



National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for National Elk Refuge

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I have visited many refuges over the years in the U.S. as well as in other countries. The Elk Refuge at Jackson Hole is by far the best! As a wildlife biologist I was impressed at how our tour guide/driver could answer difficult questions in a way that made sense to our entire group. Excellent! Excellent!—Survey comment from visitor to National Elk Refuge.



National Elk Refuge. Photo credit: U.S. Fish and Wildlife Service.

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Introduction

The National Wildlife Refuge System (Refuge System), established in 1903 and managed by the U.S. Fish and Wildlife Service (Service), is the leading network of protected lands and waters in the world dedicated to the conservation of fish, wildlife and their habitats. There are 556 national wildlife refuges (NWRs) and 38 wetland management districts nationwide, including possessions and territories in the Pacific and Caribbean, encompassing more than 150 million acres. The mission of the Refuge System is to “administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” Part of achieving this mission is the goal “to foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use” (Clark, 2001). The Refuge System attracts more than 45 million visitors annually, including 25 million people per year to observe and photograph wildlife, over 9 million to hunt and fish, and more than 10 million to participate in educational and interpretation programs (Uniack, 1999; U.S. Fish and Wildlife Service, 2007). Understanding visitors and characterizing their experiences on national wildlife refuges are critical elements of managing these lands and meeting the goals of the Refuge System.

The Service contracted with the U.S. Geological Survey (USGS) to conduct a national survey of visitors regarding their experiences on national wildlife refuges. The survey was conducted to better understand visitor needs and experiences and to design programs and facilities that respond to those needs. The survey results will inform Service performance planning, budget, and communications goals. Results will also inform Comprehensive Conservation Plan (CCPs), Visitor Services, and Transportation Planning processes.

Organization of Results

These results are for National Elk Refuge (this refuge) and are part of USGS Data Series 643 (Sexton and others, 2011). All refuges participating in the 2010/2011 surveying effort will receive individual refuge results specific to the visitors to that refuge. Each set of results is organized by the following categories:

- **Introduction:** An overview of the Refuge System and the goals of the national surveying effort.
- **Methods:** The procedures for the national surveying effort, including selecting refuges, developing the survey instrument, contacting visitors, and guidance for interpreting the results.
- **Refuge Description:** A brief description of the refuge location, acreage, purpose, recreational activities, and visitation statistics, including a map (where available) and refuge website link.
- **Sampling at This Refuge:** The sampling periods, locations, and response rate for this refuge.
- **Selected Survey Results:** Key findings for this refuge, including:
 - Visitor and Trip Characteristics
 - Visitor Spending in the Local Communities
 - Visitors Opinions about This Refuge
 - Visitor Opinions about National Wildlife Refuge System Topics
- **Conclusion**
- **References**
- **Survey Frequencies (Appendix A):** The survey instrument with the frequency results for this refuge.
- **Visitor Comments (Appendix B):** The verbatim responses to the open-ended survey questions for this refuge.

Methods

Selecting Participating Refuges

The national visitor survey was conducted from July 2010 – November 2011 on 53 refuges across the Refuge System (table 1). Based on the Refuge System's 2008 Refuge Annual Performance Plan (RAPP; U.S. Fish and Wildlife Service, 2011, written comm.), 192 refuges with a minimum visitation of 25,000 were considered. This criterion was the median visitation across the Refuge System and the minimum visitation necessary to ensure that the surveying would be logistically feasible onsite. Visitors were sampled on 35 randomly selected refuges and 18 other refuges that were selected by Service Regional Offices to respond to priority refuge planning processes.

Developing the Survey Instrument

USGS researchers developed the survey in consultation with the Service Headquarters Office, managers, planners, and visitor services professionals. The survey was peer-reviewed by academic and government researchers and was further pre-tested with eight Refuge System Friends Group representatives from each region to ensure readability and overall clarity. The survey and associated methodology were approved by the Office of Management and Budget (OMB control #: 1018-0145; expiration date: 6/30/2013).

Contacting Visitors

Refuge staff identified two separate 15-day sampling periods and one or more locations that best reflected the diversity of use and specific visitation patterns of each participating refuge. Sampling periods and locations were identified by refuge staff and submitted to USGS via an internal website that included a customized mapping tool. A standardized sampling schedule was created for all refuges that included eight randomly selected sampling shifts during each of the two sampling periods. Sampling shifts were three- to five-hour randomly selected time bands that were stratified across AM and PM, as well as weekend and weekdays. Any necessary customizations were made, in coordination with refuge staff, to the standardized schedule to accommodate the identified sampling locations and to address specific spatial and temporal patterns of visitation.

Twenty visitors (18 years or older) per sampling shift were systematically selected, for a total of 320 willing participants per refuge—160 per sampling period—to ensure an adequate sample of completed surveys. When necessary, shifts were moved, added, or extended to alleviate logistical limitations (for example, weather or low visitation at a particular site) in an effort to reach target numbers.

Table 1. Participating refuges in the 2010/2011 national wildlife refuge visitor survey.

Pacific Region (R1)	
Kilauea Point National Wildlife Refuge (HI)	William L. Finley National Wildlife Refuge (OR)
Deer Flat National Wildlife Refuge (ID)	McNary National Wildlife Refuge (WA)
Cape Meares National Wildlife Refuge (OR)	Turnbull National Wildlife Refuge (WA)
Malheur National Wildlife Refuge (OR)	
Southwest Region (R2)	
Bitter Lake National Wildlife Refuge (NM)	Aransas National Wildlife Refuge (TX)
Bosque del Apache National Wildlife Refuge (NM)	San Bernard/ Brazoria National Wildlife Refuge (TX)
Wichita Mountains Wildlife Refuge (OK)	
Great Lakes-Big Rivers Region (R3)	
DeSoto National Wildlife Refuge (IA)	McGregor District, Upper Mississippi River National Wildlife and Fish Refuge – (IA/WI)
Neal Smith National Wildlife Refuge (IA)	
Muscatatuck National Wildlife Refuge (IN)	Big Muddy National Fish and Wildlife Refuge (MO)
Rice Lake National Wildlife Refuge (MN)	Horicon National Wildlife Refuge (WI)
Tamarac National Wildlife Refuge (MN)	Necedah National Wildlife Refuge (WI)
Southeast Region (R4)	
Wheeler National Wildlife Refuge (AL)	Banks Lake National Wildlife Refuge (GA)
Big Lake National Wildlife Refuge (AR)	Noxubee National Wildlife Refuge (MS)
Pond Creek National Wildlife Refuge (AR)	Cabo Rojo National Wildlife Refuge (Puerto Rico)
Merritt Island National Wildlife Refuge (FL)	Pea Island National Wildlife Refuge (NC)
St. Marks National Wildlife Refuge (FL)	Cape Romain National Wildlife Refuge (SC)
Ten Thousand Islands National Wildlife Refuge (FL)	Reelfoot National Wildlife Refuge (TN)
Northeast Region (R5)	
Stewart B. McKinney National Wildlife Refuge (CT)	Moosehorn National Wildlife Refuge (ME)
Bombay Hook National Wildlife Refuge (DE)	Great Swamp National Wildlife Refuge (NJ)
Monomoy National Wildlife Refuge (MA)	Montezuma National Wildlife Refuge (NY)
Parker River National Wildlife Refuge (MA)	Wertheim National Wildlife Refuge (NY)
Patuxent Research Refuge (MD)	Occoquan Bay/ Elizabeth Hartwell Mason Neck National Wildlife Refuge (VA)
Mountain-Prairie Region (R6)	
Monte Vista National Wildlife Refuge (CO)	Sand Lake National Wildlife Refuge (SD)
Quivira National Wildlife Refuge (KS)	National Elk Refuge (WY)
Charles M. Russell National Wildlife Refuge (MT)	
Alaska Region (R7)	
Alaska Maritime National Wildlife Refuge (AK)	Kenai National Wildlife Refuge (AK)
California and Nevada Region (R8)	
Lower Klamath/Tule Lake National Wildlife Refuge (CA)	Ruby Lake National Wildlife Refuge (NV)
Sonny Bono Salton Sea National Wildlife Refuge (CA)	

Refuge staff and/or volunteers (survey recruiters) contacted visitors on-site following a protocol provided by USGS to ensure a diverse sample. Instructions included contacting visitors across the entire sampling shift (for example, every n^{th} visitor for dense visitation, as often as possible for sparse visitation), and only one person per group. Visitors were informed of the survey effort, given a token incentive (for example, a small magnet, temporary tattoo), and asked to participate. Willing participants provided their name, mailing address, and preference for language (English or Spanish) and survey mode (mail or online). Survey recruiters also were instructed to record any refusals and then proceed with the sampling protocol.

Visitors were mailed a postcard within 10 days of the initial on-site contact thanking them for agreeing to participate in the survey and inviting them to complete the survey online. Those visitors choosing not to complete the survey online were sent a paper copy a week later. Two additional contacts were made by mail during the next seven weeks following a modified Tailored Design Method (Dillman, 2007): 1) a reminder postcard one week after the first survey, and 2) a second paper survey two weeks after the reminder postcard. Each mailing included instructions for completing the survey online and a postage paid envelope for returning the paper version of the survey. Those visitors indicating a preference for Spanish were sent Spanish versions of all correspondence (including the survey). Finally, a short survey of six questions was sent to nonrespondents four weeks after the second survey mailing to determine any differences between respondents and nonrespondents at the national level. Online survey data were exported and paper survey data were entered using a standardized survey codebook and data entry procedure. All survey data were analyzed by using SPSS v.18 statistical analysis software.

Interpreting the Results

The extent to which these results accurately represent the total population of visitors to this refuge is dependent on 1) an adequate sample size of those visitors and 2) the representativeness of that sample. The adequacy of the sample size for this refuge is quantified as the margin of error. The composition of the sample is dependent on the ability of the standardized sampling protocol for this study to account for the spatial and temporal patterns of visitor use specific to each refuge. Spatially, the geographical layout and public use infrastructure varies widely across refuges. Some refuges only can be accessed through a single entrance, while others have multiple unmonitored access points across large expanses of land and water. As a result, the degree to which sampling locations effectively captured spatial patterns of visitor use will likely vary from refuge to refuge. Temporally, the two 15-day sampling periods may not have effectively captured all of the predominant visitor uses/activities on some refuges during the course of a year. Therefore, certain survey measures such as visitors' self-reported "primary activity during their visit" may reflect a seasonality bias.

Herein, the sample of visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for National Elk Refuge, any potential spatial and temporal sampling limitations specific to this refuge need to be considered when generalizing the results to the total population of visitors. For example, a refuge that sampled during a special event (for example, birding festival) held during the spring may have contacted a higher percentage of visitors who traveled greater than 50 miles to get to the refuge than the actual number of these people who would have visited throughout the calendar year (that is, oversampling of nonlocals). In contrast, another refuge may not have enough nonlocal visitors in the sample to adequately represent the beliefs and opinions of that group type. If the sample for a specific group type (for example, nonlocals, hunters, those visitors who paid a fee) is too low ($n < 30$), a warning is included. Additionally, the term "*this* visit" is used to reference the visit on which people were contacted to participate in the survey, which may or may not have been their most recent refuge visit.

Refuge Description for National Elk Refuge

In the early 1900s, severe winters with deep, crusted snow also took a serious toll on the wintering elk near Jackson Hole, Wyoming. The National Elk Refuge was created in 1912 as a result of public interest in the survival of the Jackson elk herd. The Refuge is an integral component of the Greater Yellowstone Ecosystem; it is bounded by Grand Teton National Park and a wilderness area in the Bridger-Teton National Forest. This 25,000 acre Refuge is nestled in the meadows and marshes of the valley floor with timbered areas bordering the Gros Ventre and soars to the sagebrush and rock outcroppings along the foothills of the mountains. This habitat diversity provides a variety of food, water, and shelter that supports the rich mixture of wildlife species found at the Refuge.

Today, the Refuge continues to preserve the last remaining elk winter range in Jackson Hole, Wyoming. This land also helps to conserve other wildlife that call the National Elk Refuge home. The largest single herd of bison under federal management, comprising at least 1,000 individuals, also winter on the Refuge. Bighorn sheep can be found here, along with pronghorn, mule deer, and even a few trumpeter swans along Flat Creek, which flows out of the refuge south into the town of Jackson. Rare sightings of wolves and grizzly bears have occurred as well.

Nearly 900,000 visitors (from 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.) come to National Elk Refuge each year to partake in the multitude of activities offered, including big game hunting, use of the Visitor Center, fishing, bicycling, hiking, auto tour routes, wildlife observation, photography, environmental education, interpretation, winter sleigh rides, visiting historic Miller House, and attending the yearly Elk Fest. The visitors particularly enjoy coming to the Refuge to watch the elk roam across the meadows, an opportunity not offered at other refuges. Figure 1 displays a map of the National Elk Refuge. For more information, please visit <http://www.fws.gov/nationalelkrefuge/>.

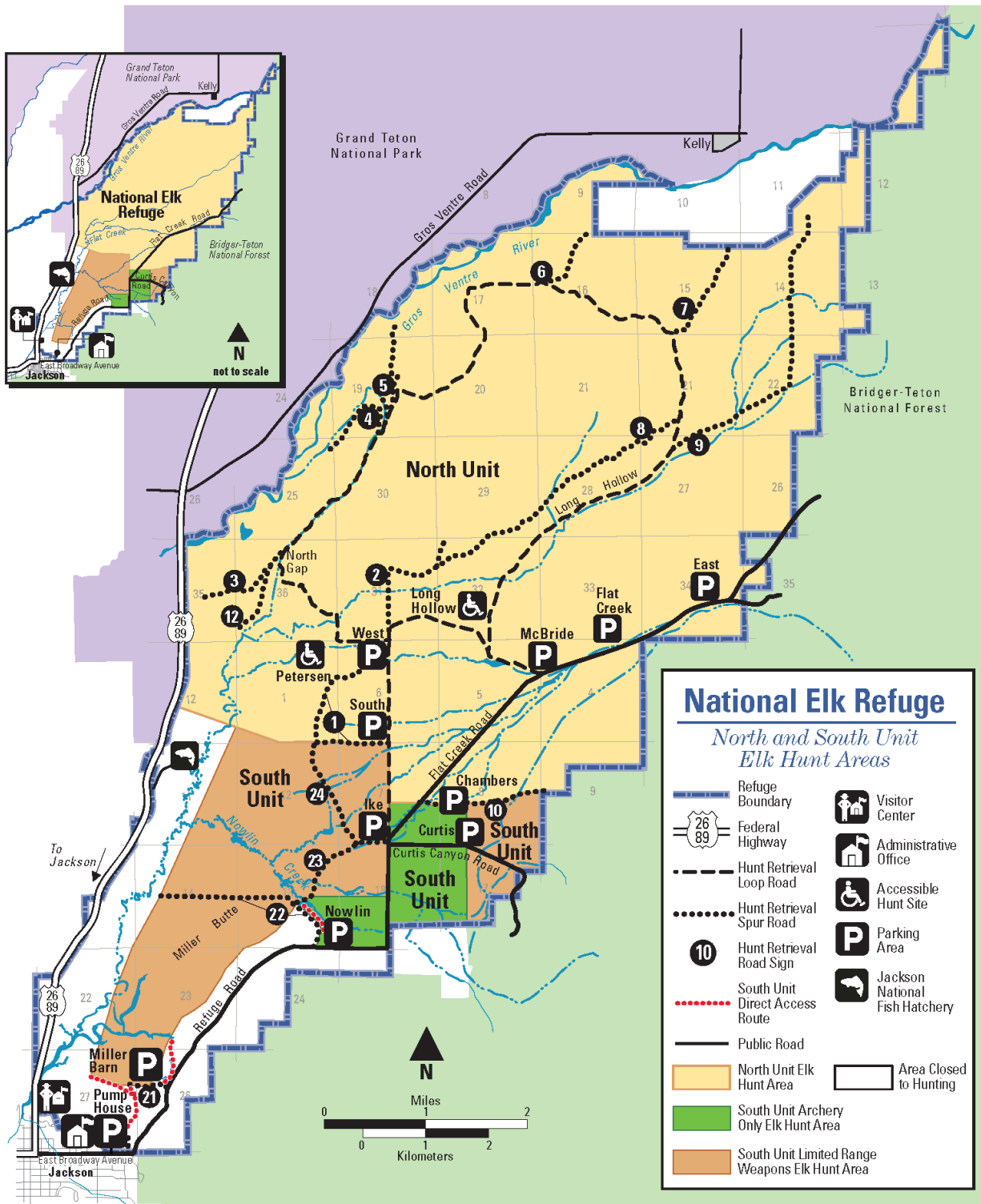


Figure 1. Map of National Elk Refuge, courtesy of U.S. Fish and Wildlife Service.

