



## **Appendixes, Selected References, Preparers and Consultants, and Index**

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## APPENDIX B: ANALYSIS OF BOUNDARY ADJUSTMENTS

As one of the provisions of Public Law 95-625, the National Parks and Recreation Act of 1978, Congress directed that the National Park Service consider, as part of a planning process, what modifications of external boundaries might be necessary to carry out park unit purposes.

*NPS Management Policies 2006* (section 3.5 Boundary Adjustments) state that the National Park Service will conduct studies of potential boundary adjustments and may make boundary revisions for the following reasons:

- 1) Protect significant resources and values, or to enhance opportunities for public enjoyment related to park purposes;
- 2) Address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads; **OR**
- 3) Otherwise protect park resources that are critical to fulfilling park purposes.

Additionally, all recommendations for boundary changes must meet the following two criteria:

- 4) The added lands will be feasible to administer considering their size, configuration, and ownership; costs; the views of and impacts on local communities and surrounding jurisdictions; and other factors such as the presence of hazardous substances or exotic species;
- 5) Other alternatives for management and resource protection are not adequate.

The following areas were assessed as potential additions to the Lakeshore based on public comments received and internal scoping.

### North and South Fox Islands

North Fox and South Fox islands are located in Lake Michigan, approximately 17 and 24 miles northeast, respectively, of North Manitou Island. The Fox Islands are part of Leelanau County, Michigan. North Fox is the smaller of the two islands at about 832 acres. The north island has been owned and managed by the state of Michigan since the year 2000. South Fox Island is about 3,400 acres in size. Since 2001, about two-thirds of South Fox Island has been privately owned. The other third is owned and managed by the state, including a lighthouse on the southern tip of the island. There is no regular ferry service to South Fox Island, and it has no docks, fuel, or sheltered harbor. The state manages a special deer hunt on the island, and hunters can access the area using the seasonal service offered by the Manitou Island Transit ferry.

The Fox Islands contain resources and values related to the Lakeshore's purpose (dunes and beaches, for example). However, the resources and values at the islands are not critical to accomplishing the Lakeshore's purpose, nor are the islands required for operational or management needs for the Lakeshore. If the islands were incorporated into the Lakeshore boundaries, they would be difficult and costly for the National Park Service to administer due to their distance from Lakeshore headquarters (more than 50 miles) and from the docks in Leland, Michigan (more than 30 miles). Adequacy of other alternatives for the islands' management and resource protection, such as continued management by the state and/or a long-term lease of lighthouse facilities by a nonprofit organization, depends upon the level of funding, as would be the case for NPS management. Dune areas on the Fox Islands are identified by the state of Michigan as "critical dunes areas," affording them special

protection under the Sand Dune Protection and Management Act of 1976, as amended. Because the Fox Islands do not meet NPS criteria for boundary adjustments, the islands are not considered for inclusion in the National Lakeshore boundary in this *General Management Plan*.

### Point Betsie Lighthouse

Point Betsie Lighthouse, built in 1858, is located on the Lake Michigan shore in Benzie County, south of Sleeping Bear Dunes National Lakeshore and north of Frankfort, Michigan. The lighthouse, which is listed on the National Register of Historic Places, is owned by Benzie County. In 2004 the lighthouse property was transferred by the Bureau of Land Management from U.S. Government management to ownership by Benzie County, with the Coast Guard retaining rights to operate the light and ownership of the modern house behind the lighthouse and the grounds on which that guest house sits. According to an operating agreement between Benzie County and the Friends of Point Betsie Lighthouse, Inc. (“Friends”), the capital assets will continue to be owned by Benzie County and operated by the Friends. The Friends are responsible for fundraising to accomplish this, along with the county who will apply for various state and federal grants.

The Point Betsie Lighthouse and its surrounding property do not contain resources and values related to the Lakeshore’s purpose. Including the lighthouse property within the National Lakeshore would not address NPS operational and management needs, nor are the resources and values at the lighthouse critical to fulfilling the National Lakeshore’s purpose. If the Point Betsie Lighthouse were incorporated into the Lakeshore boundaries, additional operational funding would be required for maintaining and administering this resource. The cooperative agreement between Benzie

County (owner) and the Friends of Point Betsie Lighthouse is an adequate alternative to NPS management and resource protection. For these reasons, the lighthouse is not considered for inclusion in the National Lakeshore boundary in this *General Management Plan*.

### North Manitou Shoal Light

The North Manitou Shoal Light (“the Crib”) is located offshore from Leland, Michigan. The light tower, which is still in service, marks the end of North Manitou Shoal, a shallow area of the Manitou Passage. The light is listed on the National Register of Historic Places and consists of a square, two-story, white steel building set on a massive concrete crib. The light is owned and managed by the U.S. Coast Guard.

