



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

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Neal Smith NWR is a glimpse into the past when Iowa was covered by prairie and provides a chance to see bison in the wild. The Visitor Center is first rate. The volunteer at the desk is friendly and knowledgeable.—Survey comment from visitor to Neal Smith National Wildlife Refuge.



Neal Smith National Wildlife 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 Neal Smith NWR (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 Neal Smith NWR, 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 Neal Smith National Wildlife Refuge

Located in Jasper County, Iowa, just twenty-five miles east of the state's largest city, Des Moines, Neal Smith NWR exists to preserve the central Iowa landscape before Euro-American settlement in the 1840's. Established in 1990, Refuge staff and volunteers continue to work with conservationists, schools and prairie enthusiasts to reclaim a piece of this state's natural heritage. This 8,654-acre refuge created a mission to reconstruct tallgrass prairie and restore oak savanna on the Walnut Creek watershed and to provide a vital environmental education facility focusing on prairie, oak savanna, and human interaction.

The restoration of this refuge has already provided habitat for a diversity of life, including hundreds of plant species, over 200 bird species, nearly 100 species of mammals, scores of amphibians, reptiles, and fish, and thousands of insect species. Bison and elk have been reintroduced to the area with an 800-acre drive-through bison and elk enclosure to demonstrate the natural role of large herbivores in the tallgrass ecosystem.

With close to 170,000 visitors each year (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.), Neal Smith NWR hosts a number of activities including upland game hunting, big game hunting, use of the Visitor Center, hiking, auto tour routes, wildlife observation, photography, environmental education, and interpretation. Figure 1 displays a map of the refuge. For more information, please visit <http://www.fws.gov/midwest/NealSmith/>.

Sampling at Neal Smith National Wildlife Refuge

A total of 320 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Neal Smith NWR (table 2). In all, 216 visitors completed the survey for a 68% response rate and $\pm 5\%$ margin of error at the 95% confidence level.¹

Table 2. Sampling and response rate summary for Neal Smith NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	9/25/2010 to 10/9/2010	Prairie Learning and Visitor Center Auto Tour Route	159	3	111	71%
2	6/4/2011 to 6/18/2011	Prairie Learning and Visitor Center Auto Tour Rout - Exit from Bison/Elk Exposure	161	1	105	66%
Total			320	4	216	68%

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 Neal Smith NWR 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 (83%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (90%). 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-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 (90%; see Appendix B for visitor comments on “What Makes National Wildlife

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).

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 Neal Smith NWR had been to at least one other National Wildlife Refuge in the past year (44%), with an average of 3 visits to other refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (47%) had only been to Neal Smith NWR once in the past 12 months, while others had been multiple times (53%). These repeat visitors went to the refuge an average of 8 times during that same 12-month period. Visitors used the refuge during only one season (55%), during multiple seasons (28%), and year-round (17%).

Most visitors first learned about the refuge from friends/relatives (45%), signs on the highway (35%), or people in the local community (19%; fig. 2). Key information sources used by visitors to find their way to this refuge include signs on highways (58%), previous knowledge (49%), or a road atlas/highway map (12%; fig. 3).

Some visitors (69%) lived in the local area (within 50 miles of the refuge), whereas 31% were nonlocal visitors. For most local visitors, Neal Smith NWR was the primary purpose or sole destination of their trip (77%; table 3). For most nonlocal visitors, the refuge was an incidental or spur-of-the-moment stop on a trip taken for other purposes (37%). Local visitors reported that they traveled an average of 28 miles to get to the refuge, while nonlocal visitors traveled an average of 275 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 81% of visitors travelling to Neal Smith NWR were from Iowa.

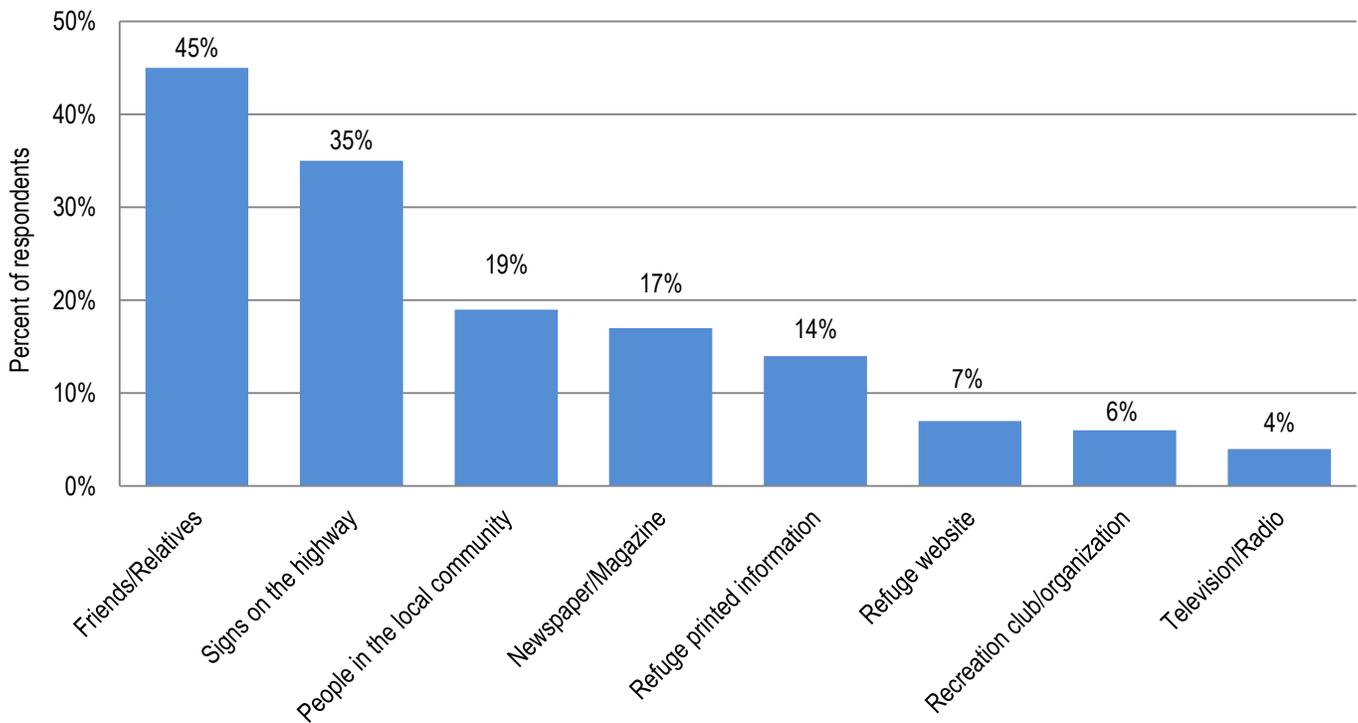


Figure 2. How visitors first learned or heard about Neal Smith NWR (n = 206).

