



**National Park Service**  
**U.S. Department of the Interior**

**Social Science Program**

OMB Control Number 1024-0224  
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**Programmatic Approval for NPS-Sponsored Public Surveys**

**Submission Date**

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1. **Project Title:** Lewis & Clark National Historic Trail Auto Tour Route Wayshowing Assessment

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2. **Abstract:** *An on-site survey, will be administered to visitors at eleven selected certified historical sites along the Lewis & Clark Historic Trail Auto Tour Route. The purpose of the study is to provide the National Park Service with an assessment of visitor satisfaction and attitudes toward current wayshowing along the route and interpretive resources available at these sites.*

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3. **Principal Investigator Contact Information**

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4. **NPS Park or Program Liaison Contact Information**

**First Name:** Neal **Last Name:** Bedlan  
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**Park:** Lewis & Clark National Historic Trail and Auto Tour Route  
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**Project Information**

5. **Park(s) For Which Research is to be Conducted:** Eleven selected sites along the Lewis & Clark National Historic Trail Auto Tour Route

6. **Survey Dates:** 6/1/13 TO 10/13/13

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

Mail-Back Questionnaire	<input checked="" type="checkbox"/> On-Site Questionnaire	Face-to-Face Interview	Telephone Survey	Focus Groups
Other (explain)				

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, development.*

The purpose of the Lewis and Clark National Historical Trail is to commemorate the 1804 to 1806 Lewis and Clark Expedition through the identification; protection; interpretation; public use and enjoyment; and preservation of historic, cultural, and natural resources associated with the expedition and its place in U.S. and tribal history. The primary way that the visiting public use and enjoy the Lewis and Clark NHT is by traveling on the designated Auto Tour Route and visiting the more than 300 key historical sites and visitor centers. In order to have a complete understanding of the visiting public additional assessment needs to be completed to ensure the Lewis and Clark NHT will continue to protect the trail resources and enhance the enjoyment of the trail use for present and future generations. The last Lewis and Clark NHT Comprehensive Management Plan was completed in 1982. Park planning is needed in the future and the assessment findings will be used in the future planning efforts.

In order to complete this assessment the Lewis and Clark NHT commissioned the Department of Human Dimensions of Natural Resources at Colorado State University to perform an assessment of visitor attitudes and preferences pertaining to the current wayfinding, wayshowing and interpretive assets along the 6,200 mile Lewis & Clark National Historic Trail Auto Tour Route. These sites are managed by a variety of agencies and public and private entities including, but not limited to the National Park Service.

9.

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

**(a) Respondent Universe:**

The response universe includes all travelers 18 years of age or older visiting one of the eleven sites along the Lewis & Clark National Historic Trail between June 1 and October 13, 2013.

Identified potential sites include:

1. Fort Clatsop National Historic Park, Astoria, OR
2. Lolo Pass Visitor Center, Lolo Pass, ID
3. Lewis & Clark Trail State Park, Walla Walla, WA
4. Pompey's Pillar Visitor Center, MT
5. Lewis & Clark Interpretive Center, Washburn, ND
6. Lewis & Clark Visitor Center, Spring Mound, SD
7. Ponca State Park, Ponca, NE
8. Sergeant Floyd Monument/Visitor Center, Sioux City, IA
9. Frontier Army Museum, Fort Leavenworth, KS
10. National Frontier Trail Center, Independence, MO
11. Lewis & Clark Memorial, East St. Louis, IL

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

The sampling for this study will be stratified by day of the week and will include week days and weekend days that fall within the study period. Dates during this period will be selected based on the availability of survey administration staff and travel time. Survey staff, with the cooperation of the selected site managers, will establish a presence at the walking exit, (or other appropriate locations) to intercept visitors.

Planned sampling will take place at each site Thursday, Friday, and Saturday from 9:00 a.m. to 4:00 p.m. Depending on travel and weather considerations, other days and times may be selected in cooperation with site management.

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**(c) Instrument Administration:**

This will be an on-site survey. Study survey staff will establish a presence that will include signage appropriate to the location and approved by site management. During sampling period, visitors will be approached and asked if they have received a survey along the route. If not, the surveyor will ask if the visitor is over 18 years old and would be interested in taking the survey. If more than one visitor is traveling in a group, the surveyor will ask which member of the group was born in or closest to the month of the contact to complete the survey.

Selected visitors will be read the following script,(adapted for each site):

*"Hello, my name is \_\_\_\_\_. I am helping to conduct a survey on behalf of the National Park Service and Colorado State University to help managers of the Lewis & Clark National Historic Auto Tour Route to understand your preferences and attitudes regarding the navigation signs along the Auto Tour Route. We are also interested in your level of satisfaction with*

*the interpretive signs, displays and programs at this site. Would you be willing to answer a short survey regarding your visit today?"*

- Should the visitor answer "No," then the surveyor will respond "Thank you very much for your time. Have a great day!"*

If the visitor has not previously participated, the surveyor will read the following statement *provided a survey and provide information completing and returning the survey.*

- If the visitor has previously accepted a survey the surveyor will thank them and move on to the next party.*

The survey staff will provide an area for survey completion. An official Lewis & Clark National Historic Trail pin will be given to all visitors completing and returning the survey.