The North Manitou Shoal Light does not contain resources and values related to the Lakeshore’s purpose. Furthermore, including the lighthouse property within the National Lakeshore would not address NPS operational and management needs, and the resources and values at the lighthouse are not critical to fulfilling the National Lakeshore’s purpose. If the North Manitou Shoal Light were incorporated into the Lakeshore boundaries, additional operational funding would be required for maintaining and managing the light. Because the lighthouse is still active, continued ownership and management by the U.S. Coast Guard is an appropriate alternative. For these reasons, the North Manitou Shoal Light is not considered for inclusion in the National Lakeshore boundary in this *General Management Plan*.

### Additional Lake Michigan Beach and Shoreline

During public scoping for this *General Management Plan*, a few members of the public suggested that the National Park

Service should acquire more beach or shoreline along Lake Michigan. The only specific suggestion along these lines was to acquire beach land located between Old Indian Trail (near the south end of the National Lakeshore) and Point Betsie, about 3 miles away. This area, which is bordered by Crystal Lake to the south and east, is largely forest land, but includes a dune area adjacent to the shoreline around Point Betsie. The area is in private ownership, and land uses include a golf course and numerous private residences.

This area does contain resources and values related to the Lakeshore's purpose (e.g., beaches and dune formations). However, including more beach lands within the National Lakeshore would not address NPS operational and management needs, and the resources and values in this area are not critical to fulfilling the National Lakeshore's purpose. In addition, many of the natural resources in this area have been severely altered and fragmented. The dune area that includes and surrounds Point Betsie is identified by the state as a "critical dune area," affording it special protection under the Sand Dune Protection and Management Act of 1976, as amended. The area between the south end of Sleeping Bear Dunes and Point Betsie would not be feasible to acquire due to very high real estate prices for Lake Michigan frontage.

### **Fishtown**

Fishtown is located on the docks along the Carp River where it empties into Lake Michigan in Leland, Michigan, north of Sleeping Bear Dunes National Lakeshore.

This 1-acre cluster of small wooden structures is listed on the National Register of Historic Places and is privately owned. Some of Fishtown's buildings were built in the late 1800s, when lumbering and iron smelting were dominant industries in northern Leelanau County. The fishing era began around 1900 and flourished over the next three decades, when most of Fishtown's fishing shanties, icehouses, and smokehouses were constructed. Most of the structures now house retail businesses, but fishing activities continue there today as well.

Fishtown has been purchased by the non-profit Fishtown Preservation Society to ensure that its historic integrity is preserved for public enjoyment. Their plan is to maintain and preserve Fishtown's historic structures, boats, and equipment, and to continue to lease the buildings to retail businesses, including commercial fishing operations, in order to continue public access there.

Fishtown does not contain resources and values related to the Lakeshore's purpose. Including the Fishtown property within the National Lakeshore would not address NPS operational and management needs, and the resources and values at the lighthouse are not critical to fulfilling the National Lakeshore's purpose. If Fishtown were incorporated into the Lakeshore boundaries, additional operational funding would be required for maintaining and administering this resource. Acquisition and management by the Fishtown Preservation Society is an adequate alternative to NPS management and resource protection. For these reasons, Fishtown is not considered for inclusion in the National Lakeshore boundary in this *General Management Plan*.

## APPENDIX C: COST SUMMARY OF ALTERNATIVES

	No Action	Preferred Alternative	Alternative A	Alternative B	Alternative C
<b>One-Time Capital Costs</b>					
<b>Facility (Construction)(1)</b>	\$3,200,000	\$14,100,000	\$11,000,000	\$40,100,000	\$27,800,000
<b>Non-Facility (2)</b>	\$3,400,000	\$3,400,000	\$3,400,000	\$2,700,000	\$2,700,000
<b>Deferred Maintenance (3)</b>	\$15,400,000	\$15,400,000	\$15,400,000	\$15,400,000	\$15,400,000
<b>TOTAL ALTERNATIVE COSTS (1)(2)(3)</b>	\$22,000,000	\$32,900,000	\$29,800,000	\$58,200,000	\$45,900,000
<b>Annual Operating Costs (in 2007 dollars)</b>					
<b>ONPS (4)</b>	\$3,900,000	\$4,400,000	\$4,200,000	\$4,400,000	\$4,500,000
<b>Staff- FTE (5)</b>	66	79	77	79	85

The presentation of costs in a general management plan is applied to the types and general intensities of development in a comparative format. The following applies to costs presented in this general management plan:

- The costs are presented as estimates and are not appropriate for budgeting purposes.
- The cost estimates were developed in 2007; they are very general and intended for alternative comparison purposes only.
- The cost estimates were developed using industry standards to the extent available and they represent the total costs of projects. However, due to cost estimating uncertainty, actual costs could be as much as 30% lower or 50% higher than noted.
- Actual costs will be determined at a later date and will take into consideration the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Initial construction was assumed to occur in year one *except* for construction of a Benzie Corridor scenic road (alternative B) and construction of a Benzie Corridor hike/bike trail (alternative C); these were assumed to occur in year 25. For the preferred alternative, Benzie Corridor construction costs (for a scenic road and/or hike/bike trail) were *not*

included because, similar to the no-action alternative, construction is not anticipated to occur within the life of the plan.

