

National Park Service
U.S. Department of the Interior



Social Science Program

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Programmatic Approval for NPS-Sponsored Public Surveys

1.	Project Title: Examining Visitor Use & User Characteristics at Sleeping Bear Dunes National Lakeshore (SLBE)	Submission Date	6-22-2012
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2. **Abstract:** Sleeping Bear Dunes National Lakeshore (SLBE) is a 71,291-acre unit within the National Parks system. Its purpose is 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. To accomplish this purpose, the Lakeshore's General Management Plan has identified areas of importance and issues that include congestion at certain visitor areas, and the preservation of proposed wilderness areas. This project will examine visitor use and user characteristics on the Platte River, Crystal River, and North Manitou Island. Results from this examination will provide managers with baseline data for current conditions and be used to address the park's commitment to user capacity management.

(not to exceed 150 words)

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Project Information

5. **Park(s) For Which Research is to be Conducted:** Sleeping Bear Dunes National Lakeshore

6. **Survey Dates:** July 4, 2012 TO Sept 10, 2012

7. **Type of Information Collection Instrument (Check ALL that Apply)**

Mail-Back Questionnaire Other (explain)	<input checked="" type="checkbox"/> On-Site Questionnaire	Face-to-Face Interview	Telephone Survey	Focus Groups
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8. **Survey Justification:** *Social science research in support of park planning and management is mandated in the NPS Management Policies 2006 (Section 8.11.1, "Social Science Studies"). The NPS pursues a policy that facilitates social science studies in support of the NPS mission to protect resources and enhance the enjoyment of present and future generations (National Park Service Act of 1916, 38 Stat 535, 16 USC 1, et seq.). NPS policy mandates that social science research will be used to provide an understanding of park visitors, the non-visiting public, gateway communities and regions, and human interactions with park resources. Such studies are needed to provide a scientific basis for park planning and development.*

The 2009 Sleeping Bear Dunes National Lakeshore General Management Plan (GMP) states that:

"this area is to be valued primarily for the preservation of its natural resources, and for the opportunities it provides for visitor enjoyment of natural, cultural, and recreational resources in a scenic outdoor setting."

To achieve this, park staff must address issues related to user capacity at the Platte and Crystal Rivers and North Manitou Island. These areas are popular visitor facilities and are maintained to provide quality experiences in both front country and proposed wilderness areas.

The recreational use levels in these areas are a management concern because high crowding conditions can exist. The public has specifically expressed concerns about high use levels on the Platte River and the GMP notes that increases in future use levels on the Crystal River may cause similar concerns. The GMP also identifies popular camping areas on North Manitou Island for special monitoring attention. As a proposed wilderness area, North Manitou Island is to be managed in such a manner as to maintain its eligibility for future federal wilderness designation.

Based on these identified areas of interest in the GMP, the managers at SLBE would like to understand the characteristics and quality of the visitor experience for the Platte River, Crystal River, and North Manitou Island. This study will provide park managers with a cross sectional view of current visitation and baseline assessments of visitor motivations, attitudes, crowding

and experiences. Results from this study will be used to identify any specific concerns regarding crowding and the quality of the visitor experience and to determine the severity and extend of these issues. Results from this study will also be used as part of the scientific basis and justification for further planning efforts or management actions that may be necessary to address areas of concern on the Platte River, Crystal River, and North Manitou Island. It will provide the empirical data that is needed to assist in future planning and user capacity management of these recreational use areas.

9. **Survey Methodology: (Use as much space as needed; if necessary include additional explanation on a separate page.)** (a) **Respondent Universe:**

Each of the three locations listed below will have an individual respondent universe.

- 1) Platte River – the target population for this location will be all adult day users. Recent use counts by SLBE staff suggest that as many as 1,500 individuals visit the Platte River on a single day during the high use period. A gross estimate of 75,000 -100,000 individuals for total visitation may be reasonable.
- 2) Crystal River – the target population for this location will be all adult day use visitors who travel the Crystal River between the Fisher Road launch to the Crystal River Bend. It is estimated that 1,100 individuals visit the Crystal River on a single day during the high use period.
- 3) North Manitou Island (NMI) – the target population is all adult overnight visitors to NMI. NMI is accessible to nearly all visitors only via concessioner ferry services provided by Manitou Island Transit. Recent logs of ticketed ferry passengers suggest that between 3 -3,500 individuals visited North Manitou Island in 2011.

(b) **Sampling Plan/Procedures:**

- Sampling will occur July 4 to September 10, 2012 for all three locations. This timeframe is based on a typical visitor use season of Independence Day to Labor Day.
- Sampling will occur at the end of a visitor’s trip for all three locations.
- For the Platte and Crystal Rivers, sampling times have been selected to best represent when visitors are completing their trip. These periods are 10am- 2pm and 2pm -6pm.
- Sampling times for North Manitou Island will be shortly before the Manitou Island Transit ferry arrives (typically late morning). However, a consistent sampling time may not be possible. The goal will be to sample visitors once they leave the wilderness and before they board the ferry.

