

Human Use/Natural Resource Management Plan For Whitefish Point

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Submitted by:

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**APPENDIX: SUMMARY OF PUBLIC INPUT, COMPILED BY THE
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I. BACKGROUND AND LEGAL RESTRICTIONS

A. Historic Uses of Whitefish Point

Whitefish Point has been known to the Chippewa Indians since the Fifteenth Century and was inhabited by unknown primitive tribes for thousands of years before that. The first white man to visit Lake Superior was Etienne Brule', reportedly visiting the Sault Area around 1622. From that time, Whitefish Point became a rendezvous and meeting place for explorers, missionaries, trappers and fur traders. The earliest recorded visitor to Whitefish Point was Jean Baptist Perrault, a "merchant voyager" for the North West Fur Trading Company in 1785.

Commercial fishing developed in the Whitefish Point area around 1832, as recorded by Lt. James Allen, who was a soldier in the military escort that accompanied Henry Schoolcraft on one of his expeditions. Schoolcraft was the Federal Indian agent for Michigan. Allen reported that the American Fur Company was enjoying success in catching whitefish and making a good profit on the sale of fish.

Whitefish Point remained undeveloped until the 1840's. In 1846, the famed newspaper publisher Horace Greeley visited Lake Superior by boat, to personally investigate the new sources of copper and iron ore that had recently been discovered, allowing the nation to develop an industrial economy. Greeley lamented that there were no aids to navigation on Lake Superior: "On the whole lake there is not a lighthouse nor any harbor other than such holes in the rock-bound coast as nature has perforated. Not a dollar has been spent on them." Following Greeley's editorials chastising the U.S. Congress, Congress finally appropriated \$5,000 for a lighthouse at Whitefish Point, which was signed into law by President James K. Polk on April 3, 1847. Modern occupation of Whitefish Point began that following July when a tract of 115.5 acres of "mostly sand and cranberry marsh" were reserved by the U.S. Government for a lighthouse.

Maritime History

Whitefish Point is a critical turning point for all vessel traffic entering and leaving Lake Superior, due to the natural configuration of its presence at the northwest corner of Whitefish Bay. Since 1847, vessels have sought shelter from prevailing northwest winds that soar over 250 miles of open water.

The highly exposed 80-mile stretch of shoreline between Munising, Michigan, and Whitefish Point lacks any natural harbor for large vessels. It has come to be known as "Lake Superior's Shipwreck Coast" due to the unusually high concentration of shipwrecks in the area. In 1876, noting the accelerated risk to maritime traffic along

this stretch of shoreline, the U.S. Life-Saving Service established Life-Saving stations at Vermilion, Crisp Point, Deer Park, and the Two-Hearted River. These stations were in contact with the Whitefish Point Light Station via telegraph lines. The Great Lakes Shipwreck Historical Society has catalogued many stories of dramatic rescues, with photographs, along the Lake Superior's coast.

In 1915, the U.S. Revenue Cutter Service and the U.S. Life-Saving Service were merged into a single agency, the U.S. Coast Guard. The U.S. Coast Guard established a modern Rescue Station at Whitefish Point in 1923, eventually constructing a Crews Quarters building, three boathouses, a garage, and lookout tower to serve this facility. Land was cleared to allow the Rescue Station to have complete access to the water as well as to improve visibility for lookouts and mariners seeking the light itself. The U.S. Lighthouse Service and all personnel related to maintenance of the Whitefish Point Light were absorbed into the U.S. Coast Guard in 1939.

Whitefish Point was under direct control of the U.S. Navy during WWII, reverting back to the U.S. Coast Guard in 1946. The Rescue Station was kept operational until the mid- 1950's. Coast Guard personnel were kept at Whitefish Point until 1970, when the light was automated to be remotely controlled by the U.S. Coast Guard base at Sault Ste. Marie.

During the period 1970-1983, officials of Whitefish Township were successful in their bid to add the light, keeper's quarters, and fog signal building to the National Register of Historic Places. However, no funding for restoration was available during that time.

History of Migratory Bird Research and Interpretation

Since the early 1900's, ornithologists have been interested in the spring and fall migration of birds through Whitefish Point. The first birding research recorded at Whitefish Point occurred on July 6, 1912, by Norman Wood, of the University of Michigan's Museum of Zoology. Wood spent six weeks collecting and cataloguing specimens and gathering data on the abundance and variety of birds by personal observation and through conversations with local residents. A total of 163 species were recorded during a two-year study and the results were published in the sixteenth report of the Michigan Academy of Science.

A group of birders from the Ontario Bird Banding Association and the Cranbrook Institute of Science familiar with the spring hawk migration at Whitefish Point established a banding project in 1966 that was the forerunner of the Whitefish Point Bird Observatory. The primary concern of this group was to gather data on the

sharp-shinned hawk to complement a study carried on at Point Pelee in autumn. After 1966 the program was expanded to survey migrating owls. In addition, they gathered data about occurrences, behavior, and migration patterns of other birds. Each spring from 1966 - 1971, a variety of data on the bird life of Whitefish Point was collected. Several published articles resulted from their work.

In 1976 the Michigan Audubon Society established a Whitefish Point Committee and secured a license from the Coast Guard for access to all the property (15-20) acres and the buildings with the exception of the light tower and the foghorn. Plans were drawn up to continue research on bird migration and in 1978 the Whitefish Point Bird Observatory (WPBO) was established. The following year, WPBO began to annually monitor the spring migrations. WPBO activities expanded to additional interpretive and research activities, including monitoring of fall migrations in 1989.

The bird observatory was patterned after outposts in Britain, where small buildings are located on rocky points along the coast to serve as a place where people can stay to observe migrating birds. Common procedures are established for observing and monitoring the migration. Volunteers may spend a few days or weeks at the station keeping records and reporting observations.

B. Current Uses

Each year, thousands of people visit Whitefish Point for the rich experience that it offers—to observe the spectacular bird migrations, to better understand Michigan's fascinating maritime culture, and simply to stand on the shores of Lake Superior and enjoy the experience of this unique and wonderful place. It hosts a variety of different uses and is owned and managed by three separate entities – the Great Lakes Shipwreck Historical Society (GLSHS), Michigan Audubon Society (MAS), and United States Fish and Wildlife Service (USFWS).

1. Great Lakes Shipwreck Historical Society

In 1978 a group of teachers, divers, and historians formed the Great Lakes Shipwreck Historical Society (GLSHS) around their collective interest in underwater exploration of the many shipwrecks of the Whitefish Point area. In 1980, Whitefish Township approached the newly created Great Lakes Shipwreck Historical Society for assistance in preserving the Whitefish Point Light Station.

With the support of the township, GLSHS obtained a 25-year lease from the U.S. Coast Guard in 1983 to conduct museum operations on the site. The first limited exhibits opened to the public for six weeks in the late summer of 1985, drawing a paying audience of 12,000 visitors. Audience demand was so successful that in 1987

the Society secured funding to construct the present Great Lakes Shipwreck Museum building.

Ownership of 8.27 acres of Whitefish Point, upon which rests the Whitefish Point Light Station, was granted through a Federal Patent in 1998, to the Great Lakes Shipwreck Historical Society.

The mission of the GLSHS is to collect, preserve, study and interpret the maritime culture of the Great Lakes with primary emphasis on maritime history as it relates to the U.S. Lifesaving Service, U.S. Lighthouse Service, U.S. Coast Guard, ships and travelers who fell victim to the perils of maritime transport

The GLSHS hosts a variety of visitor attractions and amenities:

- The Shipwreck Museum programs are essentially of the humanities, designed to examine man's attempts to harness nature and the hardships encountered while navigating the Great Lakes;
- An interpretive film in a 35-seat theater;
- Access to a number of restored historical structures. The GLSHS completed a 6- year restoration of the 1861 Lightkeepers Quarters in 1996. The 1923 U.S. Coast Guard Lookout Tower was restored and dedicated in July of 1998. The Society is currently involved in a \$4 million capital improvement project that will restore additional U.S. Coast Guard Lifeboat Station structures.
- The Society commissions, on average, three works of art per year with emphasis on paintings, sculptures and models that tell the story of the way life used to be at Whitefish Point.
- The Shipwreck Coast Museum Store features nautical gifts, clothing, books and videos, exclusive prints, lighthouse collectibles and Great Lakes Shipwreck Historical Society member items.

a. Off-Site Programs

In addition to programs offered at Whitefish Point, the Shipwreck Society also provides these cultural services:

- Underwater research, using the 47-foot David Boyd, a Marine Sonics SideScan Sonar, Phantom S4 Remotely Operated underwater vehicle, and a professional dive team;
- Production of videos, three of which are now in international syndication;
- Commissioning of professional works of art, including art prints;
- Publications, including a quarterly Shipwreck Journal;
- Information to the sport diving community about the Whitefish Point Underwater Preserve;

- Technical support to cultural organizations.

b. Audience

In 2001, the Shipwreck Museum reported a paid audience of 82,091. The museum draws an international audience of all ages. Oriented to family audiences and tourism, the museum attracts visitors who are interested in lighthouses, shipwrecks, general maritime history, academic research, underwater research, natural history, and the history of the U.S. Coast Guard.

c. Funding

Since 1984, the GLSHS has received funding for historic restoration, historic preservation, program development, program support, and research from several governmental and private agencies, including the following:

- National Endowment for the Humanities
- National Trust for Historic Preservation
- Michigan Economic Development Corporation/Fed. Housing & Urban Development
- Michigan State Historic Preservation Office/ National Park Service Bicentennial Lighthouse Fund
- Michigan Coastal Management Program
- Michigan Department of Transportation/Federal Highway Administration
- Michigan Department of Commerce
- Michigan Council for Arts and Cultural Affairs
- Michigan Council for the Humanities

2. Michigan Audubon Society/ Whitefish Point Bird Observatory

Whitefish Point has long been a preferred destination for birders and ornithologists due to the diversity and abundance of avian species that migrate through the area. Since its formation in 1978, the Whitefish Point Bird Observatory (WPBO) has collaborated with the Michigan Audubon Society (MAS) to record over 300 species of birds. Since 1979, WPBO has monitored spring migrations of raptors, waterbirds, and passerines; autumnal migrations have been documented since 1989. The information yielded from these long- term monitoring efforts can provide a greater understanding of population trends of individual species, broader migration patterns and the life histories of individual species.

In addition to ongoing education and research programs, WPBO operates a gift shop called the “Owls Roost” that specializes in books, tapes, and other items catering to visitors with birding interests.

a. Education Program

WPBO offers a variety of activities and programs about birds and the ecology of the Whitefish Point area. WPBO's educational goal is to promote awareness and appreciation of the environment and, in particular, the relationship of birds to the environment.

Interpretive activities include bird walks, in-the-hand bird programs, tours, and workshops, as well as classes for individuals, schools, and groups. WPBO educational programs target schools, natural history clubs, and visitors to Whitefish Point. The following educational programs are offered by WPBO:

- Guided walks and banding demonstrations are offered for visitors during weekends and for groups by special arrangement.
- Evening Owl Flight - the ecology of owls is discussed while waiting for owls to begin their late evening flights from the woods below the hawk dune.
- Nocturnal Raptors Close Up - when owls from the previous night's banding are available in the morning, they are displayed in-hand with a discussion of their ecology.
- WPBO built a hawk platform for bird viewing, a popular destination for visitors to Whitefish Point.

b. Research Program

With its massive concentrations of birds, Whitefish Point ranks among the most significant avian migration sites in North America. The Observatory's research programs are built around the vast biological opportunities of Whitefish Point and the northern Great Lakes ecosystem. Research at WPBO focuses on several different program areas:

Raptors

Whitefish Point is one of the most important spring flight corridors for raptors in North America. A Raptor Census conducted by WPBO's professional staff documents the migration of hawks, falcons and eagles and provides reliable comparative data for long-term monitoring of raptor populations. The Raptor Census occurs daily from March 15 through May 31. The goal of the census is to determine the migration chronology of raptors at the Point and to quantify the volume of migrants. All observations are made from the "Hawk Dune" that is about 200 meters west of the Whitefish Lighthouse and about 20 meters above Lake Superior.

Whitefish Point also has a substantial nocturnal migration of owls in both the spring and fall that would go undocumented were it not for WPBO's nighttime banding program.

This operation gathers valuable data on owls, particularly for lesser-known northern species such as the saw-whet, boreal, long-eared, great gray and hawk owl. The WPBO spring owl banding runs from April 1 to May 31. Fifteen mist nets are operated seven days a week from one half hour after sunset to one half hour before sunrise, weather permitting. Eleven mist nets were used in standardized locations and four were used in non-standardized or experimental locations. The fall owl banding runs from September 15 to October 31.

Waterbirds

Whitefish Point is the most important spot for documenting and monitoring waterbird movements in the upper Great Lakes. Spring and fall counts record loons, grebes, ducks, geese, shorebirds and other waterbirds, providing important information on abundance and timing of migration, aiding in regional and international efforts to monitor changes in populations. Before WPBO started documenting the waterbird migration at Whitefish Point, certain species such as red-throated loons, scoters and red-necked grebes, were considered uncommon in Michigan. Unlike the hawk count, the waterbird count is conducted in both spring and fall research seasons. The spring count commences on April 15th and runs to May 31, and the fall count runs from August 15 to November 15. In both cases, the count is conducted from the beach near the tip of the Point about 50 yards from the shore. The exact location varies slightly as the beach changes due to erosion.

Songbirds

The Observatory conducts a variety of census and banding programs to study migrant passerines at the Point, as well as songbird populations throughout the Upper Peninsula. Research documents species distribution, abundance and habitat use with an emphasis on rare species and other birds of special concern, including Neotropical migrants. This information is then used in combination with the Hawk Count, Waterbird Count, and a Daily Census to produce a Daily Estimated Total (DET) for all species migrating through Whitefish Point.

Daily Estimated Totals

One of the first things birders learn when visiting Whitefish Point is that counting birds can be difficult. Initially, there are just too many of them. Secondly, they act in an erratic pattern, moving incessantly about the Point. This challenge has not gone unnoticed by WPBO's Research Committee. One of the first things the Research

Committee tried to attempt was to establish a standard, reproducible census method, to establish migrating bird numbers. Over the ensuing years the method used to produce the DET has evolved into what is used today.

3. U.S. Fish and Wildlife Service/ Seney National Wildlife Refuge

The U.S. Fish and Wildlife Service (USFWS) administers 33 acres of land at Whitefish Point as part of the Seney National Wildlife Refuge. The objectives of the wildlife refuge are to:

- Provide breeding and migration habitat for migratory birds.
- Provide habitat for resident wildlife.
- Protect endangered and threatened species.
- Provide for biodiversity.
- Provide public opportunities for outdoor recreation and environmental education.

The USFWS property does not have any structures on it, other than a small shack used by WPBO researchers conducting waterbird counts. A series of poorly marked trails wind through the property from the parking lot on GLSHS property to the tip of the point. The USFWS does not administer any interpretive or research programs of its own at Whitefish Point.

4. Public Access

In 1990, GLSHS signed an agreement with Whitefish Township that allows Township residents and visitors to use the Whitefish Point Light Station property as a public access site to Lake Superior. The two parties designed the agreement to preserve this common use by local residents. The agreement further secured use of restroom facilities and parking spaces for the public.

The managers of GLSHS, MAS/ WPBO, and USFWS agree that a significant number of visitors to Whitefish Point are not actively engaging in any of the educational or research activities offered by these groups. Instead, these visitors are enjoying the beach that juts into Lake Superior and the natural and historic scenery of this area. While surveys of visitors have not been conducted at Whitefish Point, the managers of the area generally agree, based on observation, that as many as 25% of the visitors to the site are not paying customers on peak visitation days, while approximately 50% of visitors do not pay for the museum on average visitation days.

Many people visit this remote region specifically to study the floristic species. “Botanizing” at Whitefish Point provides an opportunity to observe a diverse

assemblage of plants and microclimatic effects specific to the conditions at Whitefish Point. Due to its position at the tip of Whitefish Peninsula, Whitefish Point is suspended into the frigid waters of Lake Superior and thus subjected to both a cooling effect and lake-effect moisture. These qualities delay the coming of spring by as much as two weeks from areas only a mile inland.

5. Coast Guard Aid to Navigation

After many maritime disasters, the United States Government built a lighthouse as an aid to navigation on Whitefish Point in 1849. The structure was replaced with an iron-pile lighthouse in 1861, which was better suited to the harsh weather. This structure remains in ownership by the U.S. Coast Guard as it remains a fully functioning Aid to Navigation under Group Sault Ste. Marie's ATON unit. The U.S. Coast Guard maintains an easement to access the light tower and continues to operate the beacon. The U.S. Coast Guard is solely responsible for maintaining the light tower structure, lens, and electronic aids to navigation and is not restricted in any way by this Plan.

C. Legal Restrictions

Under the Coast Guard Authorization Act of 1996, the Coast Guard was given authority by Congress to convey and divide their Whitefish Point property into three parcels. A parcel of 8.27 acres, which contained all but one of the historic structures, was transferred to GLSHS for the purpose of interpretation of maritime history. Michigan Audubon Society (MAS) received 2.69 acres of primarily undeveloped land for their research activities. The Whitefish Point Bird Observatory manages the MAS property locally. The U.S. Fish and Wildlife Service (USFWS) received the remaining 33 acres, to be managed as a part of the Seney National Wildlife Refuge. Patents were issued on September 23, 1998, and reissued on March 10, 2000, to correct an error in the original conveyance.