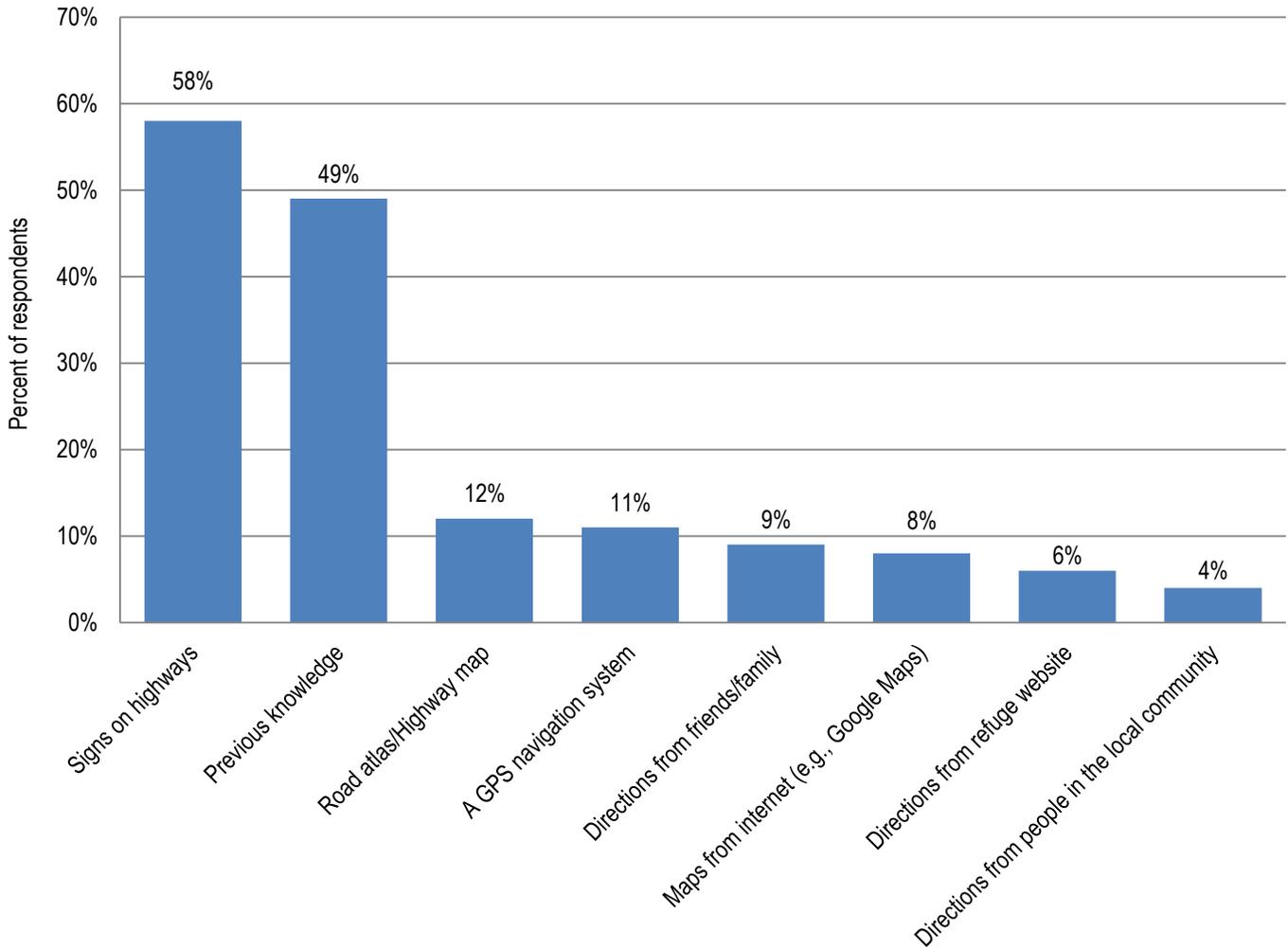


Figure 3. Resources used by visitors to find their way to Neal Smith NWR during *this* visit (n = 209).

Table 3. Influence of Neal Smith NWR 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	33%	30%	37%
Local	77%	11%	11%
Total	64%	17%	19%

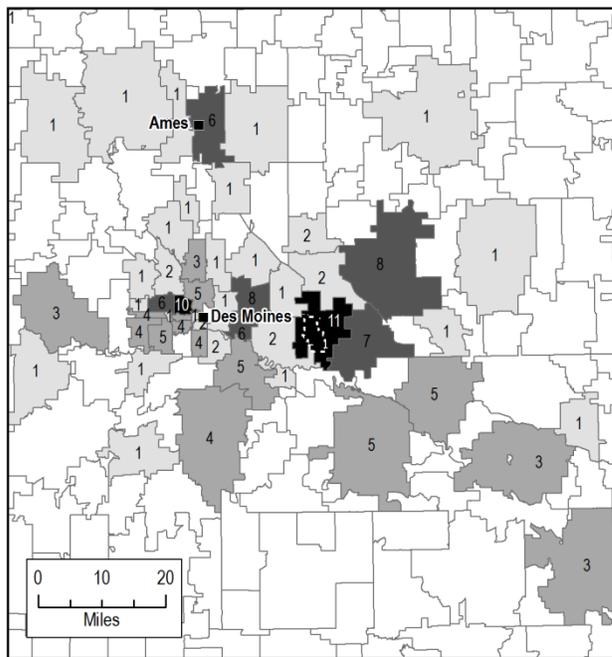
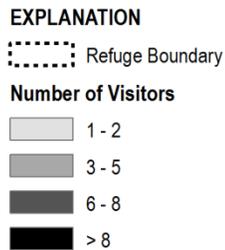
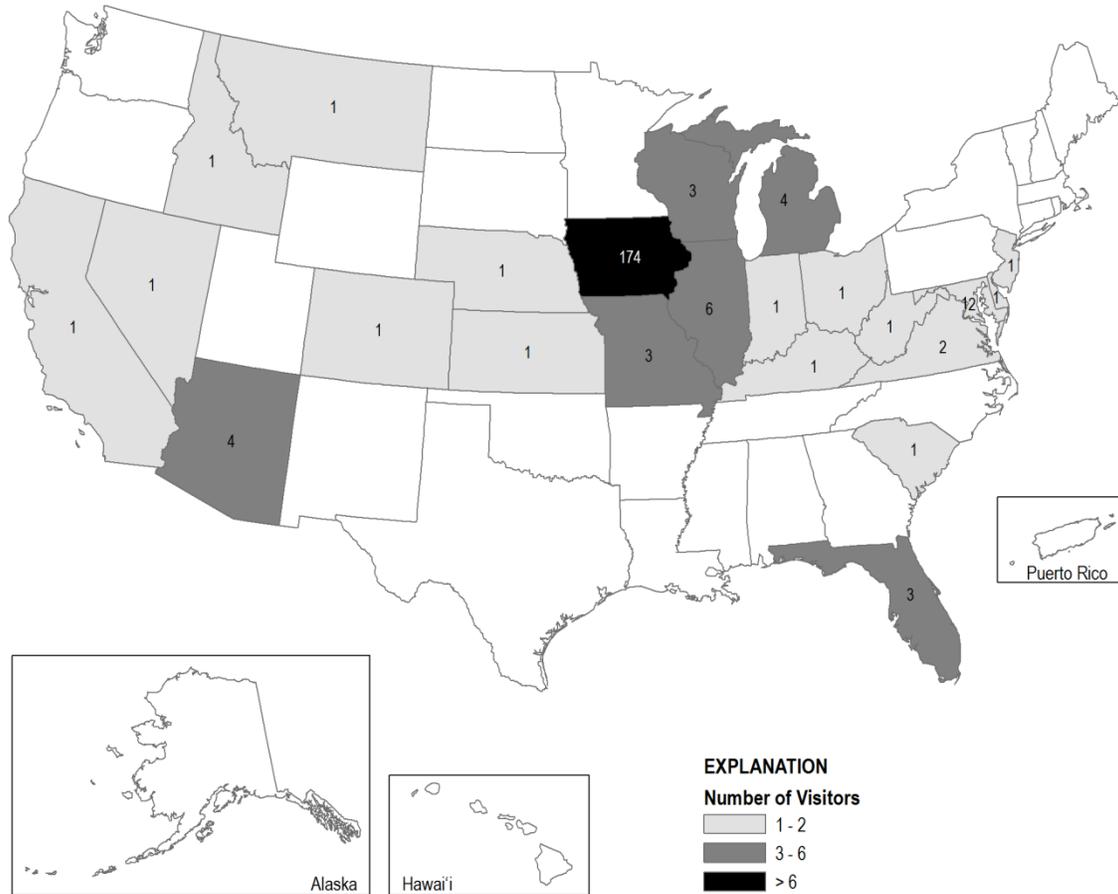


Figure 4. Number of visitors travelling to Neal Smith NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 216).

