

Identifying National Park Visitors in National Household Surveys, 2000 and 2008

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The National Park Service (NPS) uses public surveys in many forms to assess visitors' experiences in the national park system. Since 1979, these surveys have included the Visitor Survey Card Project, which uses a mail-back card given to park visitors as they leave a site. Additionally, surveys may be administered on request for a particular park, as budgets and time permit. These are generally intercept surveys, tailored to the needs of a particular park, and may target specific groups of visitors. Other researchers (academic, private, and individual) may also access the parks for their own research, often in conjunction with park administration.

In 2000, the NPS, in association with Northern Arizona University's Social Research Laboratory, conducted its first Comprehensive Survey of the American Public. The 2000 survey sought a representative sample of all U.S. adults, including non-visitors to NPS units, as well as visitors. More than 3,500 households nationwide were interviewed by telephone on subjects covering, among others, frequency of visiting national park units, reasons for not visiting, cost of traveling to a park, and attitudes toward various park management policies.

In 2008, the second Comprehensive Survey was undertaken by NPS in cooperation with the Wyoming Survey and Analysis Center (WYSAC) at the University of Wyoming. The aim of this survey was to provide updated information on issues covered in the 2000 survey and to address new questions.

Space limitations prevent an extensive discussion of sampling and interviewing methods; a detailed statement is available on request. Below we present a sketch of the methods, and comparisons on a set of questions asked both in the 2000 and 2008 surveys. We focus on a key methodological issue: accurate identification of recent visitors to NPS units.

Methods

Both the 2000 and 2008 surveys were conducted by random digit dial telephone interviews using computer aided telephone interviewing. Both samples were stratified by the seven NPS administrative regions, and both used the "birthday method" for selecting a particular, quasi-random respondent within each household (see Grandjean et al. 2004).

However, the 2008 survey differed in method from the 2000 survey in some notable ways. First, a cell phone sample was intentionally included in 2008, because by then at least

10 percent of all households had only cellular telephone service (Keeter et al. 2007). These households tend to be younger, less affluent, more mobile geographically, and more likely to be Hispanic than households with landline telephones. Second, we provided a Spanish translation of the questionnaire, with call-backs by bilingual interviewers to households where the telephone was initially answered in Spanish. Both of these adjustments in the sampling plan addressed problems of under-coverage in traditional landline-only and English-only telephone surveys, problems that have increased (and have increasingly come to be recognized) since the 2000 survey was conducted.

Another methodological difference in the two studies is that the 2000 survey ($n = 3,506$) was completed in three months during the spring of the year. In contrast, calling for the 2008 survey took place over a full year, from spring 2008 through winter 2009. This allowed a comparison with the 2000 results, as well as across seasons for the 2008/2009 results. In addition, calling over four seasons should have reduced bias in the type of visit recalled (e.g., peak season, off-season) when respondents were asked to provide details of their most recent visit to a park. The results presented here are for the spring wave of 2008 ($n = 1,025$) compared to results from the 2000 survey.

Attempts to identify the park unit visited by the respondent were assisted in the 2008 survey by a more complete list of unit names, including some common aliases that differ from official names, and by a cross-reference list of national park system units arranged by state. As described below, this list was augmented by standardized interviewer probes, and by an interviewer prompt to facilitate respondents' recall.

Who is a park visitor? While the identification of park visitors may seem self-evident, in the survey context, determining who is a park visitor is a multi-layered task. After visiting a park (six months ago, a year earlier, etc.) visitors may forget its name, or may confuse the unit with state parks or national forests. In other cases, visitors may not realize they were in a unit of the NPS. Several techniques were developed for the 2008 survey to address this problem.

In both the 2000 and 2008 surveys, respondents were asked the following question: "The national park system consists of all the units managed by the National Park Service, including national parks, historic and cultural sites, and national monuments. How many times in the past two years have you visited a unit of the national park system?" Respondents who said they had visited a national park unit at least once in the past two years were then asked to name the last NPS unit they visited. Only those respondents who identified a valid NPS unit were defined as "visitors." In the 2000 survey, this determination was finalized during each individual interview, and the interviewer's decision dictated whether or not a particular respondent was asked the questions intended for visitors, or only those relevant to non-visitors.