1. Transfer Statute Requirements

When Congress authorized the transfer of land through a patent to the MAS and GLSHS, it made several explicit requirements within the Transfer Statute. The statute includes stipulations regarding the modification and use of the property:

- (C) *PROPERTY TO BE MAINTAINED IN ACCORDANCE WITH CERTAIN LAWS. - Each recipient shall maintain the parcel conveyed to the recipient pursuant to subsection (a) in accordance with the provision of the National Historic Preservation Act (16 U.S.C. 470 et. seq.) and other applicable laws.*

- (E) *SHARED USE AND OCCUPANCY AGREEMENT – The Secretary shall require, as a condition of each conveyance of property under this section, that all of the recipients have entered into the same agreement governing the shared use and occupancy of the existing Whitefish Point Light Station facilities....*
- (F) *LIMITATIONS ON DEVELOPMENT AND IMPAIRING USES – It shall be a term of each conveyance under this section that –*
- (1) *No development of new facilities or expansion of existing facilities or infrastructure on property conveyed under this section may occur, except for purposes of implementing the Whitefish Point Comprehensive Plan of October 1992 or for a gift shop, unless:*
- (A) *each of the recipients consents to the development or expansion in writing;*
- (B) *there has been a reasonable opportunity for public comment on the development or expansion, and full consideration has been given to such public comment as provided; and*
- (C) *the development or expansion is consistent with preservation of the Property in its predominantly natural, scenic, historic, and forested condition; and.*
- (2) *Any use of the Property or any structure located on the Property which may impair or interfere with the conservation values of the Property is expressly prohibited.*

Conservation Values

The U.S. Fish and Wildlife Service (USFWS) defined conservation values at Whitefish Point in a letter to the GLSHS dated 6/21/00. That letter states in part:

“The Point is a nationally significant conservation area due to its geographic location. In summary, the conservation values of the Point include:

1. A migration funnel for both raptors and passerine birds;
2. The vegetation that provides resting and feeding habitat for migrating birds both wetland and upland;
3. Open beach nesting habitat for the endangered piping plover; and
4. Sensitive dune habitat.

Since that time, the GLSHS indicated to the USFWS its interest in expanding the definition of conservation values to include the historic character of the site. The

USFWS agreed to this broader interpretation and has stated that it will consult the State Historic Preservation Office (SHPO) on all matters related to historic integrity. Further, the USFWS has also indicated that it will seek and defer to the opinion of the SHPO before making any determination as to whether any use or structure at Whitefish Point impairs or interferes with the historic conservation values of the site.

2. Shared Use and Occupancy Agreement

In November 1997, the Great Lakes Shipwreck Historical Society, Michigan Audubon Society and U.S. Fish and Wildlife Service signed a “Shared Use and Occupancy Agreement for the Former U.S. Coast Guard Property at Whitefish Point, MI”. This document is referenced in the final Transfer Statute and patents issued to each organization and requires that each organization comply with the terms of the agreement.

Significant issues outlined in the agreement include:

- An understanding that all property owners share the use of the existing paved parking area that is on GLSHS property.
- Staff and visitors of each of the other organizations “will have access to the public restrooms on the GLSHS parcel of the property during the portion of the year designated by mutual agreement of the MAS, USFWS and the GLSHS as their ‘open’ season. Access at other times will only be by special arrangement with the GLSHS”.
- The GLSHS video theater is available to the other organizations by special arrangement, but generally not during museum operating hours.
- “The GLSHS, MAS and USFWS will share the expense of maintaining the GLSHS public restroom facilities and septic system, the sharing of such expense to be agreed upon annually by the recipients based on estimated pro-rated usage”.

3. National Historic Preservation Act and the State Historic Preservation Office

In a letter dated July 24, 2002, the State Historic Preservation Officer has described the role of the State Historic Preservation Office (SHPO) at Whitefish Point as follows:

The Great Lakes Shipwreck Historical Society, owner of the Whitefish Point Light Station, and the Michigan Audubon Society/Whitefish Point Bird Observatory, owners of adjacent property, shall preserve

and maintain the Whitefish Point Light Station and its surrounding five (5) acres in accordance with the recommended approaches in the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (National Park Service, 1990) in order to preserve and enhance those qualities that make the Whitefish Point Light Station eligible for inclusion in the National Register of Historic Places.

No construction, alteration, remodeling or site improvements shall be undertaken or permitted to be undertaken at the Whitefish Point Light Station and its surrounding five (5) acres which would affect the structural and historic integrity or the appearance of the Whitefish Point Light Station without the express written permission of the State Historic Preservation Officer (SHPO) or a fully authorized representative.

4. GLSHS Covenant with SHPO

In January 1990, GLSHS and SHPO signed a Letter of Agreement “for the purpose of the protection, stabilization, preservation, rehabilitation, restoration, and reconstruction of a certain Property known as the Whitefish Point Light Station”. The following condition was agreed to for a period of fifteen years, which expires January 2, 2005:

“The (Great Lakes Shipwreck Historical Society) agree that no visual or structural alterations will be made to the property without prior written permission of the (SHPO).”

5. GLSHS Public Access Agreement with Whitefish Township

In 1990, GLSHS signed an agreement with Whitefish Township that allows Township residents and visitors to use the Whitefish Point Light Station property as a public access site to Lake Superior. The two parties designed the agreement to preserve this common use by local residents. The agreement further secured use of restroom facilities and parking spaces for the public.

6. Whitefish Township Zoning

On November 7, 2002, Whitefish Township adopted an interim zoning ordinance to cover the parcels of land that were formerly owned by the U.S. Coast Guard, and therefore had not been specifically zoned. The interim ordinance states that those parcels are in a Historic and Preservation Zone.

Existing uses and structures would continue to be allowed regardless of interim or future zoning changes, either as non-conforming uses and structures or as allowed uses and structures. GLSHS and MAS recognize that they are subject to the provisions of a valid township zoning ordinance. USFWS is not subject to local zoning.

7. Litigation and Settlement Agreement

In 1999, MAS filed litigation against both GLSHS and USFWS, generally citing expansion of the museum complex as a violation of the transfer statute and resulting patents. Litigation ended when all parties signed a Settlement Agreement. Under this agreement, the MAS withdrew objections to GLSHS's plans to construct museum wings in the location, size and design as shown on the plans attached to the settlement agreement. The agreement further stated that use of the wings shall be subject to a Human Use/ Natural Resources Management Plan, and provided that the structure and use of the proposed museum wings will not impair or interfere with conservation values as provided in the transfer statutes, and provided that such wings are in compliance with other applicable local, state and federal regulations. MAS agreed not to object to any request for funding by GLSHS for construction of the museum wings.

This document was prepared by the Michigan Land Use Institute in accordance with the Settlement Agreement. It is understood and agreed to by all parties to the Settlement Agreement that this Plan substitutes and replaces the 1992 Comprehensive Plan that is referenced in the Transfer Statute. The basis for drafting this Plan is described in the Settlement Agreement, which states in paragraph 3(g) that "this Management Plan shall be binding on all parties and constitute a full and complete settlement of the subject matter of this action and be enforceable as provided in this Agreement." Further, paragraph 4 states that "GLSHS, MAS and WPBO agree that any use and/or structure shall not violate any condition or limitation in the Management Plan...". Finally, paragraph 9 states:

Any party may seek review of the terms, contest the interpretation, or enforce the terms of this Settlement Agreement or any condition or limitation contained in the selected Management Plan in any court of competent jurisdiction, including but not limited to specific performance, injunction, and such other equitable relief reasonably necessary to carry out the intent of the Settlement Agreement, and any violation of the Settlement Agreement and Order may be subject to contempt, wherein the Court may impose a reasonable fine, costs,

restoration and remediation, and reasonable attorney fees. The prevailing Party in any enforcement action provided for in this paragraph shall be entitled to an award of costs, witness fees, and reasonable attorney fees, except as against the USFWS in which case the prevailing party shall be entitled to such costs and attorney fees, if any, as may be awarded pursuant to the Equal Access to Justice Act.

II. WHITEFISH POINT MANAGEMENT GOALS

Although the respective missions of the Whitefish Point stakeholders are distinct, the overarching goal of keeping the truly unique character of the area is shared by all. The following specific goals were identified through a group process involving all groups:

Protection of the Unique Natural Environment

- All human activities will be managed so as not to impair or interfere with the conservation values of Whitefish Point. Specifically, bird habitat and cover will be managed to enhance and conserve bird migration corridors and threatened and endangered species, and human presence will be actively controlled to prevent damage to the natural environment.

Visitor Experience Will Be Inclusive of All Attributes

- The properties at Whitefish Point will be managed so that visitors will improve their understanding and appreciation of both Great Lakes maritime history and natural bird migration through active and passive interpretation and education programs. Visitor experience will be aesthetically pleasing, historically authentic, and sensitive to the natural environment.

Management Activities Will Be Collaborative and Protective of All Attributes

- Management of the site will strive to be collaborative and efficient between all three property owners, as well as neighboring property owners and relevant outside interests.

III. INVENTORY OF NATURAL, HUMAN AND HISTORIC RESOURCES

A. Natural Resources

1. Migratory Birds

Whitefish Point was designated as an internationally Important Bird Area by the American Bird Conservancy and has been recognized as a significant migratory concentration site in North America. It provides important stopover habitat to thousands of birds as they migrate between their winter habitats and their summer breeding grounds.

The migratory species that depend on Whitefish Point can be generally categorized into the following three groups: raptors (“birds of prey”), waterbirds, and songbirds. Birds of prey can be further broken down into nocturnal migrants (those that travel during the night—owls) and diurnal migrants (those that travel during the daytime—hawks).

As birds migrate north over Michigan, they are naturally funneled into Whitefish Peninsula. Prolonged flight over water poses risks to migrating birds, caused by both the potential of running out of energy and the lack of thermal updrafts that help sustain long- distance flight. The birds stay on a northerly trajectory toward their breeding grounds once in the Upper Peninsula, and then venture across Lake Superior. Scientists believe that geographic features determine the routes of migrating birds.

Whitefish Point is used as stopover habitat in both spring and fall. In the spring, birds forage and rest in preparation for the flight over Lake Superior to Canadian breeding grounds; in fall, the birds spend more time resting and foraging at Whitefish Point than in the spring. Raptors are observed in small numbers in March but migrate primarily in April and May. Springtime migration of passerine species begins in April, but mostly occurs in May. This group includes swallows, kinglets, bluebirds, thrushes, warblers, sparrows, and bobolinks. Many of the passerine species begin their journeys in the neotropics. In the fall, neotropical migrants pass through Whitefish Point from August to October, with most migration taking place in September. Few diurnal raptors stop at Whitefish Point in this season, but nocturnal raptors are abundant.

For successful migration, a bird must replenish energy reserves, locate suitable stopover sites and travel routes, avoid predation and cross barriers quickly and

safely. The quality of stopover habitat largely determines foraging success and predator avoidance, which both help determine the degree to which birds will be able to rest. If food is very scarce, birds spend more time foraging to meet their energy requirements and thus have less time to rest; if there is insufficient cover in which to hide from predators, birds will similarly be unable to rest. The opportunity to select a mate and successfully breed decreases with time, so arrival at breeding grounds is highly time sensitive. The urgency of departure is even more pronounced for birds that are sources of food for raptors that await them.

WPBO has amassed great quantities of information that document which birds are at Whitefish Point and when. WPBO maintains a database of daily migration count totals, including records from the hawk count, waterbird count, banding operations, and sightings outside their standardized monitoring projects. Information from the season's sightings is compiled and disseminated twice annually in the WPBO newsletter, "The Migrant." Migration count summaries from 1999 through the present are available in a searchable database on their website (www.wpbo.org). Data collected by WPBO have been analyzed to determine timing of migration, species composition of migrants, trends in numbers of migrants, and band recoveries.

WPBO researchers conducted a study on the northern portion of Whitefish Peninsula and found the highest density of migrant landbirds within 1.5 km of Whitefish Point. Higher densities of birds were also found along the shores of Lake Superior and Whitefish Bay than at inland locations. The scientists' discovery confirms the previous assertion that shoreline habitat is important not just for shorebirds, but also for transient populations of landbirds. MAS and WPBO will conduct further research at Whitefish Point to identify local migration patterns and establish conservation/restoration priorities which could assist in future conservation values determinations.

2. Endangered and Threatened Species/Species of Concern

Several species of state and national concern have been found at Whitefish Point. Perhaps the most well-known is the piping plover (*Charadrius melodus*), a federally endangered migratory shorebird species that is seen annually at Whitefish Point. The last known piping plover nesting attempt at Whitefish Point was in 1985.

Piping plovers arrive on their breeding grounds in mid-April to begin courtship, and nesting occurs on sand-cobble beaches in areas interspersed with sparse vegetation. Their eggs hatch between late May and late July and chicks fledge in 21-30 days. By late August most will have departed for warmer climates.

The Great Lakes population of piping plovers is listed as endangered under both the Michigan and Federal Endangered Species Acts. In 2001, the U.S. Fish and Wildlife Service designated an estimated 2.5 km of Whitefish Point shoreline as critical habitat for piping plovers, which means it is afforded protection under the federal Endangered Species Act.

Bald eagles (*Haliaeetus leucocephalus*) are listed as threatened by the federal government and are known to occur at the site. Other federally listed species in Chippewa County include American hart's tongue fern (*Asplenium scolopendrium* - threatened), dwarf lake iris (*Iris lacustris* - threatened), Houghton's goldenrod (*Solidago houghtonii* - threatened), and Pitcher's thistle (*Cirsium pitcheri* - threatened), but are not believed to occur at Whitefish Point. WPBO staff has reported to have seen the gray wolf (*Canis lupus* - endangered) at Whitefish Point.

The State also maintains a list of species independent of federal status, although some species are cross-listed. This list reflects how the species is faring in Michigan, regardless of national abundance. The following state-protected species¹ have been documented at Whitefish Point: ospreys (*Pandon haliaetus* - threatened), peregrine falcons (*Falco peregrinus* - endangered), prairie warbler (*Dendroica discolor* - endangered), common loons (*Gavia immer* - threatened), long-eared owls (*Asio otus* - threatened), red-shouldered hawks (*Buteo lineatus* - threatened), merlins (*Falco columbarius* - threatened), short-eared owls (*Asio flammeus* - endangered), and perhaps others. Lake Huron tansy (*Tanacetum huronense* - threatened) has also been observed on the dune crests north of the historic area. Northern goshawk (*Accipiter gentiles*) has been recognized as a species of special concern in Michigan. The Michigan Natural Features Inventory lists several protected or concern species that have been documented at Whitefish Point, but since the last observation, in some cases, was in excess of twenty years (and far longer for some), some of these species may have become locally extinct. These species include American dune wild-rye (*Elymus* sp. - special concern), dune cutworm (special concern), incurvate emerald (*Somatochlora hineana* - special concern) and Lake Huron locust (*Robinia* sp. - threatened). Also on the Michigan Natural Features Inventory list is the Douglas Hawthorn (*Crataegus douglassi* - special concern) which was known to exist at Whitefish Point until 1999.

¹ State-listed species are only mentioned if not part of the federal list.

3. Habitat Types and Natural Features

a. Soils

The primary soil type at Whitefish Point is a Deer Park–Kinross complex. This unit consists of excessively drained Deer Park soil on ridges and side slopes, while poorly drained Kinross soil is found in depressions and swales. Kinross soils frequently pond and are associated with wetland areas. The beach and dunes are composed of Deer Park fine sand. Areas along the beach also have gravel and cobble deposits. The Chippewa County Soil Survey describes Deer Park fine sand as a “very deep, excessively drained, nearly level to rolling soil [located] on broad plains and stabilized sand dunes.” Both soils are associated with a forest habitat type that is dominated by jack pine, and includes red pine, black spruce, and white pine. Ground flora includes sedge, sweet low blueberry, sweet fern, juneberry, Canada mayflower, and spinulose woodfern.

b. Flora

The dominant vegetation at Whitefish Point is jack pine. Other species include northern white cedar, Eastern white pine, white spruce, black spruce, paper birch, tag alder, and trembling aspen. Many of the jack pines are stunted at an average height of 8 to 10 feet. Some taller specimens of jack pine, white pine, and birch compose the overstory in the forested areas. Tag alder and scrub conifers, such as juniper, are associated with marsh areas. Dunes are dominated primarily by American beachgrass.

Some of the species and plant communities that particularly attract attention are lady-slippers, starflower, bunchberry, and others that can be found on dry, sandy areas and purple bog-laurel and white Labrador-tea, which grow in interdunal swales (often wetlands). Several rare species have been observed at Whitefish Point that have not been designated as protected species; among them are an arctic-alpine shinleaf (*Pyrola minor*) and a western bilberry (*Vaccinium ovalifolium*). Other species associated with wetlands include willow, spiraea, blueberry, leatherleaf, poverty oats, and various mosses.

c. Beach and Dunes

The open cobble beach habitat that forms the periphery of Whitefish Point has been recognized for its suitability for piping plover habitat. The birds are usually observed in shoreline areas of “open, sparsely vegetated, sandy habitats such as sand spits or sand beaches that are associated with wide, unforested systems of dunes and inter-dune wetlands”.