- Approval of the general management plan does not guarantee funding or staffing for proposed actions.
- Project funding will not come all at once; it will likely take many years to secure and may be provided by partners, donations, or other nonfederal sources.
- Some proposals may not be funded within the life of this *General Management Plan* and full implementation may occur many years into the future.

### NOTES

- (1) Facility (construction) costs include costs for new facilities that are proposed in the action alternatives. For the no-action alternative, construction costs include only projects that are already planned and funded.
- (2) Non-facility costs include natural and cultural resources management activities and visitor use projects.
- (3) Deferred maintenance costs are those needed to improve Lakeshore assets (structures and facilities) to a good condition based on NPS standards and calculating tools.
- (4) Annual operating costs (ONPS) are the total annual costs for maintenance and operations

associated with each alternative. Included are all costs related to Lakeshore maintenance (e.g., utilities, materials, supplies, and leasing) and visitor services, law enforcement, resource management, and administration operations (including staff salaries and benefits). These costs are based on the current budget.

- (5) Total full-time equivalents (FTE) are the number of staff required to maintain Lakeshore assets at a good level and provide

acceptable visitor services, protection of resources, and other operational support. Full-time equivalent staff would likely be NPS employees. However, Lakeshore managers would explore opportunities to work with partners, volunteers, and other federal agencies to assist in the effective and efficient management of the Lakeshore. Those hours might be in addition to or instead of NPS employees.

## APPENDIX D: DEVELOPMENT OF THE PREFERRED ALTERNATIVE

### INITIAL PLANNING STEPS

Work on the *Sleeping Bear Dunes National Lakeshore General Management Plan / Wilderness Study / Environmental Impact Statement* began in late 2005. The planning team consisted of Sleeping Bear Dunes National Lakeshore staff, the NPS Midwest Region Chief of Planning and Compliance, and technical specialists from the National Park Service's Denver Service Center.

Early steps in the planning process included the following (see chapter 1 for details):

- Reaffirm the Lakeshore's purpose and significance.
- Identify the Lakeshore's fundamental resources and values.
- Consider legislative mandates.
- Recognize planning issues.
- Identify desired conditions.

The planning team conducted field trips and gathered and studied information on National Lakeshore resources, visitor uses and values, and planning issues. The team also solicited input from the public. (See chapter 6 for a summary of public involvement.) With help from the public, the planning team developed four alternative concepts (including no action) for managing the Lakeshore. These concepts were presented to the public in a newsletter, and then comments from the public were gathered and reviewed.

Based on public input and further consideration, the planning team developed the four alternative concepts into four full preliminary alternatives. These draft alternatives were then presented in another newsletter and at public meetings, and once again public comments were collected and reviewed. Possible consequences of the preliminary alternatives were considered and additional field investigations were conducted.

### DEVELOPING THE PREFERRED ALTERNATIVE

The next major step was to develop a preferred alternative. After reviewing the public comments on the preliminary alternatives, the planning team used an evaluation process called "Choosing by Advantages" to evaluate the four preliminary alternatives (no action, alternative A, alternative B, and alternative C). In using this process, the planning team asks, "What and how large are the advantages of each alternative?", "How important are these advantages?", and finally "Are these advantages worth their associated costs?" The Choosing by Advantages process does not "weigh" evaluation criteria in advance so that certain criteria are automatically more important than others. Rather, the process focuses on the differences between alternatives and determining how important those differences (advantages) are.

After addressing the Choosing by Advantages questions in detail, the team used the resulting information to develop the preferred alternative. Alternative A provided the overall best value (greatest total advantage for the cost expended). Thus, to build the preferred alternative, the team started with alternative A, then studied the Choosing by Advantages results to see where elements of other alternatives could be incorporated (or substituted for elements of alternative A) to add advantages without adding too much additional cost.

### RATIONALE FOR AND SUPPLEMENTARY INFORMATION ABOUT THE PREFERRED ALTERNATIVE

This section provides more information about and rationale for the preferred alternative.



**High Use Zone.** The M-22 and M-109 road corridors were zoned high use in the preferred alternative to acknowledge continued vehicular use of these state transportation routes<sup>3</sup>. Along these corridors, the width of the high use zone is 300 feet (each side) from the highway centerline to allow for a possible future M-22/M-109 hike/bike trail. Within this high use zone, wherever it turns out that land is not needed for the bike trail, the width of the high use zone would revert back to the M-22 or M-109 right-of-way, and lands would revert to adjacent management zoning.

The area around Lake Michigan Road (in Benzie County, near the Platte River) was zoned high use to recognize the relatively high level of use and activity that occurs along the road, at Platte Point, and in and around the Platte River campground and picnic area. This high use zone extends to the northeast towards Tiesma Road to allow for a new Lake Michigan boat ramp or dock in this area, although a new boat ramp or dock is not proposed by the National Park Service. (A separate study would be needed to determine whether any such facility would be appropriate in this area. If such a study indicated that a new boat ramp or dock is not appropriate here, the high use zone beyond the Lake Michigan Road area would revert to the experience nature zone and Tiesma Road would revert to the recreation zone). NPS-owned Tiesma Road would remain open in any event.