Sampling at National Elk Refuge

A total of 326 visitors agreed to participate in the survey during the two sampling periods at the identified locations at National Elk Refuge (table 2). In all, 236 visitors completed the survey for a 74% response rate and $\pm 5\%$ margin of error at the 95% confidence level.¹ Survey sampling occurred before multiuse pathway was in place.

Table 2. Sampling and response rate summary for National Elk Refuge.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	7/24/10 to 8/07/10	Jackson Hole and Greater Yellowstone Visitor Center Refuge Road/Miller House Flat Creek Fishing Area	166	5	130	81%
2	1/08/11 to 1/22/11	Jackson Hole and Greater Yellowstone Visitor Center	160	4	106	68%
Total			326	9	236	74%

Selected Survey Results

Visitor and Trip Characteristics

A solid understanding of refuge visitors and details about their trips to refuges can inform communication outreach efforts, inform visitor services and transportation planning, forecast use, and gauge demand for services and facilities.

Familiarity with the Refuge System

While we did not ask visitors to identify the mission of the National Wildlife Refuge System or the U.S. Fish and Wildlife Service, visitors to National Elk Refuge reported that before participating in the survey, they were aware of the role of the U.S. Fish and Wildlife Service in managing national wildlife refuges (79%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (87%). Positive responses to these questions concerning the management and mission of the Refuge System do not indicate the degree to which these visitors understand the day-to-

¹ The margin of error (or confidence interval) is the error associated with the results related to the sample and population size. A margin of error of $\pm 5\%$, for example, means if 55% of the sample answered a survey question in a certain way, then 50–60% of the entire population would have answered that way. The margin of error is calculated with an 80/20 response distribution, assuming that for any given dichotomous choice question, approximately 80% of respondents selected one choice and 20% selected the other (Salant and Dillman, 1994).

day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why. Compared to other public lands, many visitors feel that refuges provide a unique recreation experience (88%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. Some visitors to National Elk Refuge had been to at least one other National Wildlife Refuge in the past year (42%), with an average of 4 visits to other refuges during the past 12 months.

Visiting This Refuge

More than half of surveyed visitors (53%) had only been to National Elk Refuge once in the past 12 months, while others had been multiple times (47%). These repeat visitors went to the refuge an average of 31 times during that same 12-month period. Visitors used the refuge during only one season (63%), during multiple seasons (13%), and year-round (25%).

Most visitors first learned about the refuge from signs on the highway (38%), friends/relatives (29%), or people in the local community (24%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (46%) or signs on highways (42%; fig. 3).

Some visitors (31%) lived in the local area (within 50 miles of the refuge), whereas 69% were nonlocal visitors. For most local visitors, National Elk Refuge was the primary purpose or sole destination of trip (60%; table 3). For most nonlocal visitors, the refuge was one of many equally important reasons or destinations for their trips (46%). Local visitors reported that they traveled an average of 9 miles to get to the refuge, while nonlocal visitors traveled an average of 1,075 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 31% of visitors travelling to National Elk Refuge were from Wyoming.

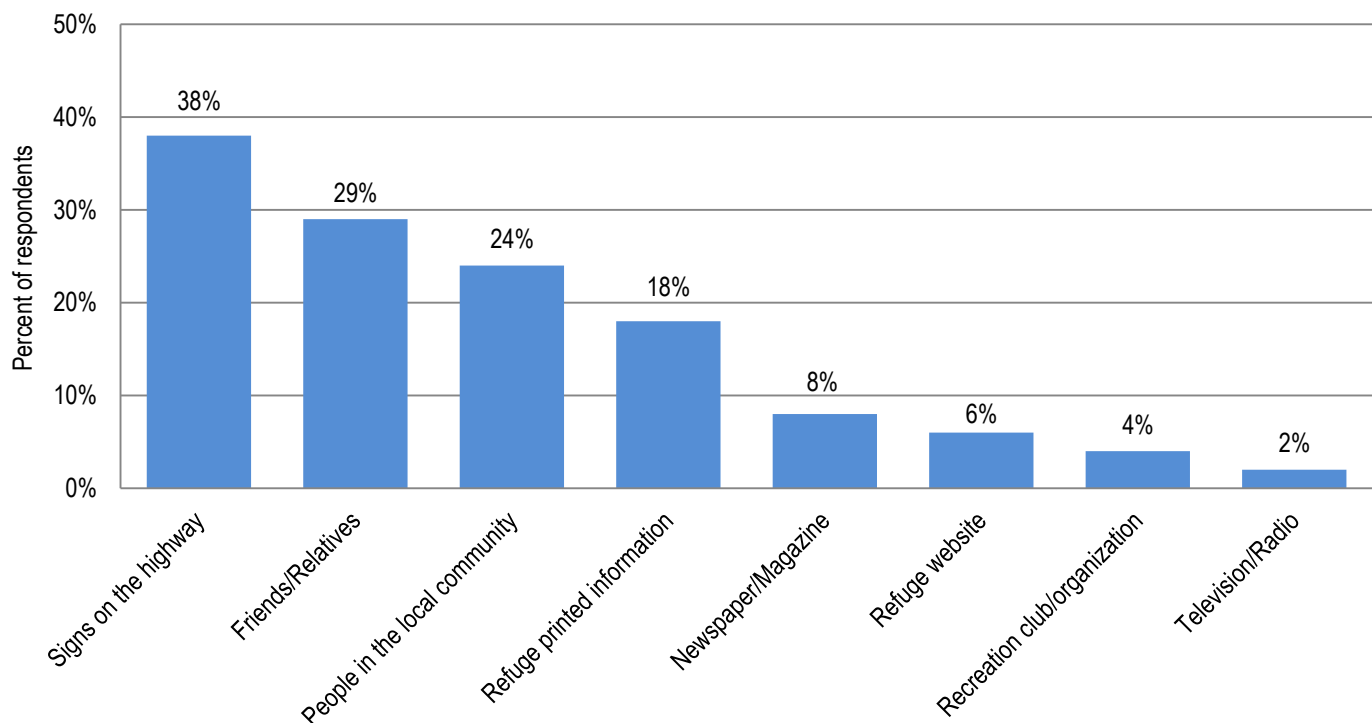


Figure 2. How visitors first learned or heard about National Elk Refuge (n = 226).

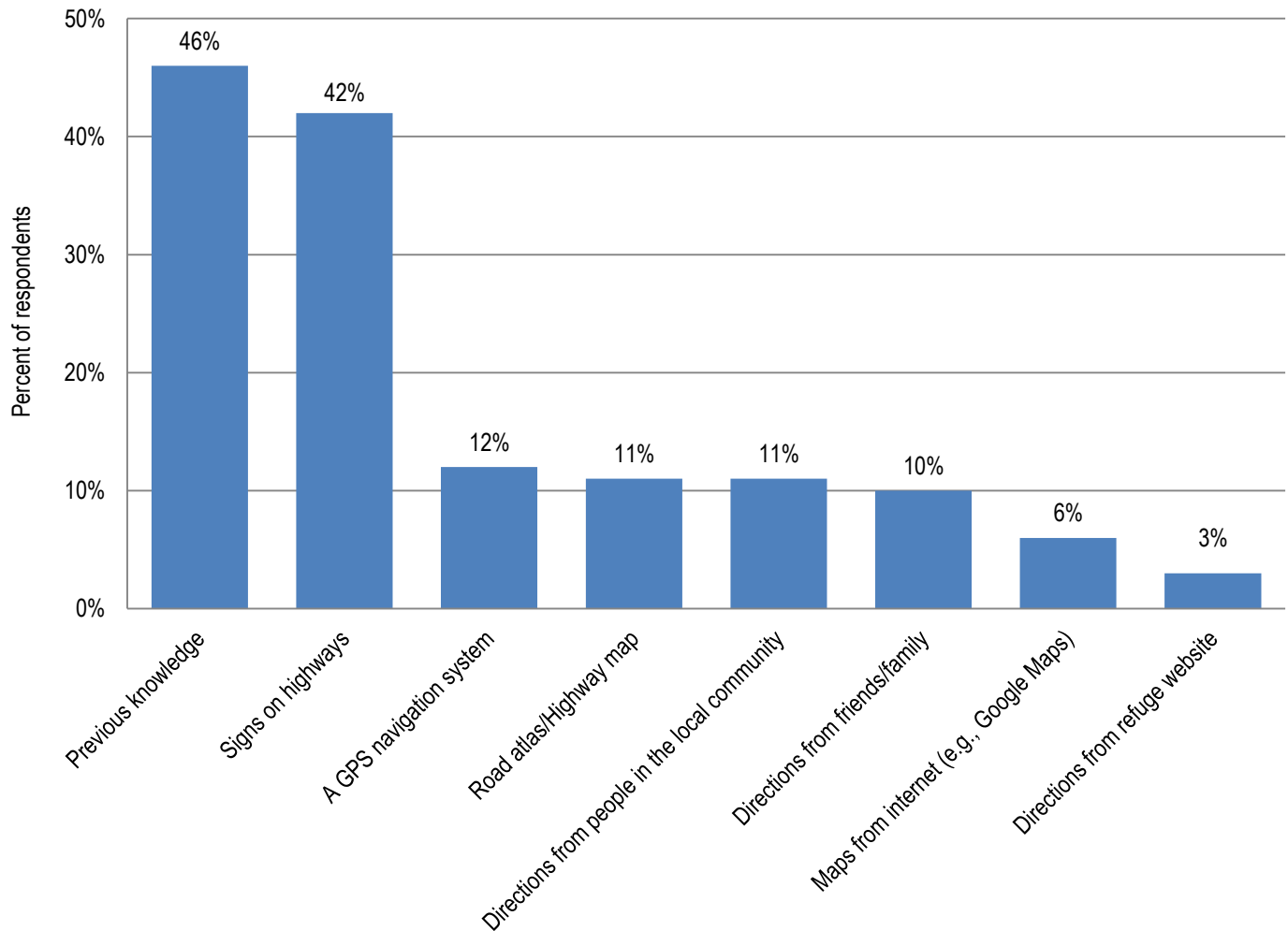
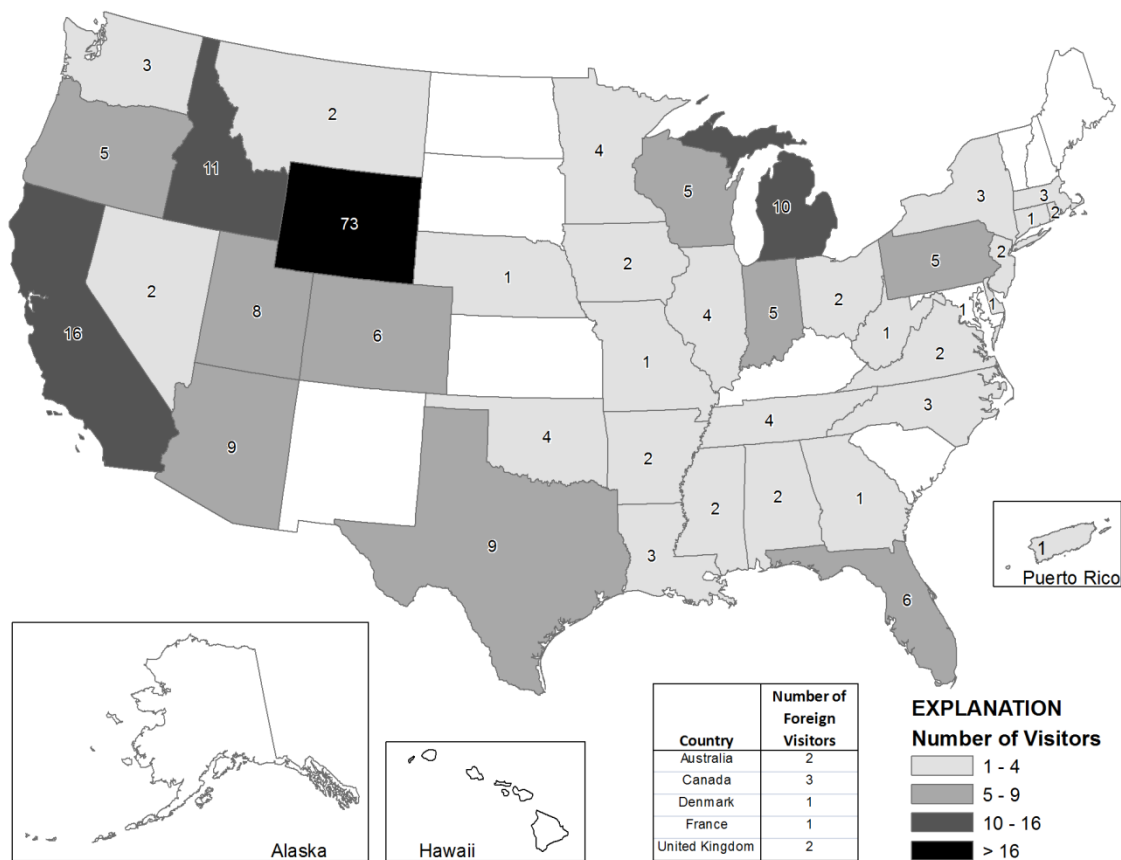


Figure 3. Resources used by visitors to find their way to National Elk Refuge during *this* visit (n = 233).

Table 3. Influence of National Elk Refuge on visitors' decision to take *this* trip.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	9%	46%	45%
Local	60%	22%	18%
Total	23%	40%	37%



EXPLANATION
 [Dashed line] Refuge Boundary
Number of Visitors
 1 - 4
 5 - 9
 > 9

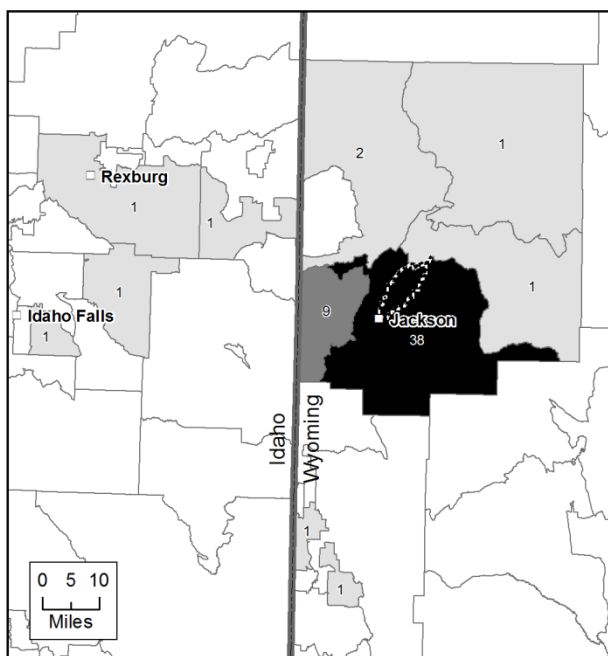


Figure 4. Number of visitors travelling to National Elk Refuge by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 236).

Surveyed visitors reported that they spent an average of 3 hours at National Elk Refuge during one day there (a day visit is assumed to be 8 hours). However, the most frequently reported length of visit during one day was actually 1 hour (32%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (79%) and walking/hiking (25%; fig. 5). More than half of visitors indicated they were part of a group on their visit to this refuge (58%), travelling primarily with family and friends (table 4).