Another important habitat on Whitefish Point described by the Michigan Natural Features Inventory is the “Wooded Dune and Swale Complex,” a “distinctive natural community composed of upland and wetland features”. This complex only forms under the conditions that exist in the Great Lakes region, and thus cannot be found elsewhere. The varied topography of the complex itself, along with the unique geologic conditions that formed the dune-swale, supports a diversity of species. As mentioned in the above “Soils” section, the dunes are composed of well-drained Deer Park sand, while the swales are usually poorly drained Kinross soils and thus often wetland ecosystems.

Some dunes are eligible for protection under Michigan laws, however, Whitefish Point does not contain state designated critical dune or high risk erosion areas. Nonetheless, sensitive dune habitats were identified as one of the conservation values of Whitefish Point and thus must be preserved.

d. Wetland and Ponds

Wetlands perform a number of ecosystem services, including provision of habitat, flood prevention, improvement of water quality, and recycling of nutrients. The presence of wetlands has been documented at Whitefish Point. Wetland areas have been identified on GLSHS property north of the observation deck and between the existing museum and road. As part of the proposed museum expansion, GLSHS applied for and received a permit to fill proximal wetlands from the Michigan Department of Quality. Subsequent modifications to the plan for expansion have rendered the permit unnecessary. A permit to build a rollway deck in front of the GLSHS boathouse is in process to allow the boat to be moved out of the boathouse for viewing by visitors. No other wetlands permits have been granted at Whitefish Point.

Wetlands are also dispersed throughout the USFWS and WPBO property. They have been identified in association with the dune-swale complexes, as the low-lying habitats between the dune ridges. A large marsh area exists along the south side of Whitefish Point Road.

Two shallow (1-3 ft.) ponds that hold water year-round are also located south of the road. Tag alders and cattails are the dominant vegetation around the ponds. Other wetland-associated species present at Whitefish Point were included in the above “Flora” section.

e. Groundwater

The groundwater at Whitefish Point lies very near the surface, in some areas 4 feet or less below the surface. Kinross soil has a seasonal high water table either above

the surface or within one foot of the surface from fall to early summer (USDA, 1992). These seasonally high-water levels can make it difficult to distinguish between upland and wetland habitats.

It is unknown how many wells previous landowners drilled at Whitefish Point, but GLSHS has drilled three wells. Two of the wells accessed water that was not potable or treatable and both have been capped; the third well, drilled to 300 feet, yielded useable water and still serves as the water source.

Given the past historic uses of the site as a Coast Guard facility, it is possible that there may be some past groundwater contamination. Prior to the transfer of the property, the Coast Guard conducted a Phase I evaluation of the site. Any further action on this issue is beyond the scope of this planning document.

B. Historic Resources and Interpretation

In 1990, the State Historic Preservation Office (SHPO) entered into a 15-year agreement with GLSHS and the U.S. Coast Guard. Under this document, the SHPO provided a grant-in-aid for protection of the Whitefish Point Light Station and in exchange, GLSHS and the U.S. Coast Guard agree to preserve the site and assume responsibility for its upkeep. One of the specific conditions of the agreement is that “no visual or structural alterations will be made to the property without prior written permission of [the SHPO].”

In the event that federally-assisted projects are undertaken at Whitefish Point, the SHPO reviews the project for its impact on historic resources under the authority of Section 106 of the National Historic Preservation Act of 1966 (NHPA). When reviewing projects at Whitefish Point, the SHPO aims to maintain compliance with the federal preservation standards, also known as the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for the Rehabilitation of Historic Buildings.

In addition to the well-documented maritime history of Whitefish Point, just offshore lie over 200 of the 550 known shipwrecks of Lake Superior. The most recent, and perhaps the most compelling of these is the *Edmund Fitzgerald* which was lost with all 29 of her crew in a storm on November 10, 1975. The exact cause of her mysterious loss has never been determined.

The Shipwreck Society’s initial activity focused on underwater exploration; this remains a major component of the Society’s activity today. Now, GLSHS also operates the Great Lakes Shipwreck Museum on the site of the historic Whitefish

Point Light Station, interpreting the history of the site including the U.S. Life-Saving Service and U.S. Coast Guard and shipwrecks of Lake Superior.

The following are historic structures of the Whitefish Point Light Station and U.S. Coast Guard Rescue Station:

Light Tower - 1861

The first lighthouse at Whitefish Point was a 65-foot stone tower put into service in November of 1848. The first lens used whale oil with parabolic reflectors, producing a light that could even then be seen 17 miles out into the lake. The stone tower proved inadequate for powerful storms roaring in from Lake Superior.

Subsequently, in 1861, President Abraham Lincoln signed an order for a new lighthouse at Whitefish Point, along with two other identical lighthouse structures, at Manitou Island and DeTour Village to provide key references for the ships carrying ore in defense of the Union. The 1861 light was forged in the eastern United States and shortly thereafter assembled at Whitefish Point. The Whitefish Point Light has had several different lenses over the past 150 years, including a three and one-half bivalve lens that served from 1895 to 1968. The present lens is a Crouse & Hinds aerobeacon installed in 1968; this is the lens that was in the light at the time the famous *Edmund Fitzgerald* foundered in 1975 just 17 miles to the north-northwest.

Lightkeepers Quarters - 1861

Originally constructed as a single-family two-story frame dwelling with an unattached structure for cooking. Over many years, the U.S. Lighthouse Service added a foundation with basement, front porch, and attached a kitchen and dining room. The interior was reconstructed as a two-family side-by-side duplex to accommodate an assistant lightkeeper and his family in 1894. This building was used consistently as housing for lightkeepers and later for U.S. Coast Guard personnel all the way through the Coast Guard's occupancy into 1970. The interior of this structure has been restored by the GLSHS to its original 1920's era condition. The Shipwreck Society completed Restoration in 1996.

Steel Lamp Oil House - 1861

Sources of fueling the Whitefish Point Light included whale oil, lamp oil, kerosene, kerosene vapor and high-pressure alcohol until the light was electrified in 1931. This building was constructed at the same time as the tower, a specified distance away from the light and dwelling for safety. The U.S. Coast Guard used it as a storage locker for paint and other flammables.

Alcohol House - 1910

Serving the same purpose as the steel lamp oil house but likely constructed around 1910, it is located closer to the light tower. The U.S. Coast Guard used it for equipment storage.

Lookout Tower - 1923

Structure constructed by the U.S. Coast Guard at the time of building the Whitefish Point Lifeboat Rescue Station in 1923. A 24-hour watch was maintained from this tower during the shipping season. Abandoned in 1955, the Shipwreck Society completed restoration of this structure in 1998. It is not open to the visiting public.

Crews Quarters - 1923

Construction of this building was completed in 1923. Upon Coast Guard abandonment, the building was sold and moved away from the site by private owners. The Shipwreck Society purchased the building in 1990 and moved it back to Whitefish Point, continuing to use it for housing of staff, student interns, members, guests, visiting scholars, and underwater research divers. The building was moved one last time in 1999 at the request of the State Historic Preservation Office to locate it in a special historic zone at Whitefish Point. Restoration was fully completed in 2002.

Boathouse - 1923

One of three boathouses used by the U.S. Coast Guard at the Whitefish Point Rescue Station. This building was later used as an automobile garage and work building by the U.S. Coast Guard. It is thought that its present, permanent location was established in the 1950's. Restoration of the structure was completed in 2001. It is planned to house a full-size replica Beebe-McClellan 26' surfboat and exhibits on the U.S. Life-Saving Service and U.S. Coast Guard Rescue Station.

Assistant U.S. Coast Guard Chief's Quarters - 1925

This building was used as a residence for U.S. Coast Guard personnel in charge, providing a separate dwelling from the crews' quarters. The Shipwreck Society received permission in 1983 from the Coast Guard to use the first floor of this building for its first exhibits, which opened in 1985. The building is used for the museum's 35-seat video theatre and administrative staff housing.

Fog Signal Building - 1937

Constructed to replace the original wooden fog signal building destroyed by a vicious storm on October 11, 1935, this building housed steam boilers, clock timing apparatus, radio equipment, diesel generators, and other related equipment to

operate three large diaphone horns from the building's tower 1937-1982. The U.S. Coast Guard removed all of the original apparatus and equipment from the building. The diaphones were removed and replaced by an electronic foghorn sounding from the light tower by the Coast Guard in 1983. The Coast Guard removed all fog signals from Whitefish Point in 1995. The Shipwreck Museum presently uses it as an exhibit and grounds maintenance facility. Restoration of the building's exterior is underway as of 2002.

Frame storage building - 1940

This small building was constructed by the U.S. Coast Guard and used as a woodshed and firewood storage building. The Shipwreck Society received permission from the Coast Guard to operate a gift shop in this building.

Chief's Garage - 1940

A three-vehicle garage constructed in 1940 at the eastern border of the main parking lot and apparently never moved from its original location. This building now functions as the "Owl's Roost" for the Michigan Audubon Society.

IV. SURROUNDING ENVIRONMENT

A. Neighboring Land Use

1. State Forest Land

The Michigan Department of Natural Resources (MDNR) manages over 8,000 acres of state land on Whitefish Peninsula (MDNR). This acreage is the Newberry Forest Management Unit of the Lake Superior State Forest, and borders the above properties on the northwest (i.e. shares the west property line of GLSHS as its east limit). The bordering parcel is described as jack pine (pole-sized stands, 5-9 inches), marsh areas without trees, and sand dunes. According to the MDNR Forest Manager for the Eastern Upper Peninsula Management Unit, over the next ten years, the MDNR will manage this area as old growth, which mainly consists of monitoring but does not require active management. Apart from potential tree clearing to maintain a snowmobile trail south of Lakeshore Drive, the nearest planned cutting sites are 5 miles away from Whitefish Point on Vermillion Road.

2. Residential/Private Property

Adjacent and south of the USFWS property, fourteen acres of residentially zoned land with more than 1,000 feet of frontage on Lake Superior are currently on the market. Several types of residential development have been proposed, including a subdivision of nine lots.

Previously, MAS and GLSHS had advocated public purchase of this property to provide public access to the beach and some limited parking. However, these plans have been dropped and MAS and GLSHS have indicated they no longer intend to advocate public or private ownership of this property for use related to their organizations.

3. Whitefish Point Road

Chippewa County Road Commission owns a 66-foot wide right of way in which Whitefish Point (formerly Old Wire Road) is located. The Road Commission currently uses the north paved parking lot as a turnaround for snowplows. It has generally indicated a willingness to cooperate with all of the property owners in using the road right-of-way to help accommodate a parking solution. However, the Road Commission has also indicated that it is supportive of maintaining the north parking lot for citizen parking and plow turnaround.

4. Lake Superior

Whitefish Point is located on the southern shore of Lake Superior. Containing nearly 3,000 cubic miles of water, Lake Superior is the coldest, deepest, and largest of the Great Lakes; its surface area is the largest of any freshwater lake in the world. Lake Superior's water quality remains the best of all the Great Lakes.

B. Economic Considerations

Whitefish Point is located in Whitefish Township, Chippewa County in the Upper Peninsula of Michigan. As in many other places in Michigan, the area's economy depends heavily on the tourism. Tourists are drawn to the area by several attractions, including the bird migrations and historic resources at Whitefish Point, Upper and Lower Tahquamenon Falls, and opportunities for outdoor recreation such as hunting, and snowmobiling.

The GLSHS has used the Michigan Economic Impact Calculator for Rural Regions, developed by the Travel, Tourism, and Recreation Resource Center at Michigan State University to estimate its impact on the regional economy. Based on 87,225 paid museum visitors, this model indicates that the Shipwreck Museum contributes over \$14 million dollars each year in induced spending to the Eastern Upper Peninsula economy and supports over 400 jobs. Measuring economic contributions of all visitors to Whitefish Point would result in significantly higher dollar amounts and jobs created. Visitors to Whitefish Point are an integral part of this economy ranking with Mackinac Island, Tahquamenon Falls and the Soo Locks.

V. RESTRICTIONS ON HUMAN USE TO MAINTAIN CONSERVATION VALUES

An important purpose of this Management Plan is to minimize conflict between migrating birds, stopover habitat, and the historic character of the site, with the unrestricted access of tourists and visitors. This section describes the basis for managing that conflict.

A. Human Carrying Capacity

Given the significance of bird migration through Whitefish Point, a critical element of this Plan is to prescribe methods that will minimize the impact of human presence on migrating bird populations.

Dr. Robert E. Manning of the University of Vermont, School of Natural Resources is the leading expert on carrying capacity. In his text, 'Studies in Outdoor Recreation' (Manning, 1986), Manning summarizes an evolution of the concept of carrying capacity for managing unique resources areas since the 1930's. Initially, resource managers strove to determine the number of visitors that an area could hold before either the resource or the visitor experience became degraded. Research clearly demonstrated that increasing human recreational use inevitably degraded the natural resources. Given the impracticality of excluding human use from these areas and the inevitability of change on the environment from human use, the focus of resource managers shifted to defining the "limits of acceptable change". Development of clear management objectives that define the level of naturalness of the area, the kind of experience offered to humans, and the level of management practices necessary to achieve those objectives is now accepted as the basis for determining carrying capacity.

According to Manning, "determining the point at which change becomes unacceptable is a value choice, not a technical issue... Clearly there is no one carrying capacity for an outdoor recreation area. Rather carrying capacity is dependent upon how the various components of the concept are fashioned together". Manning points out that the term itself is misleading, "implying a single magic number for each recreation area."

In 1992, the National Park Service (NPS) developed a framework titled Visitor Experience and Resource Protection (VERP) to specifically address visitor use management and carrying capacity within the national park system. This model is well suited for Whitefish Point because of the need to both manage large numbers of visitors, but also sensitive habitat. Within the VERP Handbook, a logical basis for

determining an acceptable level of change is described which was generally employed within the development of the Whitefish Point Human Use and Natural Resource Management Plan. That process is summarized within the context of Whitefish Point as follows:

- **Identify If Goals are in Conflict.** In most parks, conflicting goals are protection of environmental conditions and visitor experience versus unrestricted access for recreational use. At Whitefish Point, protection of bird migration, stopover habitat, and historic character is in conflict with promotion of unrestricted tourist access.
- **Establish That Both Goals Can Be Adjusted.** To establish a level of acceptable change process, it is necessary to acknowledge that both goals can be compromised. At Whitefish Point, the natural environment has historically been compromised to allow human use of the area. But it is also clear that there can be limits put on human access to Whitefish Point.
- **Decide Which Goal Will Ultimately Constrain the Other.** In the case of national parks – and at Whitefish Point – the goal of protecting conservation values must constrain the goal of unrestricted access.
- **Write ‘Level of Acceptable Change’ (LAC) Standards for this Ultimately Constraining Goal.** LAC standards, or management goals, express the minimally acceptable conditions for the environment and visitor. As recommended by the VERP, within this Whitefish Point Plan management goals are established for each distinct management area.
- **Monitor to Ensure Standards are not Exceeded.** Allow degradation of the environment and visitor experience only to the minimally acceptable standard. This requires careful attention to the development of acceptable standards.
- **Compromise the Other Goal as Much as Necessary.** Once the standards for maintaining conservation values begin to be exceeded, visitor access is restricted as needed to maintain the standards.

This approach to carrying capacity is much more useful than attempting to establish a maximum daily visitor number and “counting heads” to manage the resource. Instead, the focus is on maintaining the environmental conditions that are necessary for successful bird migration to occur at Whitefish Point. This approach only restricts visitor behavior that degrades those environmental conditions beyond an acceptable level of change.

B. Threats to Bird Migration from Human Presence at Whitefish Point

Resting and foraging are especially important to migrating birds at Whitefish Point as they prepare to make the journey across Lake Superior (spring migration) or recover from that flight (fall migration). Humans can negatively impact migrating birds in two ways: 1) by stressing birds due to human presence in close proximity; 2) by damaging or degrading stopover habitat that is important for migrating birds.

1. Stress from Direct Human/Migratory Bird Interaction

Non-consumptive activities such as hiking, wildlife viewing, or other activities that bring humans and birds into passive contact can have negative impacts on migrating birds. Humans can negatively influence bird populations by altering activity budgets, foraging patterns, distribution, and habitat use, reducing reproductive success and foraging efficiency, and increasing energy expenditures and stress. Additional specific concerns raised through the plan development process include the introduction of dogs to the area, and the presence of litter or food waste that may attract pest or exotic species to compete with or prey on migratory species.