Surveyed visitors reported that they spent an average of 3 hours at Neal Smith NWR 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 2 hours (27%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (97%) and walking/hiking (21%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (59%), travelling primarily with family and friends (table 4).

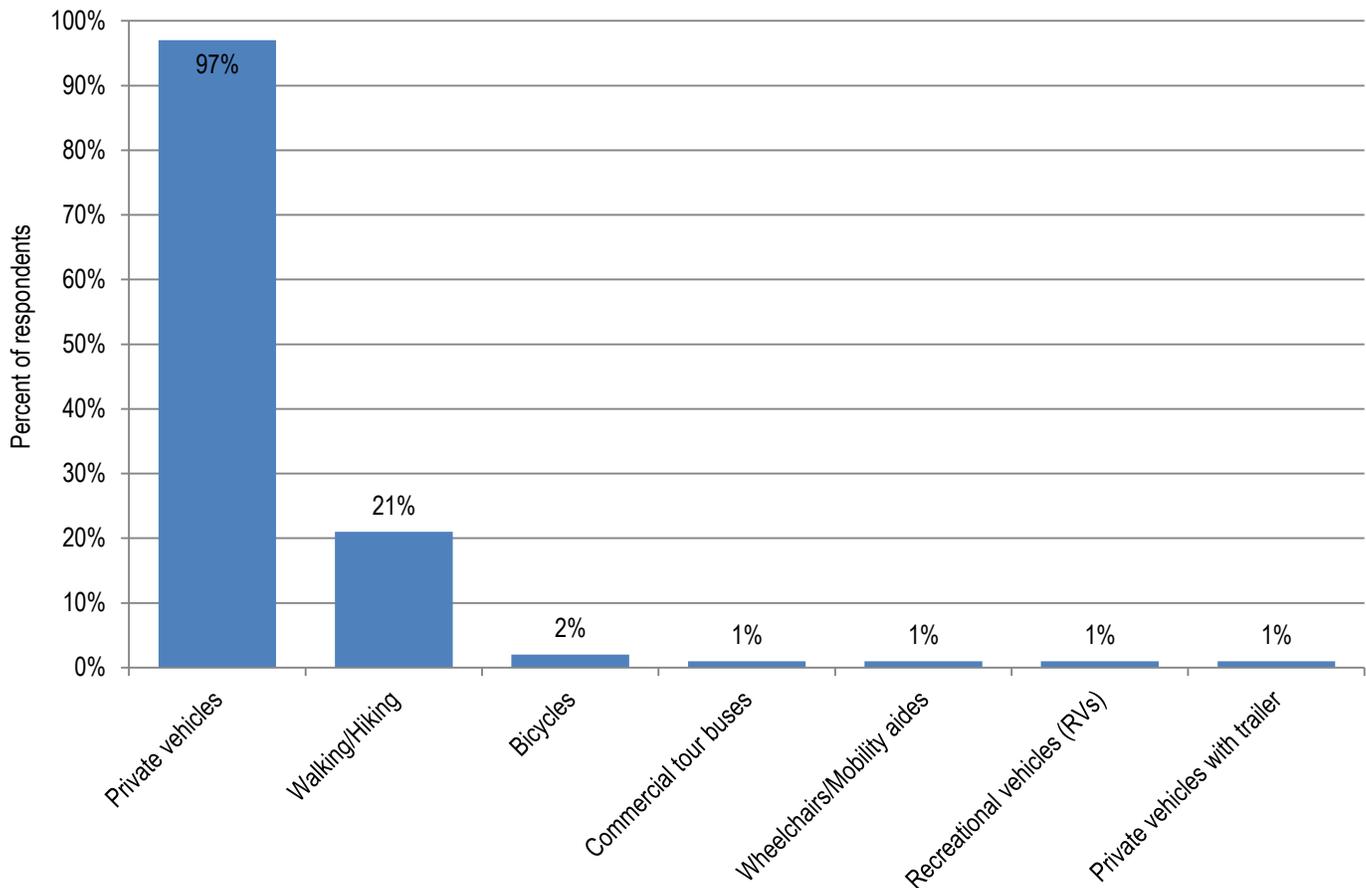


Figure 5. Modes of transportation used by visitors to Neal Smith NWR during *this* visit (n = 210).

Table 4. Type and size of groups visiting Neal Smith NWR (for those who indicated they were part of a group, n = 126).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	82%	3	1	4
Commercial tour group	5%	18	17	35
Organized club/School group	10%	14	12	26
Other group type	3%	6	0	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%), auto tour route/driving (71%), and interpretation (48%). The primary reasons for their most recent visit included wildlife observation (35%), auto tour route/driving (11%), and environmental education (10%; fig. 7). The visitor center was used by 88% of visitors, mostly to view the exhibits (90%), stop to use the facilities (for example, get water, use restroom; 78%), and visit the gift shop/bookstore (77%; fig. 8).

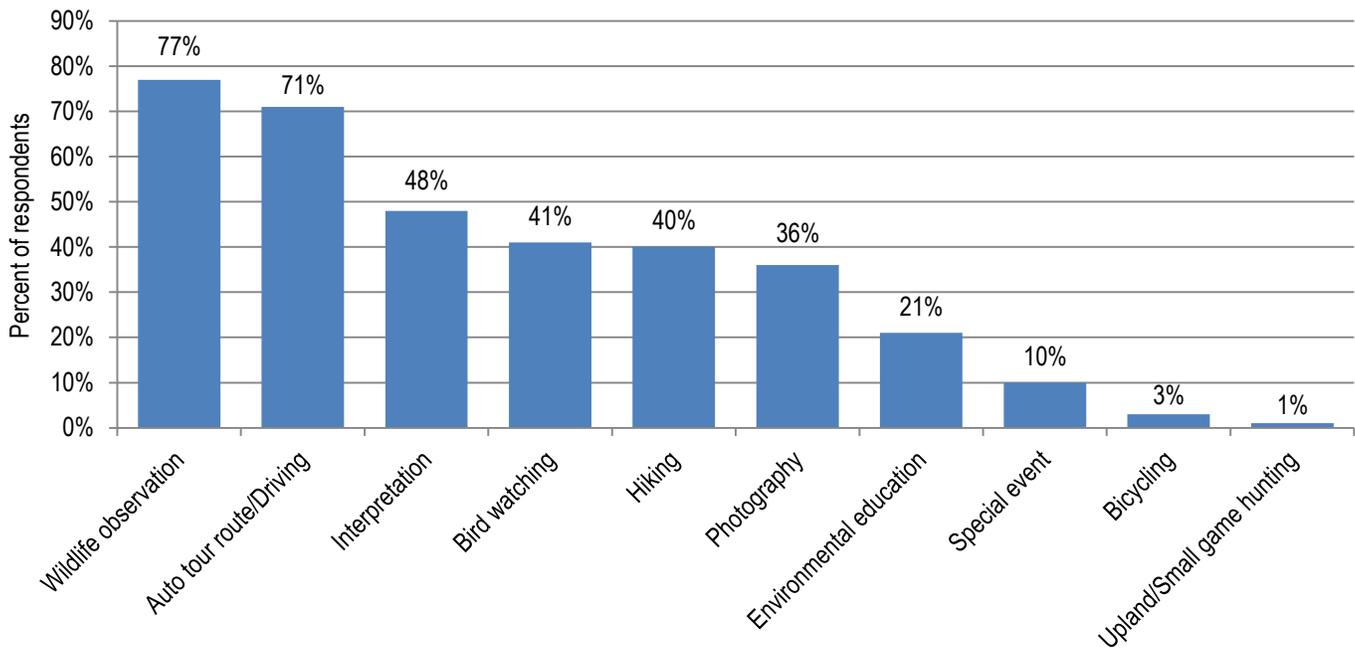


Figure 6. Activities in which visitors participated during the past 12 months at Neal Smith NWR (n = 208). See Appendix B for a listing of “other” activities.

