

**FINDING OF NO SIGNIFICANT IMPACT  
THE HOMESTEAD WASTEWATER DISPOSAL  
SLEEPING BEAR DUNES NATIONAL LAKESHORE**

**Background**

Sleeping Bear Dunes National Lakeshore (Lakeshore) encompasses a 35-mile stretch of Lake Michigan's eastern coastline, as well as the North and South Manitou Islands. The 71,000-acre park was established on October 21, 1970, primarily for its outstanding natural features, including forests, beaches, dune formations, and ancient glacial phenomena. The Lakeshore also contains many cultural features, including an 1871 lighthouse, three former Life-Saving Service/Coast Guard Stations and an extensive rural historic farm district.

The Homestead, in Glen Arbor Township, Leelanau County, Michigan, located outside of, and adjacent to, the Lakeshore boundary, is a private resort community with a variety of seasonal and year-round rental and privately-owned properties including two small hotels, a lodge, an inn, single-family residences, and resort condominiums. The Homestead holds legal easements for land application of treated wastewater on two parcels of Federal land (known as Parcels B and C), within the Lakeshore.

On August 31, 1979, the National Park Service (NPS) acquired Parcels B and C subject to easements held by The Homestead for their treated wastewater disposal system. The wastewater system used by The Homestead is currently an aerated lagoon system with "slow rate irrigation" applied to Parcels B and C. The concept of spraying the wastewater onto Parcels B and C is based on the ability of the vegetative cover in these areas to take up significant amounts of nitrogen and (to some extent) phosphorus from the surface before these nutrients are absorbed by the soil or percolate down to the groundwater. Parcel B consists of mature hardwood and coniferous forests, while Parcel C has been mostly planted with alfalfa.

In recent years, The Homestead at times has been out of compliance with wastewater disposal standards as required by the groundwater discharge permit and Rule 2222 of Part 22 Groundwater Quality Rules of Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). The Homestead often exceeded the total inorganic nitrogen and fecal coliform standards in wastewater effluent. Nitrates in drinking water are a health concern (there are downgradient drinking water wells) and drifting spray from irrigation water that is high in fecal coliform bacteria is a hazard for park visitors who might come in direct contact with it. To correct this situation, The Homestead prepared an Irrigation Management Plan (IMP) for effluent disposal that proposed clearcutting and substantial earthmoving work on Parcel B, and subsequent planting of both parcels with grasses that take up the nutrients in the sprayed effluent more efficiently. The NPS prepared an Environmental Assessment (EA) to evaluate the impacts of keeping the easements in their existing location and of two other alternative locations. The goal was to allow The Homestead to exercise their legal rights to use their easements, but in a location and manner that best protects the interests of the NPS.

Under the No-Action Alternative, as described in the EA, The Homestead would continue to discharge wastewater on Parcels B and C. This alternative represents what would likely occur if The Homestead's IMP for the existing easements were approved by the Michigan Department of Environmental Quality (MDEQ). Because of the easement language, the NPS has limited jurisdiction over the existing parcels under the No-Action Alternative. The Department of the Interior Solicitor's Office has issued an opinion that The Homestead has the legal right to continue with spray irrigation on their easement, subject to MDEQ permit approval.

Alternative 1 provides for the establishment of an easement (approximately the same size as Parcels B and C combined) on existing NPS property for subsurface (*i.e.*, leach field) wastewater disposal located in the open fields north of Parcels B and C and west of Thoreson Road.

Alternative 2 provides for the establishment of an easement (approximately the same size as Parcels B and C combined) for a leach field located in the open fields north of Parcels B and C and east of Thoreson Road on existing NPS land.