2. Loss of Stopover Habitat Used by Migrating Birds

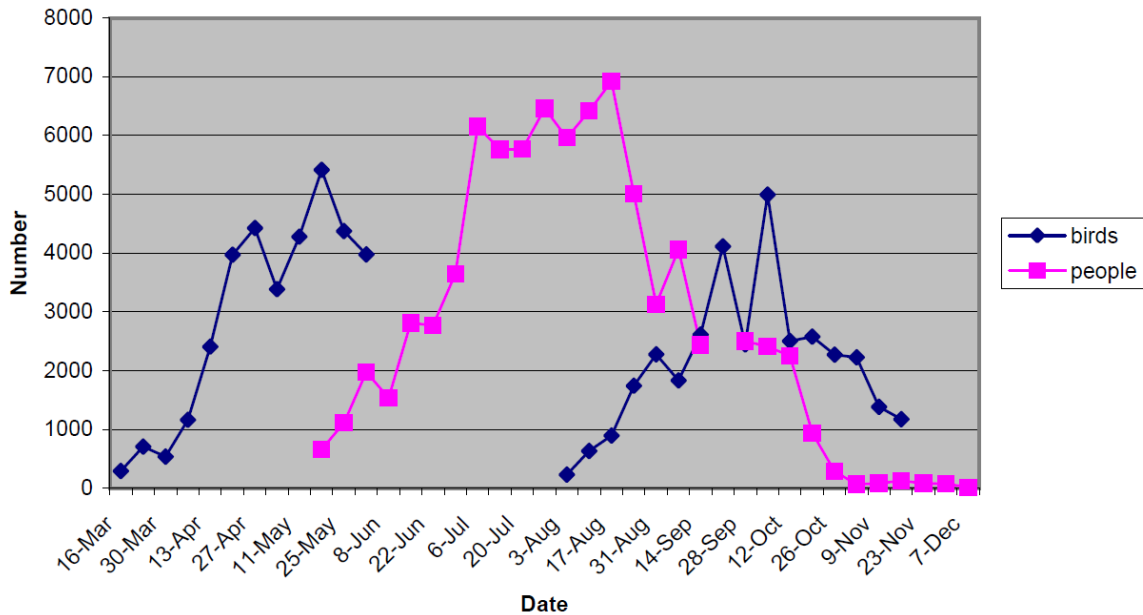
Even outside of spring and fall migration seasons, human activities can influence the success of migratory birds. A primary concern at Whitefish Point is maintaining high quality stopover habitat. Habitat is degraded or removed by development (which may remove important resources, create conditions conducive to exotic species colonization, and/or present barriers to flight) and by traffic throughout sensitive areas (which may trample vegetation, cause erosion, and/or serve to further encourage human encroachment through creation of many trails). Reduction of suitable habitat may concentrate predators and prey in the remaining areas, either through behavior to avoid humans or through direct loss, such that predation rates become unnaturally high.

3. Human Restrictions During Bird Migration

Fortunately, patterns of avian migration and human use at Whitefish Point are isolated for most of the year. July and August are peak months for tourist visitation at Whitefish Point. The WPBO considers the periods from April 1 through May 31, and August 15 through November 15 to be the spring and fall migratory bird seasons. Figure 1 demonstrates the correlation of the two populations. Bird counts stop during June and July because numbers are typically quite low then. Visitors

during the Memorial Day holiday, the latter part of August, and the month of September likely pose the greatest risk for human-bird conflicts. For situations in which human use falls within the migration seasons, management prescriptions are made.

Figure 1: Land and shore birds counted by WPBO and Great Lakes Shipwreck Museum visitors in 2001



Piping plovers have been identified during times of more concentrated human use and are addressed in the Management Plan. The USFWS reserves the right to close any or all of its property to public access if it determines that human use of the property is incompatible with its mission to protect wildlife. Specifically, the USFWS may close any or all of the trails on its property during the bird migrating season to allow birds undisturbed resting and foraging areas. USFWS will also close its beach areas to protect piping plovers and promote their nesting at Whitefish Point.

Another potential for conflicts occurs during April, when the highest number of birders come to Whitefish Point specifically to view bird migrations. This is a critical period during which management practices must be enforced, particularly those techniques for keeping visitors out of the environmentally sensitive areas.

4. Other Restrictions on Humans

The USFWS has designated portions of the beach at Whitefish Point as critical habitat for the endangered piping plover shorebird. The USFWS has authority under the federal Endangered Species Act to protect the endangered piping plover, and its designated critical habitat. Although public access to the beach is allowed, access points will be actively controlled to restrict impacts to sensitive shoreline habitats, including piping plover critical habitat.

In the event piping plovers nest within the boundaries of Whitefish Point, the USFWS will be responsible to assure the protection of the plover nests and young chicks. Monitoring and protection will be conducted in accordance with the current plover recovery program coordinated by the USFWS in the East Lansing Field Office. Protective measures may include additional restrictions on human use, construction of nest predator exclosures and daily monitoring of nesting pairs. Monitoring and protection will continue until 30 days after eggs have hatched, or until all young plovers have fledged. Additional, temporary signs regarding plover conservation may also be placed at appropriate beach areas. To ensure that no part of this Plan has an adverse impact on piping plovers or its critically designated habitat, the USFWS will conduct an intra-agency consultation with their Ecological Services office.

Concerns regarding stopover habitat degradation for migrating birds are addressed through a number of management tools that seek to maintain and improve high-quality habitat, reduce edge effects and fragmentation, and to control tourist access and traffic in sensitive habitat areas. These management practices will be followed with monitoring efforts to assess whether the prescribed strategies are adequate or whether additional controls are necessary.

Peak human visitation should be encouraged during the non-peak migratory months of June, July, and August. USFWS approval is required for planned outdoor special events expected to attract large numbers of people and are beyond ordinary daily programs.

As stated in the transfer patents, all human uses and activities described in this Plan are subject to review by the USFWS to ensure the conservation values of Whitefish Point are not impaired. USFWS endorsement of this Plan does not replace USFWS authority to conduct a conservation value determination on each recommended Plan activity as it is implemented. This additional review will ensure that any unforeseen changes to the site that may occur between completion of the Plan and

implementation of specific recommended activities will not result in impairment of conservation values.

Because of the potential to attract nuisance and pest species, food service to the public will be limited to only serving foods that are microwavable (such as pasties, hot dogs or pizza) or are pre-packaged (chips, pretzels, or candy). No conventional ovens or fryers will be allowed. If monitoring of the site indicates that food waste is attracting nuisance or pest species, USFWS shall conduct a conservation value determination, and may prohibit certain types of foods.

C. Physical Constraints on Human Use at Whitefish Point

Besides the buildings that house tourist attractions, the most important infrastructure necessary to service tourists visiting Whitefish Point are vehicle parking areas and septic system capacity. This infrastructure serves as a physical constraint to the number of people that can visit the site.

It is important that any new uses that may attract and accommodate more visitors to the site first be reviewed to ensure that there is adequate septic and parking capacity. Also, it is equally important that both septic capacity and parking capacity not be increased without a thorough review of the results of the monitoring in each management area to be sure that the management goals are being met and will not be compromised by additional visitor traffic.

1. Septic Capacity

Septic systems are designed to treat a maximum volume of wastewater each day. If the maximum capacity of the system is exceeded, contamination of groundwater – and ultimately surface water – will result. While groundwater quality is not explicitly described as a conservation value at Whitefish Point, other state and federal laws prohibit groundwater pollution. Therefore, the capacity of the septic system provides a reasonable design limit to the number of visitors to Whitefish Point.

Review of the engineering plans for the new septic system connected to the Crews Quarters and Multi-purpose/ Gift Shop indicated that the system may have been over capacity on peak visitation days. Based on the recommendation of the consultant, the GLSHS has begun metering water usage in its public buildings to accurately determine the amount of water being treated by the septic systems. Results of one season's data indicate that there is sufficient septic capacity on the peak days in 2002 for current, as well as proposed development. The Joint

Committee should regularly monitor the septic capacity by looking at actual usage numbers on an annual basis.

Monitoring Plan

Because of the large numbers of visitors to Whitefish Point, the septic systems are expected to treat large volumes of wastewater. The soils are extremely sandy and well- drained, and the water table is very shallow and fluctuates with changing levels of Lake Superior. These conditions can minimize the treatment of wastewater and could result in contamination of groundwater. To ensure that groundwater contamination from the septic system does not occur, the parties have agreed to work cooperatively to monitor groundwater quality according to the following terms:

- GLSHS will make a list of three or four qualified environmental engineering firms from northern Michigan and allow MAS to select the preferred firm for the installation of the wells.
- MAS agrees to pay the selected engineering firm for the installation of three (3) capped and locked groundwater monitoring wells at locations as determined by the engineering firm. The engineering firm will be asked to confer with the Chippewa County Health Department for guidelines and specifications for the monitoring of the septic field.
- MAS reserves the right to hire an independent expert to review and comment on the installation plan, and review and observe the installation of the wells.
- GLSHS will observe the installation of the monitoring wells and will retain within its control the sole key for the locked well caps. Twice each year, at the expense of GLSHS and at times as determined by the engineering firm and consistent with the recommendations of the County Health Department, water samples will be taken by a firm selected by GLSHS and approved by USFWS and analyzed for the sole purpose of determining that the septic system is not contaminating groundwater (most likely tests for coliform bacteria and nitrates). Testing will be limited to those tests indicative of the septic system functioning properly.
- MAS and USFWS will have the right to be present for all sampling and will be given copies of all resulting reports.

2. Parking Considerations

Parking is a key opportunity to control and manage human behavior at Whitefish Point. Virtually all visitors drive to the site and need a place to park their car to enjoy their experience of the site. While views from the windshield are important,

people begin their visitor experience once they leave their car. If they can be led from their car to a common entry point that orients them to the site, their behavior on the site becomes much more predictable and controllable.

The number of parking spots should relate to building capacity, and therefore septic system capacity. The approved footprint for parking described in this Plan has been reviewed for consistency with existing septic and building capacity and is determined to likely not allow more visitors to the site than can be reasonably controlled with the measures described elsewhere in the Plan. However, consideration of any future expansion of parking must be thoroughly reviewed by the Joint Committee to ensure that the conservation values of the site will not be compromised. Such a review of parking must consider all possible alternatives to bring visitors to the site, including using shuttle buses with parking further offsite, requiring a fee for parking, moving some visitor attractions off-site, or establishing a peak hourly or daily visitor capacity. If near-site parking expansion is determined by the Joint Committee to be the best alternative, it should be extended south along the road without impacting further habitat, rather than expanding the footprint of lots identified within this Plan into bird habitat.

VI. PREFERRED FUTURE PLAN

The preferred future plan follows a format described by the National Park Service “Visitor Experience and Resource Protection” framework. This framework suggests identifying distinct management areas within the overall property where goals and uses are similar. Within each of these management areas, management goals establish the overall purpose of the area. A summary of the current situation establishes a baseline situation. Next, future management objectives define the standards and guidelines which will be monitored. A detailed set of specific recommended management practices define the specific activities that shall be implemented to carry out the goals and objectives. Finally, a monitoring plan ensures that the management area continues to meet the defined goals and objectives.

As described in the Settlement Agreement between MAS, GLSHS, and USFWS, a consultant was selected who convened representatives of each of the groups. Through a series of several joint meetings, the consultant Michigan Land Use Institute (MLUI) learned about the goals and objectives of each property-owning entity, and also their concerns about the future for Whitefish Point. After the third meeting, MLUI proposed management areas that were identified on a map.

Through a group process, boundaries were adjusted, and goals, objectives and management practices were identified.

The management areas identified at Whitefish Point are:

- Environmentally Sensitive Habitat
- Pedestrian/Human Interpretation
- Mixed Human Interpretation/Habitat
- Beach
- Trails and Points of Interest
- Parking
- Buildings

A. Environmentally Sensitive Habitat (Non-human areas)

Management Goal:

This management area shall provide important stopover habitat for landbirds migrating through Whitefish Point, and nesting habitat for resident birds.

Management goals for environmentally sensitive habitat areas will:

- Maintain and enhance upland habitat by restricting access to humans;
- Minimize stress to migrating birds by restricting humans from habitat areas as necessary during migratory season;
- Control exotic plant species and manage to prevent nuisance pest species from critical habitat areas.

Summary of Current Use:

Currently there is no active management of people within the areas serving as critical stopover habitat for migrating birds. In the absence of management control, there has been considerable loss of vegetation, erosion and, destabilization of the sandy soils. This problem is primarily caused by foot traffic from visitors, both tourists visiting the beach area and birders pursuing bird species during migratory bird season. There also is no protection afforded to migratory birds from people who may inadvertently or intentionally put them under stress by invading their resting space.

Preferred Future Management Objectives:

Map 1 depicts the boundary of the environmentally sensitive habitat management area. The following standards shall guide management of this area:

- Trails shall keep all people and pets out of environmentally sensitive habitat at all times of year, with only a few controlled exceptions.

- Trails through habitat shall be designed to be closed seasonally to protect bird habitat, or on an hours' notice to protect a stressed bird specimen, if necessary.
- Access to all areas within the environmentally sensitive habitat management area that have been degraded by human use will be physically restricted.
- Human traffic on trails during migratory seasons shall be sparse and noise levels shall be low.
- Invasive plant species shall not reach a density that crowds out native vegetation.
- Wildlife pest species shall not be a primary source of stress on migrating or resident bird populations.

Specific Recommended Management Practices:

The environmentally sensitive habitat area requires active restoration and mitigation of degraded habitat areas as well as protection of existing habitat. The Joint Committee shall appoint a Habitat Maintenance and Restoration Subcommittee to oversee habitat restoration and improvement of degraded habitat areas, control invasive species and manage human behavior to prevent habitat destruction. USFWS shall review and approve all restoration projects to mitigate the loss of environmentally sensitive habitat. Mitigation shall occur at a replacement value of 2:1 with vegetation of similar species before or during habitat removal.

Habitat Loss Areas

- 1) Southeast wing – the loss of trees from the construction of the 35' x 55' wing and construction impact area is estimated to be approximately 540 square feet, which will be mitigated. GLSHS shall complete 2:1 mitigation of the impact from east wing construction to the satisfaction of USFWS. Beach grass and juniper has already been planted by GLSHS over and around the drain field serving the Gift Shop and Crews Quarters.
- 2) Habitat triangle – at the north end of the existing gravel lot, a small triangle of low shrubby habitat will be lost. This triangle is estimated to contain about 1,860 square feet of habitat that has been heavily disturbed in the past and would continue to be impacted and fragmented by the construction of the service drive.
- 3) Staff parking area – some mature jack pines and shrubby growth will be lost to allow a paved access drive. The drive will generally be located under the power line easement as much as possible to minimize habitat loss. The

- 1) Create similar habitat in the area created by the removal of the north lot, to the satisfaction of USFWS.
- 2) Fill in the open area created along the road easement access to the beach with similar habitat, on both GLSHS property and USFWS property, to the satisfaction of USFWS.
- 3) Revegetate the path that currently bisects that block of habitat (where the propane pig currently sits) to the satisfaction of USFWS.
- 4) Complete the mitigation of the east wing to the satisfaction of the USFWS.
- 5) Provide a 3-year performance guarantee to replace any trees that die within a 10-foot construction impact area around the footprint of the museum wings. Any trees that die within an additional 10 feet of the SE wing (20 feet from the wing footprint) within that 3-year period and are determined by USFWS to likely have died as a result of construction impact shall also be replaced.
- 6) Create habitat in the areas identified on both sides of the Crews Quarters, to the satisfaction of USFWS.
- 7) Create habitat in an area approximately 25' x 25' between the Gift Shop drain field and the west boundary of GLSHS property to the satisfaction of USFWS.
- 8) Create habitat in a 10 – 20 foot area around the Gift Shop drain field to the satisfaction of USFWS.
- 9) Any additional habitat lost due to a fire prevention plan approved by both DNR and USFWS shall be mitigated 2:1.
- 10) Re-establish Douglas Hawthorn and Western Bilberry species to the site to reflect historic levels, as recommended by the Habitat Maintenance and Restoration Subcommittee.

USFWS shall ensure that required 2:1 mitigation occurs for impacts of the construction of the museum wings, south lot expansion, and access drive and staff parking area. The remainder of the habitat restoration beyond the 2:1 mitigation shall also be required, but not as mitigation.

Other Restoration and Habitat Improvement

- Re-establish degraded or disturbed areas within USFWS and MAS property through active revegetation or passive restoration practices, especially to fill in areas where 'social trails' have created habitat loss.

- The 'historic lawn' area created from parking lot reclamation will be restored with habitat similar to what exists along the road right of way; will include shrubs, native grasses, forbs, etc.

Summary of Habitat Improvements

The practical result of GLSHS completing all of the habitat improvement projects identified above would total 26,940 square feet of new habitat. The maximum footprint of impacted area totals 7,900 square feet (although is expected to be much less because of existing disturbance under the power line easement), resulting in a minimum net gain of 19,040 square feet of stopover habitat created. Also, approximately 9,250 square feet of native grasses, forbs and shrubs will be created in the human interpretive area created by removal of the north lot. Finally, the net result of reducing the north parking lot but adding a service drive will reduce total pavement on GLSHS property by 2,300 square feet.

Habitat Maintenance and Restoration Subcommittee

USFWS and MAS/WPBO will be expected to take a lead on the Habitat Maintenance and Restoration Subcommittee. Specific management actions to be implemented by this subcommittee include:

- Oversee and recommend appropriate habitat restoration and mitigation.
- Completion of a Trail Plan.
- Monitor habitat and implement additional restrictions on human access to respond to habitat degradation, or stress on migrating birds. As necessary, use discrete barricades such as maritime chains strung from low posts, driftwood logs, or vegetation plantings to clearly discourage people from moving into habitat.
- Coordinate with the Signage and Interpretation Subcommittee to develop interpretive signs and signs to inform people about the need to stay out of habitat.
- Develop and implement recommended procedures to minimize or eliminate invasive species in the habitat areas.
- Prepare a procedure for quickly closing areas during the migratory season if a vulnerable bird specimen is in danger of stress from human presence.
- Encourage the USFWS to have a uniformed staff presence on site during peak visitation months and migratory bird season, to minimize human impacts to bird habitat, protect piping plover nesting areas, enforce restrictions, and assist with natural history interpretation.

