve	Preserve	Preserve
Cleared Area		Restore (0.4 acre)	Restore (1.0 acre)	Restore (2.3 acres)
Concrete Walks		Maintain/Rehab.	Maintain/Rehab.	Maintain/Rehab.
Dump Sites		Retain	Retain	Retain
Wood Shed/Tool Shed		No Action	No Action	Restore
Stone Foundation		Retain	Retain	Retain
Landscape Plantings		Maintain	Maintain	Restore
Fencing at Garden		No Action	Restore	Restore
Noncontributing Features				
NPS Vault Toilet		Replace	Replace	Replace
Solar Panel		Retain	Relocate	Relocate
Park Signs		Retain	Retain	Retain
Stone North Arrow		Remove	Remove	Remove
Wooden Headwall		Retain	Replace	Replace
Flagpole		Retain	Remove	Remove
Fire Pit		Retain	Relocate	Relocate
Hiking Trail		Maintain	Maintain	Maintain
Noncontributing Trees		Remove	Remove	Remove

MITIGATION

NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected action alternative (Table 4). NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

TABLE 4. MITIGATION MEASURES FOR ALL ACTION ALTERNATIVES

Resource Area	Mitigation
General Considerations	Where necessary for resource or visitor protection, work areas would be identified with construction fence, silt fence, or some similar material prior to any activity. The fencing would define the work zone and confine activity to the minimum area required. All protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities beyond the work zone. Disturbances would be limited to areas inside the designated construction limits. No machinery or equipment would access areas outside the work limits. Construction equipment staging would occur within previously disturbed areas as much as possible. All staging and stockpiling areas would be returned to preconstruction conditions following construction. Contractors would be required to properly maintain construction equipment (i.e., mufflers and brakes) to minimize noise. All tools, equipment, barricades, signs, surplus materials, and rubbish would be removed from the project work limits upon project completion.
Geology and Coastal Processes	In addition to mitigation measures described to protect water quality and soils, erosion on the shoreline bluffs of Michigan and Outer islands will be monitored. If the banks show unacceptable levels of instability, biostabilization techniques will be used to stabilize the banks. Additional measures such as redirecting surface flows at the top of the banks or installing erosion control mat would also be used if needed.
Vegetation, Including Wetlands	All disturbed ground would be reclaimed using appropriate BMPs including planting native plants. Until the soil is stable and vegetation is established, erosion-control measures would be implemented to minimize erosion and prevent sediment from reaching streams and the lake. Temporary barriers would be provided to protect existing trees, plants, and root zones. Trees or other plants would not be removed, injured, or destroyed without prior approval. To prevent the introduction of, and minimize the spread of, nonnative vegetation and noxious weeds, the following measures would be implemented during construction: • Where needed, work limits would be established in wetland areas along the Devils Island tram track for work in this area. • Soil disturbance would be minimized. • All construction equipment would be pressure washed and/or steam cleaned before entering the park to ensure that all equipment, machinery, rocks, gravel, and other materials are cleaned and weed free. • Staging areas outside the park would be surveyed for noxious weeds and treated appropriately prior to use. • All fill, rock, and additional topsoil would be obtained from stockpiles from previous projects or excess material from this project, if possible. If not available, then weed-free fill, rock, or additional topsoil would be obtained from sources outside the park to the maximum extent possible. NPS personnel would certify that the source is weed free. • Monitoring and follow-up treatment of exotic vegetation would occur after project activities are completed.