Other popular National Lakeshore areas that were zoned high use to allow for high levels of visitor use and interpretive activities include the Pierce Stocking Scenic Drive and the Dune Climb. The Lakeshore's maintenance facility

area, located just south of Empire, was also zoned high use.

**Experience History Zone.** Areas of the National Lakeshore containing cultural resources that are fundamental to the Lakeshore's significance (see chapter 1) were zoned experience history. These areas are Glen Haven (including the area around the Sleeping Bear Point Life-Saving Museum), Port Oneida Rural Historic District, and the U.S. Life-Saving Service Station/villages and lighthouse on the Manitou Islands. In addition, on South Manitou Island the NPS-owned portion of the farm loop tour and adjacent fields and the schoolhouse were zoned experience history. The primary management emphasis in these areas is to preserve historic structures and landscapes and provide visitors the opportunity to enjoy and learn about them.

**Recreation Zone.** Areas zoned recreation in the preferred alternative include the following:

- Lake Michigan beach areas and the 0.25-mile-wide strip of Lake Michigan within the National Lakeshore boundary — to allow continued access by watercraft (except for personal watercraft, or jet skis).
- County-owned road corridors — to recognize continued vehicular and other use of these routes for recreational and other purposes.<sup>4</sup>
- School Lake and Loon Lake —to permit continued motorboat and other recreational uses.
- The Platte River — to permit moderate levels of recreational use, including use of motorboats.

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3 State owned road rights-of-way are not controlled by the National Park Service. Showing state-owned road rights-of-way within the high use management zone is not intended to suggest otherwise, but rather to indicate continued use under management by the state.

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4. County-owned road rights-of-way are not controlled by the National Park Service. Showing county-owned road rights-of-way within the recreation management zone is not intended to suggest otherwise, but rather to indicate continued use under management by the counties.

- To allow for a possible M-22/M-109 hike/bike trail developed at the initiative of Lakeshore partners, the area between Peterson Road and north of Platte River campground; the area southeast of the Lakeshore's Empire maintenance area and west of M-22; the area south of Glen Haven and north of the Dune Climb (west of M-109); plus corridors or two-tracks east of the Pierce Stocking Scenic Drive and north of Alligator Hill. If these areas are not needed for the bike trail, they would revert back to the experience nature zone (except for county roads and the D. H. Day group campground, which would retain the recreation zone).
- Various trailhead areas — to allow for trailhead parking.
- Various farmsteads, farm fields, and other historic elements that are either adjacent to M-22 or where there is minimal conflict with the adjacent experience nature zone — to allow for preservation as “scene setters” or possible adaptive reuse/rehabilitation by partners or the National Park Service. Examples include the Boekeloo cabin and immediate landscape, the Ken-Tuck-U-Inn and immediate landscape, Tweddle School, the Tweddle farmstead, the Bufka farmstead and surrounding open fields, and the Eitzen and Kropp farmsteads.
- The wooded area (“Burnham Woods”) south of the Glen Lakes and east of M-22 — to allow consideration for a possible future designated mountain bike trail system.
- The area east of Glen Haven — to maintain the rustic character of the D. H. Day campground and surroundings, and to permit moderate use levels in this area.
- The Benzie Corridor — to allow for a future scenic road per the Lakeshore's enabling legislation, and/or a hike/bike trail. About 10% of the 1,100-acre Benzie Corridor has been purchased by the National Park Service from willing sellers over the past quarter century, so

development of a scenic road or hike/bike trail is likely decades off into the future. Based on public input received to date and preliminary impact analyses, NPS managers concluded that (a) the Benzie Corridor should remain within the Lakeshore's legislated boundary, and (b) future managers should have the flexibility to study and decide, based on the circumstances, public input, and other best available information at the time, whether a scenic road or hike/bike trail (or both) should be built within the Benzie Corridor<sup>5</sup>.

**Experience Nature Zone.** The remainder of the National Lakeshore was zoned experience nature, in keeping with the purpose of the National Lakeshore: to “preserve outstanding natural features, including forests, beaches, dune formations, and ancient glacial phenomena in their natural setting, and protect them from developments and uses that would destroy the scenic beauty and natural character of the area, for the benefit, inspiration, education, recreation, and enjoyment of the public.”

**Wilderness Proposal.** Based on public input, preliminary impact analyses, and the Choosing by Advantages evaluation, the planning team started with alternative A's wilderness proposal and modified it as follows:

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5. The NPS vision of the scenic road at the time of this writing is as follows. The road would provide an identifiable southern entrance to the National Lakeshore. It would include an interchange on US-31. From there it would continue in a generally northwesterly direction along the Crystal Ridge to an intersection with M-22. The road would provide scenic variety and offer outstanding scenic views of Lake Michigan, Empire Bluffs, Platte Lake, and Crystal Lake. Complementary facilities along the scenic road would likely include an entrance station, scenic overlooks, picnic areas, restrooms, and hiking and biking trails. The road would likely be similar to Pierce Stocking Scenic Drive, only with two-way traffic. It would be closed to commercial traffic.