Visitor Characteristics

All surveyed visitors to Neal Smith NWR 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 58 years and 51% female with an average age of 52 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$50,000–\$74,999. 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).

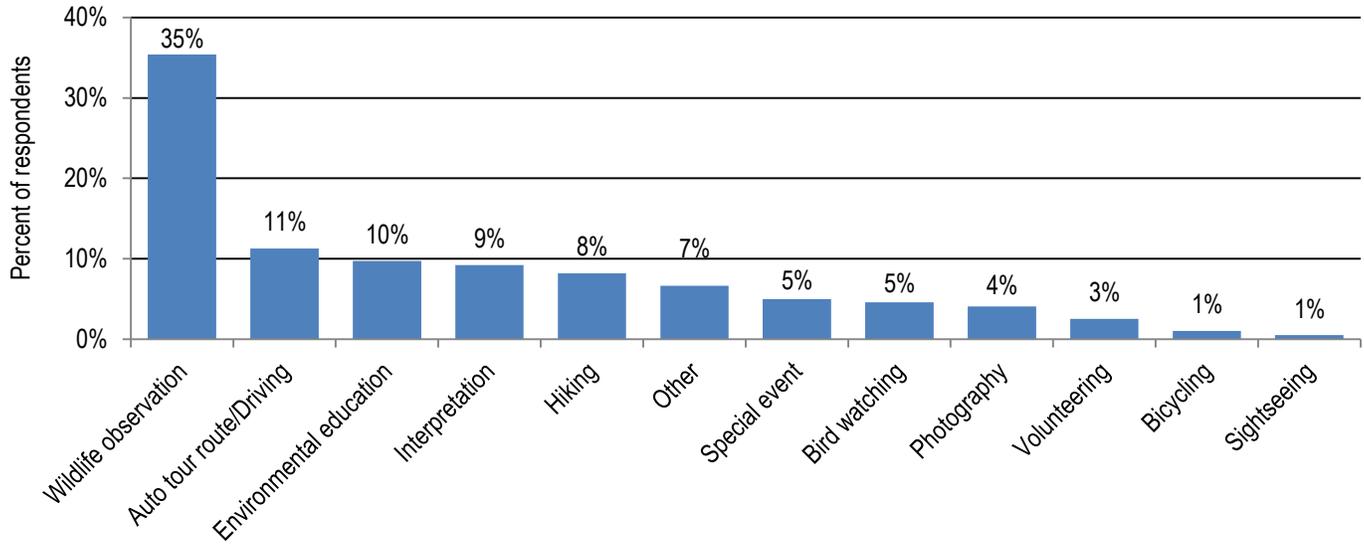


Figure 7. The primary activity in which visitors participated during *this* visit to Neal Smith NWR (n = 195). See Appendix B for a listing of “other” activities.

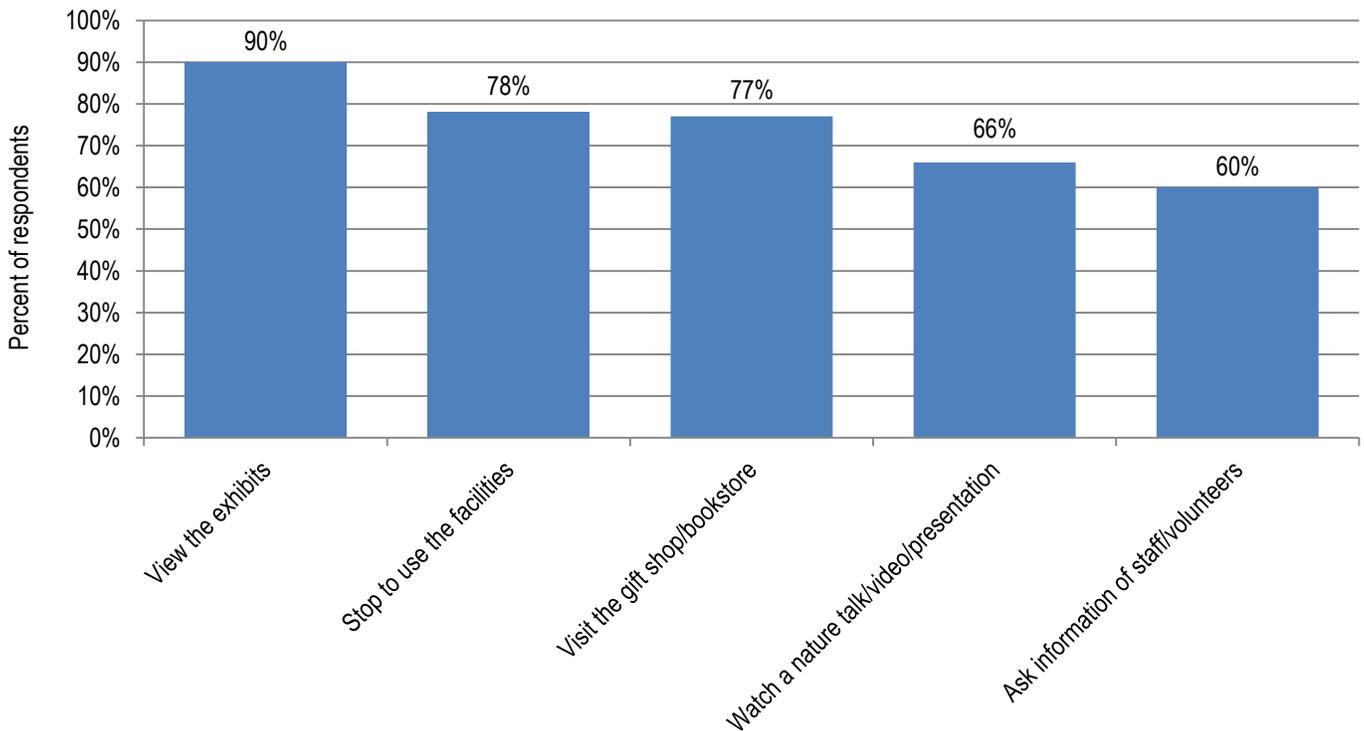


Figure 8. Use of the visitor center at Neal Smith NWR (for those visitors who indicated they used the visitor center, n = 189).