Resource Area	Mitigation
Water Quality and Soils	Erosion-control BMPs for drainage and sediment control, as identified and used by NPS, including those in NPS Procedural Manual #77-1: Wetland Protection, would be implemented to prevent or reduce nonpoint source pollution and minimize soil loss and sedimentation in drainage areas. These practices may include, but are not limited to, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas to minimize sedimentation and turbidity impacts as a result of construction activities. The placement and specific measures used would be dictated to a large degree by the steep topography in some parts of the project area. Silt fencing fabric would be inspected daily during project work, and weekly after project completion, until removed. Accumulated sediments would be removed when the fabric is estimated to be approximately 75% full. Silt removal would be accomplished in such a way as to avoid introduction into any water bodies. Regular site inspections would be conducted to ensure that erosion-control measures are properly installed and functioning effectively. The operation of ground-disturbing equipment would be temporarily suspended during large precipitation events to reduce the production of sediment that may be transported to wetlands, streams, or lakes. In the unlikely event there would be more than 1 acre of ground disturbance at a construction site, a storm water pollution prevention plan (SWPPP) would be developed and approved by the park and submitted to the Wisconsin Department of Natural Resources prior to commencing any activities. All equipment would be maintained in a clean and well-functioning state to avoid or minimize contamination from fluids and fuels. Prior to starting work each day, all machinery would be inspected for leaks (e.g., fuel, oil, and hydraulic fluid); and all necessary repairs would be made before commencing work. A hazardous spill plan would be required from the contractor prior to the start of construction that states what actions would be taken in the case of a spill, and preventive measures to be implemented. Hazardous spill clean-up materials would be on-site at all times. This measure is designed to avoid/minimize the introduction of chemical contaminants associated with machinery (e.g., fuel, oil, and hydraulic fluid) used in project implementation.
Wildlife	No construction activities would occur from 7 P.M. to 5 A.M. to minimize impacts to wildlife that are most active at dawn and dusk. These hours would be adjusted by the park biologist seasonally for varying day lengths. Other construction restrictions for special status species, described below, also would protect wildlife. Lights used for night construction activities would be shielded and directed downward to minimize the areas impacted by the artificial light, and to avoid light pollution. Openings made in walls or other structural components that expose potential roosting areas for bats to enter will be screened or netted to prevent bats from being inadvertently closed into structures. The construction contractor would be required to keep all garbage and food waste contained and removed periodically from the work site to avoid attracting wildlife into the construction zone. Construction workers would be instructed to remove food scraps and not feed or approach wildlife.
Special Status Species	Sensitive plant surveys would be conducted prior to disturbance of any suitable habitat. If sensitive species are found, the area would be avoided (if practicable) and mitigation measures, such as establishing buffer areas, would be implemented to minimize impacts. Work on Long Island would be done outside of the piping plover nesting season, or upon approval by the park biologist.

Resource Area	Mitigation
Visitor Experience, Public Health, Safety, and Park Operations	Visitors would be informed in advance of construction activities via the park website, local media outlets, park bulletin boards, and visitor center. Visitor access to buildings would be prohibited during removal of hazardous materials and construction activities.
Cultural Resources	All activities would comply with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716, revised). Archeological resources in the vicinity of the project area would be identified and delineated for avoidance prior to project work. The park would continue to coordinate with the SHPO throughout the course of the project to protect and mitigate cultural resources affected by the preferred alternative. Should any archeological resources be uncovered during construction, as appropriate, work would be halted in the area and the park archeologist, SHPO, and appropriate Native American tribes would be contacted for further consultation. Park cultural resources staff would be available during construction to advise or take appropriate actions should any archeological resources be uncovered during construction. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed. NPS would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archeological sites or historic properties. Contractors and subcontractors also would be instructed on procedures to follow in case previously unknown archeological resources are uncovered during construction. Equipment and material staging areas would avoid known archeological resources. Known dump sites exposed by forest clearing would be monitored for deterioration and disturbance.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The CEQ defines the Environmentally Preferable Alternative as "…the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act § 101." Section 101 states that, "…it is the continuing responsibility of the Federal Government to:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
5. Achieve a balance between population and resource use, which will permit high standards of living and a wide sharing of life's amenities; and

6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

This means that the environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment; it also means it is the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. The identification of the "Environmentally Preferable Alternative" was based on an analysis that balances factors such as physical impacts on various aspects of the environment, mitigation measures to deal with impacts, and other factors, including the statutory mission of NPS and the purposes for the project.

Although an environmentally preferable alternative is identified, it may not be the preferred alternative. The preferred alternative is the alternative that NPS believes would best fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors.

While the no action alternative would maintain existing conditions, it would not be considered the environmentally preferable alternative because it would not meet environmental goals in the same manner as the other action alternatives. Although it would not result in new disturbance to natural resources, the no action alternative would not preserve important cultural landscape or historic structural elements as well as the treatment alternatives because of the continued presence of numerous noncontributing landscape and architectural features. The no action alternative would also not include restoring significant cultural elements or introducing features that complement the landscape and structures. Cultural landscapes and historic structures would continue to deteriorate without the guidance provided by a treatment plan. The no action alternative is not the environmentally preferable alternative because other alternatives better protect, preserve, and enhance historic, cultural, and natural resources. With regard to sections 101 and 102(1) of NEPA, the no action alternative is not the environmentally preferable alternative for the following reasons: 1) it would not meet the stewardship responsibility for protecting park resources (goal 1); 2) it would not improve visitor safety or access, or protect environmental and cultural resources (goals 2, 3, and 4); and 3) cultural landscapes and historic structures would continue to deteriorate, resulting in increased maintenance costs (goal 3).