- south portion of the Lakeshore — added a wilderness exclusion around Empire Bluffs Trail to facilitate trail maintenance and to ensure that hang gliding could continue there; added a wilderness exclusion around the Treat farmstead to facilitate maintenance of open farm fields
- north portion of the Lakeshore — added a wilderness exclusion around the Bufka farm to facilitate maintenance or rehabilitation of the farmstead and surrounding farm fields
- South Manitou Island — added a wilderness exclusion for the farm loop tour route, including the schoolhouse, to allow continuation of the interpretive tours and to facilitate maintenance, rehabilitation, or restoration of the structures, farmsteads, and surrounding fields.
- North Manitou Island — added a wilderness exclusion for all of Cottage Row to facilitate maintenance, rehabilitation, or restoration of these structures and immediate surroundings.

#### **Other Elements of the Preferred Alternative**

- Parking at Platte River Point (near the mouth of the Platte River) could be improved to enhance vehicular circulation and reduce congestion.
- The Esch Beach road end would be improved to address resource impacts and safety concerns associated with parking and improve vehicular circulation there.
- Access for canoes and kayaks would be improved at some inland lakes to facilitate such use and address natural resource impacts (trampling, erosion, etc.)

- The Crystal River access area would be upgraded or relocated and a small parking area would be provided to address natural resource impacts (trampling, erosion of gravel into the river, etc.)
- Motorboats would no longer be allowed on Bass Lake (Leelanau County) and North Bar Lake to improve visitor experiences for nonmotorized uses (canoeing, kayaking, fishing, and swimming).
- Little Glen Lake picnic area would be improved to facilitate beach use. For example, the sand area along the beach would be expanded and flush toilets might be constructed.
- Valley View campground, which is not very popular with visitors, would be abandoned and the area returned to more natural conditions. A replacement campground for hikers and paddlers would be provided in a more attractive location closer to the Lake Michigan shoreline as a part of the bay-to-bay trail proposal.
- On South Manitou Island, provided there is demand and the service is economically feasible, concession auto tours to near the Giant Cedars would be allowed to the end of the county-owned road; from there, tours would continue on foot for a short distance to the trees. User capacity management strategies (e.g., education, supervision by tour leaders, fences, and/or boardwalks) would be implemented as needed to prevent visitor use-related impacts to the cedar trees and surrounding vegetative community.
- Day ferry trips to North Manitou Island (once or twice a week, not daily) would be allowed provided there is demand and the service is economically feasible. The intent is to allow a different segment of visitors to experience this island.

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- On North Manitou Island, designated camping would be required within certain problem areas to confine and address natural resource impacts. In areas where use has not resulted in problems, dispersed camping would continue.
- At Bow Lakes, a small parking area and a loop hiking trail would be provided to facilitate visitor use on NPS-owned lands.

## APPENDIX E: WILD AND SCENIC RIVERS

Section 5(d) of the National Wild and Scenic Rivers Act (16 USC 1271-1287) requires that “In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas.” It further requires that “the Secretary of the Interior shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas . . . shall be evaluated in planning reports by all Federal agencies as potential alternative uses of water and related land resources involved.”

The National Park Service has compiled and maintains a Nationwide Rivers Inventory (NRI), which is a register of river segments that potentially qualify as national wild, scenic or recreational river areas. The inventory is a listing of more than 3,400 free-flowing river segments in the United States that are believed to possess one or more “outstandingly remarkable” natural or cultural values judged to be of more than local or regional significance. The original inventory, completed in 1982, was conducted by the U.S. Department of the Interior with the cooperation of state and local agencies. To be listed, river segments had to meet the following three basic criteria:

- be free flowing (and generally 25 miles or longer)
- be relatively undeveloped (both river and corridor)
- possess outstanding natural and/or cultural values

In 1990, National Lakeshore staff inventoried and evaluated rivers and river segments that may have had potential for inclusion into the national wild and scenic rivers system. Five streams were inventoried: Platte River, Otter Creek, Shalda Creek, Crystal River, and Good Harbor Creek. Only the Platte River was

identified by the Lakeshore staff for possible study and inclusion at that time.

A major update to the Nationwide Rivers Inventory was initiated in 1993. To be eligible for listing on the updated inventory, river segments had to meet the following two criteria:

- be free flowing (no mileage requirement)
- have at least one “outstandingly remarkable” value

The Crystal River and the Platte River were included on the 1993 update. The entire 3-mile segment of the Crystal River within the National Lakeshore was included, with the following description: “Sinuous river channel following beach ridges. Large wetlands associated with interdunal wetlands. Remnant beaches contain rich diversity of species. Popular canoeing stream.” The entire segment of the Platte River within the National Lakeshore (4 miles) was included, with the following description: “Sinuous river channel following remnant beach ridges. Major archeological resources relative to mid-woodland period Indian encampments. Popular canoeing destination. Important salmon and trout resource.”