Through pre-testing of the 2008 questionnaire, a process that included focus groups, cognitive interviews (Willis 2005) conducted by telephone, and national calling on the final draft of the instrument, we learned that respondents often recalled the NPS unit they visited not by its official name, but by its location, a colloquial alias, or some key geographic or natural feature. Therefore, in the full-scale 2008 calling, when a telephone interviewer could not find the named park on a list of the 391 park units, three "primary probes" were introduced into the telephone script: "Do you know what state that park is in?"; "Is there another name

for that park?"; and finally, "Can you spell that name for me?" Responses to these questions allowed the interviewer to double-check the list of park unit names (alphabetically by name or alias, by state, or both, as needed). The list was available to interviewers as an on-screen spreadsheet and in hardcopy, allowing them to search whichever format they found more convenient.

If the telephone interviewer still could not find the named park unit on the list, or if the respondent said he or she had not visited any unit in the past two years, a "secondary prompt" was provided. The respondent's state of residence (as determined in a previous question) was used by the interviewing software to identify two nearby national park units. The telephone script then provided the following statement for the interviewers to read: "A lot of people don't realize that the national park system includes not only the big units like Yellowstone, but also national battlefields, national seashores, national recreation areas, and small urban sites. In your area, _____ and _____ are both national park system units. With this in mind, can you give me the name of any place you've visited in the past two years that you think is part of the national park System?" If the respondent could name or describe any place visited, the telephone interviewer took down the response verbatim, and the respondent was treated tentatively as a park visitor for purposes of the interview. After completion of the interview, these open-ended responses were reviewed, and only then was a final determination made as to whether any persons were indeed park visitors. Those who were determined to be non-visitors were moved to the non-visitor respondents.

For example, a respondent might report going to a national park beach in Corpus Christi, Texas, without being able to name the unit. Similarly, another respondent might say the family visited the "Arch" in St. Louis. Responses such as these were subsequently coded as indicating a park visitor (i.e., to Padre Island National Seashore and the Jefferson National Expansion Memorial, respectively). Approximately 87 respondents in the spring 2008 calling were retained as "visitors" based on the open-ended responses. These respondents would not have been counted as visitors in the 2000 survey, because probing to identify park units was not as systematic.

Some respondents initially said they had not visited a national park unit within the past two years, but volunteered on a subsequent question that their most recent visit had been within the past two years. Seven such respondents who were then able to identify a valid NPS unit for that visit were reclassified as "visitors" in the spring 2008 wave.

Comparison of 2000 and 2008 results

Table 1 presents the results of the two surveys as regards defining recent "visitors." Both sets of data have been weighted to adjust for the stratified sampling and to generate comparable national estimates.

Asked whether they had "ever visited a National Park System unit," 87% in the 2000 survey said they had visited a park unit sometime during their lives. In 2008, the percentage was slightly higher, at 91%. In 2000, 53% reported that they had visited a park unit within the past two years, while in 2008, that figure was noticeably higher, at almost 63%. Both of these questions elicited unprompted, unverified self-reports, and hence should be largely unaffected by the methodological differences just discussed. The differences in results sug-

	2000 (n=3506)	2008 (n=1088)
Says ever visited NPS unit	86.9%	91.0%
Says visited in past 2 years	53.4%	62.5%
Says visited in past 2 years and names a valid unit	32.1%	49.1%
Says visited in past 2 years, names unit after a prompt	—	62.9%

Table 1. Visitor percentages to a National Park Service unit by year, sample survey data for 2000 and 2008.

gest either somewhat higher visitation recently, or somewhat greater self-selection of recent visitors among those reached and willing to respond to the 2008 survey. The NPS visitation counts have not shown any increase this decade (if anything, a slight decline), while response rates to telephone surveys have been dropping. We therefore are inclined to attribute the modest increase in the percent of households reporting unverified visitation between 2000 and 2008 mainly to the greater willingness of recent visitors to participate in a survey about national parks. Those who were less interested in national parks, and who were not recent visitors, may also have been more likely to refuse to be interviewed.