Alternative 1 is focused on preserving cultural landscapes and structures. It would include needed maintenance and repairs on buildings and would slightly reduce the encroachment of forest vegetation into the historically cleared areas, but it would not include restoring or rehabilitating cultural landscape and structural features. The protection, preservation, and enhancement of historic resources are not as extensive under alternative 1 as under alternatives 2 and 3. For this reason, alternative 1 is not the environmentally preferable alternative. Alternative 1 does not fully meet the provisions of NEPA section 101 goals for the following reasons: 1) it would provide some improvements to visitor safety; but would not improve visitor use, access, or understanding of cultural resources (goals 2, 3, and 4); and 2) noncontributing cultural landscape and structural features would remain (goal 4).

Alternative 2, the preferred alternative, and alternative 3 are very similar and would include restoring and rehabilitating cultural resources, which would improve cultural resource protection and visitor access, use, and understanding (goals 1, 2, 4, and 5). Alternatives 2 and 3 would meet many of the NEPA section 101 goals and would protect, preserve, and enhance historic resources better than the no action alternative or alternative 1. Although very similar, alternative 2 includes

slightly less historic resource rehabilitation than alternative 3 and so would not be the environmentally preferable alternative.

NPS determined that the environmentally preferable alternative is alternative 3 because it surpasses the no action alternative and alternative 1 and is slightly better than alternative 2 in realizing the fullest range of national environmental policy goals stated in NEPA section 101. Although alternative 3 is the environmentally preferable alternative, alternative 2 remains the preferred alternative because it meets almost the same range of section 101 goals as alternative 3, but it provides the best combination of features that meet the project objectives.

IMPACT SUMMARY

A summary of potential environmental effects for the alternatives is presented in Table 5.

TABLE 5. IMPACT SUMMARY

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Geology and Coastal Processes	The no action alternative would have no new effect on geology or coastal processes because there would be no new activities that would affect geologic features or the shoreline and the alternative would have no cumulative effects.	Alternative 1 would include selective tree removal on about 1.2 acres of shoreline bluffs. This could increase the area of soils exposed to erosion, but mitigation would minimize effects. Also, dock repairs and a new boardwalk at the LaPointe site on Long Island may have minor effects on the shoreline. Alternative 1 would have local long-term minor to moderate adverse effects. Cumulative effects would be local, minor to moderate, and adverse.	Alternative 2 would have similar effects as alternative 1, but 3.1 acres of shoreline bluff trees would be managed and the LaPointe site boardwalk would be located in its current alignment. Alternative 2 would have local long-term minor to moderate adverse effects. Cumulative effects would be local, minor to moderate, and adverse.	Alternative 3 would have similar effects as alternative 1, but 3.2 acres of shoreline bluff trees would be managed. Also, the Long Island dock would be rebuilt in its historic location and a new, permanent boardwalk would be built from the dock up the shore toward the Triplex. The new dock and boardwalk could affect sediment movement along the shoreline. The dock would be designed to minimize changes is sediment. Alternative 3 would have local long-term minor to moderate adverse effects. There would be additional short-term adverse effects during and immediately after construction. Cumulative effects would be local, minor to moderate, and adverse.