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, 69% of surveyed visitors to Neal Smith NWR indicated that they live within the local area. Nonlocal visitors (31%) stayed in the local area, on average, for 2 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. During the two sampling periods, nonlocal visitors spent an average of \$60 per person per day and local visitors spent an average of \$21 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 Neal Smith NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	53	\$33	\$60	\$69	\$0	\$350
Local	101	\$16	\$21	\$21	\$0	\$122

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 Neal Smith NWR were as follows (fig. 9):

- 92% were satisfied with the recreational activities and opportunities,
- 94% were satisfied with the information and education about the refuge and its resources,
- 93% were satisfied with the services provided by employees or volunteers, and
- 96% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 8% of visitors (n = 17) indicated they paid a fee to enter Neal Smith NWR, the refuge does not have an entrance fee. It is not known why a small number of visitors thought they paid a fee to enter the refuge.

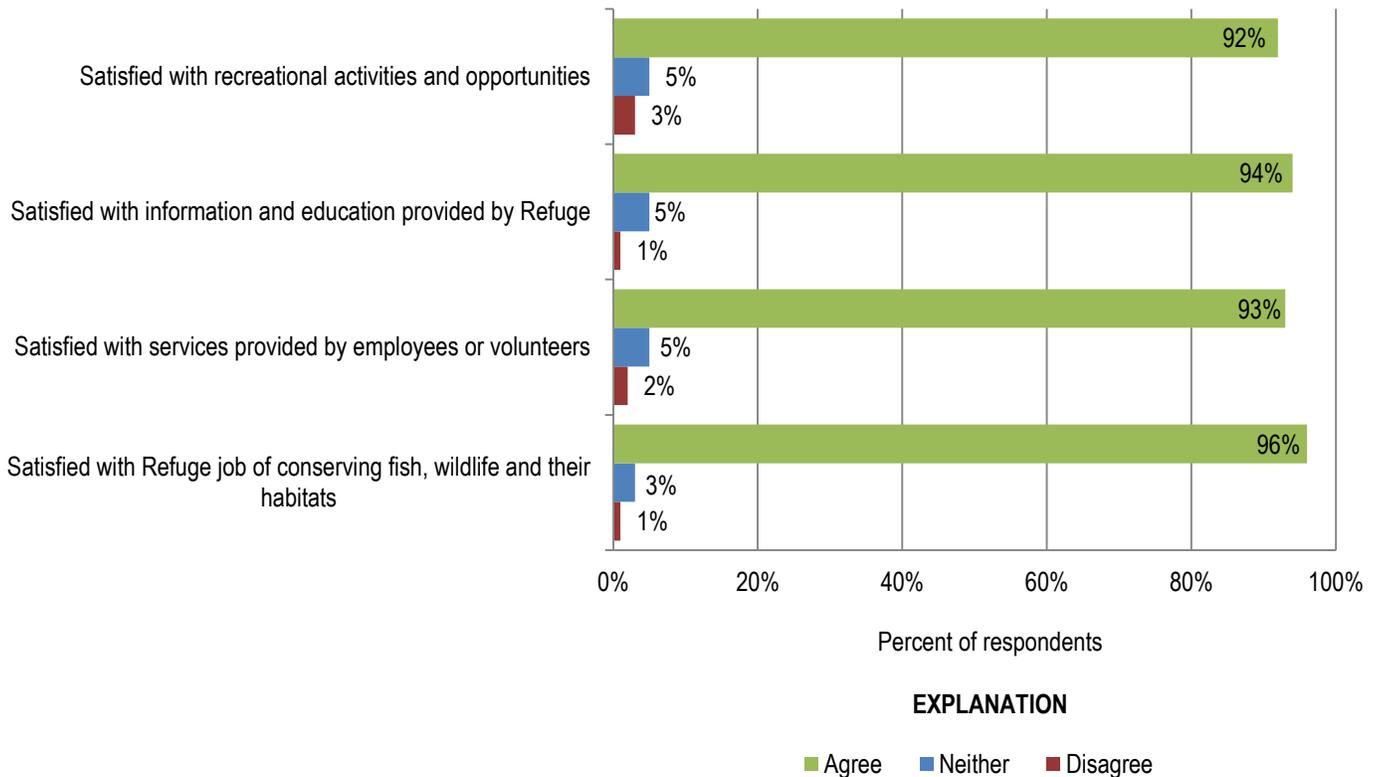


Figure 9. Overall satisfaction with Neal Smith NWR during *this* visit (n ≥ 204).

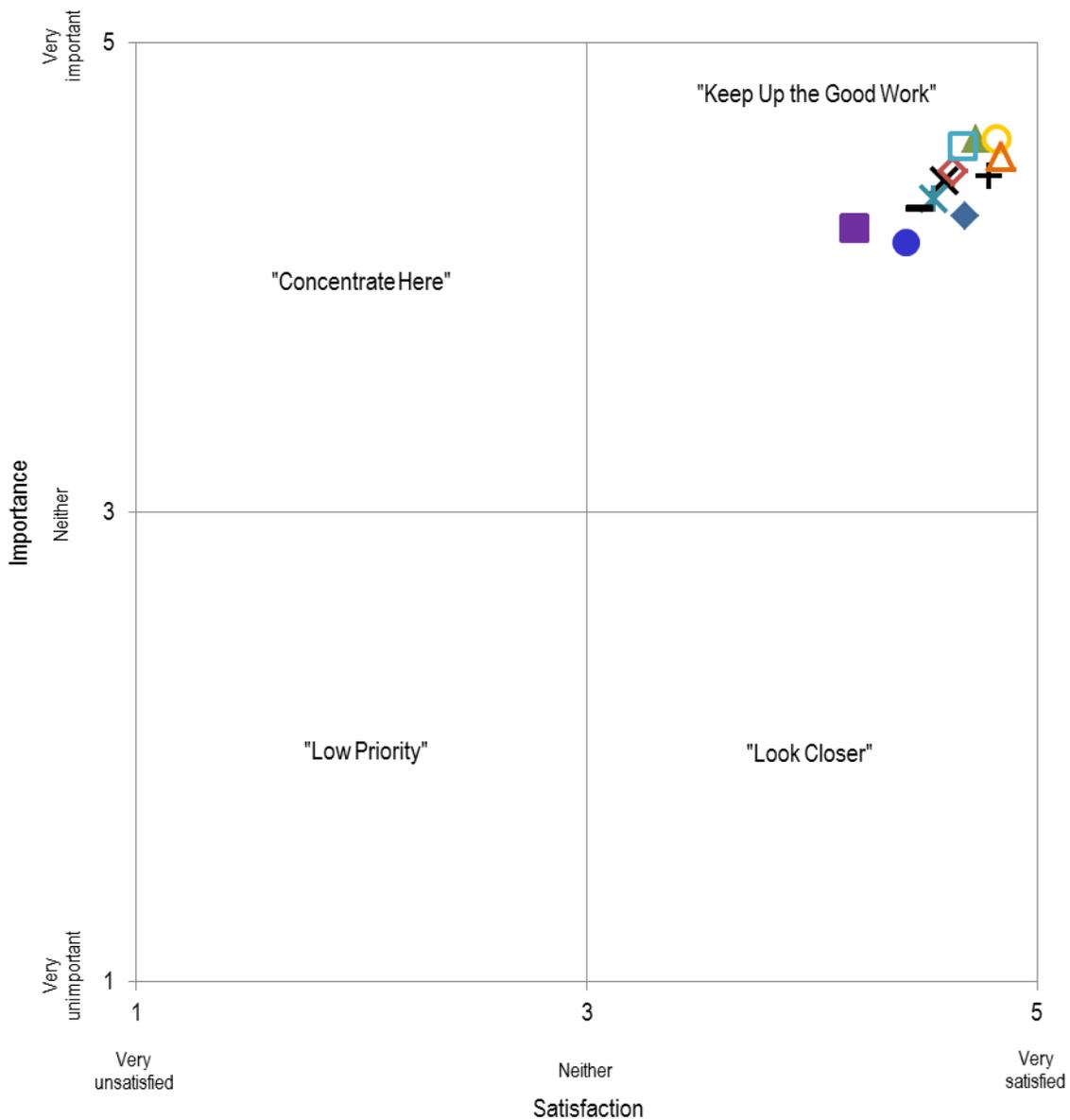
Importance/Satisfaction Ratings

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 Neal Smith NWR. 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.