In 2005, NPS staff completed acquisition of the 104 acres of land identified in the Lakeshore boundary expansion authorized by Public Law (PL) 108-229. These lands include 6,300 feet of river frontage along the Crystal River, approximately 0.6 miles along both banks. The land contains important wetland, riparian, and upland habitat for a variety of species within mixed northern forests. It also provides a natural backdrop for recreational river users and exceptional vistas for visitors who are hiking, biking or driving on nearby trails and roads.

## APPENDIXES

The National Park Service recommends that this additional 0.6-mile reach of the Crystal River be added to the 3 miles already on the

Nationwide Rivers Inventory when it is next updated.

## APPENDIX F: CONSULTATION LETTERS

Mr. Dusty Shultz

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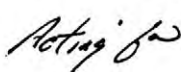
We have provided the approximate location of each species within or adjacent the Lakeshore. If you require more precise information on species locations, please contact our office. In addition to the species listed above, the breeding range of the federally endangered Indiana bat (*Myotis sodalis*) occurs within the southern half and western coastal counties of the Lower Peninsula, including Benzie and Leelanau Counties. Although this species has not been confirmed within the Lakeshore, it may occur in any area of suitable habitat. Suitable Indiana bat habitat typically consists of highly variable forested landscapes in riparian, bottomland, and upland areas which provide roosting trees with crevices or exfoliating bark.

Critical habitat for the endangered piping plover was designated in May, 2001. Michigan Units MI-14, MI-15 and MI-16 occur within the boundaries of the Lakeshore. Maps depicting these units are attached. As a reminder, species for which critical habitat has been designated require a determination of effect for the species as well as for the critical habitat. In determining the effect of the action on critical habitat, we recommend you refer to the Federal Register notice regarding designation (66 Fed. Reg. 22938, May 7, 2001).

If the project requires modification, or new information becomes available that suggests species listed or proposed for listing may be present and/or affected, you should initiate consultation with us as required by section 7 of the Endangered Species Act. Since threatened and endangered species data changes continuously, we recommend you contact this office for an updated Federal list of the species occurring in the project area every six months during the remaining planning and building period.

We have no additional comments on the proposed action at this time. We would be happy to review and comment on the Draft EIS when it is available. Please contact me or Mr. Jack Dingleline at 517-351-6320 if you have questions.

Sincerely,



Craig A. Czarnecki  
Field Supervisor

Enclosures

cc: MDNR, Wildlife Division, Lansing, MI (Attn: Lori Sargent)

g: admin/archives/mar06/NPSMgmtPlanEISListReq.jvd.doc



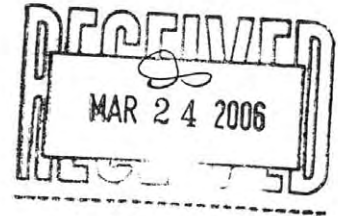
# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

East Lansing Field Office (ES)  
2651 Coolidge Road, Suite 101  
East Lansing, Michigan 48823-6316

IN REPLY REFER TO:

March 21, 2006



Dusty Shultz, Superintendent  
National Park Service  
Sleeping Bear Dunes National Lakeshore  
9922 Front Street (Hwy M-72)  
Empire, Michigan 49630

# 2408

Subject: Request for Information on Federally Listed Threatened and Endangered Species  
for the General Management Plan/Wilderness Study/Environmental Impact  
Statement for Sleeping Bear Dunes National Lakeshore, Michigan.

Dear Ms. Shultz:

We appreciate receiving your February 16, 2006 letter regarding your intent to prepare an Environmental Impact Statement (EIS) in support of a General Management Plan/Wilderness Study for Sleeping Bear Dunes National Lakeshore, Leelanau/Benzie Counties, Michigan. According to your letter, the National Park Service (NPS) intends to prepare a General Management Plan that will provide an overall decision-making framework for long-term management direction for the next twenty years, while the Wilderness Study will identify and recommend areas of possible inclusion into the National Wilderness Preserve System.