- Assist the Joint Committee with the development of best management practices for human activities outside of the habitat areas that could affect migrating or breeding birds, such as:
 - Reviewing the scheduling of activities that encourage high volumes of visitors during peak migration periods.
 - Guidelines for control of food waste to avoid attracting nuisance species.
- Assist USFWS with piping plover monitoring as necessary (see Beach Management Area).
- USFWS may authorize individuals for specified activities in the Habitat Areas through a Special Use Permit. Generally, permits will only be approved for specific research projects, and interpretive activities.

Monitoring:

The Habitat Maintenance and Restoration Committee shall develop a thorough monitoring plan for approval by the Joint Committee to ensure that the goals and objectives for the Environmentally Sensitive Habitat Management Area are being met. If goals are not being met, the Committee shall suggest a course of action to the Joint Committee.

Suggested Monitoring Activities:

- Monitor quality of stopover habitat available for migrating birds by annual inspection using ground photos and aerial photographic comparisons. Specifically identify areas where people are moving into and damaging habitat, and where invasive species are impacting habitat.
- Record occurrences of excessive litter and food waste and determine the source. If monitoring of the site indicates that food waste is attracting nuisance or pest species, USFWS shall conduct a conservation value determination, and may prohibit certain types of foods.
- Seek anecdotal evidence from USFWS, WPBO or GLSHS staff of problems with people or pets in habitat, or generally disobeying rules. This can help determine appropriate management actions. During migratory bird season, monitor the numbers of people visiting Whitefish Point and using the trails through habitat, and take preventive measures to limit human contact with sensitive bird species.

B. Interpretive Lawn and Sidewalks (Historic Interpretive Areas)

Management Goal:

This management area shall provide an interesting, open space for people that connects parking, buildings, and other visitor attractions. This area should function as a staging area for visitor interpretation of historic structures and activities.

Management goals for the lawn and sidewalks area will:

- Orient visitors to the features and behavioral rules of Whitefish Point.
- Interpret the historic character of the site.
- Direct visitors to appropriate areas with signage.
- Allow visitors to enjoy the character of the site while moving between attractions.

Summary of Current Use:

This area serves visitors to the site, both paying museum customers and non-paying visitors, by allowing them to stroll through historic buildings and staging before moving to the next management area. Sidewalks provide access to all buildings, but there is very little outdoor signage interpreting the site. The sidewalks also provide vehicular access for maintenance and emergency vehicles. This area is located almost entirely on GLSHS property. A historic sidewalk through habitat on GLSHS property functions more as a trail to the beach than a sidewalk.

Preferred Future Management Objectives:

Map 2 depicts the boundary of the interpretive lawn and sidewalk management area.

- This area shall be managed for the highest densities of people, with many opportunities for maritime and historic interpretation, social interaction, and relaxed strolling.
- This area shall welcome visitors to the site as they leave the parking area, informs them of the various points of interest, and directs them to those areas.
- The welcome area shall be large enough to accommodate large numbers of visitors, be designed as a comfortable pedestrian area with shade, benches and possibly public art or cultural artifacts.
- Visitors arriving by bus will require a separate orientation plaza area near the bus turnaround and dropoff area.

- The lawn and sidewalk area shall be maintained free from litter and food waste to avoid attracting nuisance wildlife species.
- This area shall have passive interpretation of birding and maritime history with signage, displays, monuments, as well as opportunities for active interpretation (instructors, actors, group events).
- This area also serves as a fire prevention buffer for historic structures.

Specific Recommended Management Practices:

Signs:

The Joint Committee shall appoint a Signage and Interpretation Subcommittee that will establish a plan for how signs are designed, where they shall be located, and what guidelines, directions and interpretive information shall be communicated through signage. This management area shall be managed to accommodate many of these signs.

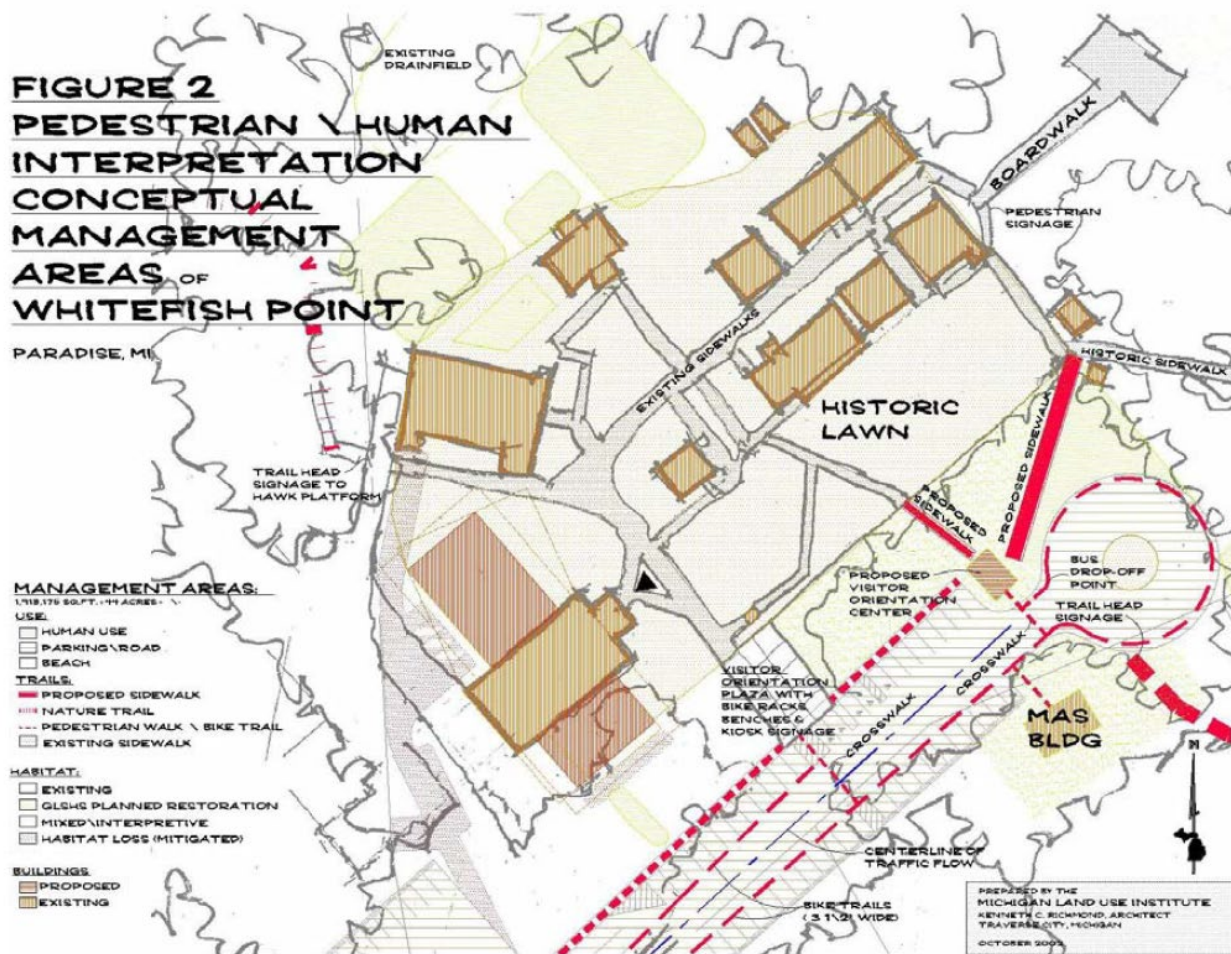
Visitor Orientation:

It is important that all visitors to the site enter through an area that welcomes them to Whitefish Point, and clearly orients them to all of the attractions and features of the site. This orientation should consider both bus passengers as they disembark, and pedestrians as they stroll onto the site from the offsite parking area. The orientation areas should be located along the main pedestrian routes and designed in a manner to attract visitors to stop and learn about Whitefish Point.

Information provided at the orientation areas should include:

- Important Attractions and Maps
 - This includes the Hawk Platform, the boardwalk to the beach, the Shipwreck Museum, the restrooms and GLSHS Gift Shop, the lighthouse, the trail to the Point, and the MAS building.
- Rules of Behavior
 - Along with rules, a brief explanation of why these rules help protect bird migration and habitat should be provided. In addition, signage will be installed to prevent trespass on neighboring private properties.

Map 2: Pedestrian/Human interpretation conceptual management areas of Whitefish Point



- Site Features and Organizations
 - This should include a brief summary of why Whitefish Point is important in Great Lakes maritime history, as well as for bird migration, and a brief introduction to the GLSHS, MAS/ WPBO, and USFWS.

Orientation from Parking Area

A visitor orientation plaza that introduces visitors to the site shall be constructed at the entry point from the off-site parking area in an area near the front of the museum, along a clearly marked pedestrian route from the off-site parking. An interpretive signage display shall provide the information described above. This area should be designed to accommodate the needs of a staff attendant who may greet visitors, answer questions, and help orient them to the site.

This plaza area will allow visitors coming from the off-site parking areas to immediately find the restroom and other attractions. It will also welcome bicyclists who have ridden along the bike path and will provide bike racks. Benches, a drinking fountain, trash can and shade are other amenities that could be provided at this orientation area. This plaza shall be an open area with a surface constructed of brick, blocks or pavement that stands out from the sidewalk as a pedestrian area.

If the second keeper's quarters is constructed to function as a visitor orientation center, signage at this entry plaza will also direct visitors ahead to that building for primary orientation information. In that case, the entry plaza area and signage shall be smaller and less substantial.

If the second keeper's quarters is not constructed, this entry plaza will be the main visitor orientation area and will consist of a kiosk or sign board with all orientation information. The size of the plaza should be approximately 30' x 30' if it is the primary visitor orientation area and may be considerably smaller if the visitor orientation center is constructed.

Orientation for Bus Passengers

Bus passengers will disembark at the bus turnaround, past the initial orientation plaza from the parking area. If the second keeper's quarters is constructed, it will be adjacent to this area and will serve as a primary visitor orientation center for all visitors to the site. It may have minimal outdoor signage and visitor amenities such as a bench and trash can.

If the second keeper's quarters is not constructed, a small orientation plaza (approximately 15' x 15') shall be constructed with a small sign board to direct bus passengers toward the major attractions. Sidewalks should be designed to encourage bus visitors toward the main visitor orientation plaza, where they can get more information about Whitefish Point.

Other Management Practices in the Lawn/ Sidewalk Management Area

- The sidewalk that runs alongside the GLSHS Gift Shop to the restrooms shall be allowed to be expanded to a width similar to other sidewalks, so that it can accommodate delivery vehicles.
- Provide garbage cans with lids, and ensure they are emptied regularly.
- If possible, limited tree and shrub species should be planted within the lawn area and around buildings to support native vegetation on the site and enhance stopover habitat for migrating birds.
 - Placement and selection of species should be coordinated with the Habitat Management and Restoration Subcommittee.

- Placement of trees species should consider potential fire risk to historic structures.
- Maintain predominantly mowed lawn around buildings to maintain a neat presence.
 - Use of any fertilizers, pesticides, or herbicides shall be approved by the USFWS to ensure no impact to conservation values.

Allowed Uses in the Lawn Area:

- USFWS approval is required for planned outdoor special events expected to attract large numbers of people and are beyond ordinary daily programs.
- Informal picnicking will be allowed, but not encouraged.
- Pets on leashes will be allowed in the lawn and sidewalk area.

Expressly Prohibited Uses in the Lawn Area:

- Picnic tables
- During migratory bird season, permanent outdoor stationary lighting such as porch lights shall be turned off from dusk to dawn to avoid confusing migrating birds. This prohibition excludes the Coast Guard beacon, automobile lights, and a reasonable temporary use of outdoor lighting to facilitate people moving safely across the grounds. Migratory season is described as April 1 through May 31 and August 15 through Nov. 15.

Monitoring:

The Joint Committee shall be responsible for monitoring activity in the Lawn/Sidewalk area and ensuring that the goals of the area are met. Monitoring activities in this management area shall include:

- Look for worn grass indicating people walking across the lawn.
- Record occurrences of excessive litter and food waste and determine the source. If monitoring of the site indicates that food waste is attracting nuisance or pest species, USFWS shall conduct a conservation value determination, and may prohibit certain types of foods.
- Ask GLSHS, MAS, and WPBO staff for anecdotal evidence of problems.
- Survey visitors to determine effectiveness of signage.

C. Mixed Human Interpretive/Habitat

Management Goal:

This management area shall contain some bird habitat, but also allow limited use by people primarily for interpretation of birding and natural history. It is to be a

transition area between environmentally sensitive habitat and more intensive human areas and is not designed for regular daily traffic. Management goals for mixed human interpretive/ habitat areas will:

- Provide an area for people to view birds during migratory bird season that is not paved or mowed lawn.
- Provide an area to educate groups of visitors about birds and bird migration.
- Maintain the historic character of the site.
- Create some natural habitat such as shrubs, clumps of trees, grasses and other native plants.
- Utilize areas that are being reclaimed from the paved north parking lot and are not likely to provide critical habitat.

Summary of Current Use:

A small area immediately surrounding the MAS/ WPBO Owls Roost building is currently managed for mixed human interpretation and habitat. It consists of several birdfeeders and allows people to closely observe birds. During bird migration season, people generally use the north parking lot to congregate and watch for nocturnal raptors and owls. Because there are no restrictions, other interpretation occurs on or off trails in habitat areas.

Preferred Future Management Objectives:

Map 2 shows the boundary of the interpretive lawn and sidewalks management area. This area shall be managed to allow low to modest densities of people and occasional large groups, primarily for the purpose of birding interpretation. Human activities will be monitored and restricted to ensure some habitat is maintained.

This area will provide birders of all levels of experience with an open area to observe owls, hawks, and other birds as they move throughout the Whitefish Point area.

This area will also serve as a trailhead for the trails out to the tip of the point, and within the USFWS property. The Habitat Maintenance and Restoration Committee shall implement restoration of native vegetation in areas where pavement is removed. The area shall be maintained free from litter to avoid attracting nuisance wildlife species.

Specific Recommended Management Practices:

The Joint Committee shall be responsible for implementing management practices to ensure that the goals of the Mixed Human Interpretive/ Habitat area are achieved, but MAS and WPBO shall be the lead agencies. Most of this area is

proposed to be reclaimed from an area that currently is paved as a parking lot. Reclaimed areas that are slated for Environmentally Sensitive Habitat management shall be physically separated from the Mixed Human Interpretive/Habitat area with signage and/or barriers to prohibit trampling. The Habitat Maintenance and Restoration Subcommittee will review monitoring.

A mixed human interpretive/habitat area shall be established in the area immediately surrounding the location of the second keeper's quarters building to provide a historic representation of the area that surrounded that building. This area will be reclaimed from the existing paved parking area. It shall be planted in native grasses identical to those found elsewhere on the site, and will include some low shrubs, clumps of native trees, and other native plants. A similar area will be maintained adjacent to the MAS/WPBO building, and near the trailhead to the tip of the Point.

Management activities that may occur in the Mixed Human/Interpretive Area include:

- Burning or limited mowing will maintain an open space clear area for people to gather, and to identify trailheads.
- Signs interpreting bird migration, bird species, and birding activities should be encouraged in this area.
- USFWS approval is required for planned outdoor special events expected to attract large numbers of people and are beyond ordinary daily programs.
- Food and beverage service shall be allowed for special events provided approval is obtained from USFWS.
- Limited food and beverage service shall be allowed for special events with approval of the USFWS.
- Bird banding or mist net exhibits or demonstrations shall be allowed.
- Due to concerns related to attracting nuisance species, bird feeders are only allowed subject to approval of USFWS.

Prohibited Uses:

- Pets
- Motorized vehicles including snowmobiles and ORVs

Monitoring:

The Joint Committee shall be responsible for monitoring activity in the Mixed Human Interpretive/Habitat area and ensuring that the goals of the area are met. Suggested monitoring activities include:

- Record occurrences of excessive litter and food waste and determine the source. If monitoring of the site indicates that food waste is attracting nuisance or pest species, USFWS shall conduct a conservation value determination, and may prohibit certain types of foods.
- Look for evidence of trampling of vegetation, especially into Environmentally Sensitive Habitat areas.
- MAS, WPBO, GLSHS, and USFWS staff should provide anecdotal information of any problems.

D. Beach Area

Management Goal:

This management area shall be managed as a publicly accessible beach for visitors to enjoy a panoramic view of Lake Superior, including freighters, waterbirds, and inclement weather, while still maintaining the quality of the beach habitat for endangered piping plovers and other coastal species. Management goals for the beach will:

- Promote overriding USFWS management for the protection of piping plover critical habitat, promotion of nesting piping plovers, and protection of piping plovers and other migratory shorebird species while they are at Whitefish Point.
- Provide access to visitors along the beach to or from the tip of Whitefish Point.
- Provide visitors with environmental education and recreational uses that are compatible with wildlife.

Summary of Current Use:

The existing deck platform and steps provide primary access to the beach and directs most visitors that way. Others reach the beach by the trail to the tip of Whitefish Point and walk back toward the steps and platform. The beach functions as a trail for these visitors. The general use of this area is beachcombing, strolling in surf, and viewing boats or birds. There is limited swimming and sunbathing during peak summer periods, because most visitors' length of stay is relatively short, and due to cold air and water temperatures and insects. Local and summer residents frequently visit the beach in the evening to view the sunset or enjoy a stroll along the beach. WPBO monitors piping plovers, but currently there are no restrictions to humans accessing the beach.

Preferred Future Management Objectives:

Map 1 depicts the extent of the beach management area at Whitefish Point.