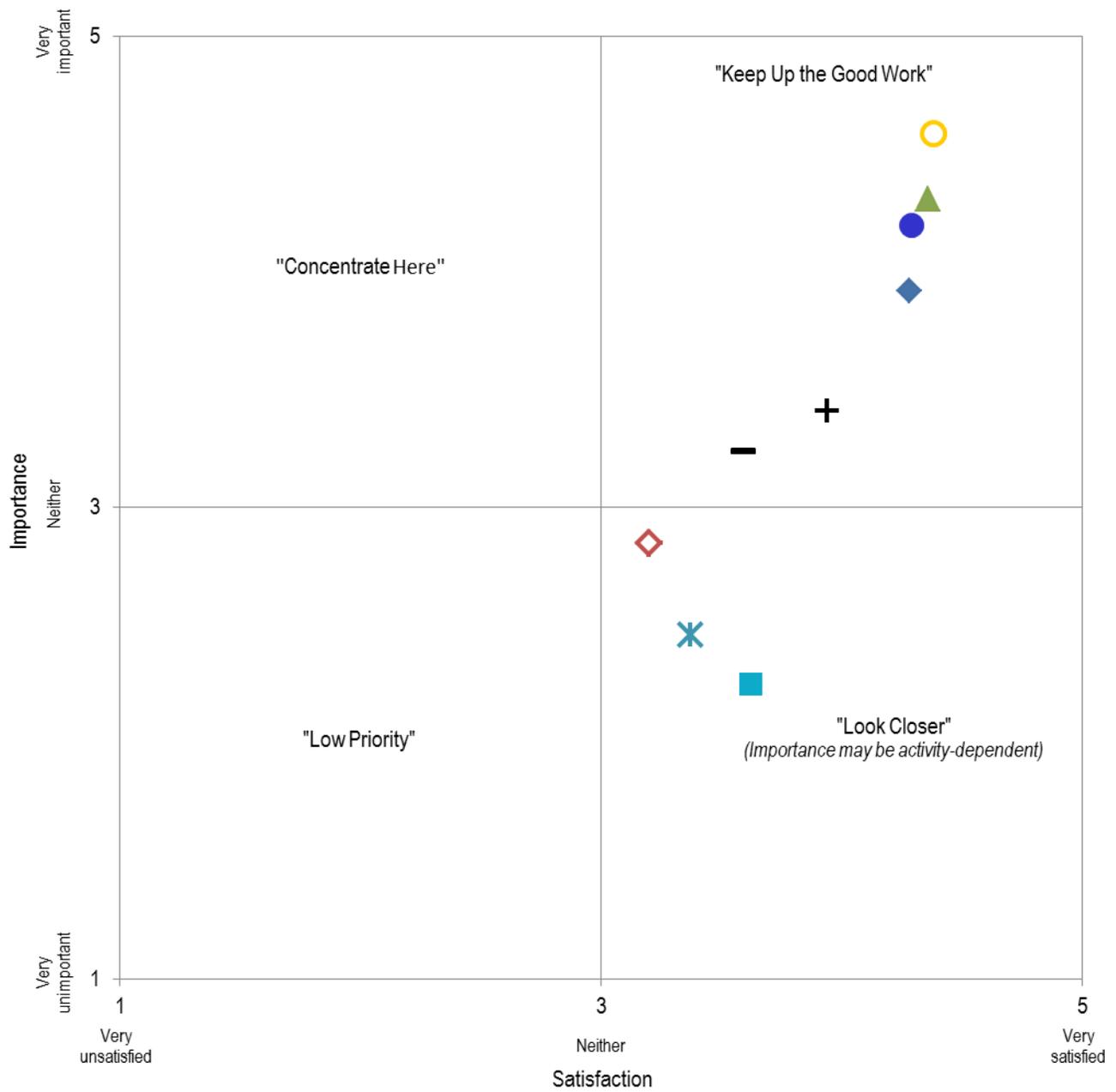
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Neal Smith NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except hunting, fishing, and kayak/canoe opportunities, which fell into the "Look Closer" quadrant (fig. 11). The average importance of these activities in the "Look Closer" quadrant may be higher among visitors who have participated in them 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

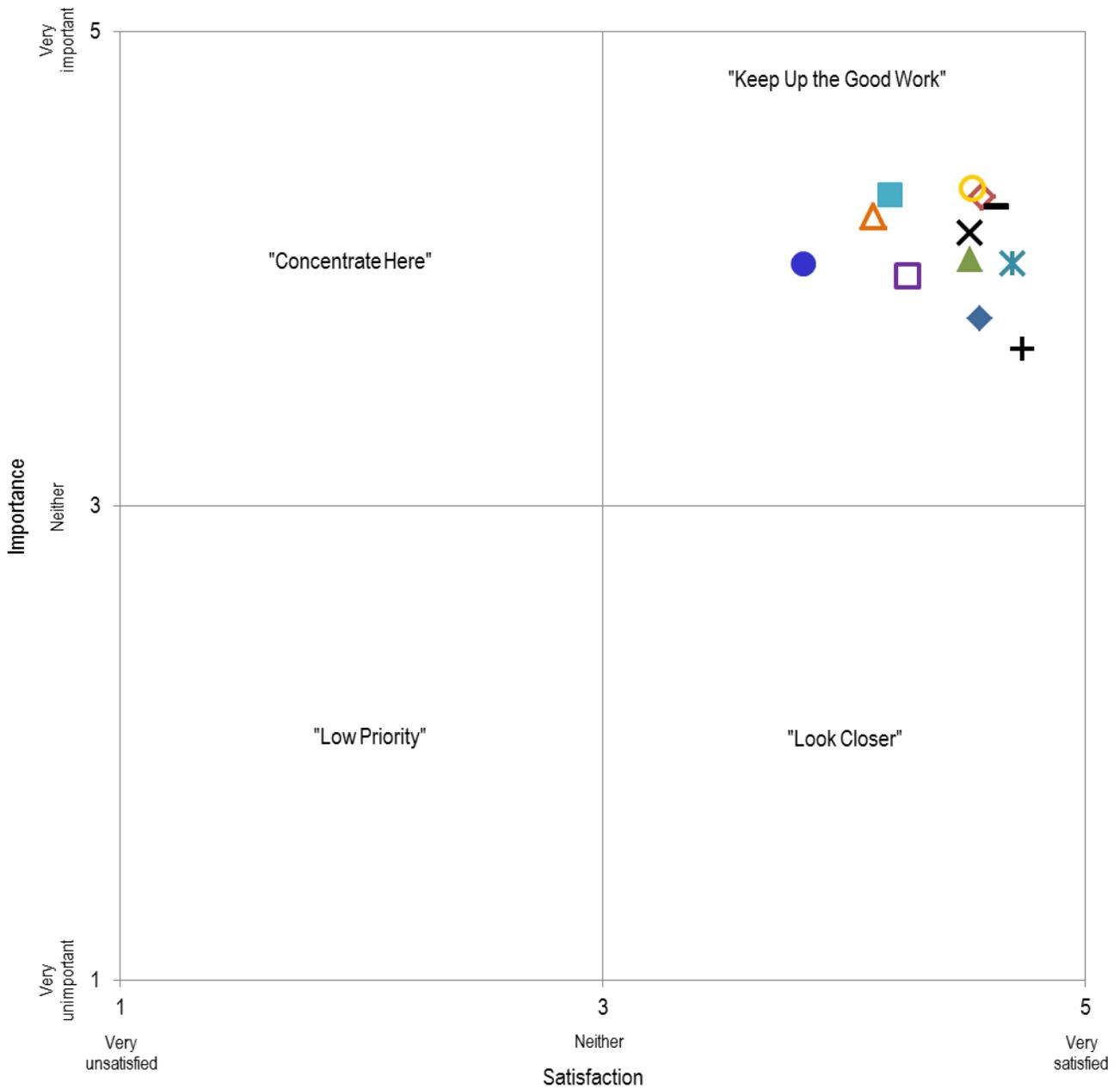
Figure 10. Importance-satisfaction ratings of services and facilities provided at Neal Smith NWR.