The effect of the more systematic probing used in 2008, as well as the additional time for respondent reflection, became evident when self-reported visitation was verified against a list of valid NPS units. In 2000, the interviewer verifications identified only 32% of respondents as “visitors,” while in 2008, 49% were so identified. Or, to view the figures from a different perspective, in 2000, only 60% of those who said they had visited in the past two years could name a unit that the interviewers found on their list, whereas in 2008, almost 79% of the self-reported recent visitors could provide a unit name, an alias, or a state that led the interviewers to find the unit in their more comprehensive list. The use of a complete, cross-referenced list of NPS units (in two formats) in 2008, along with a standardized set of probes, seems to have substantially reduced the number of “false negatives” in the verification process. Because it lacked these design features, the 2000 survey’s estimate of the proportion of recent visitors probably was conservative.

Indeed, when the interviewers moved beyond the primary probes to the secondary prompt, nearly all of those who said they visited a national park unit in the past two years were able to describe or identify a location that was subsequently coded as a valid NPS unit. This would suggest that as many as 63% of respondents in 2008 had in fact visited a park unit in the past two years. However, we view this figure as a high-side estimate, because the prompting may have generated some false positives. Having initially claimed a recent visit, some respondents might react to the prompting by identifying any valid NPS unit, even if they had not visited it recently. Therefore, it’s possible that the 2008 estimate of the proportion of recent visitors is somewhat liberal because of the tendency toward “yea-saying” in surveys in which respondents interact directly with interviewers (see Dillman 2007).

Why do such methodological details matter? The details of method are often lost in the march toward substantive comparisons. However, these details are important in a number of respects. The NPS often is called upon to describe the nature and extent of park visitation. Counts of visitation compiled by the NPS Public Use Statistics Office are estimates of the

number of visits to the national park system, not the number of different visitors. The NPS estimates do not identify repeat visitors to the same park during the year, nor do they identify those who visit more than one park. A single person may generate multiple visits, but this is not captured in official statistics. By knowing what proportion of households has visited in the past two years, or has ever visited a national park unit, the NPS obtains a complementary and valuable perspective on the connection between the U.S. population and the national park system. Results from the spring wave of the 2008/2009 NPS survey indicate that respondents in more than 90% of households in the sample reported that they had visited a national park unit at some time in their lives. In that sense, the NPS directly serves nearly the entire population of households in the United States.

The NPS visitor counts at park unit entrances also make no distinction between U.S. and international visitors, so that counts of visitors from the United States cannot be extracted from NPS gate counts. For example, Grand Canyon National Park and Death Valley National Park report that nearly half of their visitors during the summer months are international in origin (Myers 2008; Shochaki 2009). The Comprehensive Survey of the American Public yields visitation figures that are specific to the U.S. population, since the survey includes information on residency.

Finally, some groups may be more likely than others to under-report their visitation. Probes included in the 2008 survey should help to reduce those differences. For example, individuals or families who did not make trips for the express purpose of visiting national park sites, but who “stopped on the way” to another location, may not quickly recall their park visit. Or casual (but regular) users of sites in urban areas such as Washington, D.C., San Francisco, Boston, New York, or Philadelphia may not realize they are in units of the national park system. Only by probing or prompting the respondents will a better picture emerge of the visitation rates by the population.

Conclusion

The wide support enjoyed by the NPS is demonstrated by this survey. That more than 90% of respondents in the spring wave reported visiting an NPS site during their lifetime, and up to 63% said they had visited a site in the past two years that they could name, suggests a strong connection between the American public and those exemplars of natural and cultural heritage protected by the NPS. Additional analyses of the 2008/2009 data are in progress; more complete information will be available regarding the attitudes of Americans toward their national parks, and will further illuminate the connection between the national park system, established in 1916 by the Organic Act, and the U.S. population. This information is vital to the NPS as it approaches its centennial in 2016, and as the national park system prepares for a new generation of visitors.

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