The USFWS has authority under the federal Endangered Species Act to protect the endangered piping plover, and its designated critical habitat. Although public access to the beach is a management goal of this area, it can be overridden by the USFWS goal of protecting piping plover critical habitat and nesting. Access points will be actively controlled to restrict impacts to sensitive shoreline habitats, including piping plover critical habitat.

Specific Recommended Management Practices:

The Joint Committee shall be responsible for implementing management practices to ensure that the goals of the Beach Area are achieved. Suggested management practices include:

- Allow human access to the beach from only three locations – the deck platform/steps, the end of the historic concrete sidewalk through the “triangle of trees”, and the trail to the tip of the point.
- Close access to the beach from the open area off the end of the parking lot (the road end) and revegetate with stopover habitat similar to what already exists.
- Restrict trampling of beach grass with signage or barriers.
- USFWS plans to close the southeast beach from April through August to humans to promote nesting of piping plovers.
- Identifiable markers shall be placed to help visitors locate where the trail joins the beach near the tip of the point. This will help reduce inadvertent trampling as people look for the trail back when they are ready to leave the beach.
- Provide garbage cans with attached lids at steps and at trail head. Bonfires shall be allowed only in areas previously approved by the Joint Committee.
- USFWS approval is required for planned outdoor special events expected to attract large numbers of people and are beyond ordinary daily programs.
- Food and beverage service shall be allowed for special events provided approval is obtained from USFWS.

Prohibited Uses on the Beach:

- Pets
- Picnics/ food
- Alcoholic beverages
- Motorized vehicles including jet skis, ORVs and snowmobiles
- Kite flying
- Fireworks
- Off-road vehicles

Monitoring:

The Joint Committee shall be responsible for monitoring the beach area to ensure the management goals of the beach area are being met. Suggested monitoring practices include:

- Record occurrences of excessive litter and determine the source.
- Look for evidence of trampling of beach grass and other vegetation, especially into Environmentally Sensitive Habitat areas.
- USFWS will monitor for impacts to piping plovers.
- Ask MAS, WPBO, and USFWS staff for anecdotal evidence of problems.
- Coordinate with WPBO and USFWS regarding the presence of nesting piping plovers.

In the event piping plovers nest within the boundaries of Whitefish Point, the Joint Committee will be responsible for additional monitoring to assure the protection of the plover nests and young chicks. Monitoring and protection will be conducted in accordance with the current plover recovery program coordinated by the USFWS in the East Lansing Field Office. Protective measures may include additional restrictions on human use, construction of nest predator exclosures and daily monitoring of nesting pairs. Monitoring and protection will continue until 30 days after eggs have hatched, or until all young plovers have fledged. Additional, temporary signs regarding plover conservation may also be placed at appropriate beach areas.

E. Trails

Management Goal:

These management areas occur primarily on USFWS and MAS property and shall be managed to provide visitors opportunities for wildlife-oriented recreation and

environmental education without negatively impacting wildlife. Management goals for the trails will:

- Allow visitors the opportunity to view birds in a variety of habitats.
- Provide access to the tip of Whitefish Point, the beach and the hawk platform on DNR property.
- Allow wildlife managers to minimize visitor impact on vegetation and disturbance of wildlife.
- Incorporate interpretive signage that describes bird migration, natural history of the site, and rules of conduct.

Summary of Current Use:

Currently there is no defined or mapped system of trails. There is very little interpretive signage to discourage people from walking through the fragile vegetation, and to educate them about the sensitivity of the area. In many places, the sandy soils have become destabilized, and vegetation has been removed by excessive trampling, leading to a loss of habitat. During spring and fall bird migrations, birders are allowed to move off trails and through habitat without restrictions.

Areas that currently function as trails include the boardwalk to the beach, the boardwalk to the hawk platform on DNR property, an unmarked trail through MAS and USFWS property to the birders shack and tip of the Point, and a sandy access to the beach along the road easement. There are also numerous social paths connecting to other trails.

Preferred Future Management Objectives:

Map 1 shows a conceptual design of the trails management area. The trails will accomplish the following objectives:

- Minimize disturbance to birds and other wildlife;
- Minimize destruction of habitat;
- Provide access to the tip of the Point;
- Provide access to the beach through controlled points;
- Satisfy American with Disabilities Act requirements;
- Provide access through interior vegetation;
- Provide an interpretive experience for visitors.

- Minimize the conflict between humans and migratory birds.

The area shall have three defined trails:

- 1) The existing boardwalk trail to the Hawk Platform, which begins near the GLSHS multi-purpose Gift Shop building and ends on MDNR property.
- 2) A “Tip-of-the-Point Trail” that begins near the current location of the MAS/ WPBO Owls Roost building, and ends at the beach near the waterbird shack and the tip of the point.
- 3) A “Birders Trail” that leaves the trail to the beach in a southerly direction through USFWS property.

Specific Recommended Management Practices:

The Habitat Maintenance and Restoration Committee shall be responsible for preparing the Trail Plan. The Joint Committee shall be responsible for implementing management practices to ensure that the goals of the trails area are achieved. Suggested management practices include:

- Trails will be designed in a manner to discourage people from venturing off trail. They may be ‘hardened’, either with permanent or roll-up boardwalk, and contained with a barricade. Heavy maritime chain strung from cedar posts 2 feet above ground may provide a noticeable barrier that is also appropriate to the site. In natural areas, driftwood logs may provide more appropriate barriers to access.
- Post signage in coordination with the Signage and Interpretation Subcommittee to inform people about the need to stay out of habitat, and to protect migrating birds.
- Trails will be mapped and clearly marked at the visitor entry plaza. The trail length and destination will also be clearly marked at the trail head.
- Interpretive signage will be placed along the trail to inform visitors of the historic and natural characteristics of the site, as well as to educate about the environmental sensitivity of the site.
- During migratory bird season, visitor access to trails may be restricted to minimize human impacts on birds.
- Presence of a uniformed ranger during peak visitor periods, or key migratory season, would be very helpful at discouraging off-trail hiking.
- The Americans with Disabilities Act requires that trails be designed to accommodate visitors with disabilities.

Prohibited Uses:

- Motorized vehicles including snowmobiles and ORVs (motorized wheelchairs for the disabled are allowed on trails)
- Pets
- Walking off designated trails

Monitoring:

The Joint Committee shall be responsible for monitoring the Trails to ensure that the goals of the Trails management area are being met. WPBO, USFWS, and MAS will take the lead. Suggested monitoring practices include:

- Record occurrences of excessive litter and determine the source.
- Look for evidence of trampling off trails into habitat, especially in previously disturbed areas that have been closed to pedestrian access.
- Ask MAS, WPBO, and USFWS staff for anecdotal evidence of problems.
- If there is evidence of human destruction of habitat from people leaving the trails, additional barriers, signage, hardening, or enforcement presence shall be installed.
- If there is evidence of human interference with migrating birds during migratory season, additional interpretive signage, or enforcement presence should be considered.

F. Parking

Management Goal:

All parties have identified finding a solution to the parking problem as a critical component of this plan. The goal of this parking plan strives to balance the need to accommodate visitors to Whitefish Point attractions with the need to maintain suitable stopover habitat for migrating birds. Management goals for the parking area will:

- Provide parking spaces as close and convenient to visitor attractions as possible and safely guide bicyclists and pedestrians from their cars to visitor orientation areas;
- Efficiently manage traffic flow and parking for cars, recreational vehicles, and buses;
- Not remove any habitat without USFWS approval and mitigation.

Summary of Current Use:

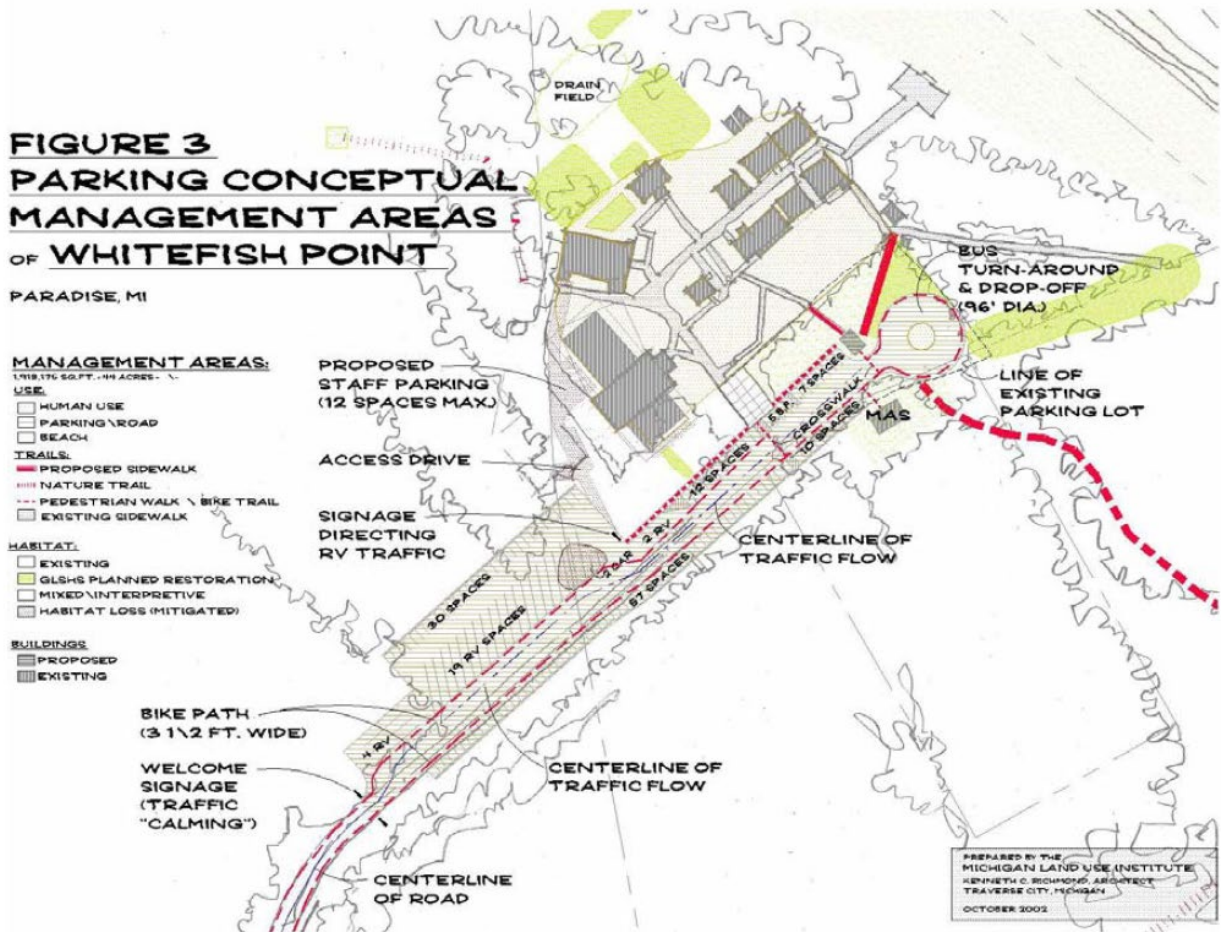
Currently, there are 66 parking spots available in the north paved parking area. There are approximately an additional 30 spots available in the gravel parking area just south of the museum building. More cars could be parked in the gravel area, but without striping, cars are parked in a very inefficient manner. On peak days, it is reported that for much of the day all of those parking spots are occupied, with more vehicles parallel parked around the perimeter of the parking lot and down the road.

Preferred Future Management Objectives:

Map 3 depicts the selected parking management area. The selected parking plan shall meet the following design standards and objectives:

- The final footprint of the south parking lot shall not alter the footprint of the existing parking easement, shall not extend more than 13 feet beyond the edge of the existing road pavement to the east and shall not fill or alter any wetlands.
- Parking shall be designed to minimize the removal of existing habitat, and any habitat removal shall require USFWS approval. Any habitat destroyed to create parking shall be mitigated at a minimum of 2:1 with vegetation identical to that removed, according to the USFWS specifications.
- The final engineered parking plan shall seek to accommodate up to but no more than 160 total parking spaces, and all parking spaces shall all be located within 1/8 mile (660') of the visitor orientation plaza.
- If parking capacity is exceeded more than six (6) days in a summer when more than ten (10) vehicles are parked along the side of the road south of the parking lot for more than three hours and the parking lots are full, the Joint Committee shall consider the adequacy of current parking according to the provisions under Parking Considerations on page 35.
- The parking areas shall be designed to maintain a steady flow of traffic. Regular occurrences of standing vehicles waiting to move through the lot because of improper, inefficient or ineffective parking design shall be corrected with an improved parking flow design.
- Traffic speeds in the parking area shall average less than 8 mph, and should never exceed 20 mph.
- Parking capacity shall not be expanded to allow more visitors than the site can maintain, according to the provisions outlined in Section V.C.2 of this Plan.

Map 3: Parking conceptual management areas of Whitefish Point



Selected Parking Plan

The parties agree to modify current parking as reflected on Exhibit 3. The parties acknowledge parking modifications may require the consent of the Chippewa County Road Commission and/or other authorities. All parties agree to support the Plan as described. The total number of parking spaces to be constructed shall not exceed 160, but the totals within each area described below allow some flexibility for final engineered design. The Joint Committee will review final engineered parking plans for consistency with the easement footprint (as depicted in Map 3). USFWS will approve new parking construction to ensure that the conditions agreed to in this Plan are met, including that habitat creation occurs in a timely and appropriate sequence with other development. GLSHS agrees to apply for habitat restoration funding simultaneous with construction funding. Future construction activity will not proceed until habitat mitigation for previous projects is completed. Pets on a leash shall be allowed in the parking area.

Reduction in North Parking Lot

To mitigate the adverse impact of the new construction of the museum wings, SHPO recommends that the existing paved parking area in the north lot be reduced. This reduction in paved parking will accommodate the footprint and construction of a historic second keeper's quarters building and provide an area to mitigate habitat loss.

This change will maintain some parking and will allow automobile traffic and buses to circle through the north lot to view the lighthouse and historic structures. Parking in the north lot area will not exceed more than 20 paved parking spaces. This area will also accommodate a bus turnaround and visitor drop-off area.

Bus Turnaround and Visitor Drop-off

At the north end of the north lot will be a turnaround large enough for buses to turnaround with room for disembarking passengers to walk safely around the outside of the circle to the orientation area. The inside of the turnaround will be grassed porous paver blocks. This turnaround will be able to support some parallel parking during off-season and off-hours only.

Parking on GLSHS Property Directly South of Museum

Approximately 17 spaces can be accommodated in the existing paved area adjacent to the habitat southeast of the museum. At the northeast end of this strip of parking will be the first visitor orientation area.

Staff Parking Lot

This area will consist of a paved access drive connecting the south parking lot with the rear of the gift shop and connect to the sidewalk that is alongside the gift shop. This will allow direct access to the museum for delivery vehicles without requiring vehicles to drive on sidewalks, thus eliminating conflicts with pedestrians. The paved access drive will be located with approval from USFWS in order to minimize the loss of habitat and will generally follow the power line easement.

USFWS will work with parking engineers to locate up to 12 parking spaces along the service drive, designed to minimize loss of habitat. USFWS must approve final habitat removal for parking as a conservation value determination and will require that mitigation occur on GLSHS property at a ratio of at least 2:1. USFWS will determine the final surface of the staff parking spaces (paved, gravel, or grassed paver blocks) following approval of an engineered plan for staff parking. If DNR and USFWS approve additional tree removal in this area for fire prevention management, that may influence the final footprint of the staff parking area.

Paving/Striping and Expansion of South Parking Lot

The existing south lot will be allowed to be paved according to an agreement between all three parties. In exchange for this agreement, additional habitat will be created by GLSHS in various areas described elsewhere in this Plan. USFWS will ensure that the habitat creation occurs in a timely and appropriate sequence with other development to guarantee the terms of the agreement are met.

An engineered parking plan and striping will help organize orderly parking in this lot. Expansion of this lot will remove the small 'triangle' of habitat at the intersection of GLSHS, USFWS, and DNR property and any other vegetation that has grown up in the easement footprint. This habitat will be replaced with new habitat as described in the mitigation and habitat restoration plan to be completed by GLSHS (see page 40).

This paved parking area will accommodate approximately 30 cars, 20 RVs, and 4 buses within the existing footprint as shown on the figure. This lot is owned by the DNR, with an easement for parking granted to GLSHS through the Chippewa County Road Commission.

Signage to Direct RVs/Oversized Vehicles to Use the South Lot

There will be no parking for RVs or oversized vehicles in the north lot area. At the point where traffic must turn into the south lot, there shall be clear and definitive signage that directs those oversized vehicles to park in the south lot. This will be necessary to eliminate congestion in the north lot.

Bike Path/Pedestrian Walkway through parking

Whitefish Township and the Michigan Department of Transportation (MDOT) have constructed a 4-foot bike path on each side of Whitefish Point Road. This bike path terminates at the existing north lot. These bike paths will continue through the south parking lot with striping at the same width and will terminate at the first visitor orientation plaza. Final design of bike paths through the parking area will consider the safety of cyclists and maintain the bike route developed by MDOT and Whitefish Township. Bike racks will be available in the plaza area.