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Soils	The no action alternative would have no new soil disturbance and so would have no new or cumulative effects on soils	Alternative 1 would affect about 22 acres of land, included some currently developed areas. Although areas of soil would be exposed to the potential for higher erosion, the effects on soils would be minimized by the flat topography of the light stations, the remaining ground cover, and implementing erosion-control measures. Alternative 1 would have local short-term minor adverse effects. Cumulative effects would be local, minor, and adverse.	Alternative 2 would have the same effects and would include the same mitigation measures as alternative 1, except that alternative 2 would affect about 31 acres of land, including some currently developed areas. Alternative 2 would have local short-term minor adverse effects on soils as a result of the treatment. Cumulative effects would be local, minor, and adverse.	Alternative 3 would have the same effects and would include the same mitigation measures as alternatives 1 and 2, except that alternative 3 would affect about 42 acres of land, including some currently developed areas. Alternative 3 would have local short-term minor adverse effects on soils as a result of the treatment. Cumulative effects would be local, minor, and adverse.
Vegetation	The no action alternative does not include new effects on vegetation. The existing maintenance of currently cleared areas would continue. There would be no change in the rate of introduction or spread of invasive exotic plants. The no action alternative would have no new effects on vegetation in the project area, and would have no cumulative effects.	Alternative 1 would include managing about 16 acres of vegetation, including clearing trees and shrubs. The infestation and spread of invasive exotic plants, including plants in the cultural landscapes, is possible. Implementing weed control BMPs would minimize the potential for weed establishment and long-term adverse effects. Alternative 1 would have local long-term minor to moderate adverse effects on vegetation. Cumulative effects would be parkwide, moderate, and adverse.	Alternative 2 would include the same effects and mitigation measures as under alternative 1, except that 23 acres of vegetation would be affected. Alternative 2 would have local long-term minor to moderate adverse effects on vegetation. Cumulative effects would be parkwide, moderate, and adverse.	Alternative 3 would include the same effects and mitigation measures as under alternatives 1 and 2, except that 33 acres of vegetation would be affected. Alternative 3 would have local long-term minor to moderate adverse effects on vegetation. Cumulative effects would be parkwide, moderate, and adverse.

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Wildlife	The no action alternative would have no new effects on wildlife or wildlife habitat, and would have no cumulative effects.	Human presence and construction noise would temporarily disturb and displace resident wildlife, resulting in local short-term adverse effects. Additional, periodic short-term effects would occur when cleared areas are periodically maintained by mowing or brush removal. About 16 acres of habitat would be permanently modified, resulting in local long-term minor adverse effects on wildlife. Cumulative effects would be local, minor, and adverse.	The effects on wildlife under Alternative 2 are the same as those under alternative 1, except that about 25 acres of habitat would be permanently modified. Alternative 2 would have local long-term minor adverse effects on wildlife. Cumulative effects would be local, minor, and adverse.	The effects on wildlife under Alternative 3 are the same as those under alternatives 1 and 2, except that about 36 acres of habitat would be permanently modified. Alternative 3 would have local long-term minor adverse effects on wildlife. Cumulative effects would be local, minor, and adverse.
Special Status Species	Because there would be no habitat-disturbing activities under the no action alternative, there would be no new effects on special status species and no cumulative effects.	Alteration of about 16 acres of habitat and disturbance during construction would have no effect on the federally listed gray wolf or piping plover and would not likely adversely modify piping plover designated critical habitat. Mitigation measures, such as preconstruction surveys and limiting construction to the nonnesting season, would reduce the potential for disturbing piping plovers. Work would only proceed with approval from the park biologist. Alternative 1 would likely have no effect on state-listed wildlife species because listed species potentially present are migrant birds that would easily	Alternative 2 would have the same effects and would include the same mitigation measures as under alternative 1, expect that about 25 acres of habitat would be disturbed. Alternative 2 would have no effect on gray wolf or piping plover and would not likely adversely modify piping plover critical habitat. Alternative 2 would have no effect on state listed wildlife and local long-term negligible adverse effects on state listed plant species. Cumulative effects would be local, minor, and adverse.	Alternative 3 would have the same effects and would include the same mitigation measures as under alternatives 1 and 2, expect that about 36 acres of habitat would be disturbed. Alternative 3 would have no effect on gray wolf or piping plover and would not likely adversely modify piping plover critical habitat. Alternative 3 would have no effect on state listed wildlife and local long-term negligible adverse effects on state listed plant species. Cumulative effects would be local, minor, and adverse.

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
		avoid the small areas of disturbance at the light stations. Surveys for state-listed and other rare plants would be performed prior to vegetation removal, and vegetation treatments would be altered, where practicable, to avoid disturbing populations. As a result, alternative 1 would have local long-term negligible adverse effects on special status plant species. Cumulative effects would be local, minor, and adverse.		