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 Neal Smith NWR.



EXPLANATION

- ◆ Condition of roads
- ⊕ Condition of parking areas
- ▲ Condition of bridges
- ✕ Condition of trails/boardwalks
- ✖ Number of parking places
- Number of pullovers
- ◇ Safety of driving conditions
- Safety of Refuge entrances
- Directional signs on highways
- Directional signs on Refuge
- △ Directional signs on trails
- Disabled access

Figure 12. Importance-satisfaction ratings of transportation-related features at Neal Smith NWR.

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 Neal Smith NWR 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 Neal Smith NWR 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; and
- a bus/tram that runs during a special event.

When asked about using alternative transportation at Neal Smith NWR specifically, 45% 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 (32%).

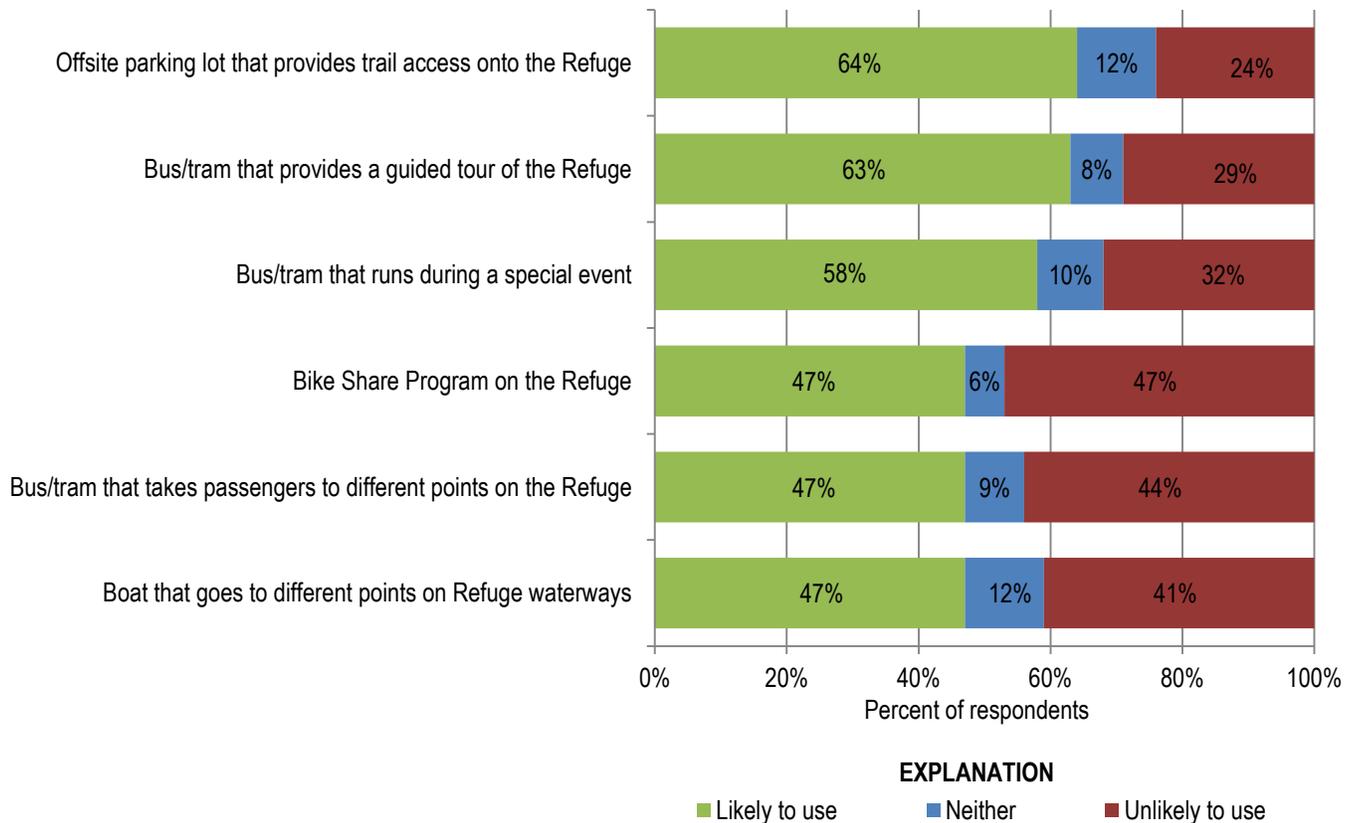


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 195).

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 (for example, 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 Neal Smith NWR 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.”