Parking Expansion Along Road Right of Way

To accommodate additional parking without removing habitat, this Plan will place parking spaces within the current roadway in the area directly across from the gravel lot. An area extending up to 13 feet from the edge of the pavement into the right-of-way on the southeast side of the road will be utilized to accommodate perpendicular parking. Habitat in this area is subject to regular impact from mowing and snowplowing because it is in the road right of way. No filling of

wetlands in construction of this parking expansion shall be allowed. Parking shall not be allowed further south along the road right of way than the south boundary of the gravel parking lot. As many as 63 spaces can be placed along this edge of the roadway.

Traffic Calming Measures Shall Be Employed to Slow Incoming Traffic

Because parking is proposed within the existing county road right-of-way, measures must be taken to ensure that traffic is slowed to below 15 mph as it comes around the final curve toward Whitefish Point. Road narrowing with vegetated bump-outs and restriping can help accomplish this, as well as signage. Highly visible signage welcoming visitors to Whitefish Point at the entrance to the south parking lot will help attract drivers' attention to slow down. Signage just before the final curve before the parking area would help warn motorists to prepare to slow down. Traffic speeds in the parking lot will be posted at 5 mph and will be monitored.

Summary of Parking Changes

If all of the parking projects identified above were completed, it would result in a net reduction of 2,300 square feet of pavement on GLSHS property. The expansion of pavement along the road right-of-way and paving of the existing gravel lot would increase pavement on the offsite (DNR) area by 29, 275 square feet. However, this paved area would occur primarily within the existing gravel lot footprint. As described above, all habitat lost as a result of parking changes would be adequately mitigated.

Monitoring:

The Joint Committee shall review parking according to the standards described on page 35 under Parking Considerations.

G. Buildings

Management Goals:

The construction and use of buildings at Whitefish Point shall support the following management goals:

- All new construction shall minimize impact on sensitive habitat according to a determination of conservation values.
- Buildings shall provide an authentic historic interpretation of the site, by following the National Historic Preservation Act guidelines for new construction.

- Buildings shall accommodate interpretation of maritime and natural history of Whitefish Point, through programs, displays, exhibits, etc.
- Buildings shall support the needs of the property owners to administer programs and generate revenue from visitors through the collection of entrance fees and sales of gift items.
- Buildings shall serve the minimal needs of visitors to Whitefish Point, including restrooms, refreshments, and shelter from the elements and insects.

Summary of Current Use:

All of the structures on the site are historic as defined by the State Historic Preservation Office, except for the museum, multi-purpose gift shop and fiberglass huts. The MAS/ WPBO building is not considered by SHPO to be an important historic structure. The buildings provide an attraction for tourists to interpret maritime history, through both historic architecture and interpretation activities within the buildings such as displays, photographs, and information.

Following is an inventory of all existing structures' square footage and allowed occupancy, along with current and projected uses. Square footage calculations are from a Parking/Traffic Analysis Report, and do not include unoccupied basement space.

Lightkeeper's Quarters (2,828 sq. ft./total occupancy 94)

This facility is exclusively used for interpretation to visitors of the life of a lighthouse keeper at a remote lightstation. It consists of detailed restoration of the living quarters, replete with local and actual historic artifacts that help interpret life at Whitefish Point since the late 1800's. This building has some storage space in the basement, but it isn't environmentally controlled and therefore is not suitable for storing sensitive artifacts. This building does not have public restrooms.

Lighthouse

Currently, the U.S. Coast Guard continues to maintain and operate the automated light and tower adjacent to the Keeper's Quarters. It is anticipated that within the next several years, the Coast Guard will abandon the light completely and offer the facility to the GLSHS for continued maintenance.

Old Theater/Staff Residence' (1,152 sq. ft./total occupancy 12)

A theater occupies the main floor of this building, while the second floor is used as a staff apartment. Occupancy of the theater in the lower level is approximately 30. Because of the popularity of the videos that GLSHS presents, there are frequently

lines of people waiting to enter the theater. The upstairs currently is used as housing for GLSHS administrative staff. There are no public restrooms in this building.

'Old Gift Shop' (730 sq. ft./total occupancy 49)

This historic structure has been used as a secondary concessions shop for visitors. Some prepared and packaged foods are sold here, but there is not seating. This building does not have public restrooms.

Boat House (940 sq. ft./total occupancy 19)

This building was recently renovated for interpretation of a Coast Guard lifesaving boat and activities associated with lifesaving.

Fog Signal Building (1,055sq. ft./total occupancy 4)

This historic building is unoccupied, and in a general state of disrepair. It is currently used for limited storage. As a brick historic structure from the 1940's, this building is not architecturally matched with other structures from before the 1920's. Its purpose was to house the diaphones that would emit a signal to assist boats with navigation during low visibility conditions. The structure has a basement with large air compressors. This building does not have a public restroom.

Crews Quarters (3,170 sq. ft./total occupancy 16)

Current use of this historic structure is to provide temporary overnight housing for special guests and financially contributing members of the GLSHS, as well as seasonal housing for interns. To date, year-round use has been limited to non-contributing guests. It is connected to the septic system and drain field that was installed with the public restrooms attached to the Gift Shop.

Gift Shop Building/Administrative Building (Gift Shop/Public Toilets: 2,992 sq. ft./total occupancy 100; Administrative Offices: 2,209 sq. ft./total occupancy 22)

This facility was built in 1999. It accommodates several uses, including administrative offices for GLSHS Executive Director and support staff, and a conference room on the upper level. On the main level is a public gift shop that primarily sells maritime and northern Michigan souvenirs. On the lower level are public restrooms that currently serve all visitors to the site.

Museum (3,336 sq. ft./ total occupancy 111)

This non-historic building was constructed in 1986 as a museum to interpret shipwrecks on the Great Lakes. It houses many artifacts related to shipwrecks,

including the bell from the famous *Edmund Fitzgerald*. This building has restrooms attached, but the septic system capacity is unknown.

Fiberglass Huts/Shed

The two fiberglass huts were previously owned by the U.S. Coast Guard, but one has been given to the GLSHS for use to store gifts and food supplies. The huts are climate controlled and impenetrable to rodents. The second hut continues to be used by the Coast Guard but is expected to be given to GLSHS when the light tower is abandoned.

The shed building at the north end of the parking lot, below the lookout tower, is used primarily for storage of lawnmowers and other landscaping equipment.

WPBO Owls Roost Building (864 sq. ft.)

This structure is thought to be a historic garage for the Coast Guard station. It is currently used by the WPBO as the Owl's Roost Gift Shop and interpretive center. There is also a very small area dedicated to storage of equipment for birding research and bird banding. This structure is not connected to any water or septic system.

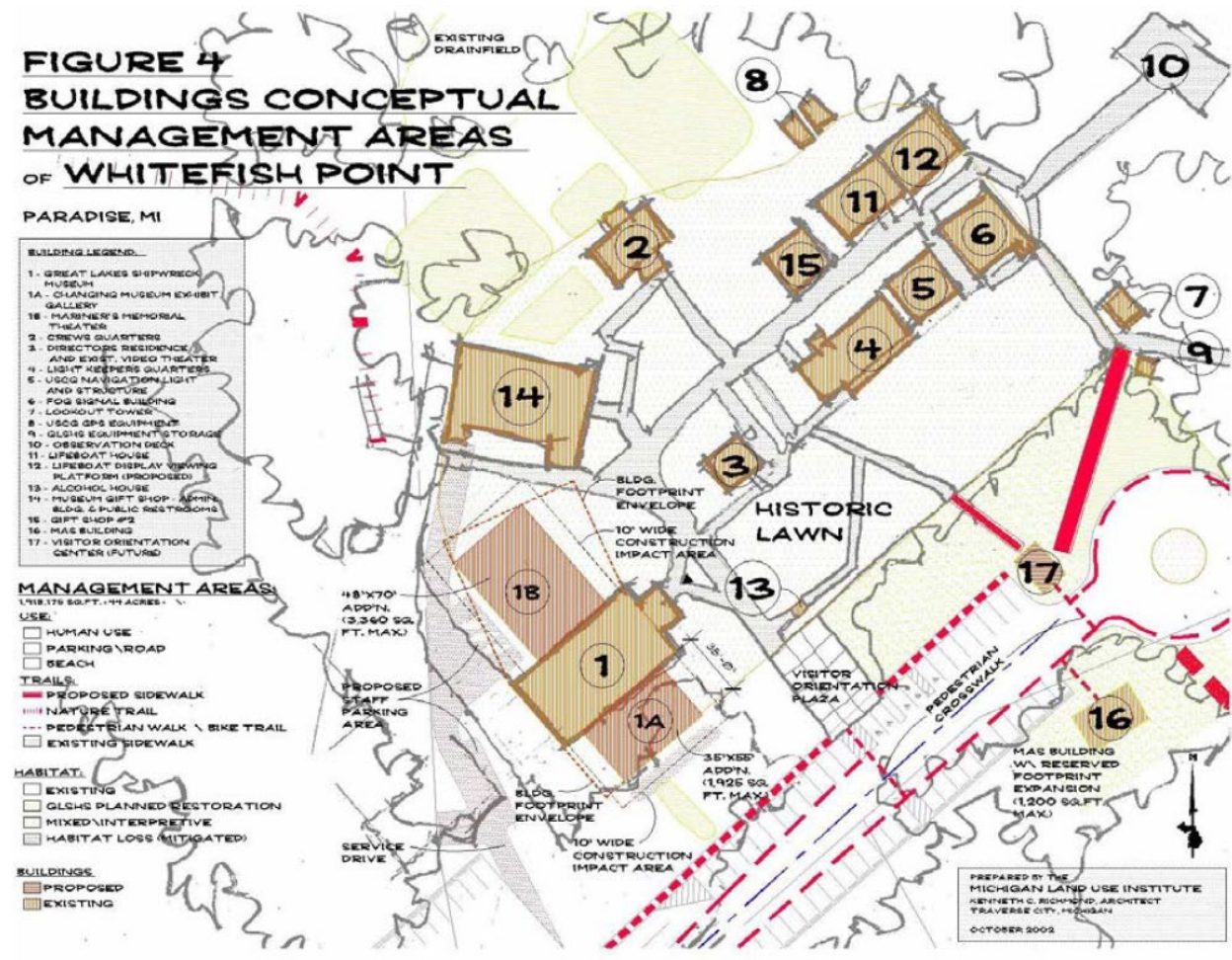
Preferred Future Management Objectives

Map 4 depicts the footprints of the existing and proposed buildings at Whitefish Point. Use of these facilities, and new construction, shall follow these objectives:

1. New construction and changes in use of buildings shall not impact the conservation values of Whitefish Point, subject to a determination by USFWS.
2. All buildings at Whitefish Point shall be managed according to the provisions of the National Historic Preservation Act, and specifically, the Secretary of Interior's Standards for Rehabilitation which require that a property "be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment". Adverse impacts must be avoided or mitigated.
3. The State Historic Preservation Office has designated a line at Whitefish Point northeast of which is a historic zone. The purpose of this historic zone is to encourage historic authenticity. Outside this historic zone, the SHPO has indicated that it is more willing to mitigate the adverse impact of new construction. The SHPO has developed Design Guidelines for new construction outside the historic zone at Whitefish Point.

4. Uses in the buildings should be consistent with the missions of the non-profit agencies that own the property and operate at Whitefish Point in the public interest.
5. When vacant space becomes available in existing buildings, all parties agree that a principle of considering shared use between the parties is preferred. The Cultural Resource/Building Use Management Plan will assist with identifying opportunities for shared uses. The Shared Use and Occupancy Agreement that outlines the terms for sharing restrooms and parking is a precedent for future shared uses between the parties.
6. New construction and changes in use beyond what is described in this Plan must consider the constraints of the septic system. Water monitoring data in conjunction with visitation estimates can indicate the available septic capacity.
7. The buildings at Whitefish Point could be susceptible to an uncontrolled forest fire. There are precautionary measures that can be taken to manage for the prevention of building damage from forest fire, including removal of woody vegetation close to buildings, especially on the west side.
8. The SHPO has indicated that reconstruction of historic structures that previously existed during the historic period of significance is allowed. Such construction must be done authentically, and with SHPO oversight.

Map 4: Building conceptual management areas of Whitefish Point



Building Legend

- | | |
|--|---|
| 1. Great Lakes Shipwreck Museum | 9. GLSHS Equipment Storage |
| 1A. Changing Museum Exhibit Gallery | 10. Observation Deck |
| 1B. Mariner's Memorial Theater | 11. Lifeboat House |
| 2. Crew's Quarters | 12. Lifeboat Display Viewing Platform (Proposed) |
| 3. Director's Residence and Existing Video Theater | 13. Alcohol House |
| 4. Light Keeper's Quarters | 14. Museum Gift Shop - Administration Building and Public Restrooms |
| 5. USGS Navigation Light and Structure | 15. Gift Shop #2 |
| 6. Fog Signal Building | 16. MAS Building |
| 7. Lookout Tower | 17. Visitor Orientation Center (Future) |
| 8. USGS GPS Equipment | |

Specific Building Structure and Use Plans:

Cultural Resource Management/Building Use Plan

In consultation with SHPO, GLSHS will retain a historic preservation consultant and/or cultural resource management consultant from a list provided by SHPO, paid for from grant funds specifically awarded for such purpose, to advise with respect to the efficient use and management of square footage of buildings on site. The consultant will consider the elements described in this Plan but will also develop new ideas or improvements to be fully considered and agreed to at the discretion of GLSHS. The utilization of this study will be considered as a GLSHS management tool.

Shipwreck Museum Expansion

GLSHS plans to build two new wings to its existing museum. A proposed southeast wing of 1,925 sq. ft. (55' x 35') will accommodate a changing museum exhibit. The configuration of this wing has been modified from the drawing attached to the Settlement Agreement in accordance with terms agreed to by both MAS and GLSHS. The wing shall also be located further south along the existing museum to avoid destroying a large tree.

A larger northwest wing will house a 125-seat theater, along with a Mariner's Memorial totaling 3,360 sq. ft. (48' x 70'). Standard construction practices will be employed, which may destroy or degrade habitat up to 10' from the footprint of the expansion. Mitigation for the loss of habitat caused by the construction of both wings shall be completed to the satisfaction of USFWS and shall include a three-year performance guarantee in a 10-foot 'construction impact' area around the wings, and an additional 10' (20' total) from the southeast wing, to replace any trees that die due to construction disturbance.

SHPO has indicated that the square footage, interior use and attachment of the wings to the existing structure are approved, pending approval of the footprint and design that meets the historic guidelines. GLSHS has agreed to design these structures to meet these SHPO guidelines:

SHPO Guidelines:

In preparing the guidelines for the expansion of the GLSHS museum, the SHPO has indicated that it made the following assumptions:

- *The square footages reflected in the "Alternate Museum Plan", Settlement Agreement, Exhibit 1, is necessary and will meet the needs of the (GLSHS),*

- The new addition consists of three functionally independent but related units, consisting of the changing exhibit space, the Mariner's Memorial and the new theater space. These units need to have both external and internal access, however the access need not be directly linear.
- Removing the roof of the existing museum building to create a second floor is neither feasible nor appropriate.
- Based upon the overall character of the site the creation of a single monolithic building to house all of the required new and existing museum functions is not appropriate in this instance.
- That introduction of a contrasting exterior skin system would be visually distracting and would likely draw additional attention to the new additions.

Guidelines

1. The current character of the site is one of multiple buildings, similar in massing, size, scale, and proportion, closely spaced to create a functional complex. The additions to the museum should seek to continue this visual concept of multiple buildings.
2. The southern [east] museum wings shall be sited such that is minimally impacts views into the historic site upon a visitor's arrival.
3. The functional units of the new addition shall be expressed on the exterior of the building through manipulation of the spaces and offsetting of façade planes. The additions shall be offset from the front (East [North] Elevation) of the existing building and other addition units.
4. No portion of the additions shall project beyond the northeast (front) plane of the existing museum building.
5. The rooflines of the additions shall not create the impression of a continuous mass. The roofs of the individual units shall read as visually independent elements.
6. New roofs shall not exceed the height of the existing museum building's ridgeline, excluding the peak of the watchtower element.
7. Create the impression of independent entries into independent buildings creating the character of separate buildings.
8. The proposed new units may be angled slightly from the plane of the existing museum building façade to help strengthen the visual separation of the units and minimize access travel distances.
9. A covered walk area may connect the entries to the new units. The possibility of incorporating an open connector should be investigated.

10. *The architectural details, profiles, proportions and materials of the addition shall be based on those found on the historic buildings but shall not be duplicative.*
11. *Needed staff parking and service facilities for the new additions shall be located at the rear (west [south] elevation) of the building.*

The SHPO has indicated that the reduction and reconfiguration of parking in the north lot is mitigation for the adverse impact of museum wings. Therefore the reduction in pavement in the north lot must occur before or simultaneous with construction of the museum additions, such that funding could be secured, plans engineered and approved by SHPO for the additions, and construction planning and scheduling could occur such to allow completion of both projects (parking modifications and museum expansion) at approximately the same time.

Building Footprint Envelope

GLSHS has not yet completed engineered design plans for the new museum wings. Therefore, given the intent of the SHPO guidelines to allow flexibility in design, it was determined that a building footprint “envelope” can be defined in this Plan, rather than a final footprint. As long as the final building footprint is constructed within this envelope and does not exceed the total square footage already approved, it is likely to receive approval from USFWS and SHPO. This Plan identifies a somewhat larger building envelope that is angled from the existing museum for available construction for the northwest wing as shown on Map 4. The larger building envelope would permit some modification of the configuration of the NW wing as may be determined desirable through the engineering and review process.