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Wetlands	The no action alternative would have no new effects on wetlands and would have no cumulative effects.	Alternative 1 would include continuing existing management of the Devils Island trail between the light station and the boat house and vegetation would be managed along the tram tracks. Both alignments pass through wetlands. Vegetation would be managed to maintain a trail corridor between the LaPointe site and Chequamegon Bay. Wetland vegetation along the managed trails would be trampled. Alternative 1 would have local short- to long-term negligible adverse effects on wetlands. Cumulative effects would be local, negligible, and adverse.	Alternative 2 would include the activities and effects described for alternative 1. It would also include managing vegetation along a trail between the Long Island LaPointe, Original Lighthouse, and Chequamegon Point sites. The trail would avoid wetlands. Alternative 2 would have local short- to long-term negligible adverse effects on wetlands. Cumulative effects would be local, minor, and adverse.	Alternative 3 would include the activities described under alternative 2, but repairing the tram tracks on Devils Island would temporarily impact up to 0.06 acre of wetlands. Alternative 3 would have local short- to long-term minor adverse effects on wetlands. Cumulative effects would be local, minor, and adverse.
Soundscape	The no action alternative would have no new effect on the existing soundscape and would not contribute to cumulative effects.	Alternative 1 would result in temporarily elevated noise levels during vegetation removal and ongoing management, building repairs and rehabilitation, and occasionally operating generators for various uses. Alternative 1 would have local short term minor adverse effects on the soundscape and local minor and adverse cumulative effects.	Alternative 2 would have the same effects as those under alternative 1. Alternative 2 would have local short term minor adverse effects on the soundscape and local minor and adverse cumulative effects.	Alternative 3 would have the same effects as those under alternatives 1 and 2. Alternative 3 would have local short term minor adverse effects on the soundscape and local minor and adverse cumulative effects.

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Historic Structures and Cultural Landscapes	The total area cleared on the light stations would remain at about 10.7 acres, which is about 19% of the historically cleared area. There would continue to be no treatment recommendations for the historic resources and incremental degradation would continue and potentially accelerate. Because current management practices and maintenance capabilities would continue under the no action alternative, the alternative would have local long-term moderate adverse effects on historic structures or cultural resources. Cumulative effects would be local, moderate, and adverse.	Alternative 1 would include activities to remove vegetation to reestablish some areas of historic clearing, preserve and maintain structures, and add features to meet building codes. The total area cleared on the light stations would be about 19 acres, which is about 34% of the historically cleared areas. Under alternative 1, there would be local long-term beneficial effects as a result of preservation and stabilization measures. Cumulative impacts would be local, minor, and adverse, with long-term beneficial impacts contributed from alternative 1.	Under alternative 2, existing contributing structures and landscape features would be repaired or altered, and missing historic features would be restored. Some noncompatible features would be removed. Where needed, compatible features would be added to meet building codes and maintain safety. Some areas of vegetation would be cleared to better represent the extent of clearing in the light stations during the period of significance. The total area cleared on the light stations would be about 28 acres, which is about 49% of the historically cleared areas. Under alternative 2, there would be local long-term beneficial effects as a result of rehabilitation measures. Cumulative impacts would be local, minor, and adverse, with a long-term beneficial contribution from alternative 2.	Existing contributing structures and landscape features would be repaired or altered, and missing historic features would be restored. Some noncompatible features would be removed. Where needed, compatible features would be added to meet building codes and maintain safety. Alternative 3 would remove slightly more vegetation than alternative 2 to better represent the extent of clearing in the light stations during the period of significance. The total area cleared on the light stations would be about 45 acres, which is about 79% of the historically cleared areas. Under alternative 3, local long-term effects would be beneficial as a result of rehabilitation and restoration measures. Cumulative impacts would be local, minor, and adverse, with a local long-term beneficial contribution.