### **NPS Preferred Alternative**

The relative advantages and disadvantages of the three alternatives were identified and analyzed by reviewing the EA and public comments. NPS concerns with potential impacts resulting from implementation of either of the two action alternatives (Alternatives 1 and 2) were weighed against those of clearing and grading 8.3 acres of mature forest and semi-open land (on easement Parcel B) and developing the proposed spray irrigation system. For the action alternatives, the NPS was concerned about unknowns relating to the ability to achieve successful long-term restoration of the Thoreson cultural landscape in the Port Oneida Rural Historic District, long-term wastewater maintenance and monitoring activities, and the ability to maintain the aesthetics that are appreciated by many visitors. The NPS was also concerned that the effects of anticipated increased nitrogen levels in the shallow nearshore environment in Lake Michigan are not fully understood. While the MDEQ and other specialists recognize Lake Michigan as a “nitrogen sink,” the NPS was concerned about this particular community (shallow water with rocky bottom), and the recent stresses placed on Lake Michigan from zebra mussels and other exotic organisms. Potential impacts to adjacent private drinking water wells was a concern for Alternative 2. Impacts of activities likely to occur under the No-Action alternative are also of concern to the NPS, including the long-term loss of mature forest and short-term erosion/sedimentation on park lands. Also, another concern is the drifting of contaminated wastewater from the sprayed parcels onto park lands and the associated safety hazards for park visitors. In addition, the NPS was concerned that the affected resources for the action alternatives (Lake Michigan water quality and the viewshed of the Thoreson farm landscape) are more significant than the affected resources for the No-Action alternative (8.3 acres of mixed native and non-native forest and semi-open land).

Based on a comparative analysis of these impact concerns, the No-Action alternative is the NPS preferred alternative.

### **Environmentally Preferred Alternative**

As stated in Section 2.7.D of *Director's Order #12 and Handbook*, the environmentally preferred alternative is the alternative that will promote the national environmental policy expressed in the National Environmental Policy Act (NEPA) (Sec. 101 (b)). This includes alternatives that:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2. Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.

5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

In essence, the environmentally preferred alternative would be the one that "causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (2001 NPS Management Policies).

In this case, the No-Action alternative has been determined to be the environmentally preferred alternative because it best meets goals 1, 2, 3, and 4 described above. While over seven acres of mature forest will be cleared and converted to open fields (under a privately-held easement), open fields in the Port Oneida Rural Historic District will be protected, this cultural landscape's visual resources will be maintained, and potential impacts to adjacent drinking water wells and surface waters of Lake Michigan will be avoided. Though an Environmentally Preferred Alternative could not initially be identified, a full evaluation of the EA and public comment has shown enough uncertainty about the potential effects of the Action alternatives on the Lake Michigan community and the Thoreson cultural landscape that the No-Action alternative has been selected.

### **The Preferred Alternative and Significance Criteria**

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

*Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial:*

The preferred alternative will result in 8.3 acres cleared, graded and maintained as an open field with wastewater spray equipment. However, this park land is encumbered with a pre-existing easement and the NPS has very limited jurisdiction over the wastewater disposal activities that occur on it. There will be moderate, long-term adverse impacts from clearing and grading the 8.3 acres. There will also be moderate, long-term beneficial impacts due to better wastewater treatment and reduced off site groundwater contamination.

*The degree to which the proposed action affects public health or safety:*

The NPS is concerned about effluent spray drifting onto adjacent park lands. Effluent spray that contains elevated levels of fecal coliform bacteria poses a health risk to park visitors, who may come in contact with it. MDEQ permits, however, contain language that prohibits operation of a system causing drift of effluent beyond the easement boundaries and, therefore, adverse impacts to park visitors will be negligible.

*Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:*

The preferred alternative will not affect any resource listed, or eligible for listing, on the National Register of Historic Places, nor will it impact any other significant park resources. This alternative is on lands that are part of the Lakeshore, but are encumbered by a preexisting easement.

*The degree to which the effects on the quality of the human environment are likely to be highly controversial:*

The location of the easement in the preferred alternative is unlikely to be controversial. The permitting process for The Homestead's proposed IMP is likely to be controversial due to stated public concerns with The Homestead's past compliance record and the MDEQ management of this issue. The NPS, however, has

very limited jurisdiction over wastewater disposal activities on the easement, and thus this controversy is beyond the scope of this EA. The action proposed by The Homestead is within their existing rights.

*Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks:*

Should The Homestead implement their IMP, 8.3 acres of mature forest and semi-open land would be cleared and graded, and a new spray irrigation system would be constructed. The MDEQ would monitor groundwater contaminant levels and, if exceeded, The Homestead would need to take measures to correct the exceedance. Drifting effluent spray onto park land is a major concern to the NPS due to the potential harmful effects of fecal coliform bacteria on park visitors. However, the risk to park visitors is negligible if the conditions of the MDEQ permit are followed.

*Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:*

Since the NPS has limited jurisdiction over the easement parcels, the preferred alternative neither establishes an NPS precedent for future actions with significant effects nor will it represent a decision in principle about a future consideration.

*Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:*

The preferred alternative will not significantly impact the resources of the Lakeshore. Any adverse effects, in conjunction with the adverse impacts of any other past, present, or reasonably foreseeable future actions, will result in negligible to minor cumulative impacts.

*Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:*

This action will not affect any resources listed on, or eligible for, the National Register of Historic Places, nor will it impact any other significant park resources. A January 3, 2005 letter from the Michigan State Historic Preservation Office stated that “the No-Action Alternative could reasonably be determined to have No Effect on historic properties and thus should not require additional consultation.”

*Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:*

As required under section 7 of the Endangered Species Act of 1973, as amended, U.S. Fish & Wildlife Service was consulted. June 18, 2004 and December 14, 2004 letters from the U.S. Fish & Wildlife Service stated that no Federal endangered, threatened, or proposed species, or designated or proposed habitat, are found in the project area.

*Whether the action threatens a violation of Federal, state, or local environmental protection law:*

The preferred alternative will result in the implementation of The Homestead’s IMP, if it is approved by the MDEQ. The NPS will closely monitor the construction and long-term management of the project to ensure that no Federal, state, or local environmental protection laws are being violated on park-administered lands. The action does not threaten a violation of law if the permit is followed.

*Impairment:*

In addition to reviewing the list of significance criteria, the National Park Service has determined that implementation of the preferred alternative will not constitute an impairment to Lakeshore resources and

values. This conclusion is based on a thorough analysis of the environmental impacts described in the project's environmental assessment and the professional judgment of the decision-maker guided by the direction in *2001 NPS Management Policies*.

### Public Involvement

The environmental assessment was made available for public review and comment during the period, November 17, 2004 to December 30, 2004. A media release announcing its availability was sent to over 20 newspapers, radio and television stations on November 16, 2004. Also on November 16, 2004, a letter announcing the EA availability was sent to over 200 contacts on the Lakeshore mailing list. The EA was placed on the park's website and a copy was mailed to each of seven area libraries.

A public meeting was held at the Glen Arbor Township Hall on November 30, 2004, and the NPS also participated in a public forum, hosted by the Michigan Land Use Institute, on November 16, 2004.

Eighty-five comment letters or recorded oral statements at the public meeting were received from the general public. Two agencies replied: the U.S. Fish & Wildlife Service and the State Historic Preservation Office.

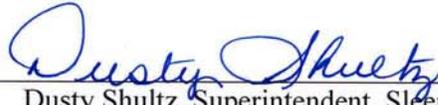
Based on public comments, an errata sheet and map (enclosed) has been prepared to correct mistakes in the EA. The errata sheet, in combination with the EA, forms the completed EA.

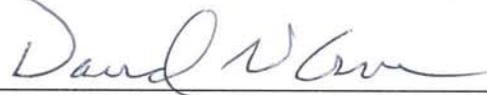
A question and answer document has been prepared to respond to questions from the public. This document is also enclosed.

### Conclusions

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are negligible or minor in intensity. There are no significant impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended by:  4/21/2005  
Dusty Shultz, Superintendent, Sleeping Bear Dunes Date

Approved by:  4/28/05  
Ernest Quintana, Regional Director, Midwest Region Date

Enclosures: Errata Sheet and Map  
Question and Answer Document