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**(d) Expected Response Rate/Confidence Levels:**

We will administer the survey at eleven sites along the Lewis & Clark National Historic Auto Tour Route. We anticipate contacting approximately 100 visitors per site with a response rate of 60%. This will result in approximately 480 responses and provide a 95% confidence level from data examined (margin of error = +/-5%).

We have identified other studies with similar methodology that received the same or higher response rates. In a study of recreationists at the Boundary Water Canoe Areas Wilderness in Northern Minnesota in 1992 (Manfredo & Bright 1993), 99% of the respondents approached on-site completed the 10 minute interview. Furthermore, of those who agreed to complete a subsequent survey mailed to their home, 72% of these completed and returned the survey. Other surveys have had similarly high results, including that reported by Vaske, Donnelly, & Lehto (2002; 95%). Over time, response rates have appeared to be declining somewhat, therefore, we are providing what we believe to be a low estimated response rate of 60%. This will give us an ability to generalize to the population of travelers at a 95% confidence level and an error rate of approximately +/- 5%, pending completion of non-response testing.

	Number of Initial Contacts	Expected Response Rate	Expected #of Responses	Margin of Error +/-
Fort Clatsop National Historic Park, Astoria, OR	80	60%	48	5%
Lolo Pass Visitor Center, Lolo Pass, ID	80	60%	48	5%
Lewis & Clark Trail State Park, Walla Walla, WA	80	60%	48	5%

Pompey's Pillar Visitor Center, MT	80	60%	48	5%
Lewis & Clark Interpretive Center, Washburn, ND	80	60%	48	5%
Lewis & Clark Visitor Center, Spring Mound, SD	80	60%	48	5%
Ponca State Park, Ponca, NE	80	60%	48	5%
Sergeant Floyd Monument/Visitor Center, Sioux City, IA	80	60%	48	5%
Frontier Army Museum, Fort Leavenworth, KS	80	60%	48	5%
National Frontier Trail Center, Independence, MO	80	60%	48	5%
Lewis & Clark Memorial, East St. Louis, IL	80	60%	48	5%
TOTAL	880	60%	528	5%

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

In order to identify any potential patterns of response bias for a particular group or groups, three questions from the survey will be used to ask of all visitors who refuse to participate in the survey when approached. These questions will be used to determine if there exist systematic differences between those who complete the survey and those who have been approached but do not.

Non-response check questions include:

- 1) "Have you visited this site before"?
- 2) "Are you aware that this site is part of the Lewis & Clark National Historic Trail and Auto Tour Route"?
- 3) How did you navigate your trip to this site" (map, GPS, website, etc.)?

If these questions are refused, survey staff will note characteristics of the individual, (approximate age, apparent ethnicity, and gender); and or group (size gender mix, and age mix).

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

The survey instrument has undergone a rigorous graduate committee review and an on-campus pilot testing in an undergraduate tourism classes to estimate the time to complete the questionnaire and to suggest any changes to improve the overall flow of the survey instrument. Additionally, NPS personnel and project consultant in wayshowing and wayfinding provided an extensive review of the survey instrument and technical edits.

The survey instrument is based on social psychological frameworks including "grounded theory" (Martin 1986), "expectation ->confirmation->satisfaction

theory” (Oliver 1977), “cognitive dissonance theory” (Festinger 1957), and “the theory of reasoned action” (Ajzen & Fishbein, 1975). In addition, a series of cognitive psychology frameworks will be applied to the aspects of the survey and analysis regarding wayfinding and wayshowing, including “cognitive mapping theory” (Tolman 1948), Wayshowing theory (Golledge 1999), wayfinding principles (Pinalto & Dahlquist); and visitor satisfaction measurement (Burns, Gaefe, & Absher 2003).

- 10 **Burden Estimates:** We plan to approach up to 880 individuals during the sampling period. With an anticipated response rate of 60%, we expect to receive 528 total responses for this collection.

We expect that the initial contact time will be at least one minute per person (880 x 1 minute = 14.7 hours). We expect that 352 (40%) visitors will refuse to participate during the initial on-site contact, for those individuals we will record their reason for refusal and ask them to answer the four questions that will be used for the non-response check. This is estimated to take no more than 2 minutes (528 x 2 = 17.6 hours) to complete each session.

For those who agree to participate (n= 528) we expect that all will complete and return the survey, with that, an additional 10 minutes will be required to complete the follow through (528 response x 10 minutes = 88 hours). The burden for this collection is estimated to be 120.4 hours.

Estimated Number of Contacts		Estimation of Time (mins)		Estimation of Respondent Burden (hours)	
Total Number of Initial Contacts	880	Complete Initial Contact	1	Estimated Burden Hours	15
Estimated number of on-site refusals	352	On-site Refusal/ non-response	2	Estimated Burden Hours	18
Total Number of Responses	528	Complete and return surveys	10	Estimated Burden Hours	88
				<b>Total Burden</b>	<b>121</b>

11. **Reporting Plan:** A technical report of survey findings will be provided to the Recreation Planner for the Lewis & Clark National Historic Trail and Auto Tour upon completion of the survey administration, analysis, and interpretation. Management recommendations will be included in the technical report. A final copy of the report will be submitted to the NPS Social Science Division for archiving in the Social Science Studies Collection as required by the programmatic approval process.

#### References Cited

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