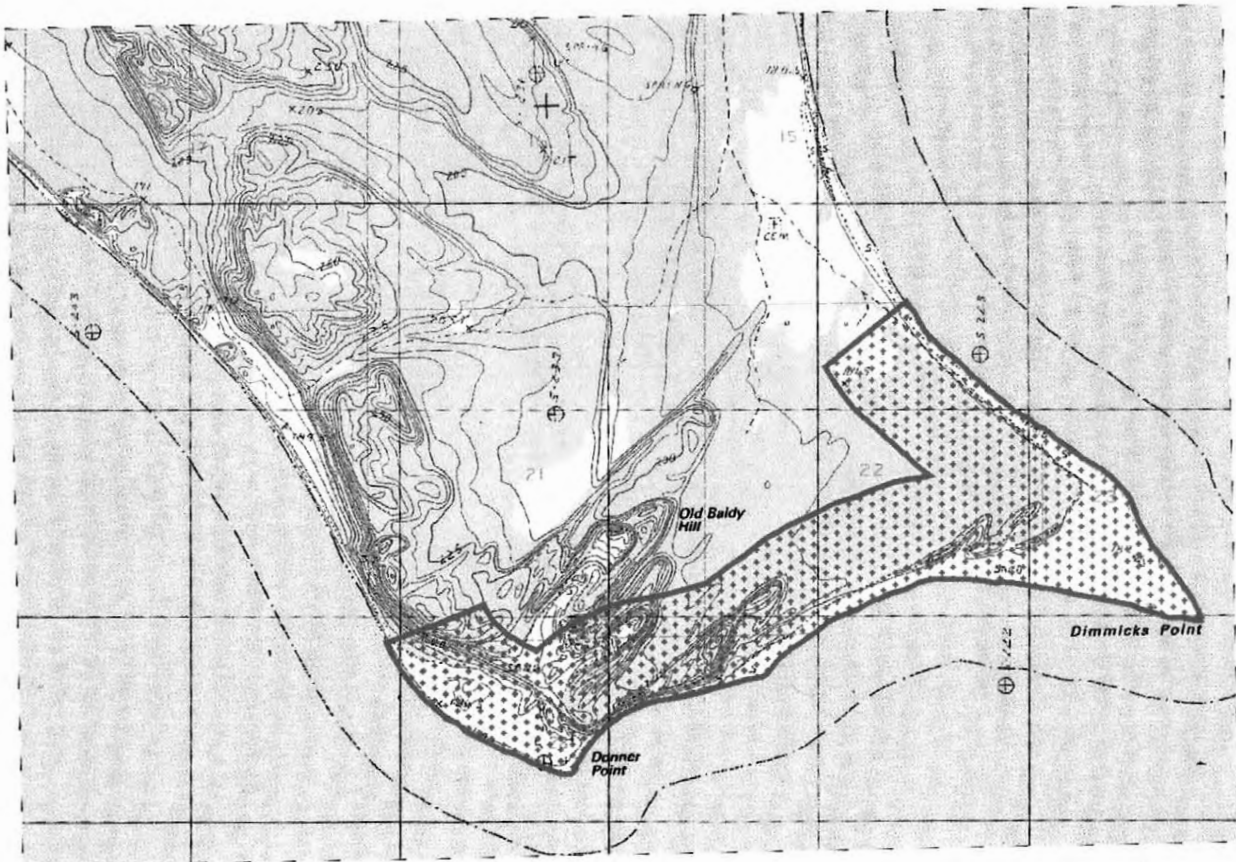
You have requested a current list of all federally endangered, threatened, or proposed species, or designated or proposed critical habitat, in the action area. According to our files, the following species are known to occur within or adjacent the Lakeshore in Leelanau and Benzie Counties.

Species	Current Status	Approximate Location
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	T	T32NR14W, T30NR15W, T30NR12W, T29NR13W, T27NR14W, T27NR15W
Piping Plover ( <i>Charadrius melodus</i> )	E	T31NR14W, T29NR14W, T27NR15W, T27NR16W
Michigan Monkey-Flower ( <i>Mimulus glaberratus</i> var. <i>michiganensis</i> )	E	T29NR13W, T28NR14W, T27NR14W,
Pitcher's thistle ( <i>Cirsium pitcheri</i> )	T	T32NR15W, T31NR14W, T30NR15W, T31NR12W, T29NR12W, T30NR13W, T29NR14W, T29NR15W, T28NR15W, T27NR15W, T27NR16W




## Piping Plover CH Unit MI-14

North Manitou  
Leelanau Co.