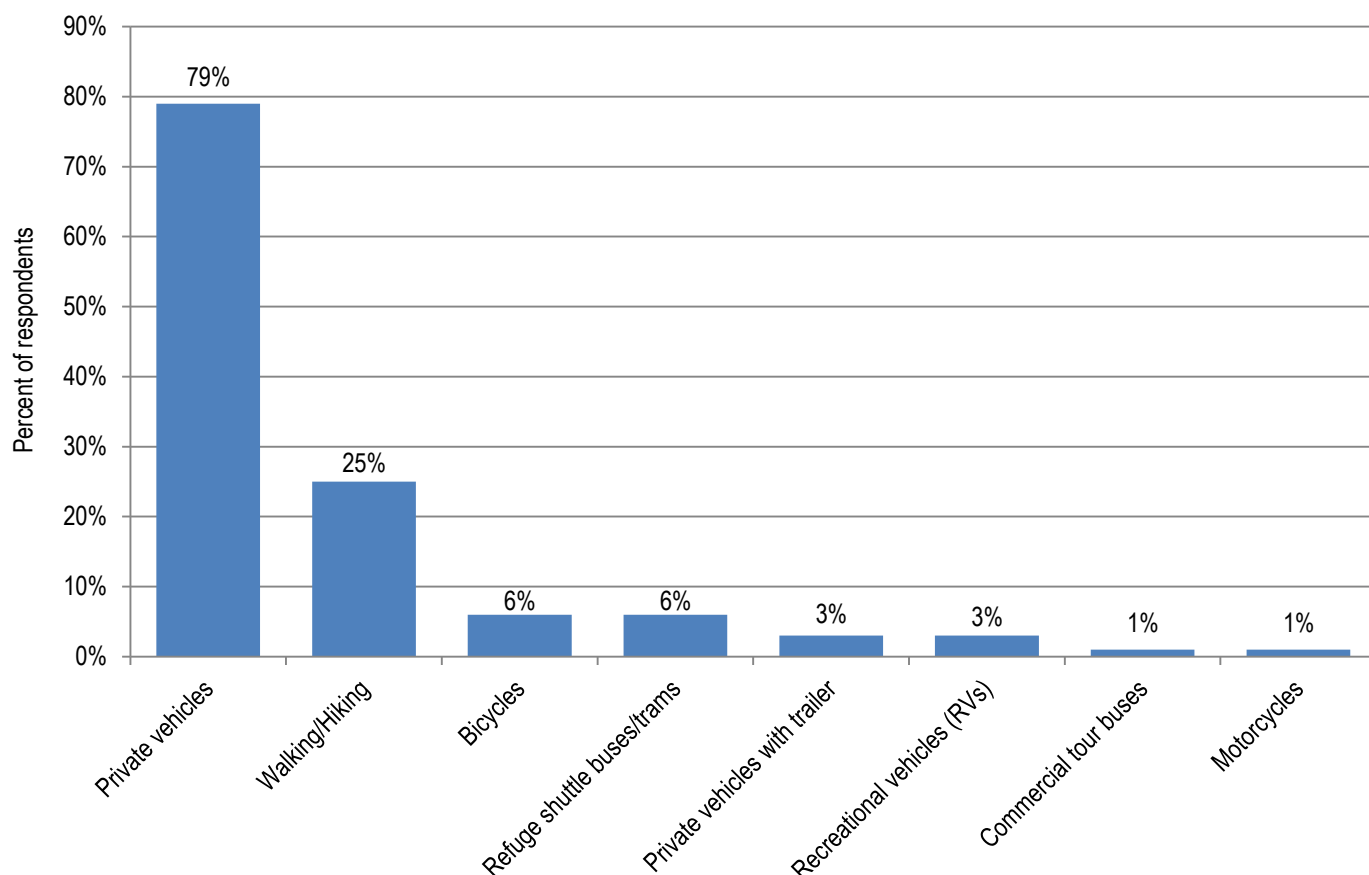


Figure 5. Modes of transportation used by visitors to National Elk Refuge during *this* visit (n = 234).

Table 4. Type and size of groups visiting National Elk Refuge (for those who indicated they were part of a group, n = 135).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	93%	3	1	4
Commercial tour group	3%	13	3	16
Organized club/School group	1%	29	0	29
Other group type	2%	5	1	6

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were wildlife observation (77%), photography (56%), and auto tour route/driving (39%). The primary reasons for their most recent visit included wildlife observation (40%), hiking (10%), and interpretation (8%; fig. 7). The visitor center was used by 71% of visitors, mostly to view the exhibits (91%), visit the gift shop/bookstore (88%), and ask information of staff/volunteers (60%; fig. 8).

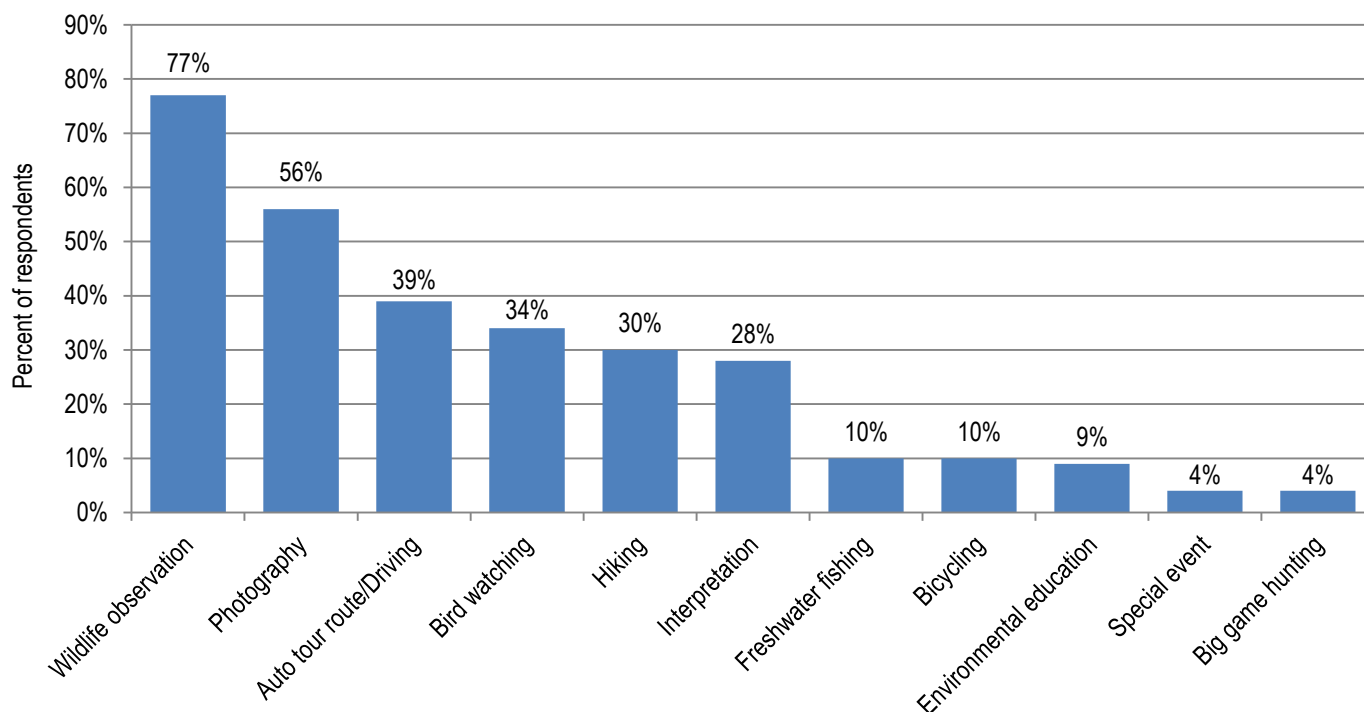


Figure 6. Activities in which visitors participated during the past 12 months at National Elk Refuge (n = 232). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (96%) surveyed visitors to National Elk Refuge indicated that they were citizens or permanent residents of the United States. Only those visitors 18 years or older were sampled. Visitors were a mix of 49% male with an average age of 54 years and 51% female with an average age of 52 years. Visitors, on average, reported they had 16 years of formal education (college or technical school). The median level of income was \$75,000–\$99,000. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

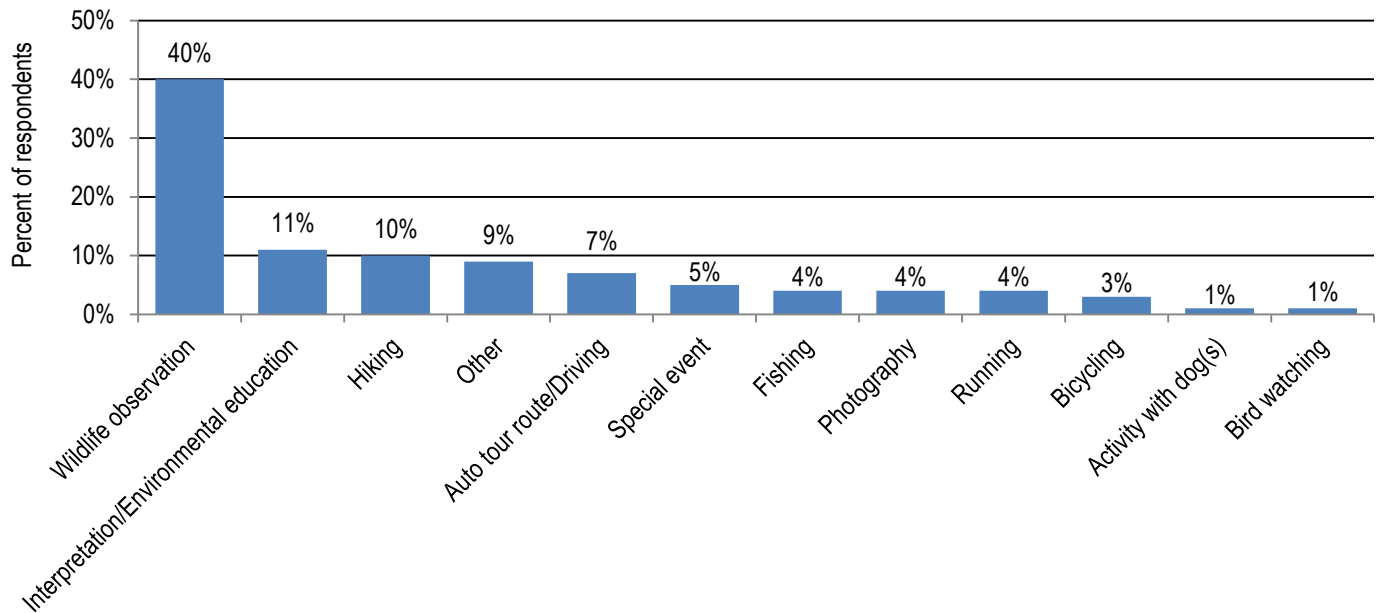


Figure 7. The primary activity in which visitors participated during *this* visit to National Elk Refuge (n = 218). See Appendix B for a listing of “other” activities.

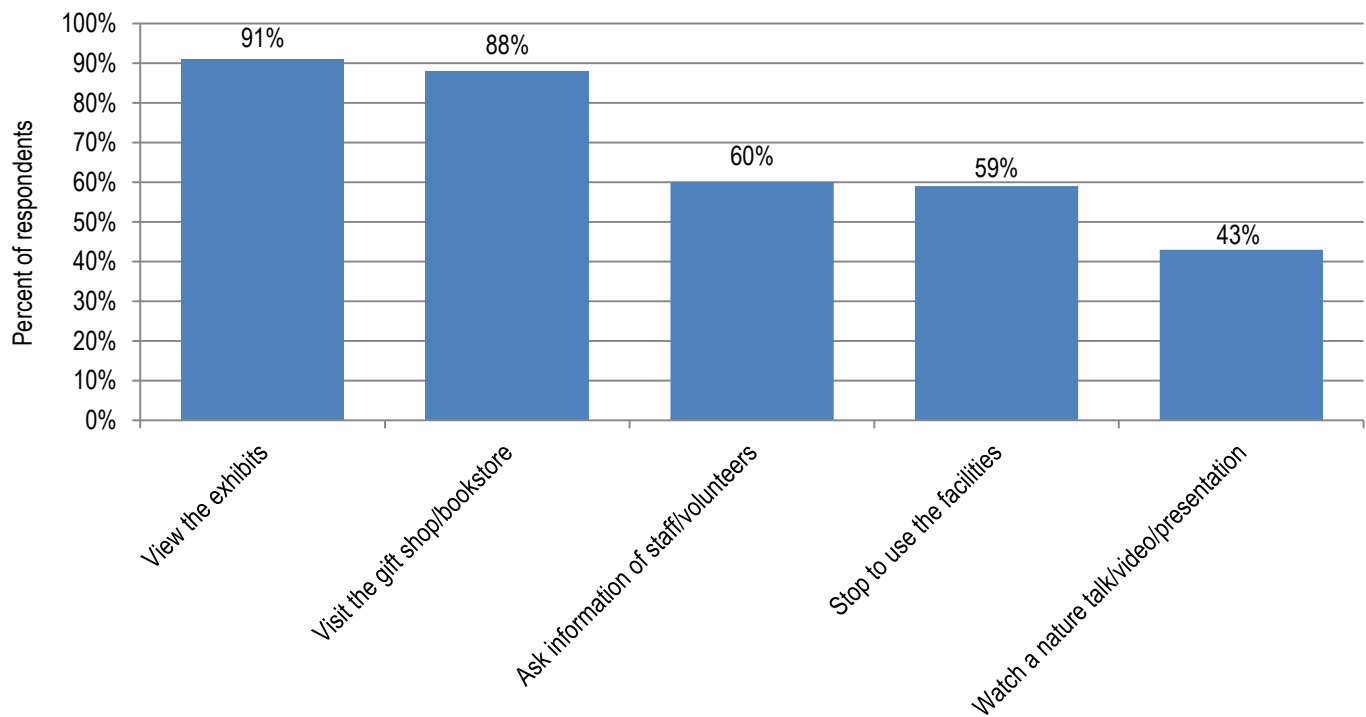


Figure 8. Use of the visitor center at National Elk Refuge (for those visitors who indicated they used the visitor center, n = 167).

Visitor Spending in Local Communities

Tourists usually buy a wide range of goods and services while visiting an area. Major expenditure categories include lodging, food, supplies, and gasoline. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge. For example, more than 34.8 million visits were made to national wildlife refuges in fiscal year 2006; these visits generated \$1.7 billion in sales, almost 27,000 jobs, and \$542.8 million in employment income in regional economies (Carver and Caudill, 2007). Information on the amount and types of visitor expenditures can illustrate the economic importance of refuge visitor activities to local communities. Visitor expenditure information also can be used to analyze the economic impact of proposed refuge management alternatives.

A region (and its economy) is typically defined as all counties within 50 miles of a travel destination (Stynes, 2008). Visitors that live within the local 50-mile area of a refuge typically have different spending patterns than those that travel from longer distances. During the two sampling periods, 31% of surveyed visitors to National Elk Refuge indicated that they live within the local area. Nonlocal visitors (69%) stayed in the local area, on average, for 5 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. ***It is important to note that summary statistics based on a small sample size ($n < 30$) may not provide a reliable representation of that population.*** During the two sampling periods, nonlocal visitors spent an average of \$149 per person per day and local visitors spent an average of \$47 per person per day in the local area. Several factors should be considered when estimating the economic importance of refuge visitor spending in the local communities. These include the amount of time spent at the refuge, influence of refuge on decision to take this trip, and the representativeness of primary activities of the sample of surveyed visitors compared to the general population. Controlling for these factors is beyond the scope of the summary statistics presented in this report. Detailed refuge-level visitor spending profiles which do consider these factors will be developed during the next phase of analysis.

Table 5. Total visitor expenditures in local communities and at National Elk Refuge expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	140	\$106	\$149	\$135	\$0	\$734
Local	33	\$3	\$47	\$101	\$0	\$526

¹n = number of visitors who answered both locality and expenditure questions.

Note: For each respondent, reported expenditures were divided by the number of persons in their group that shared expenses in order to determine the spending per person per trip. This was then divided by the number of days spent in the local area to determine the spending per person per day for each respondent. For respondents who reported spending less than one full day, trip length was set equal to one day. These visitor spending estimates are appropriate for the sampling periods selected by refuge staff (see table 2 for sampling period dates and figure 7 for the primary visitor activities). They may not be representative of the total population of visitors to this refuge.

Visitor Opinions about This Refuge

National wildlife refuges provide visitors with a variety of services, facilities, and wildlife-dependent recreational opportunities. Understanding visitors' perceptions of their refuge experience is a key component of the Refuge System mission as it pertains to providing high-quality wildlife-dependent recreational opportunities. Having a baseline understanding of visitor experience can inform management decisions to better balance visitors' expectations with the Refuge System mission. Recent studies in outdoor recreation have included an emphasis on declining participation in traditional activities such as hunting and an increasing need to connect the next generation to nature and wildlife. These factors highlight the importance of current refuge visitors as a key constituency in wildlife conservation. A better understanding is increasingly needed to better manage the visitor experience and to address the challenges of the future.

Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at National Elk Refuge were as follows (fig. 9):

- 88% were satisfied with the recreational activities and opportunities,
- 90% were satisfied with the information and education about the refuge and its resources,
- 92% were satisfied with the services provided by employees or volunteers, and
- 92% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 32% of visitors indicated that they paid a fee to enter the National Elk Refuge, the refuge does not charge an entrance fee. Sixty one percent of visitors who indicated they paid an entrance fee were sampled in the winter. It may be that these visitors were recalling the sleigh ride concessionaire fee when answering this question. It is not known why other visitors thought they paid a fee.