Impact Topic	No Action Alternative	Treatment Alternative 1	Treatment Alternative 2 (Preferred)	Treatment Alternative 3
Archeological Resources	There would be no new impacts on archeological resources under the no action alternative and there would be no cumulative impacts.	Alternative 1 includes activities such as vegetation removal and constructing a new foundation for a shed on Michigan Island that may expose previously unknown archeological resources. To minimize potential adverse effects, surveys for archeological resources would be done prior to construction and monitoring would be done during construction in areas with high likelihood to contain artifacts. Alternative 1 would have local long-term minor adverse effects and local minor adverse cumulative effects.	The effects and mitigation measures under alternative 2 would be the same as those under alternative 1, except that forest vegetation around two known dump sites would be removed. The dump sites would be monitored for deterioration or disturbance. Alternative 2 would have local long-term minor adverse effects and local minor adverse cumulative effects.	The effects and mitigation measures under alternative 3 would be the same as those under alternatives 1 and 2, except that forest vegetation around three known dump sites would be removed. The dump sites would be monitored for deterioration or disturbance. Alternative 3 would have local long-term minor adverse effects and local minor adverse cumulative effects.
Visitor Experience	Visitor access would remain at 6 buildings. There would be no improvements to water or sanitation facilities. The light station clearings would not be reestablished to any degree and the views to and from the light stations would not improve. Under the no action alternative, the current conditions of visitor facilities and interpretive opportunities would remain unchanged, so there would be no new effect on visitor experience and no cumulative effects.	Visitor access to the light stations would be restricted during vegetation clearing, and access to buildings would be limited during exterior and interior work. The number of buildings open to the public would remain at 6 and there would be no improvements to water and sanitation facilities. Unlike the no action alternative, visitor experiences would improve under alternative 1 because interpretive opportunities would increase by repairing and preserving some buildings, removing some noncontributing features, and rehabilitating some of the cleared areas. Compatible features would be added to meet building and	Alternative 2 would expand visitor access and use to 13 buildings and upgrade one water and sanitation facility. Alternative 2 provides more interpretive opportunities and would expand cleared areas more than alternative 1. As with alternative 1, under alternative 2, visitor access to the light stations would be restricted during vegetation clearing, and access to buildings would be limited during exterior and interior work. Alternative 2 would have local short-term minor adverse effects and local long-term beneficial effects on visitor experience. Cumulative effects	Activities and effects under alternative 3 would be very similar to those under alternative 2. Alternative 3 would expand visitor access and use to 17 buildings and improve three water and sanitation facilities. Alternative 3 provides more interpretive opportunities and would expand cleared areas more than alternatives 1 and 2. As with alternatives 1 and 2, under alternative 3, visitor access to the light stations would be restricted during vegetation clearing, and access to buildings would be limited during exterior and interior work. Alternative 3 would

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		safety codes. Clearing vegetation would improve visitor views to and from the light stations. Alternative 1 would have local short-term minor adverse effects and local long-term beneficial effects on visitor experience. Cumulative effects would be local and beneficial.	would be local and beneficial.	have local short-term minor adverse effects and local long-term beneficial effects on visitor experience. Cumulative effects would be local and beneficial.
Public Health and Safety	The continued presence of unaddressed hazardous materials and conditions under the no action alternative would have local long-term minor adverse effects on public health and safety. There are no known reasonably foreseeable actions that would have a new effect on public health and safety, so there would be no cumulative effects.	Under alternative 1, hazardous materials would be addressed by removing bat guano and removing and stabilizing lead-based paint and asbestos. Minor safety issues would be addressed. Alternative 1 would have local long-term beneficial effects on public health and safety. There would be no cumulative effects.	Activities and their effects under alternative 2 would be similar to those under alternative 1, but would be more extensive. Alternative 2 would have local long-term beneficial effects on public health and safety. There would be no cumulative effects.	Activities and their effects under alternative 3 would be similar to those under alternatives 1 and 2, but would be more extensive. Alternative 1 would have local long-term beneficial effects on public health and safety. There would be no cumulative effects.

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Park Operations	Current management practices would continue and the estimated number of hours required to maintain the light stations would not change. There would continue to be no treatment guidance. Because current operation and management practices would continue, there would be no new effect on park operations under the no action alternative. There are no known reasonably foreseeable actions that would have a new effect on park operations so there would be no cumulative effects.	Implementing alternative 1 would require an estimated 0.6 FTE per year over the baseline FTEs of the no action alternative. There would be guidance on treatments. Increased hours necessary for maintaining the light stations, exotic species monitoring and control, bluff erosion monitoring, and potential mitigation efforts under alternative 1 would have local long-term minor adverse effects on park operations. Having guidance on treatments under alternative 1, would have local long-term beneficial effects on park operations. There would be no cumulative effects.	Actions under alternative 2 would be the same as those under alternative 1, but alternative 2 would require 1.2 FTE per year over baseline FTEs. Increased hours necessary for maintaining the light stations, exotic species monitoring and control, bluff erosion monitoring, and potential mitigation efforts under alternative 2 would have local long-term minor adverse effects on park operations. Having guidance on treatments under alternative 2, would have local long-term beneficial effects on park operations. There would be no cumulative effects.	Actions under alternative 3 would be the same as those under alternative 1 and 2, but alternative 3 would require 1.9 FTE per year over baseline FTEs. Increased hours necessary for maintaining the light stations, exotic species monitoring and control, bluff erosion monitoring, and potential mitigation efforts under alternative 3 would have local long-term minor adverse effects on park operations. Having guidance on treatments under alternative 2, would have local long-term beneficial effects on park operations. There would be no cumulative effects.