### Legend

 Mi\_14\_PP critical habitat



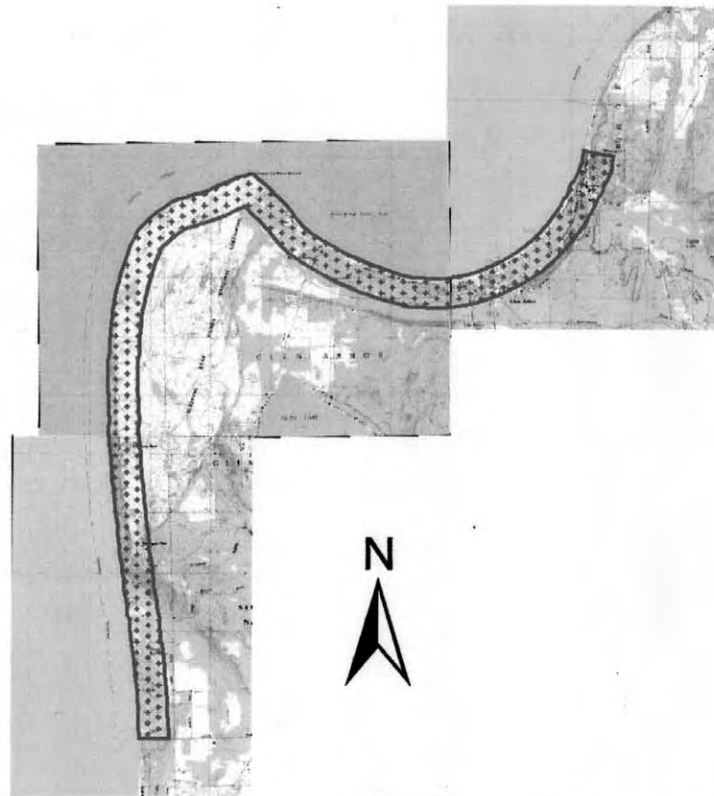
0 0.25 0.5 1 1.5 2 Kilometers




A horizontal scale bar with alternating black and white segments, corresponding to the distances marked above it: 0, 0.25, 0.5, 1, 1.5, and 2 Kilometers.


# **Piping Plover CH Unit MI-15**

**Crystal Run to Empire Beach  
Leelanau Co.**



## **Legend**

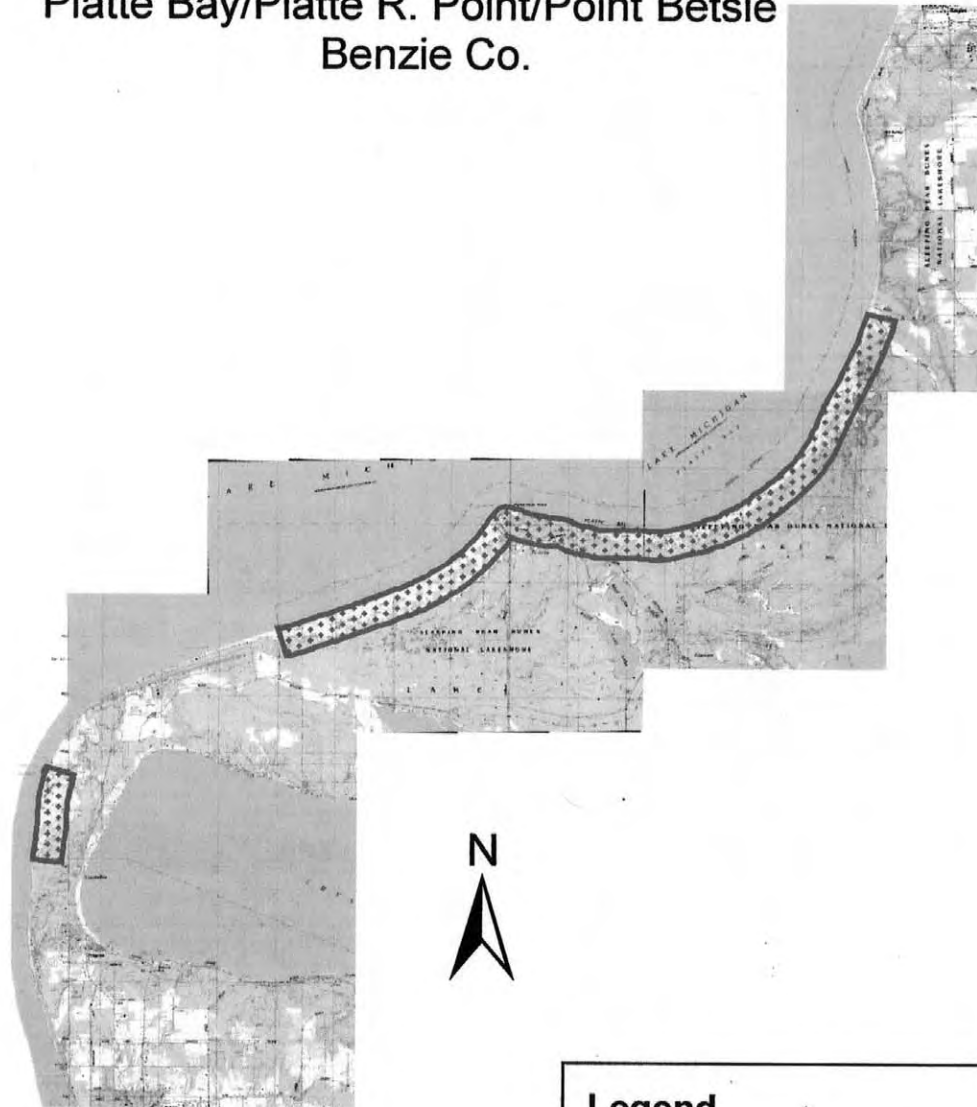
 Mi\_15\_500m\_buff\_finall\_3\_proj.shp

0 0.5 1 2 3 4  
 Kilometers


# **Piping Plover CH Unit MI-16**

## **Platte Bay/Platte R. Point/Point Betsie**

### **Benzie Co.**



### **Legend**

 Mi\_16\_PP critical habitat

0 0.5 1 2 3 4 Kilometers