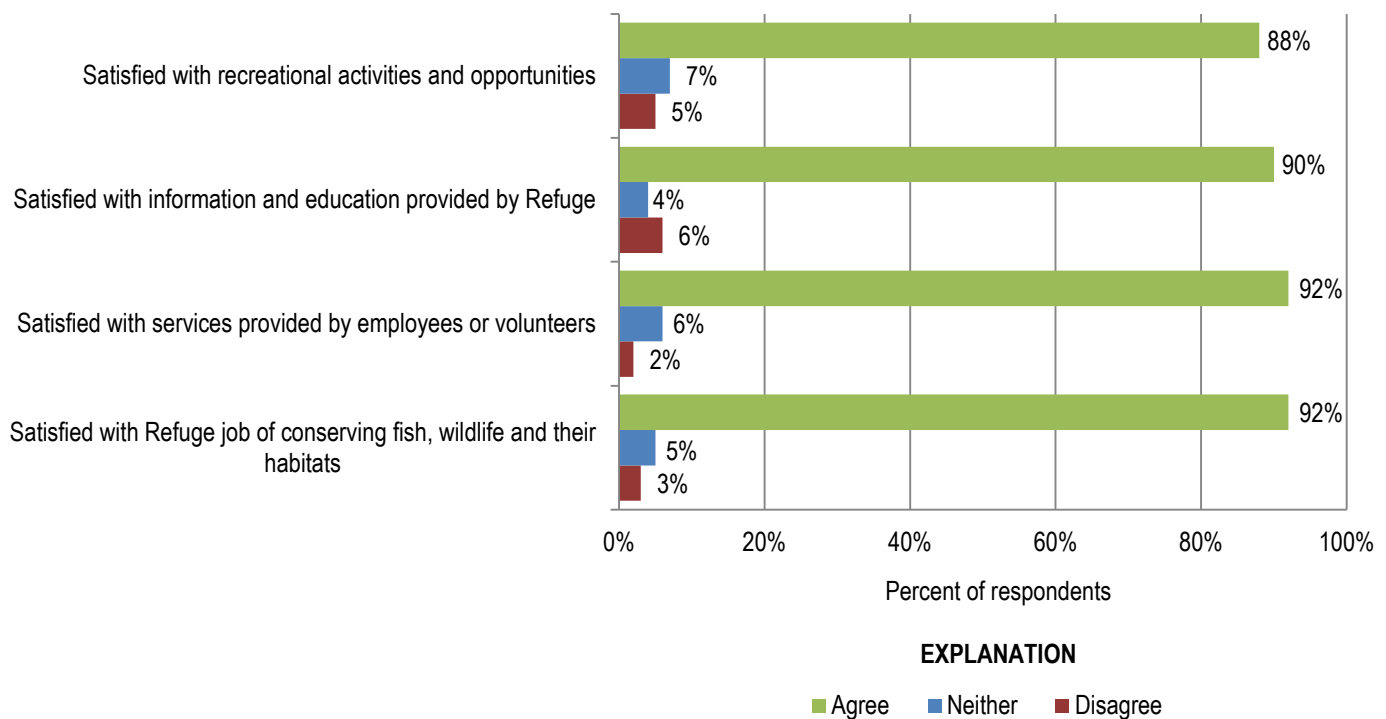


Figure 9. Overall satisfaction with National Elk Refuge during this visit (n ≥ 218).

Importance/Satisfaction Ratings

Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in relation to their satisfaction with that attribute. Drawn from marketing research, this tool has been applied to outdoor recreation and visitation settings (Martilla and James, 1977; Tarrant and Smith, 2002). Results for the attributes of interest are segmented into one of four quadrants (modified for this national study):

- Keep Up the Good Work = high importance/high satisfaction;
- Concentrate Here = high importance/low satisfaction;
- Low Priority = low importance/low satisfaction; and
- Look Closer = low importance/high satisfaction.

Graphically plotting visitors' importance and satisfaction ratings for different services, facilities, and recreational opportunities provides a simple and intuitive visualization of these survey measures. However, this tool is not without its drawbacks. One is the potential for variation among visitors regarding their expectations and levels of importance (Vaske et al., 1996; Bruyere et al., 2002; Wade and Eagles, 2003), and certain services or recreational opportunities may be more or less important for different segments of the visitor population. For example, hunters may place more importance on hunting opportunities and amenities such as blinds, while school group leaders may place more importance on educational/informational displays than would other visitors. This potential for highly varied importance ratings needs to be considered when viewing the average results of this analysis of visitors to National Elk Refuge. This consideration is especially important when reviewing the attributes that fall into the "Look Closer" quadrant. In some cases, these attributes may represent specialized recreational activities in which a small subset of visitors participate (for example, hunting, kayaking) or facilities and services that only some visitors experience (for example, exhibits about the refuge). For these visitors, the average importance of (and potentially the satisfaction with) the attribute may be much higher than it would be for the overall population of visitors.

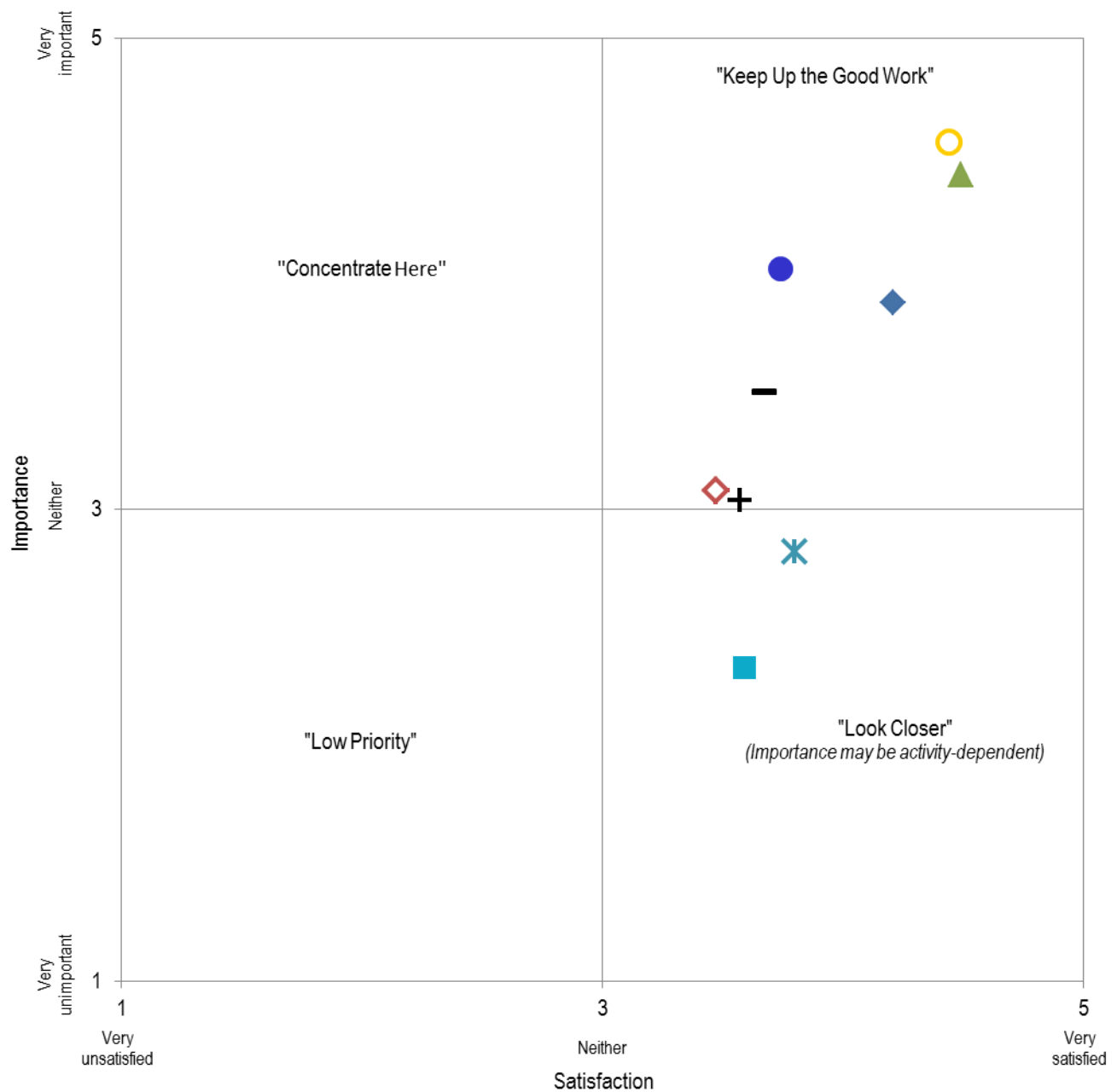
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at National Elk Refuge, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except hunting and fishing opportunities, which fell into the "Look Closer" quadrant (fig. 11). The average importance of hunting and fishing opportunities in the "Look Closer" quadrant may be higher among visitors who have participated in these activities during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants. All transportation-related features fell in the "Keep Up the Good Work" quadrant (fig. 12).



EXPLANATION

- ◆ Availability of employees/volunteers
- ▲ Knowledgeable employees/volunteers
- ✕ Informational kiosks/displays about this Refuge
- ◇ Exhibits about this Refuge
- Visitor Center
- △ Well-maintained restrooms
- ✚ Courteous/welcoming employees/volunteers
- ✕ Printed information about this Refuge
- Signs with rules/regulations
- Environmental education programs/activities
- Convenient hours/days of operation
- Wildlife observation structures

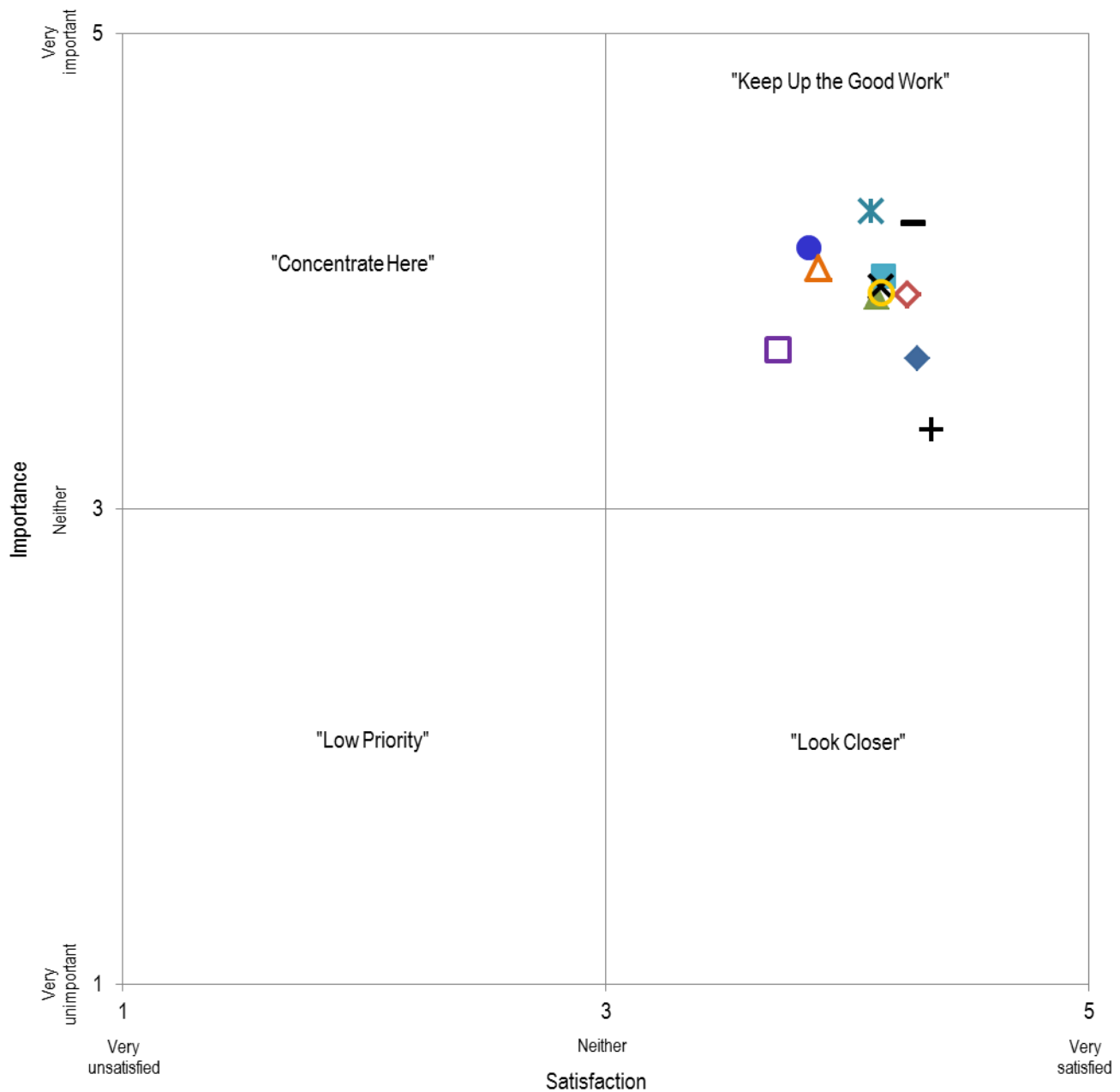
Figure 10. Importance-satisfaction ratings of services and facilities provided at National Elk Refuge.



EXPLANATION

- | | | |
|-------------------------------|----------------------------------|-----------------------------|
| ◆ Bird watching opportunities | ○ Wildlife viewing opportunities | ▲ Photography opportunities |
| ■ Hunting opportunities | ✕ Fishing opportunities | ● Hiking opportunities |
| ◇ Kayak/Canoe opportunities | — Bicycling opportunities | ✚ Volunteer opportunities |

Figure 11. Importance-satisfaction ratings of recreational opportunities provided at National Elk Refuge.



EXPLANATION

◆ Condition of roads	✚ Condition of parking areas	▲ Condition of bridges	■ Directional signs on Refuge
✕ Condition of trails/boardwalks	◊ Directional signs on highways	● Number of parking places	● Number of pullovers
✕ Safety of driving conditions	— Safety of Refuge entrances	▲ Directional signs on trails	□ Disabled access

Figure 12. Importance-satisfaction ratings of transportation-related features at National Elk Refuge.

Visitor Opinions about National Wildlife Refuge System Topics

One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results to these questions will be most meaningful when they are evaluated in aggregate (data from all participating refuges together). However, basic results for National Elk Refuge are reported here.

Alternative Transportation and the National Wildlife Refuge System

Visitors use a variety of transportation means to access and enjoy national wildlife refuges. While many visitors arrive at the refuge in a private vehicle, alternatives such as buses, trams, watercraft, and bicycles are increasingly becoming a part of the visitor experience. Previous research has identified a growing need for transportation alternatives within the Refuge System (Krechmer et al., 2001); however, less is known about how visitors perceive and use these new transportation options. An understanding of visitors' likelihood of using certain alternative transportation options can help in future planning efforts. Visitors were asked their likelihood of using alternative transportation options at national wildlife refuges in the future.

Of the six Refuge System-wide alternative transportation options listed on the survey, the majority of National Elk Refuge visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 13):

- an offsite parking lot that provides trail access;
- a bus/tram that provides a guided tour;
- a boat that goes to different points on Refuge waterways;
- a bus/tram that runs during a special event; and
- a bus/tram that takes passengers to different points on Refuge.

When asked about using alternative transportation at National Elk Refuge specifically, 42% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (24%) and others thought it would not (34%).