- Sampling will occur on the Platte and Crystal Rivers 2 days/week, with sampling times alternating between locations (e.g. Day 1= Platte River (10am -2pm) & Crystal River (2pm -6pm); Day 2 = Crystal River (10am - 2pm) & Platter River (2pm-6pm)). Sampling days will be randomly selected to include both weekdays and weekends to represent difference across days of the week.
- Sampling will occur on North Manitou Island 1-2 days/week. Sampling days will be randomly selected to include both weekdays and weekend, but are constrained by staff transit to and from the island.
- Visitors will be intercepted at the end of their visit at:
 - 1) Platte River – **Kittendorf Landing and Lake Township Park**
 - 2) Crystal River – **Crystal River Outfitters and The River Outfitters**
 - 3) North Manitou Island – **Village area adjacent to dock**
- A pass-by or convenience sampling strategy will be used on the Platte and Crystal Rivers. The first available adult visitor from a group will be approached and asked to complete the survey onsite. Only one person per group will be sampled, as to provide the greatest diversity and variability in responses. An individual may only complete one survey during the data collection period (e.g. a visitor will not be asked to complete a second survey later in the season if they are a repeat visitor).
- Due to the smaller population of NMI visitors, all groups will be approached prior to their departure on the Manitou Island Transit Ferry. All adult members may be asked to complete a survey if initial efforts to receive one response per group appear inadequate. An individual may only complete one survey during the data collection period (e.g. a visitor will not be asked to complete a second survey later in the season if they are a repeat visitor).
- Staff may have as many as 3 individuals from separate groups completing a survey at one time. Once a survey is completed, the next adult member from a new group will be approached.

(c) Instrument Administration:

- Survey staff will approach visitors, provide an explanation of the study and acquire the visitor's consent.
- Surveys will be provided on a clip-board for completion on-site. Staff may read surveys to the visitors and record their responses if needed to accommodate the visitors.
- Staff will be available to provide clarity or answer questions regarding the survey.

(d) Expected Response Rate/Confidence Levels:

The goal for this study is to achieve 95% confidence levels with a $\pm 4\text{-}5\%$ error rate.

Expected responses rates should be high, with similar onsite studies achieving responses rates of 70% or higher. Below are the specific response rates and expected number of responses for each location.

Sampling Location	Number of Initial Contacts	Expected Response Rate	Expected Number of Responses	Margin of Error +/- %
1) Platte River	857	70%	600	$\pm 4\%$
2) Crystal River	857	70%	600	$\pm 4\%$
3) NMI	535	70%	375	$\pm 5\%$
TOTAL	2,249		1,575	

(e) Strategies for dealing with potential non-response bias:

To evaluate nonresponse bias, field staff will record gender, age, group size, and number of previous visits to the location (e.g. Crystal River, Platte River, North Manitou Island) for individuals who refuse to participate in the survey. These demographic and trip characteristics will be used for comparisons between respondents and nonrespondents.

(f) Description of any pre-testing and peer review of the methods and/or instrument (recommended):

During the previous peak season, the principal investigator made site visits to all locations discussed in the study plan. SBDNL field staff provided information and assistance in investigating these locations for future sampling options.

Park staff, including the deputy superintendent, district rangers, and relevant field staff, has reviewed both the methods and instrument for this study. Feedback from the reviews has been used to create sampling procedures and to reflect critical issues in the survey instrument.

Measures included in the survey instrument reflect topic areas from the pool of known questions provided in programmatic review. These include such topics as respondent's characteristics, trip behavior, motivations, preferences, attitudes, crowding, experiences, and evaluation of services. Item formats reflect examples provided for these topics areas. If examples are not available, then item formats have been based largely on previously validated scale items (e.g. place attachment scales, REP scales, Trust and commitment social value scales). References for the previous use and validation of these items can be provided if necessary.

10 **Burden Estimates:** We plan to approach at least **2250** individuals during the sampling period ($n=2250$). With an anticipated response rate of 70%, we expect to receive **1575** total responses for this collection.

We expect that the initial contact time will be at least one minute per person ($2250 \times 1 \text{ minute} = \mathbf{38 \text{ hours}}$). We expect that **675** (30%) visitors will refuse to participate during the initial on-site contact, for those individuals we will record their gender, age, group size, and number of previous visits. These questions will be used for the non-response check. This is estimated to take no more than 2 minutes ($675 \times 2 = \mathbf{23 \text{ hours}}$) to complete each session.

For those who agree to participate ($n= 1575$) we expect that **1575** will complete and return the survey, with that, an additional 10 minutes will be required ($1575 \text{ response} \times 15 \text{ minutes} = \mathbf{394 \text{ hours}}$). The total burden for this collection is estimated to be **455** hours.

Estimated Number of Contacts		Estimation of Time (minutes)		Estimation of Respondent Burden (hours)	
Total Number of Initial Contacts	2250	Estimated Time to Complete Initial Contact	1	Estimated Burden for initial contact	38
Estimated number of on-site refusals	675	On-site Refusal/nonresponse	2	Estimated Burden for on-site refusals	23
Total Number of Responses	1575	Time to complete and return surveys	15	Estimated Burden to complete the on-site survey	394
				Total Burden Hours	455

11. **Reporting Plan:** Surveys responses will be compiled and analyzed by December 2012. A summary report of key findings and results will be provided to the park in mid to late Spring 2013.

Park staff will also be provided with a database of all compiled responses from the data collection process.

Key findings and results may also be presented in professional and scholarly presentations. Park staff will be informed and included on any of these presentation opportunities.

Reporting of results to local stakeholders and other interested parties will be per the discretion and requirements of the park staff.