The building envelope for the southeast wing footprint will not extend beyond 35 feet from the existing museum, as agreed to by all parties and will shift south to attempt to preserve a large jack pine tree. The intent of the southeast building envelope is to protect the environmentally sensitive habitat to the greatest extent possible.

Construction of Second Keeper's Quarters

The State Historic Preservation Office has identified a historic second assistance keeper's quarters building footprint that is currently within the existing paved north parking lot on GLSHS property. The building was removed in the 1930's. SHPO has noted that interpreting the location of this historic building is important. Construction of this building is allowable according to the following conditions:

- Interior use of the lower floor of the building shall be as a visitor orientation center and bus visitor greeting and shall allow for predominant use of the

main floor to interpret natural history of the site by USFWS and/or MAS/WPBO.

- Administrative use of the upper floor by USFWS shall be allowed.
- Because the building footprint is located on GLSHS property, the other parties shall negotiate terms for occupation with GLSHS. Those terms shall not exceed the shared cost of maintenance and upkeep expenses, which shall be approved in advance by each party before those expenses are incurred. In-kind payment may be negotiated for those expenses.
- USFWS shall be authorized to negotiate with and compensate GLSHS for terms of shared maintenance and upkeep costs and may sublet the use of the lower floor of the building to MAS.
- MAS is authorized to negotiate a sublease with USFWS that includes payment by in-kind consideration of services.
- The GLSHS shall reserve the right to use one 16-foot wall without doors or windows for signage interpreting the historic use of the building, as well as orienting visitors to the features of the GLSHS property. They also reserve the right to install a counter for storing brochures and other materials to assist in greeting visitors. This counter may be shared with other building occupants.
- USFWS, or MAS as a sub-lessee, may use all of the other wall space and perimeter of the interior of the building for interpreting natural history of Whitefish Point. However, interior floor displays should be installed to maintain sufficient floor space to accommodate bus passengers who will be greeted by GLSHS in the building.
- MAS will agree to reduce the reserved square footage of its future building capacity by the amount of total square footage of this building (16' x 24' main floor, and 16' x 24' upper floor).
- SHPO shall review and approve all exterior design and construction elements to ensure historic authenticity; and approve final footprint location.

MAS has expressed its reservation over the increase in building structures at Whitefish Point and would prefer that the second keeper's quarters not be constructed but interpreted instead with a memorial marker.

MAS Building/Expansion

MAS/WPBO continue to reserve the right to build an additional building or expand their existing structure, as described in the 1992 Comprehensive Plan. However, they have no immediate plans to do so. If this new construction occurs, the following conditions will apply:

- MAS and WPBO have agreed to follow SHPO design guidelines for new construction, and to receive SHPO review and approval.
- The maximum new construction allowed by MAS/WPBO is a two-story 30' x 40' building (2,400 square feet).
- The use of the facility will be as an interpretive center for bird migration and natural history of Whitefish Point. Additional uses could include restrooms and an associated septic system, a bird banding lab, small administration office, and gift shop.
- MAS/WPBO have indicated they are willing to consider locating these future uses on GLSHS property if the opportunity arises, and satisfactory terms can be negotiated.
- MAS/WPBO have indicated they will reduce the square footage reserved for their future expansion if the historic second keeper's quarters is built on GLSHS property, and the predominant use of the building is by USFWS. The square footage of the second keeper's quarters is 16' x 24' (main floor), and 16' x 24' (upstairs) for a total of 768 square feet. This means the reserved square footage for new construction by MAS/WPBO would be reduced by that amount (from 2,400 sq. ft. to 1,632 sq. ft.). The footprint may exceed 30' x 40' if construction is only one-story.

Theater/Residence Building

Currently there is no change in use proposed for this building. However, if a new theater is constructed, the downstairs will become available for a new use. As with any structure on the site, any new use will require a conservation value determination. As a residence, seasonal restrictions on outdoor lighting apply. Also, during migration season, blinds should shield indoor lighting after dusk.

Crews Quarters

Current and future use of the crews' quarters as overnight housing for contributing members and special guests of GLSHS will be allowed. GLSHS intends to only use rental of this space as a means of membership development, conducting business and fundraising for its programs. GLSHS will annually review its rates with lodging establishments in Paradise to ensure that its rates are not competitive, but instead will set rates well above the average in Paradise.

A seasonal restriction will apply to indoor lighting during migratory bird season (as defined by a USFWS conservation value determination). Lights should be turned off or window blinds drawn after midnight to minimize impact on migrating birds being attracted to the light, disoriented, and possibly colliding with windows or building. During migratory bird season, permanent outdoor stationary lighting such

as porch lights shall be turned off from dusk to dawn to avoid confusing migrating birds. This prohibition excludes the Coast Guard beacon, automobile lights, and a reasonable temporary use of outdoor lighting to facilitate people moving safely across the grounds. Migratory season is described as April 1 through May 31 and August 15 through Nov. 15.

Boat House

No change, except to explicitly allow construction of a deck 'rollway' into an adjoining wetland to allow the interpretive lifesaving boat to be moved in and out of the boathouse.

Second Gift Shop

If USFWS finds, as a result of monitoring, that food waste or litter is attracting nuisance or pest species, it shall perform a determination of its impact on conservation values of the site and shall restrict food service as deemed appropriate.

Food service will be limited to only serving foods that are microwavable (such as pasties, hot dogs or pizza) or are pre-packaged (chips, pretzels, candy). No conventional ovens or fryers will be allowed.

Fog Signal Building

GLSHS will use this building as a workshop and for storage. Funding has been secured to seal and restore the outside of this building. This structure is also planned to have a replica low-decibel fog signal that will sound on foggy days to simulate the old fog signal. The Joint Committee shall review the decibel level and usage during migratory bird season to evaluate and if any concern is documented, the audible level will be adjusted accordingly any impact.

Monitoring

USFWS shall review the pace of new construction to ensure that it does not far exceed the rate of required habitat creation. Bird mortality from striking windows and structures will be documented, and if deemed necessary, USFWS will conduct a conservation value determination on use of lighting.

VII. PLAN IMPLEMENTATION

Development of this Plan required considerable effort and cooperation from each of the property owners at Whitefish Point. The Plan represents a vision of how human uses and natural resources will be managed at Whitefish Point in the future.

It is the intent of each of the parties that have endorsed this Plan to see that it is implemented.

This Plan, as with any plan, is a living document, which means it may be amended. The Plan is a starting point for future discussions, which, if entered into in good faith, should be able to come up with much more creative solutions to the problems of managing humans and natural resources at Whitefish Point.

This section of the Plan is designed to highlight suggestions that will help with the implementation process. As a guiding tool, a plan cannot dictate exactly when or even if the elements described within are implemented. Only the parties involved can ensure that the ideas in the Plan become reality. However, this Plan does provide clear direction to how future development can occur at Whitefish Point and is enforceable according to the provisions of the above-referenced settlement agreement and transfer statute. The settlement agreement states, “all parties agree to exercise good-faith efforts to reestablish the Joint Committee and to establish guidelines for the operation of the Joint Committee”. Clearly the Joint Committee bears the burden for implementing this Plan and shall be responsible for resolving differences in interpretation of the Plan. Each of the parties agree to support, or at least not actively oppose, any of the necessary permits to implement this Plan. As a guiding document, this Plan attempts to be as specific as possible in describing its implementation.

This Plan shall not be construed to waive the requirement to obtain all other necessary local, state, county, or federal permits or approvals. These permits may allow additional opportunities for public input. The USFWS has indicated that they will comply with the National Environmental Protection Act for projects identified in this Plan that will occur on USFWS property. The following section will outline some of the guidelines that should be considered to ensure implementation.

A. Joint Committee

The Joint Committee shall have ultimate authority for implementing the Plan. The Joint Committee is comprised of the three entities that own property at Whitefish Point: the U.S. Fish and Wildlife Service, Great Lakes Shipwreck Society and Michigan Audubon Society. However, other parties have significant interest, and useful input that can be contributed to the Plan implementation. Representatives from the following groups shall be considered ex-officio (non-voting, but fully participating) members of the Joint Committee.

- State Historic Preservation Office
- Whitefish Point Bird Observatory

- Whitefish Township
- Michigan Department of Natural Resources

B. Subcommittees

The Plan identifies two subcommittees of the Joint Committee that will be necessary to aid in Plan implementation. Membership on subcommittees should be broader than just the principal people involved in the Plan development, but instead should reach out to the community and utilize expertise from other groups.

1. Signage and Interpretation Subcommittee

The U.S. Fish and Wildlife Service has access to staff expertise in sign development, as well as trail development. Members of GLSHS, MAS, and WPBO will also assist in working on this subcommittee, and assistance from SHPO will be sought.

The Signage and Interpretation Subcommittee will develop a plan for communicating the conservation values of the site to visiting tourists. The plan should broadly address opportunities for providing information to visitors about the site, including rules of behavior and the location of points of interest. Specific elements to be addressed in a Signage and Interpretation Plan include:

- A description of the signs needed in all areas of the site to help identify and interpret historic buildings and maritime history, as well as natural history of the site. Signs identifying appropriate behavior, and directing visitors are also recommended.
- A sign design theme (color, logo, materials, etc.) shall be selected that will be incorporated for all signs on the site. The design theme may accommodate variations in directional/management, historic interpretative, and natural resource interpretive signs.

2. Habitat Maintenance and Restoration Subcommittee

The Joint Committee shall appoint a Habitat Maintenance and Restoration Subcommittee to identify degraded areas and to develop a specific plan for restoring them as useful stopover habitat. USFWS and MAS/WPBO will lead this committee with input from GLSHS, members of the public (especially birders), Michigan Department of Natural Resources /Michigan Natural Features Inventory staff, MSU Extension agents, and Natural Resources Conservation Service staff. Specific issues to be included in the plan include:

- Develop a Trail Plan that includes:
 - Locations of trails

- Any seasonal access restrictions to trails
- Determine appropriate trail hardening practices and locations.
- A plan for communicating trail locations (maps) and rules to visitors
- Assist USFWS in developing restoration and habitat improvement plans, and monitor progress

C. By-laws

The Joint Committee shall establish by-laws to administer meetings satisfactorily, and that at a minimum address the following issues:

- Process for amending the Plan.
- Approval of minor modifications to the Plan, and a definition of what is “minor”.
- How many people will represent each entity and identify which individuals each agency wants notified.
- Will proxy votes or alternate members be allowed.
- A process for ensuring the Committee runs smoothly (selection of a Chair with responsibilities for scheduling meetings, etc.)
- How many meetings are required, meeting locations, and whether ‘distance technology’ will be used to facilitate meetings.
- Sanctions for violating the Plan agreement (outside of court).
- Decision-making process for agreeing on issues such as allotment of maintenance costs.

D. Funding and Implementation Steps

The Joint Committee shall adopt a capital budget plan for the elements of this Plan that will be managed by the Committee. All parties are expected to endorse all elements of the Plan in applications for funding, and under no circumstance shall any party oppose funding for implementation of any element of the Plan. Lead responsibility for acquiring and managing grants will shift between parties according to the elements. This Plan is not intended to suggest or require that any party is obligated to implement the proposed changes with their own funds. It is understood that most of these capital costs will be borne with grant funds found from outside agencies.

Below is a description of capital and in-kind staff costs that have been identified within the Plan, and a general assignment of responsibility among the parties for ensuring these elements will be implemented:

Signage

All parties will share funding responsibility through the Signage and Trails Subcommittee of the Joint Committee.

GLSHS has some signage already, and a grant to be completed by next spring. USFWS has a sign shop available that may be able to provide important in-kind assistance in sign development and production.

Trails & "Fencing"

All parties will share funding responsibility through the Signage and Trails Subcommittee.

MAS, WPBO, and USFWS will take primary responsibility for signage on trails. GLSHS will take primary responsibility for historic interpretive signage on lawns. Responsibility for developing signage in the parking areas and visitor entry pavilion will be shared.

Restoration/Revegetation

GLSHS shall be solely responsible for seeking funds and implementing the creation of habitat in the areas described in Section VI. A. and below. USFWS and MAS will be expected to support any proposals for funding. USFWS will approve a final plan for habitat restoration, with assistance from the Habitat Maintenance and Restoration Subcommittee. Each party will be responsible for the costs of restoring habitat required for mitigation of habitat destruction associated with their capital improvement projects or management practices.

GLSHS agrees to apply for habitat restoration funding simultaneous with construction funding. Future construction activity will not proceed until habitat mitigation for previous projects is completed. GLSHS agrees to operate in good faith to seek funds for the creation of habitat, as diligently as for new construction. Habitat creation shall generally occur at a similar pace to construction but shall not be required in entirety before construction or paving can be initiated. USFWS shall be the final arbiter to ensure that habitat creation is occurring at a reasonable pace relative to new construction. USFWS will not approve a conservation value assessment for future or proposed construction projects should it determine that development is proceeding disproportionate to habitat restoration or mitigation.

Habitat Improvement:

- 1) Removal of paved parking in north lot to create mixed human interpretive/habitat and interpretation of a historic second keeper's quarters mitigates the adverse impact of museum wings, as required by the

State Historic Preservation Office. Habitat created in this area will be similar in type and amount to what may be removed along the road right-of-way.

- 2) Removal of paved parking in north lot to create new habitat areas mitigates the impact of an access drive and staff parking, and the loss of the “triangle” of habitat at the southwest corner of GLSHS property.
- 3) Revegetation of the path directly south of the museum that splits the large block of habitat (where the propane pig is located) mitigates the impact of an access drive and staff parking, and the loss of the “triangle” of habitat at the southwest corner of GLSHS property.
- 4) Revegetation of the portion of ‘beach access’ area along the road easement that is on GLSHS property mitigates the impact of an access drive and staff parking, and the loss of the “triangle” of habitat at the southwest corners of GLSHS property. The portion of this area on USFWS is not directly connected to any mitigation.
- 5) Habitat restoration along trails on MAS/USFWS property is not connected to mitigation.
- 6) GLSHS has agreed to create new stopover habitat in the areas identified on the attached maps, generally behind the Crews’ Quarters building and around the drain field.

Parking - North

All parties will share responsibility through the Joint Committee for funding the reduction and reconstruction of the north parking lot. The Joint Committee shall review and approve the footprint of the final engineered parking plan for consistency with the footprint and conditions approved in this Plan before it can be constructed. Approval of the south lot parking plan shall be required before implementation can begin on the north lot.

Parking - South

GLSHS will take the lead funding responsibility in developing the south lot. Joint Committee shall review the footprint of the final engineered parking plan for consistency with the easement footprint before it can be expanded and paved, and USFWS shall approve the final engineered parking plan for consistency with the conditions agreed to in this Plan.

MAS and USFWS will provide organizational support for the south lot in acquisition of funds, and representation of the conceptual design to the county road

commission and public. This support is based on the benefit of the reduction of the north lot.

Staff Parking and Access Drive

GLSHS is solely responsible for implementing a paved access drive and staff parking area behind the museum. This area shall be constructed after or simultaneous with the museum expansion and reconfiguration of the north lot to allow USFWS to approve a final footprint.

Visitor Orientation Plaza

All parties will share responsibility in constructing a visitor orientation plaza and sign kiosk through the Joint Committee. The Joint Committee shall approve a final design based on the goals outlined in this Plan before it can be constructed. The final size and scope of the visitor orientation plaza shall be smaller if a visitor orientation center is constructed.

Construction of Replica Second Keeper's Quarters Building

The construction of a historic replica of the second keeper's quarters building is allowed in this Plan according to the terms outlined in the previous section. Because the building footprint is on GLSHS property, it is expected that GLSHS will lead the effort to construct this building. However, because it will be largely occupied and used by USFWS and MAS, it is expected that they will actively support its construction.

E. Shared Maintenance Costs

The Shared Use and Occupancy Agreement states that all parties will share the costs of maintenance for the septic system and restroom. The parties agree to restrict the shared "expense of maintaining the GLSHS public restroom facilities and septic system" to these cost items:

- 12% of wages of maintenance staff (based on square footage of restroom)
100% of restroom supplies
- 12% of heat for entire multi-purpose building, less costs from December through March
- 12% of garbage collection costs
- 100% of septic pumping
- 12% of electricity for entire multi-purpose building, less costs from December through March
- 12% of repair and maintenance for entire multi-purpose building

12% is based on the percentage of the square footage of the restrooms to the entire square footage of the multipurpose building.

In accordance with the terms of the Shared Use and Occupancy Agreement, the percentage paid by each party of this total cost will be determined by the results of a survey of visitors to Whitefish Point. The survey will indicate the primary property that attracted them to come to Whitefish Point. Shared expenses for the summer of 2003 will be based on a percentage agreed upon in advance but will be adjusted thereafter to reflect the results of the visitor survey. Thereafter, expenses shall be allocated based on the results of the most recent visitor survey conducted by the Joint Committee.

F. Monitoring

All parties will share responsibility for monitoring elements of the Plan through the Joint Committee.

USFWS and MAS will take lead responsibility for monitoring habitat and trails, especially through the use of in-kind staff. If monitoring results indicate that management goals and objectives are not being achieved, the Joint Committee is responsible for adopting management practices to ensure that the goals are not compromised.

Groundwater monitoring

According to the terms described earlier in this Plan, the costs for installing groundwater monitoring wells shall be borne by MAS, and the annual costs of water sampling shall be borne by GLSHS.