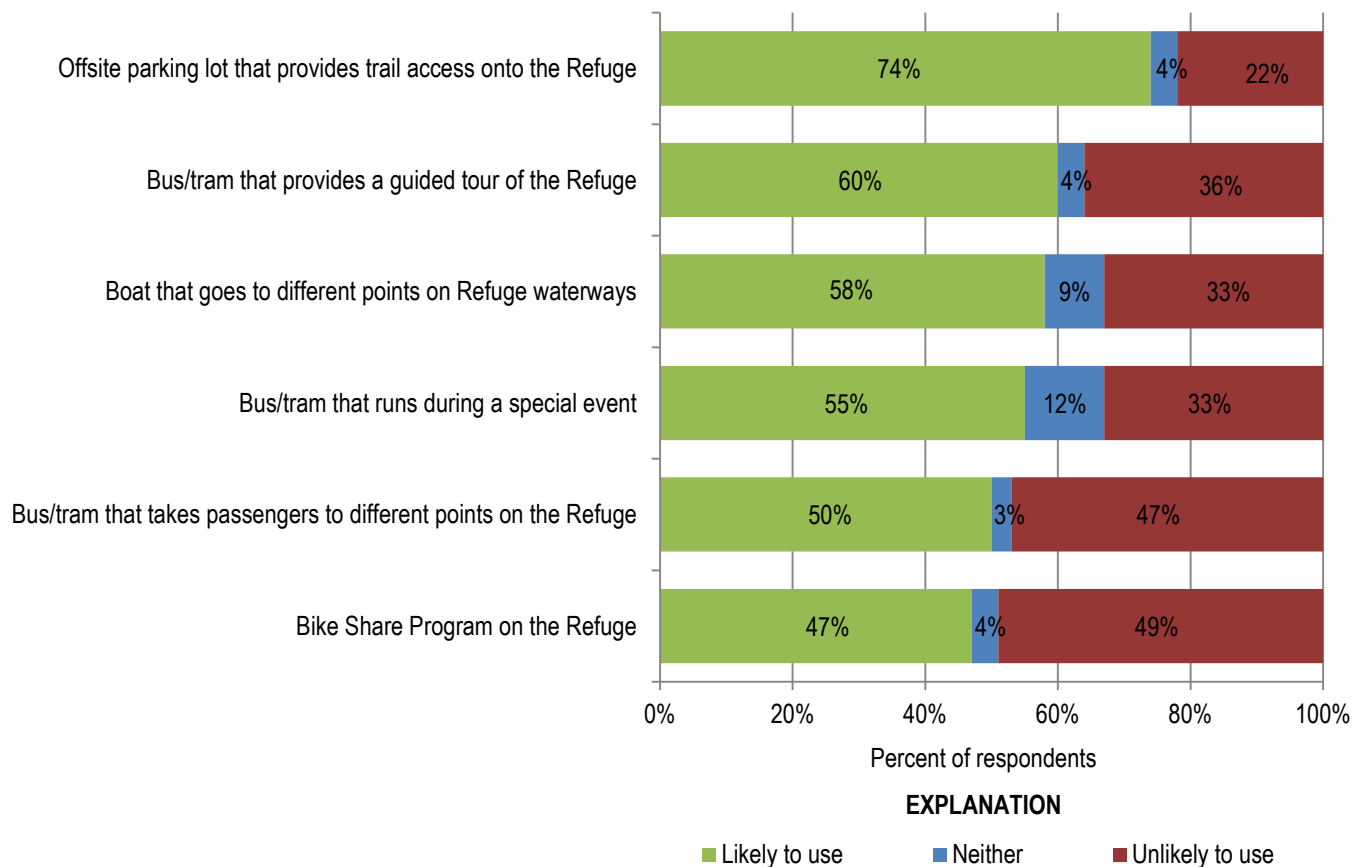


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 217).

Climate Change and the National Wildlife Refuge System

Climate change represents a growing concern for the management of national wildlife refuges. The Service’s climate change strategy, titled “Rising to the Urgent Challenge,” establishes a basic framework for the agency to work within a larger conservation community to help ensure wildlife, plant, and habitat sustainability (U.S. Fish and Wildlife Service, 2010). To support the guiding principles of the strategy, refuges will be exploring options for more effective engagement with visitors on this topic. The national visitor survey collected information about visitors’ level of personal involvement in climate change related to fish, wildlife and their habitats and visitors’ beliefs regarding this topic. Items draw from the “Six Americas” framework for understanding public sentiment toward climate change (Leiserowitz, Maibach, and Roser-Renouf, 2008) and from literature on climate change message frames (e.g., Nisbet, 2009). Such information provides a baseline for understanding visitor perceptions of climate change in the context of fish and wildlife conservation that can further inform related communication and outreach strategies.

Factors that influence how individuals think about climate change include their basic beliefs, levels of involvement, policy preferences, and behaviors related to this topic. Results presented below provide baseline information on visitors’ levels of involvement with the topic of climate change related to fish,

wildlife and their habitats. The majority of surveyed visitors to National Elk Refuge agreed with the following statements (fig. 14):

- “I am personally concerned about the effects of climate change on fish, wildlife and habitats;”
- “I take actions to alleviate the effects of climate change;” and
- “I stay well-informed about the effects of climate change.”

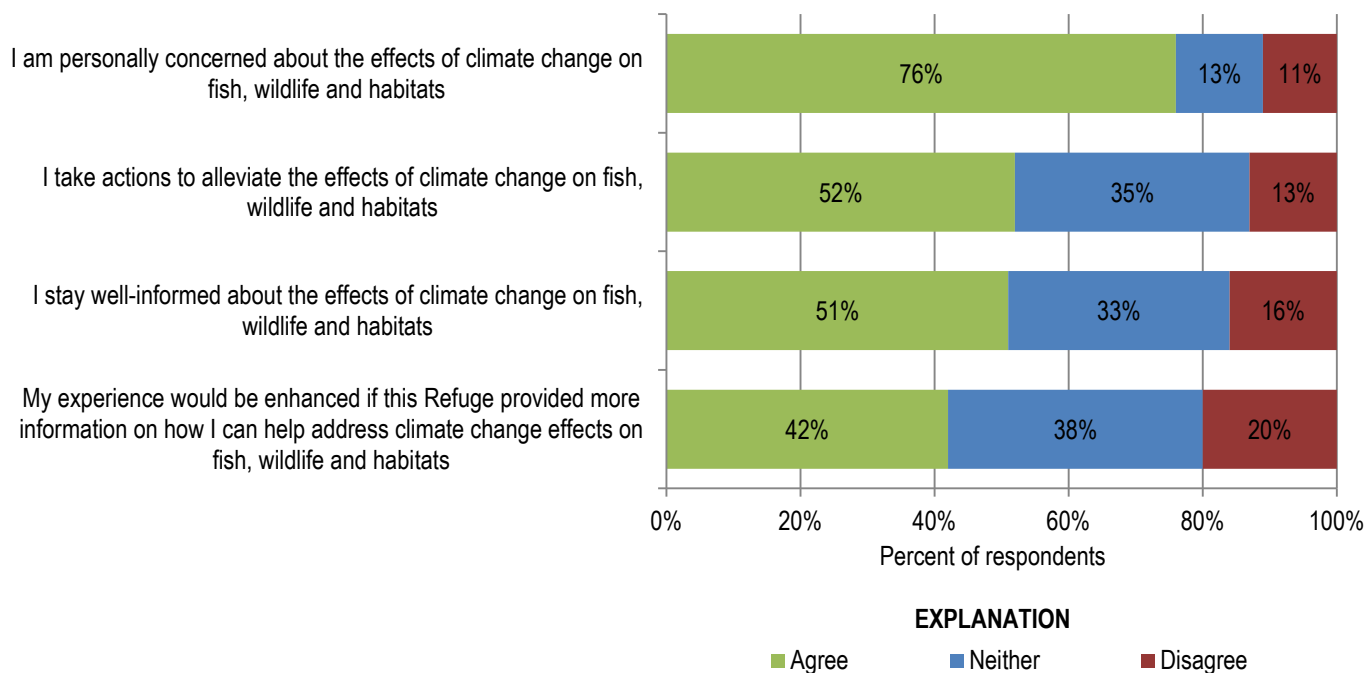


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 218).

These results are most useful when coupled with responses to belief statements about the effects of climate change on fish, wildlife and their habitats, because such beliefs may be used to develop message frames (or ways to communicate) about climate change with a broad coalition of visitors. Framing science-based findings will not alter the overall message, but rather place the issue in a context in which different audience groupings can relate. The need to mitigate impacts of climate change on Refuges could be framed as a quality-of-life issue (for example, preserving the ability to enjoy fish, wildlife, plants, and their habitat) or an economic issue (for example, maintaining tourist revenues, supporting economic growth through new jobs/technology).

For National Elk Refuge, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 15):

- “Future generations will benefit if we address climate change effects;”
- “It is important to consider the economic costs and benefits to local communities when addressing climate change effects;” and
- “We can improve our quality of life if we address the effects of climate change.”

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because some visitors (42%) indicated that their experience would be enhanced if National Elk Refuge provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 14), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.

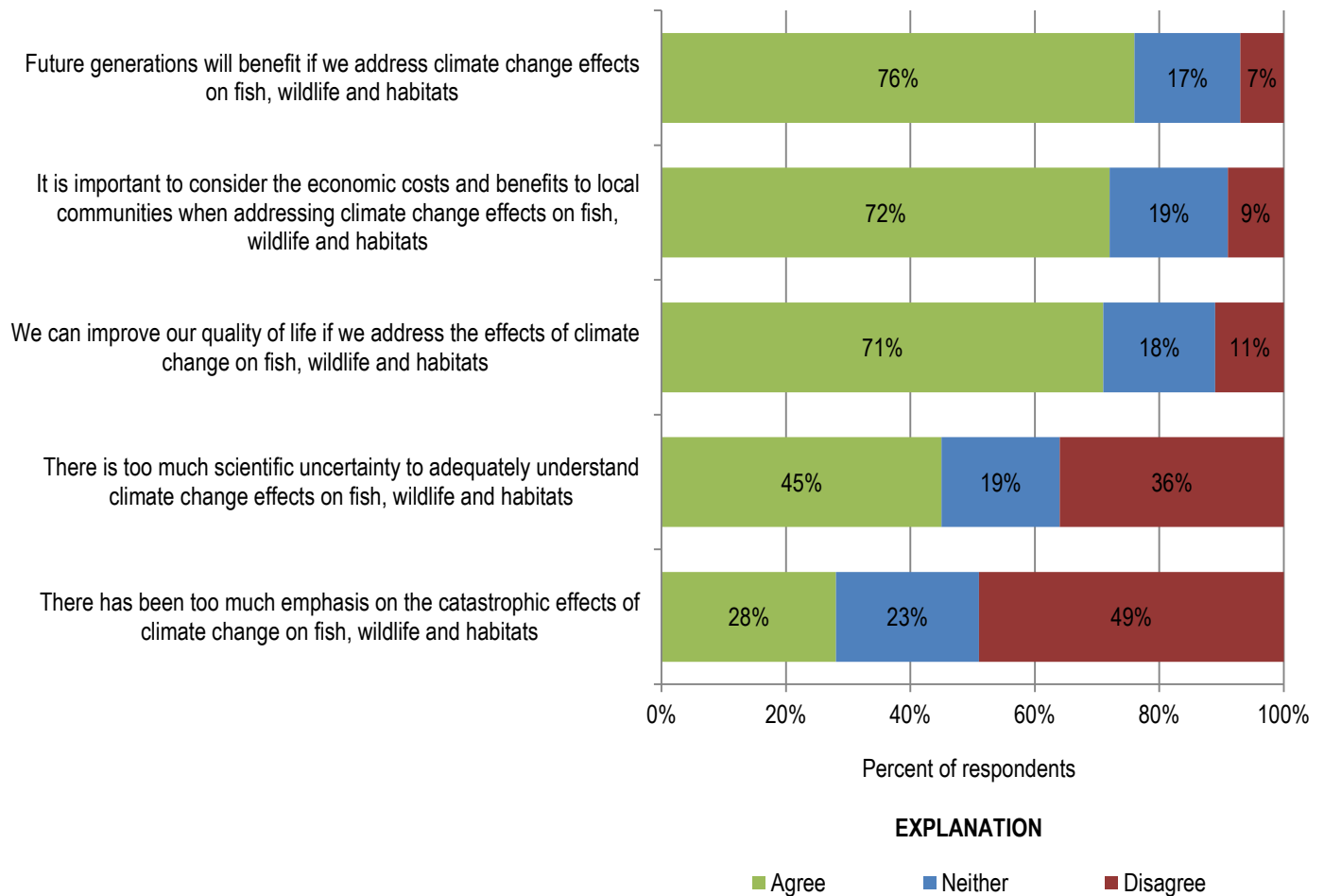


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 218).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to National Elk Refuge during 2010–2011. These data can be used to inform decision-making efforts related to the refuge, such as Comprehensive Conservation Plan implementation, visitor services management, and transportation planning and management. For example, when modifying (either minimizing or enhancing) visitor facilities, services, or recreational opportunities, a solid understanding of visitors' trip and activity characteristics, their satisfaction with existing offerings, and opinions regarding refuge fees is helpful. This information can help to gauge demand for refuge opportunities and inform both implementation and communication strategies. Similarly, an awareness of visitors' satisfaction ratings with refuge offerings can help determine if any potential areas of concern need to be investigated further. As another example of the utility of these results, community relations may be improved or bolstered through an understanding of the value of the refuge to visitors, whether that value is attributed to an appreciation of the refuge's uniqueness, enjoyment of its recreational opportunities, or spending contributions of nonlocal visitors to the local economy. Such data about visitors and their experiences, in conjunction with an understanding of biophysical data on the refuge, can ensure that management decisions are consistent with the Refuge System mission while fostering a continued public interest in these special places.

Individual refuge results are available for downloading at <http://pubs.usgs.gov/ds/643/> as part of USGS Data Series 643 (Sexton and others, 2011). For additional information about this project, contact the USGS researchers at national_visitor_survey@usgs.gov or 970.226.9205.

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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

Thank you for visiting a National Wildlife Refuge and for agreeing to participate in this study! We hope that you had an enjoyable experience. The U.S. Fish and Wildlife Service and the U.S. Geological Survey would like to learn more about National Wildlife Refuge visitors in order to improve the management of the area and enhance visitor opportunities.

If you have recently visited more than one National Wildlife Refuge or made more than one visit to the same Refuge, please respond regarding only the Refuge and the visit when you were asked to participate in this survey. Any question that uses the phrase “this Refuge” refers to the Refuge and visit when you were contacted.

SECTION 1. Your visit to this Refuge

1. Including your most recent visit, which activities have you participated in during the past 12 months at this Refuge?
(Please mark **all that apply.**)

<input type="checkbox"/> 4% Big game hunting	<input type="checkbox"/> 30% Hiking	<input type="checkbox"/> 9% Environmental education (for example, classrooms or labs, tours)
<input type="checkbox"/> 0% Upland/Small-game hunting	<input type="checkbox"/> 10% Bicycling	
<input type="checkbox"/> 0% Migratory bird/Waterfowl hunting	<input type="checkbox"/> 39% Auto tour route/Driving	<input type="checkbox"/> 4% Special event (<i>please specify</i>) <u>See Appendix B</u>
<input type="checkbox"/> 77% Wildlife observation	<input type="checkbox"/> 0% Motorized boating	
<input type="checkbox"/> 34% Bird watching	<input type="checkbox"/> 0% Nonmotorized boating (including canoes/kayaks)	<input type="checkbox"/> 19% Other (<i>please specify</i>) <u>See Appendix B</u>
<input type="checkbox"/> 10% Freshwater fishing		
<input type="checkbox"/> 0% Saltwater fishing	<input type="checkbox"/> 28% Interpretation (for example, exhibits, kiosks, videos)	<input type="checkbox"/> 2% Other (<i>please specify</i>) <u>See Appendix B</u>
<input type="checkbox"/> 56% Photography		

2. Which of the activities above was the ***primary*** purpose of your visit to this Refuge?
(Please write **only one activity** on the line.) See report for categorized results; see Appendix B for miscellaneous responses

3. Did you go to a Visitor Center at this Refuge?

<input type="checkbox"/> 29% No	
<input type="checkbox"/> 71% Yes → If yes, what did you do there? (Please mark <u>all that apply.</u>)	
<input type="checkbox"/> 88% Visit the gift shop or bookstore	<input type="checkbox"/> 43% Watch a nature talk/video/presentation
<input type="checkbox"/> 91% View the exhibits	<input type="checkbox"/> 59% Stopped to use the facilities (for example, get water, use restroom)
<input type="checkbox"/> 60% Ask information of staff/volunteers	<input type="checkbox"/> 11% Other (<i>please specify</i>) <u>See Appendix B</u>

4. Which of the following best describes your visit to this Refuge? (*Please mark only one.*)

Nonlocal **Local** **Total**

9%

60%

23%

It was the primary purpose or sole destination of my trip.

46%

22%

39%

It was one of many equally important reasons or destinations for my trip.

45%

17%

37%

It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many **miles** did you travel to get to this Refuge?

Nonlocal 1075 number of miles

Local 9 number of miles

6. How much time did you spend at this Refuge on your visit?

See Report for Results

7. Were you part of a group on your visit to this Refuge?

42% No (*skip to question #9*)

58% Yes → What **type of group** were you with on your visit? (*Please mark only one.*)

93% Family and/or friends

1% Organized club or school group

3% Commercial tour group

2% Other (*please specify*) See Appendix B

8. How many people were in your group, including yourself? (*Please answer each category.*)

3 number 18 years and over

1 number 17 years and under

9. How did you **first learn or hear about** this Refuge? (*Please mark all that apply.*)

29% Friends or relatives

6% Refuge website

38% Signs on highway

2% Other website (*please specify*) See Appendix B

4% Recreation club or organization

2% Television or radio

24% People in the local community

8% Newspaper or magazine

18% Refuge printed information (brochure, map)

7% Other (*please specify*) See Appendix B

10. During which seasons have you visited this Refuge in the last 12 months? (*Please mark all that apply.*)

28% Spring
(March-May)

76% Summer
(June-August)

32% Fall
(September-November)

55% Winter
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 15 number of visits

...other National Wildlife Refuges in the last 12 months? 2 number of visits

SECTION 2. Transportation and access at this Refuge

1. What **forms of transportation** did you use on your visit to this Refuge? (*Please mark **all that apply.***)

<input type="checkbox"/> 79% Private vehicle without a trailer	<input type="checkbox"/> 6% Refuge shuttle bus or tram	<input type="checkbox"/> 6% Bicycle
<input type="checkbox"/> 3% Private vehicle with a trailer (for boat, camper or other)	<input type="checkbox"/> 1% Motorcycle	<input type="checkbox"/> 25% Walk/Hike
<input type="checkbox"/> 1% Commercial tour bus	<input type="checkbox"/> 0% ATV or off-road vehicle	<input type="checkbox"/> 10% Other (<i>please specify below</i>)
<input type="checkbox"/> 3% Recreational vehicle (RV)	<input type="checkbox"/> 0% Boat	<u>See Appendix B</u>
	<input type="checkbox"/> 0% Wheelchair or other mobility aid	

2. Which of the following did you use to find your way to this Refuge? (*Please mark **all that apply.***)

<input type="checkbox"/> 42% Signs on highways	<input type="checkbox"/> 3% Directions from Refuge website
<input type="checkbox"/> 12% A GPS navigation system	<input type="checkbox"/> 11% Directions from people in community near this Refuge
<input type="checkbox"/> 11% A road atlas or highway map	<input type="checkbox"/> 10% Directions from friends or family
<input type="checkbox"/> 6% Maps from the Internet (for example, MapQuest or Google Maps)	<input type="checkbox"/> 46% Previous knowledge/I have been to this Refuge before
	<input type="checkbox"/> 5% Other (<i>please specify</i>) <u>See Appendix B</u>

3. Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future. Considering the different Refuges you may have visited, please tell us **how likely you would be to use each transportation option.** (*Please circle one number for each statement.*)

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 31%	<input type="checkbox"/> 16%	<input type="checkbox"/> 3%	<input type="checkbox"/> 30%	<input type="checkbox"/> 20%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 36%	<input type="checkbox"/> 12%	<input type="checkbox"/> 4%	<input type="checkbox"/> 29%	<input type="checkbox"/> 17%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 24%	<input type="checkbox"/> 12%	<input type="checkbox"/> 4%	<input type="checkbox"/> 34%	<input type="checkbox"/> 26%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 27%	<input type="checkbox"/> 6%	<input type="checkbox"/> 9%	<input type="checkbox"/> 34%	<input type="checkbox"/> 25%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 23%	<input type="checkbox"/> 10%	<input type="checkbox"/> 12%	<input type="checkbox"/> 34%	<input type="checkbox"/> 22%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 14%	<input type="checkbox"/> 8%	<input type="checkbox"/> 4%	<input type="checkbox"/> 35%	<input type="checkbox"/> 40%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 0%	<input type="checkbox"/> 10%	<input type="checkbox"/> 10%	<input type="checkbox"/> 24%	<input type="checkbox"/> 57%

4. If alternative transportation were offered at *this* Refuge, would it enhance your experience?

☐ 24% Yes ☐ 34% No ☐ 42% Not Sure

5. For each of the following transportation-related features, first, **rate how important** each feature is to you when visiting this Refuge; then **rate how satisfied** you are with the way this Refuge is managing each feature.
If this Refuge does not offer a specific transportation-related feature, please rate how important it is to you and then circle NA "Not Applicable" under the Satisfaction column.

Importance						Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
9%	13%	10%	42%	26%	Surface conditions of roads	5%	5%	5%	24%	60%	NA
9%	19%	15%	42%	15%	Surface conditions of parking areas	5%	1%	10%	23%	61%	NA
4%	7%	22%	30%	37%	Condition of bridges	5%	1%	25%	18%	52%	NA
4%	6%	17%	40%	33%	Condition of trails and boardwalks	5%	3%	16%	24%	51%	NA
4%	8%	10%	49%	29%	Number of places for parking	4%	7%	11%	28%	50%	NA
3%	6%	4%	50%	36%	Number of places to pull over along Refuge roads	4%	14%	11%	36%	35%	NA
3%	4%	7%	35%	50%	Safety of driving conditions on Refuge roads	5%	6%	10%	31%	47%	NA
3%	3%	7%	44%	43%	Safety of Refuge road entrances/exits	4%	4%	11%	23%	58%	NA
7%	7%	12%	38%	36%	Signs on highways directing you to the Refuge	3%	4%	15%	24%	55%	NA
5%	5%	9%	48%	32%	Signs directing you around the Refuge roads	3%	6%	13%	32%	47%	NA
3%	6%	17%	36%	39%	Signs directing you on trails	5%	4%	25%	28%	37%	NA
9%	5%	22%	38%	26%	Access for people with physical disabilities or who have difficulty walking	3%	7%	36%	22%	31%	NA

6. If you have any comments about transportation-related items at this Refuge, please write them on the lines below.

See Appendix B

SECTION 3. Your expenses related to your Refuge visit

1. Do you live in the local area (within approximately 50 miles of this Refuge)?

☐ 31% Yes

☐ 69% No → How much time did you spend **in local communities** on this trip?

 5 number of hours OR 6 number of days

2. Please record the amount that **you and other members of your group** with whom you shared expenses (for example, other family members, traveling companions) spent in the local 50-mile area during **your most recent visit** to this Refuge. *(Please enter the amount spent to the nearest dollar in each category below. Enter 0 (zero) if you did not spend any money in a particular category.)*

Categories	Amount Spent in Local Communities & at this Refuge <i>(within 50 miles of this Refuge)</i>
Motel, bed & breakfast, cabin, etc.	
Camping	
Restaurants & bars	
Groceries	
Gasoline and oil	
Local transportation (bus, shuttle, rental car, etc.)	
Refuge entrance fee	
Recreation guide fees (hunting, fishing, wildlife viewing, etc.)	
Equipment rental (canoe, bicycle, kayak, etc.)	
Sporting good purchases	
Souvenirs/clothing and other retail	
Other <i>(please specify)</i> _____	

See Report for Results

3. Including yourself, how many people in your group shared these trip expenses?

 2 number of people sharing expenses

4. As you know, some of the costs of travel such as gasoline, hotels, and airline tickets often increase. If your total trip costs were to increase, what is the maximum extra amount you would pay and still visit this Refuge? *(Please circle the highest dollar amount.)*

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
<input type="checkbox"/> 13%	<input type="checkbox"/> 16%	<input type="checkbox"/> 13%	<input type="checkbox"/> 3%	<input type="checkbox"/> 10%	<input type="checkbox"/> 3%	<input type="checkbox"/> 19%	<input type="checkbox"/> 2%	<input type="checkbox"/> 5%	<input type="checkbox"/> 5%	<input type="checkbox"/> 15%

5. If you or a member of your group paid a fee or used a pass to enter this Refuge, how appropriate was the fee? *(Please mark **only one**.)*

☐ 3% Far too low ☐ 7% Too low ☐ 85% About right ☐ 5% Too high ☐ 0% Far too high ☐ 68% Did not pay a fee
(skip to Section 4)

6. Please indicate whether you disagree or agree with the following statement. *(Please mark **only one**.)*

The value of the recreation opportunities and services I experienced at this Refuge was at least equal to the fee I paid.

☐ 3% Strongly disagree ☐ 3% Disagree ☐ 10% Neither agree or disagree ☐ 53% Agree ☐ 32% Strongly agree

SECTION 4. Your experience at this Refuge

1. Considering your visit to this Refuge, please indicate the extent to which you disagree or agree with each statement. *(Please circle one number for each statement.)*

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	<input type="checkbox"/> 2%	<input type="checkbox"/> 3%	<input type="checkbox"/> 7%	<input type="checkbox"/> 47%	<input type="checkbox"/> 40%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 1%	<input type="checkbox"/> 5%	<input type="checkbox"/> 5%	<input type="checkbox"/> 35%	<input type="checkbox"/> 55%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 1%	<input type="checkbox"/> 1%	<input type="checkbox"/> 6%	<input type="checkbox"/> 35%	<input type="checkbox"/> 57%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 2%	<input type="checkbox"/> 1%	<input type="checkbox"/> 5%	<input type="checkbox"/> 33%	<input type="checkbox"/> 59%	NA

2. For each of the following services, facilities, and activities, first, **rate how important** each item is to you when visiting this Refuge; then, **rate how satisfied** you are with the way this Refuge is managing each item.
If this Refuge does not offer a specific service, facility, or activity, please rate how important it is to you and then circle NA “Not Applicable” under the Satisfaction column.

Importance <i>Circle one for each item.</i>					Refuge Services, Facilities, and Activities	Satisfaction <i>Circle one for each item.</i>					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
9%	6%	13%	38%	34%	Availability of employees or volunteers	1%	2%	12%	18%	67%	NA
6%	3%	14%	32%	45%	Courteous and welcoming employees or volunteers	1%	2%	11%	13%	72%	NA
6%	4%	7%	27%	56%	Knowledgeable employees or volunteers	1%	1%	12%	11%	75%	NA
4%	5%	6%	43%	40%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	5%	12%	27%	55%	NA
6%	2%	10%	52%	31%	Informational kiosks/displays about this Refuge and its resources	1%	2%	14%	28%	56%	NA
2%	6%	12%	42%	38%	Signs with rules/regulations for this Refuge	1%	2%	19%	29%	50%	NA
6%	4%	7%	49%	34%	Exhibits about this Refuge and its resources	1%	2%	13%	26%	58%	NA
6%	4%	19%	42%	29%	Environmental education programs or activities	1%	2%	26%	21%	49%	NA
7%	3%	11%	28%	51%	Visitor Center	1%	1%	11%	12%	75%	NA
3%	1%	6%	39%	50%	Convenient hours and days of operation	1%	2%	8%	21%	68%	NA
4%	3%	10%	32%	52%	Well-maintained restrooms	2%	6%	10%	13%	69%	NA
4%	3%	10%	38%	46%	Wildlife observation structures (decks, blinds)	1%	2%	12%	25%	60%	NA
4%	8%	18%	34%	35%	Bird-watching opportunities	1%	2%	23%	26%	49%	NA
1%	1%	3%	26%	67%	Opportunities to observe wildlife other than birds	1%	4%	6%	26%	62%	NA
2%	2%	7%	30%	59%	Opportunities to photograph wildlife and scenery	2%	1%	8%	24%	65%	NA
49%	6%	19%	13%	12%	Hunting opportunities	4%	3%	50%	17%	27%	NA
33%	7%	22%	22%	17%	Fishing opportunities	2%	1%	45%	21%	32%	NA
6%	4%	12%	39%	39%	Trail hiking opportunities	6%	10%	21%	29%	34%	NA
19%	10%	29%	30%	13%	Water trail opportunities for canoeing or kayaking	4%	5%	52%	16%	22%	NA
12%	8%	21%	36%	23%	Bicycling opportunities	3%	8%	37%	24%	28%	NA
17%	9%	39%	21%	13%	Volunteer opportunities	0%	2%	61%	16%	21%	NA

3. If you have any comments about the services, facilities, and activities at this Refuge, please write them on the lines below.

See Appendix B

SECTION 5. Your opinions regarding National Wildlife Refuges and the resources they conserve

1. Before you were contacted to participate in this survey, were you aware that National Wildlife Refuges...

...are managed by the U. S. Fish and Wildlife Service?

79%

Yes

21%

No

...have the primary mission of conserving, managing, and restoring fish, wildlife, plants and their habitat?

87%

Yes

13%

No

2. Compared to other public lands you have visited, do you think Refuges provide a unique recreation experience?

88%

Yes

12%

No

3. If you answered "Yes" to Question 2, please briefly describe what makes Refuges unique. _____

See Appendix B

4. There has been a lot of talk about climate change recently. We would like to know what you think about climate change as it relates to fish, wildlife and their habitats. To what extent do you disagree or agree with each statement below? *(Please circle one number for each statement.)*

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	6%	5%	14%	40%	36%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	5%	7%	18%	42%	29%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	12%	24%	19%	31%	14%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	2%	14%	33%	36%	15%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	2%	7%	19%	54%	18%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	3%	10%	35%	39%	13%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	26%	23%	23%	19%	10%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	3%	4%	17%	34%	42%
My experience at this Refuge would be enhanced if this Refuge provided more information about how I can help address the effects of climate change on fish, wildlife and their habitats.	9%	11%	38%	31%	11%

SECTION 6. A Little about You

**** Please tell us a little bit about yourself. Your answers to these questions will help further characterize visitors to National Wildlife Refuges. Answers are not linked to any individual taking this survey. ****

1. Are you a citizen or permanent resident of the United States?

96% Yes 4% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 49% Male 51% Female

3. In what year were you born? 1958 (YYYY)

4. What is your highest year of formal schooling? *(Please circle one number.)*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					0%			10%				46%				43%			

5. What ethnicity do you consider yourself? ☐ 4% Hispanic or Latino ☐ 96% Not Hispanic or Latino

6. From what racial origin(s) do you consider yourself? *(Please mark **all that apply.**)*

<input type="checkbox"/> 4% American Indian or Alaska Native	<input type="checkbox"/> 0% Black or African American	<input type="checkbox"/> 98% White
<input type="checkbox"/> 1% Asian	<input type="checkbox"/> 1% Native Hawaiian or Pacific Islander	

7. How many members of your household contribute to paying the household expenses? 2 persons

8. Including these members, what was your approximate household income from all sources (before taxes) last year?

<input type="checkbox"/> 1% Less than \$10,000	<input type="checkbox"/> 9% \$35,000 - \$49,999	<input type="checkbox"/> 21% \$100,000 - \$149,999
<input type="checkbox"/> 3% \$10,000 - \$24,999	<input type="checkbox"/> 20% \$50,000 - \$74,999	<input type="checkbox"/> 8% \$150,000 - \$199,999
<input type="checkbox"/> 5% \$25,000 - \$34,999	<input type="checkbox"/> 17% \$75,000 - \$99,999	<input type="checkbox"/> 14% \$200,000 or more

9. How many outdoor recreation trips did you take in the last 12 months (for activities such as hunting, fishing, wildlife viewing, etc.)?

21 number of trips

Thank you for completing the survey.

There is space on the next page for any additional comments you may have regarding your visit to this Refuge.

See Appendix B for Comments

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Appendix B: Visitor Comments to Open-Ended Survey Questions for National Elk Refuge

Survey Section 1

Question 1: "Including your most recent visit, which activities have you participated in during the past 12 months at this Refuge?"

Special Event	Frequency
Elk Antler Pickup	1
Old Bill's Fun Run	1
Paseo a este mismo ver los elks (Trip to see the elk this time)	1
Ranger Talks	1
Sleigh ride	4
Wildlife viewing with ranger	1
Total	9

Other Activity	Frequency
Bighorn sheep	1
Camping	1
Crossing to reach other public lands	1
Dog Walk on the Road	1
Elk sleigh ride	1
Elk viewing	1
I live on the edge of the refuge.	1
Landscape viewing	1
Maps/Information of Area	1
Run on the refuge several times per week.	1
Running	8
Skiing	1

Sleigh ride	9
Snowmobiling	1
Toured Historical Site	1
Vacation	1
Visited	1
Visited the Homestead	1
Visitor Center	2
Visitor Center stop for info about Jackson Hole.	1
Walk	1
Walk on Refuge Road	1
Walking	1
Walking my dog	3
Work at inholding residence	1
Total	43

2 nd Other Activity	Frequency
Camping at cabin	1
Historical Miller House	1
Running	2
Total	4

Question 2: "Which of the activities above was the primary purpose of your visit to this Refuge?"
Primary activities are categorized in the main report; the table below lists the "other" miscellaneous primary activities listed by survey respondents.

Other Miscellaneous Primary Activities	Frequency
Biology	1
Exercise	1
Historical Preservation Miller Home and Furnishings	1
Interest in Jackson's History	1
Landscape Viewing	1
Maps/Information of Surrounding Area Outside of the Refuge	1
Miller Homestead	1
On Vacation	1
Purchase Gifts	1
Relaxing outdoors/Getaway with spouse	1
Resting Area	1
Skiing to ski cabin	1
Snowmobiling	1
Touring	1
Tourism	1
Vacationing	2
Visit to Jackson Hole	1
Work at inholding residence	1
Total	19

Question 3: "Did you go to a Visitor Center at this Refuge?" If yes, "What did you do there?"

Other Visitor Center Activity	Frequency
A wood permit	1
Ask where all animals were that day	1
Buy tickets for sleigh ride	2
Buy tickets for tour	1
Check my brochure stock	1
Did Junior Blue Goose Program	1
Get info about events and businesses in town	1
Get tickets to visit the elk refuge in Jackson Hole	1
Kids Ranger Program and Junior Ranger Patch	1
Sleigh ride	1
Staff entered in refuge drawing, I have no access to a computer.	1
Talked to Volunteers	1
To be updated on Elk Feeding Program at the refuge during winter months.	1
To connect with a tour to the Elk Reserve	1
Visit information exhibits and back porch.	1
Wait for sleigh ride	1
Walked/Hiked	1
Total	18

Question 7: "Were you part of a group on your visit to this Refuge?" If yes, "What type of group were you with on your visit?"

Other Group Type	Frequency
Guided public wildlife observation tours	1
Teacher training group	1
Work group passing through	1
Total	3

Question 9: "How did you first learn or hear about this Refuge?"

Other Website	Frequency
Chamber of Commerce	1
Jackson Hole website	2
Sierra Club	1
Worked for the people who do the sleigh rides	1
Total	5

Other Ways Heard about This Refuge	Frequency
AAA book	1
AAA Tour Book	1
As a game warden in 1970	1
Atlas	1
Concierge at the Wort Hotel	1
Concierge at Worth Hotel	1
DOI employee	1
Employees of the Grand Teton National Park	1
Fodor travel book to Yellowstone and the Tetons	1
From visiting Grand Teton National Park	1
Part of Class for Safari Club	1
Tour guide	1
Travel book	1
Was running and it was at the end of the road.	1
Wildlife guides, rangers	1
Worked as a bio-aid in 1983 for a few months	1
Total	16

Survey Section 2

Question 1: "What forms of transportation did you use on your visit to this Refuge?"

Other Forms of Transportation	Frequency
Horse drawn sleigh	2
Horse-drawn sled	1
Horseback riding on refuge road	1
Jog	1
Plane	1
Private tour vehicles (suburban and 15 passenger van)	1
Run	1
Runner	1
Skis	1
Sleigh	10
Sleigh ride	1
Sleigh tour	1
Taxi	1
The horse drawn sleigh rides	1
Total	24

Question 2: "Which of the following did you use to find your way to this Refuge?"

Other Ways Found This Refuge	Frequency
AAA	1
Directions at Visitor Center	1
Directions from employees at Grand Teton National Park	1
Driving by and saw it.	1
Guide	1
It was across the street from our hotel	1

Just passing	1
Map of Jackson provided by Teton village	1
None, I randomly came upon it.	1
Passing By	1
Saw it beside the road	1
Taxi driver	1
Total	12

Question 5: "Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future...please tell us how likely you would be to use each transportation option."

Other Transportation Option Likely to Use	Frequency
A glass dome train just like the one in Alaska.	1
Bicycle riding on hunt area retrieval roads; hiking and horseback riding on refuge (like you can do during the hunting season)	1
Car	1
Guided walk	1
Horse drawn sleigh	1
Horse-drawn sled	1
Horseback rides into area	1
Horseback trail rides	1
Horses	1
I like to come and go alone and as I please under my own power or vehicle. I hate group experiences on parks/refuges etc. - it ruins the solitude!	1
Motorcycle or private bicycle	1
My van	1
Personal car	1
Personal vehicle	1
Personal work vehicle	1
Private Car	1

Quads, horses on authorized trails	1
Refuge staff guided walking tour	1
Sleigh	1
Sleigh Rides in Winter	1
Snowmobile	1
The sleigh ride is a viable option	1
Wagon ride	1
Walking path adjacent to the road	1
Total	24

Question 6: "If you have any comments about transportation-related items at this Refuge, please write them on the lines below."

Comments on Transportation-related Items at This Refuge (n = 37)

Absolutely loved the sleigh ride into the refuge. It added to the whole experience. We loved it so much!!! Good to leave the driving to the experienced and made the trip hassle-free. And very doable under snow conditions.

Do not commercialize the wildlife areas - please leave as natural as possible.

Elk refuge is probably different to other wildlife areas because you can only access interior area via sleigh ride. Infrastructure probably won't change that. Viewing from roads around the Elk refuge are adequate, but would be nice to get some better/safer stopping points along the road to stop and take photos, and access closer to the center of the park - even if it was on foot.

I did not see any roads open to the public, just a pull-off area. There was a road under construction along the fence on the highway.

I did not use any transportation related items on this trip as we were staying directly across the street, so we walked over. Also, since it was winter we did not use any trails or do any outside activity. We did not have time in the trip to take the sleigh ride.

I had a great visit and will come again!

I had a very hard time finding it, even with a street address and a navigation system in my SUV.

I like everything fine as it is, but a few more pullouts wouldn't hurt, and more signs to use them and not park in the road. Presently the "no parking in the road" sign is burned (among other signs) at the entrance and people just don't see or obey them. Also maybe some snow poles for visitors who pull over in winter and get stuck, not realizing it's a ditch!

I like the level and type of access currently being used on this refuge.

I love biking there. I was not aware that hiking was available.

I think spending more revenue on the animals (i.e. acquiring more land) instead of building and maintaining roads is more important.

I was disappointed by how many roads were closed during our winter visit.

I was not aware of any trails, but would have used them and that would have made my experience better.

I was only at the refuge for approximately 1 hour. I don't have enough information to answer all the questions satisfactorily.

I wish this refuge had a separate walking trail off the road. There are pedestrians on this refuge road at any time of the day, all year round. Personally, I walk and jog on the road at least once a week, frequently with my baby in a stroller. And there are often cars and trucks driving over the speed limit, making me fear for our safety. Several times I've had to jump off the road, into the weeds to avoid injury.

I wrote 0 in every case because I felt that I didn't really know the answer. I stopped at the visitor center to get information about Jackson Hole and discovered that it happened to be a refuge. I unfortunately did not have time to spend enjoying any of the trails or such at the refuge so I can't rate them.

I'm not sure how someone in a wheel chair would have been able to enjoy the sleigh rides at the Elk Refuge.

If a path was either constructed or at least dedicated next to the existing main access road for people to walk on, it would make it much safer for the walker and biker and better for the vehicle traveler as well.

In general, people don't obey posted speed limits and this is bothersome.

It would be nice to have a foot path along the road for pedestrian/walker/hiker safety.

It's very good that this Refuge allows walking, bikes, and slow-vehicle driving on its roadways for exercise and wildlife observation, and delineates 'No Entry' areas clearly. People go slowly and are very respectful of this important resource near town.

Mile markers on the road would be nice. Many people run, walk, or bike on the main road. Many people are training for future competitive events. To have mile markers (and 1/2 mile markers) would assist those people as well as add some security for those lost or need help.

More hiking trails!

My husband has limited walking due to double hip replacements and a heart attack ('07 was a bad year) and he needs level ground for walking and accessibility to cool water. There was not a lot of walking involved; however, the slopes inside were a bit difficult for his hips.

Parking was fine. The horse-drawn sled ride was absolutely excellent! Our driver was perfect: good with the animals, a very good speaker, and extremely knowledgeable about the refuge, local history, and the wildlife.

People often stop in the road with their vehicles to watch the animals. As it would be impossible to have parking everywhere, perhaps it would help if the road were a bit wider. The shoulder and ditch are very abrupt, and some people sometimes get stuck in them in the winter. Bikers and hikers also use the road, and in winter may not be able to leave it, so making it wider would definitely be safer for all.

Private vehicles speeding seem to always be an issue and safety concern.

The Elk Refuge road is poorly maintained. This is hard on cars and bikes. Given that there is no roadside path for walking, the poor road conditions are hazardous for walkers and bike riders.

The main purpose of my trip to the refuge was the sleigh ride and it exceeded my expectations!

The National Elk Refuge is small enough where transportation issues and access are not big issues to

me.

The road was very rough!

The roads were very slick and they just dropped off on the side so we ended up sliding off the road and getting stuck for a while but luckily some nice people were willing to help us get out of the snow.

The trails could have been in better shape and could have some trail markers.

This year they started using a grader to push snow off the side edge of the road, so you can see where the side of the road ends. This has helped decrease the number of vehicles that get stuck.

Too many signs cluttering the refuge entrance and make it confusing.

Very limited trails for access other than for fishing on Flat Creek.

We rode a horse drawn sled into the refuge for an educational and site-seeing outing. We also went on a wildlife/photography excursion with a guide in a SUV - very enjoyable and informative.

Survey Section 4

Question 6: "If you have any comments about services, facilities, and activities at this Refuge, please write them on the lines below."

Comments on Services, Facilities, and Activities at This Refuge (n = 57)

Again, we only spent about 15 minutes at the actual refuge - but I learned the difference between horns and antlers and that was quite interesting.

Amazing-loved everything about the tour.

Employees and volunteers were very helpful and knowledgeable in their positions. The wild animal display was interesting as well as the movie program.

Employees are always courteous. I don't really think refuge roads should be used for jogging, running, or dogs. It is a refuge for animals. There are bike paths every corner to do those things.

First Class facility.

Fisherman can access a section of the refuge during parts of summer, hunters (walking or horseback riding) can access large parts of refuge during the season, and hunters on bicycles can ride on retrieval roads, no one can hike or horseback ride during summer months. I think this should be allowed as the big game animals move off the refuge by May and do not return until October. Picnic tables would be nice by the pull-outs and by the hunter access parking lots. Benches about every 100 yards to stop and sit on as one walks the refuge road. Many older adults and parents with children walk the road and need a place to sit and rest.

For what I do - biking, hiking, and wildlife watching- it's just fine. Bathroom at parking area could be nice.

Great experience...we visited in winter so we loved the elk!

I am fundamentally against supplemental feeding of elk and bison to increase hunting opportunities. Also I believe it tends to increase disease transmission among ungulate herds due to these unnatural higher wildlife densities.

I came here to view the elk via the sleigh ride on my honeymoon.

I don't agree with the hunting that is allowed on the refuge.

I have limited my comments just to the visit to the Elk Reserve tour we took one morning. We did stay in Jackson for 7 days and participated in day trips out, including a snowmobile trip into Yellowstone. We were very satisfied with that tour.

I just walk on the refuge a lot - therefore I never use the facilities.

I love living near and visiting the refuge and it's fine as it is to me--any comments I've already made and any that haven't been made I'll keep to myself!

I love the blue ribbon trout fishing on Flat Creek. I wish other people had more etiquette but that's not your fault.

I really wanted information on how to recognize signs of a bear in our area since we were camping in bear country and thought it would be interesting to see if it was around us.

I simply drive to the refuge, walk a little, and then fly fish. I do not do anything else.

I was impressed by the volunteers at the Elk Refuge - their friendliness and expertise. I appreciate the people who work at the Great Blue Heron. As a retired biology teacher and lifelong birder I always am eager to learn more about natural history about the new places I've visited.

I was on my morning walk which was a very brief visit. I returned with family in car for another brief visit.

I went there to fish on Flat Creek. I enjoyed my time there, but "Flat Creek" is a small portion of the refuge. The less services the better. The refuge is bigger than most people realize. The more effort someone puts into exploring it, the bigger the reward. Also, on the question regarding bikes, I do not think bikes in the refuge are good.

I would like a guided walking tour offered in the summer to learn more about this refuge and its wildlife. I also would like more information on hiking trails. 0

I would like to see more summer access to refuge when elk are not present.

Incredible education experience and facility.

It was only a short stay on a vacation so I really can't say much about the refuge.

It would be really nice to have binoculars to view the deer from the observation deck near the Visitor Center and create more decks around the refuge with binoculars.

Law enforcement is a vital function on resource and wildlife management. Sufficient budget allocation towards the law enforcement operation is critical.

Love stopping here with out-of-town guests. Exhibits, gift shop, and restroom.

Mile markers and the main road would be nice. Mile and 1/2 mile markers.

More trails!

My husband and I enjoyed the visitor's center and the exhibits/ movies that were on display. We bought souvenirs of the area at this location also.

Our guide and driver (of the sled) was about as good as they get. He was very professional and very knowledgeable! The visitor center and exhibits were very good and the staff was friendly and helpful.

Refuge facility very informative and the displays are excellent.

Riding my bike on the gravel road was not good fun.

Sidewalks along the main refuge road would be an important safety feature, especially in the winter.

Thank you!

The elk hunting on the refuge is the most dangerous activity I've ever experienced. Someone will get shot someday. No control! Need to double the amount of G&F and FWS agents policing the refuge. It's ridiculous and unethical hunting.

The hunting program is an abomination. It is dangerous to the general public and counter to the mission of this refuge.

The only thing I dislike is how to "calcium" spray hardens on my car. You post signs so one known of the event. It comes off with some elbow grease.

The volunteer hostess was knowledgeable, friendly, and welcoming. She made my stop so enjoyable. I would go back just to see her.

There have been more incidents of volunteers telling people to not walk off the road on a trail paralleling the road, but the trail is within the bounds of the signs denying access to the interior of the refuge. So, improve the trail!

This is a very important Refuge so near to town which gives residents and visitors a good look and "feel" for wildlife here. It is a vital community resource.

This refuge is primarily for elk and also mountain sheep. The wildlife viewing opportunities are great and that is all that it really needs to offer people. I don't think it needs changing.

Too many wolves! This will only get worse! The elk are not as easily seen as before - This is my fourth trip.

Very good information given by knowledgeable staff.

Very good volunteers - very personable, knowledgeable and friendly. Very nice visitor's center and historic Miller House. Kids had a great experience at the VC.

Visitor Center exhibits were exceptional.

Volunteers and employees were very friendly and helpful.

We just LOVE visiting the National Elk Refuge in Jackson, WY. We always make it a point to stop at this refuge every time we visit Grand Teton National Park and come into the town of Jackson.

We were on a time restraint and just visited the visitor's center.

Well done exhibits, friendly employees, and good educational opportunities.

Well maintained, helpful volunteers and informative.

While in Jackson Hole, we took the sleigh ride on the Elk Refuge twice. Both times the guides were very knowledgeable and entertaining. We will do this again! We also drove around the back side several times viewing the bighorn sheep. It was great!

Would like to see some limited duck hunting allowed on the refuge.

You should not allow hunting on the refuge!

Survey Section 5

Question 3: "If you answered "Yes" to Question 2, please briefly describe what makes Refuges unique."

Comments on What Makes Refuges Unique? (n = 152)

They are a great place to view wildlife.

A fun place to see flora and fauna and not usually crowded!

Ability to observe wildlife.

Ability to view wildlife up close and in the numbers available.

All the wildlife grouped in one place.

Allow folks to learn more about the wildlife and plants that live on refuge and allow people to explore wild areas.

Allows the general public to view wildlife in their natural environment.

Amazing opportunity to see wildlife up close. Amazing educational experience for my family.

Animals in a natural habitat.

As a photographer - elk and sheep are special in this area. It seems so many bulls in one place are awesome.

Because it provides an opportunity to see plants and wildlife in their natural settings, that people might not necessarily see otherwise. Also, people can experience landforms and natural phenomena such as geysers, see the effects on our landscape, such as earthquake lake, etc. Also, the land and wildlife are protected.

Because no human presence is allowed on the refuge, except for a brief fishing season and a special hunt, walking the refuge to find antlers is a very special experience.

Better success rate of encountering wildlife than at many other places.

Close up encounters with wildlife.

Close-up views of Bighorn Sheep.

Conserving, managing and restoring fish, wildlife, plants and their habitat

Displays and information about local wildlife and vegetation is very informative and educational.

Educational opportunities regarding our environment are concentrated in a site where experts live and contribute to my understanding of the land, the animals, the history, and the politics. Also I believe seeing wildlife specifically cared for and managed is a very important part of our culture.

Elk herds, buffalo, big horn sheep, and birds.

Elk!! I wish it were larger.

Enjoy the quiet beauty and peace of the refuge. I've been in the winter years before, but mainly return in the summer so I can enjoy the biking opportunities provided, especially early mornings!

Entrance fee = higher services, higher education employees, better maintained roads.

Focus on animals- which is great.

Gives the opportunity to observe wildlife in their natural habitat.

Gorgeous scenery!

Have less people than most places I have gone to.

Have never been to another refuge, but the sleigh ride that took us right in the middle of hundreds of elk would be really hard to beat!

Have never seen elk before.

I always think of the Elk Refuge as a winter refuge, but it has seasons that are unique. As a visitor to the area, I wish I had the time to see, understand, and enjoy each season.

I appreciate the "conservation" factor. I would like to be more "up close and personal" but would not like the conservation of the habitat put at risk.

I feel it is important to be able to enjoy natural wildlife areas without harming the animals that live there. Also programs that teach the public about these animals and their environment helps the public to own the idea of keeping the land clean of debris and protecting the wildlife.

I like the refuge because you get to see wildlife. Also a refuge protects the animals. The only thing I do not like about the refuge is that they allow hunting by permits and I feel a refuge should not have hunting on it.

I think there is more of an abundance of wildlife to be viewed. More of a guarantee of seeing the wildlife you've come to observe.

I use the refuge frequently for running and biking. I enjoy the peace and quiet, especially the further out you go.

In Jackson Hole it is the elk and all other animals.

Information given.

Information we gathered about the local wildlife.

It gives people not accustomed to the activities available at refuges the chance to become involved and gain knowledge.

It gives people the opportunity to see wildlife in its natural environment and protects land from commercialism.

It is important to have safe havens for wildlife and for people to observe and use these places. It is also wonderful that there is no fee attached and that it is convenient for all the public to use.

It is more educational than the parks, and provides great insight into animals, their habitats, and how to preserve them.

It is no man's land in its purest form. We are able to see wildlife in its original environment where it belongs.

It is not over-developed.

It is open to the public all the time, provides ample information about the refuge and also allows for a personal experience.

It is safe for me to go on long distance runs.

It offered the ability to observe wildlife without animals fearing our presence within close proximity and within their habitat. I liked the opportunity to photograph so I could later share with my children and family this rare and appreciated experience.

It opens the mind on how it is important to preserve and restore wildlife.

It's just unique by itself; it does not need to be compared to other public lands.

It's like walking on hallowed grounds. There's a respect felt as soon as you start your journey. It makes me proud to be American.

It's mandated by congress to manage primarily for Elk (more singleness of purpose than, say, the nature forest).

It's nice to see wildlife in a natural habitat.

It's unique in that it doesn't control predator populations. This must change. i.e., Wolves.

Its location and the sleigh ride in amongst the elk.

Its proximity to town and variety of wildlife and activities it allows.

Its unique location.

Jackson/Teton area is a wonderfully beautiful area that is easy to access and experience. The Elk refuge and access to viewing wildlife is rare. It provides a safe but personal way to view the wildlife and appreciate the environment. Also demonstrates how important the environment is and the responsibilities involved in maintaining it. Great showcase for the parks and U.S. Fish and Wildlife Service

Just to watch the wildlife up close and to photograph is enjoyed by many. The buffalo are awesome; to feed their own young is such a problem with them at Yellowstone, Montana. People keep forgetting the cattle introduced the brucellosis, not the other way around. Buffalo need to be fed like elk.

La oportunidad de ver de cerca toda la vida animal y las aves ke tienen el mismo. (The opportunity to see up close the wildlife and the birds.)

Large amount of land to observe elk in their natural habitat.

Largest concentration of elk I've seen due to winter feeding program.

Less crowded, more natural, usually have some type of twist to what they offer (Hagerman in TX has oil derricks all over, which are interesting to see in operation - also have wetlands in the spring) vs. NPS that tend to be more groomed and setup for human use.

Maybe it does - I didn't see enough to tell.

More diversity in species. Not logged so much.

My experience with this wildlife refuge is that it has no interest in providing a recreational experience for its visitors, despite the number of people seeking a recreational experience there. I think this is very unfortunate and hope this refuge will make an effort to welcome recreational visitors.

Natural setting.

Never seen anything like it - the wildlife and tour was fabulous.

Not as heavily used as nearby National Parks, hence fewer people. Great wildlife viewing including birds, elk, coyotes, wolves, big horn sheep, and bison.

Not as highly visited as the parks, and therefore a personal wildlife experience. I enjoyed not having the entrance fee - our federal treasures such as this ought to be "free" to our citizens to enjoy.

Offers opportunities not available in public lands.

One of a kind. I love big game. It's close to my home (50 miles).

Only place I've seen an elk herd.

Opportunities to see wildlife in their natural environment but not necessarily have to trail-blaze to see the animals, and yet the facilities don't necessarily destroy the habitats of the animals at the same time.

Planting grasses to nutritionally support Elk. Gift Shop with great educational material to purchase. Top priority - great restroom facilities so visitors can enjoy their stay.

Preservation.

Preserving wildlife for future generations.

Protection from development.

Provide for low-impact recreation (bird, wildlife observation, walking) in conjunction with nature.

Provides a highly accessible area for wildlife viewing.

Provides habitat for the winter feeding of elk.

Proximity to big game observation.

Refuges are controlled environments so that those who are less aware of the importance of the wildlife on this planet are educated and those who are very aware can pay respect, enjoy, and appreciate this world.

Refuges give a chance to see wildlife that is not normally seen.

Refuges provide vital habitat for migrating birds and mammals - which is more important than ever in a time when our natural areas are shrinking!

Refuges usually have better opportunities to see wildlife and birds in greater numbers and closer than most other public lands.

Road-side viewing of Big Horn Sheep, Elk, Wolves, Cougars, etc. World Class fly fishing. In our crowded valley, we owe the wildlife this space.

Safe place for animals and birds.

Seeing all those animals with the naked eye so close to home. I love the elk refuge.

Since we were there in winter, a sleigh ride is unique and we enjoyed it with our 2 year old son.

Sleigh rides out into the elk.

So very many animals.

Some trails through the grasslands and along the creek would be great! Viewing refuge from the road is not a unique experience.

That it feeds and protects the wintering Elk herds from Yellowstone and Grand Teton National parks in the winter. I think that's a wonderful thing they're doing.

The ability to observe wildlife in its natural habitat- much better than a zoo!

The ability to take a sleigh ride and see elk that close was fantastic!

The abundance of animals.

The concentration of wapiti.

The concentration of wildlife in one area for viewing.

The conservation of wildlife habitats which feeds into the bigger ecosystem as a whole and the education of the public on these lands.

The Elk Refuge, like other refuges, provides sustenance for elk and buffalo during the winter. Otherwise many of the animals would not survive. Watching them, often in my own years, is a great experience every winter.

The emphasis seems to be on the animals and what is best for them and not on the visitors (as it should be). Also appears that there is less of a human impact in the refuge versus a National Park, etc.

The exhibits, maps, and different wildlife that can be seen.

The high probability of viewing wildlife

The land and animals are managed in a manner to which the public can have a more enjoyable time.

The management style is unique and the availability of wildlife viewing is very well managed.

The natural state of the environment.

The NER provides extra excitement during hunting season because you could get shot or run over by an overly exuberant hunter.

The opportunity to see herds of elk close up.

The opportunity to see wildlife I otherwise would never see or photograph.

The opportunity to see wildlife in natural conditions with natural behaviors.

The opportunity to view hundreds of elk, and occasionally big horn sheep, in the winter.

The overall desire to maintain and protect.

The purpose is to help the animals in their survival through rough climates by providing food which otherwise they probably wouldn't have, and promoting the life of those animals which may be in extinction.

The refuge was more focused on the needs and well-being of the animals and wildlife than a National Park which has more of a focus on the visitors experience and comfort.

The sheer number of animals.

The uniqueness is a result of the number and variety of wildlife, birds, and scenery this refuge has to offer. Other refuges are also important for these reasons, however the varieties are not as diversified (still, the others are very important and enjoyable as well).

The variety of wildlife you can see.

The wildlife and amazing fishing.

The wildlife and views.

The wildlife.

Their primitive "back to nature" qualities.

There were so many elk in one place!

They are managed better which makes the plants looking good and the wildlife around.

They are not as well known or as developed as National Parks and conservation areas. Visitation is less, but opportunities to observe wildlife and escape the crowds are greater. They frequently offer surprises.

They are very important to the maintenance of wildlife habitats and maintenance of wildlife. Very educational for students or children.

They attempt to show the animals in natural habitats without limiting their mobility. They do somehow keep them in a limited area for the possibility of viewing. We didn't see anything except one bird that we didn't recognize but noted the primitive area so we knew the possibility was there.

They offer an opportunity to view wildlife without all the conveniences that cost money.

They offer refuge for wildlife and allow people to interact and/ or educate people about the wildlife.

They often offer an opportunity to recreate an unspoiled habitat and pursue rare fish and game.

They preserve and manage wildlife and conserve land. This is important so that we can enjoy our natural resources into the future.

They prioritize the needs of wildlife and keep people out. People have plenty of other public lands to recreate on.

They provide a safe place for animals and humans.

They provide the opportunity for the public to learn about wildlife (and get their interest) in addition to their conservation of resources function.

This particular refuge gives residents and visitors a good opportunity to observe and appreciate wildlife and scenic beauty.

This refuge is very unusual - Flat Creek is unique land. It is tough and too crowded on opening days. Also very few refuges I found have this elk population.

This refuge provides an excellent opportunity for people to be close to wildlife.

Uncluttered but easily accessible and easy to locate open space.

Viewing animals in their natural habitat.

Viewing opportunities.

Walking, watching wildlife.

We are outdoors people and were able to view wildlife we had never seen before at a very close distance as a result of accessibility. It made our experience very memorable.

We have nothing like it back in Australia! And being able to get so close to the animals and seeing them undisturbed by the visitors made it absolutely unforgettable. The sleigh ride also added to the experience. We have told so many friends! Loved it so much!

Well informed volunteers and good displays.

Well maintained and knowledgeable staff.

Well regulated to make the area unique, special, and a place where wildlife can thrive.

Wildlife is more concentrated and easier to observe and photograph.

Wildlife Refuges tend to protect areas that are used by wildlife more so than to the benefit of visitation. Most do offer enough visitation or recreational opportunities to appreciate the unique wildlife habitats these refuges protect.

Winter feeding, sleigh rides, fishing, buffalo viewing.

Winter is a unique time of the year to visit the elk refuge and see all the elk. Being a hunter, I've been doing this since I was a small boy and have made many trips with my children.

Wonderful open space and habitat to preserve the environment.

You get to see things in a more natural state.

You have the rare opportunity to see wildlife as it was intended to be with the opportunity to preserve it for future generations.

Additional Comments (n = 39)

1. I found the "Q/ A" on climate change strange. If you're talking about "global warming" you should say that. The Earth's "climate" has always been in a state of "change." It's our job as humans to guide and protect our wildlife through those changes. 2. Mile markers on the main road would be greatly appreciated by visitors.

Continue the good work. Hoping it reflects 100% behind the scene. Thank you.

Do something about the wolves!

Great experience, the elk were wonderful to see up close.

I am a regular (almost daily) visitor to the Elk Refuge. I consider it one of the crown jewels of Jackson Hole.

I am a seasonal National Park Service ranger and am outdoors a lot for both work and recreation.

I don't think it had much to offer outside of the elk hunting season or during the wintering refuge of the elk, other than make you aware of what happens during those times. I was very bored here.

I enjoyed the visit.

I have visited many refuges over the years in the U.S. as well as in other countries. The Elk Refuge at Jackson Hole is by far the best! As a wildlife biologist I was impressed at how our tour guide/driver could answer difficult questions in a way that made sense to our entire group. Excellent! Excellent!

I love not having the roads paved. I love being able to walk out on the refuge road (trails would be better to keep pedestrians and cars safer). I love accessing National Forest lands via the refuge. I love its low profile status.

I love the Elk Refuge as it is. Please do not waste tax payer's money by establishing new offerings or over managing it.

I loved visiting Wyoming! Can't wait to come back.

I really dislike the subtext here of the trend to want to control and bus people into national parks, wildlife refuges, and national forests. To me the freedom to go out into nature for solitude to write, think, observe, photograph, or pray is a huge reason to go. There are enough rules and regulations in our society. Our taxes go to support these wild areas and I feel we have a right and responsibility to voice our opinions. This survey--thank you--gives us that chance. For me though, I can be there at 4am or 10pm or any other time - if I were subjected to being bused or managed in a group context in these wild areas at times of day of their choosing I would move out of Jackson Hole and not come back. For those who are uncomfortable alone in the parks,

refuges, forests-maybe they're like a tour or a bus to feel safe. Not me. Choice - solitude - self efficacy and direction - discovery - observation - are what makes the natural world attractive. I resist being pabulum fed wild experiences - I am very law abiding and caring, but I am not in favor of mass transit into these places. This seems to me to be for the convenience of people managers and is justified by their "concerns" over visitor impact on wildlife.

I started to fill this out, but after going through the survey, we really only visited the visitor center, saw exhibits inside visitor center, watched informational video and spoke to volunteer about some sightseeing opportunities. We didn't go through the refuge - however, we did enjoy the visitor center. And the volunteer was most helpful.

I think it is a very important refuge, we have to take care of our wildlife year round, both summer and winter range.

I was not going to answer this survey because it did not apply to me. Then, for our President's Day weekend I took my grandson out to see the sheep. I was astounded by what I saw. Eight wolves had killed five elk not 50 yards from the road and were still feeding when we got there. I drove 1/4 of a mile further and saw a lone wolf harassing an injured ram who could not get up. All this happened not half a mile from the Miller House. I am concerned about walking my dog out there with wolves so close to the road. I may have to carry a gun.

I'm a professional senior national resource manager and appreciate what the National Elk Refuge provides the Jackson area and for visitors from everywhere. Don't believe the refuge needs to much more to provide for employee or public safety, education, or enjoyment. Thank you!

I've taken the year off to travel so the household income and number of trips is not typical

It was a great experience! Thank you (signature)

It was my first winter trip and unfortunately it was a side trip. Next time I would like to spend more time in and around the refuge. Kudos to the USFWS for maintaining an excellent refuge.

Keep up the good work! Very concerned about Pine Beetle infestation.

Lot of the questions on this I find do not pertain to our refuge. I like the refuge and hope it continues to protect wildlife. We are fortunate to live so close to it, and get to see the wildlife. Like I said previously, I just do not like hunting on the refuge even though it is limited to permit holders. It is not really a hunt, but a slaughter.

One of my favorite places to visit.

Thanks for all you do for wildlife! Additional work to enhance waterfowl and fishing would be appreciated...

Thanks, it was a great visit. All the people were so helpful and friendly and so knowledgeable. We came away knowing so much more.

The Elk Refuge is a very special place.

The Elk Refuge is a wonderful place to visit all 12 months of the year. It is one of my favorite places to see visit when I go to Jackson.

The refuge and Miller Homestead were great.

The visit was a side-trip from a longer planned backpacking trip. Additional exposure to habitats in the area and history of human impact enhanced overall appreciation of the region and the refuge.

There are no experiences like exploring places saved for their rugged beauty. Keep doing what you're doing. Protect the trout, feed the elk, haze the buffalo, and let us shoot wolves. God bless America.

This refuge needs to better maintain health of the elk on the refuge, start feeding elk sooner, especially when weather causes crusting of snow. As crusting of the snow pack increases the danger of animals developing foot rot, caused by cuts in feet, from pawing through the snow to obtain food. Also, earlier feeding will

preserve the native grasses from over grazing.

This was my first trip to a National Refuge. I have visited many National Parks over the years. I enjoyed it very much and wish we had had more time to see the refuge itself. We will definitely plan a return trip to the Wyoming area and the next trip will be sure to add the refuge tour to the itinerary.

We appreciate the blue bird boxes on the fence along the Elk Refuge at Jackson, Wyoming. We were able to spot many blue birds "hanging out" there even though nesting season seemed to be over. It was a life bird for me.

We especially enjoyed the exhibits at the visitor's center (differences in size of certain animals, descriptions, etc.).

We just stopped in at the visitor's center while waiting for other people. I wouldn't want my input to carry the same weight as someone who made a point of visiting the refuge. This exercise (filling out the booklet) seemed wasteful.

We love the refuge and would like to visit there more often. The town of Jackson is a very friendly and a welcoming place and we feel very comfortable and important there. It's my impression that the refuge helps more than just the wildlife and plant life, but also helps the locals as well.

We use this refuge road almost weekly to get to a care taking job at an inholding residence.

Wonderful place to be. (signed) From Paris-France.