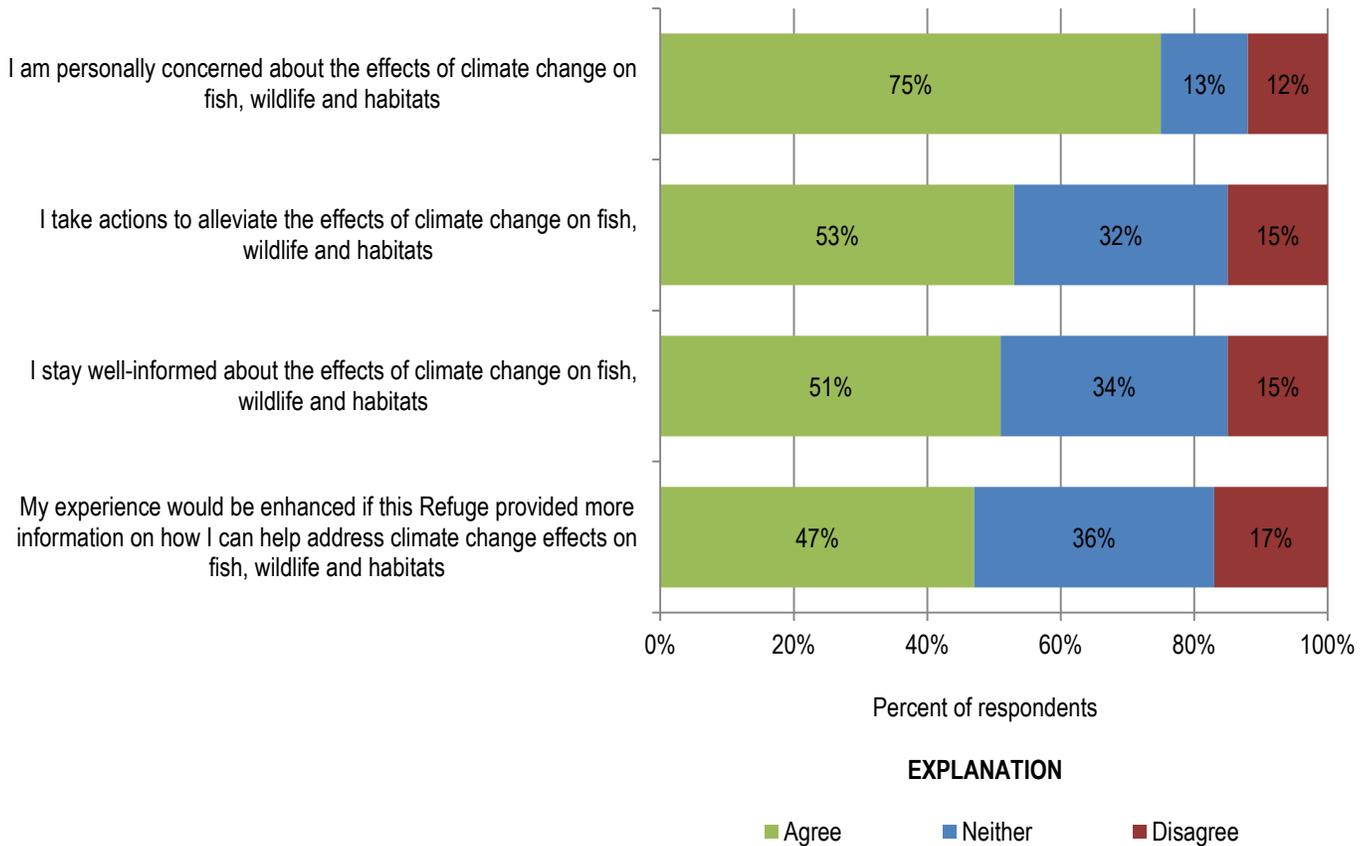


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 203).

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

The majority of visitors did *not* believe:

- “There has been too much emphasis on the catastrophic 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 (47%) indicated that their experience would be enhanced if Neal Smith NWR 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.

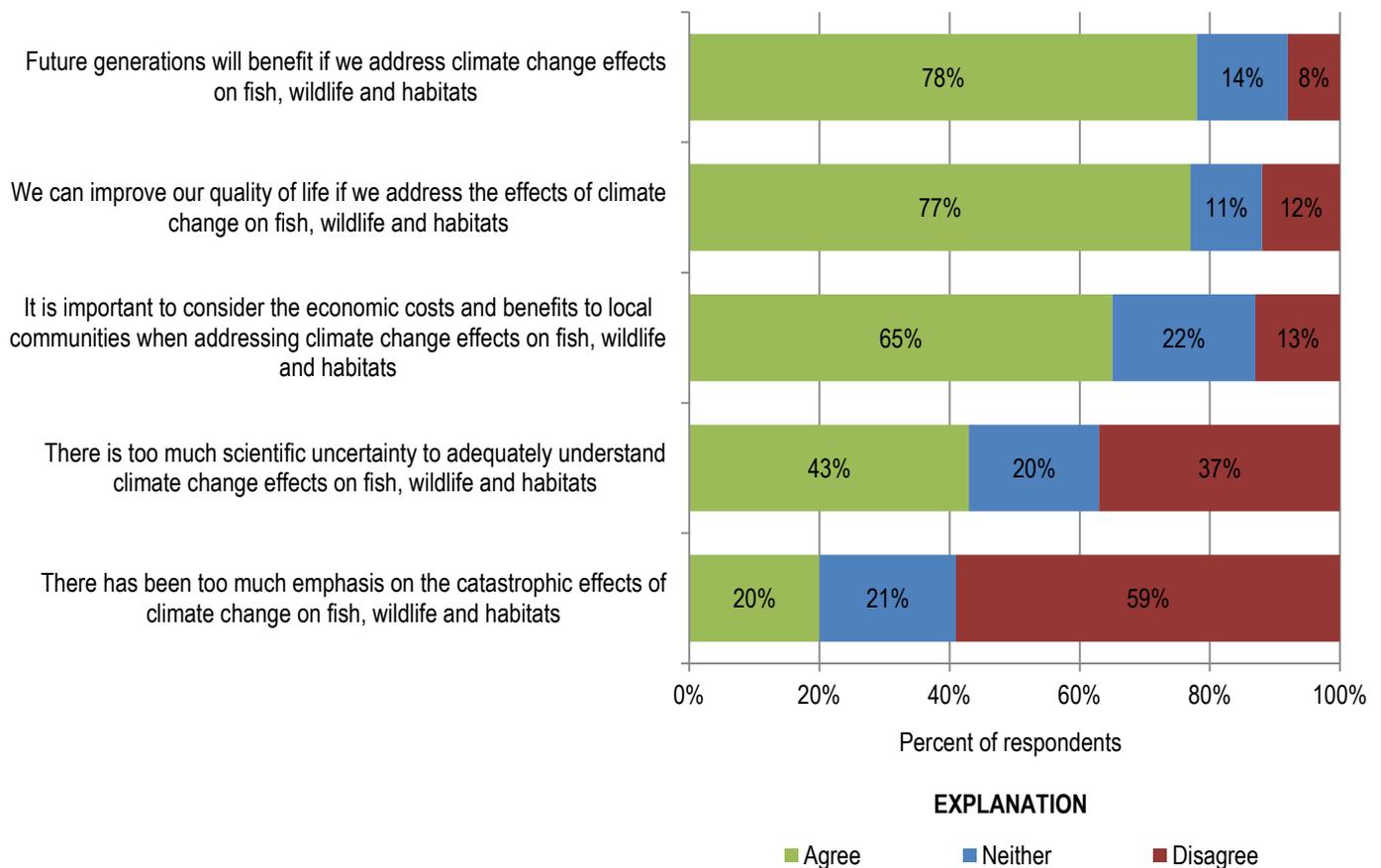


Figure 15. Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 201).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Neal Smith NWR 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"/> 0% Big game hunting | <input type="checkbox"/> 40% Hiking | <input type="checkbox"/> 21% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 1% Upland/Small-game hunting | <input type="checkbox"/> 3% Bicycling | |
| <input type="checkbox"/> 0% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 71% Auto tour route/Driving | <input type="checkbox"/> 10% 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"/> 41% Bird watching | <input type="checkbox"/> 0% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 12% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 0% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 48% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 2% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 36% 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?

- 12% No
- 88% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 77% Visit the gift shop or bookstore | <input type="checkbox"/> 66% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 90% View the exhibits | <input type="checkbox"/> 78% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 60% Ask information of staff/volunteers | <input type="checkbox"/> 10% 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	
33%	77%	64%	It was the primary purpose or sole destination of my trip.
30%	11%	17%	It was one of many equally important reasons or destinations for my trip.
37%	11%	19%	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 275 number of miles

Local 28 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?

41% No (*skip to question #9*)

59% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

82% Family and/or friends

10% Organized club or school group

5% Commercial tour group

3% Other (*please specify*) See Appendix B

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

 4 number 18 years and over

 2 number 17 years and under

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

45% Friends or relatives

7% Refuge website

35% Signs on highway

1% Other website (*please specify*) See Appendix B

6% Recreation club or organization

4% Television or radio

19% People in the local community

17% Newspaper or magazine

14% Refuge printed information (brochure, map)

8% 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.***)

44% Spring
(March-May)

65% Summer
(June-August)

64% Fall
(September-November)

19% Winter
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 4 number of visits

...other National Wildlife Refuges in the last 12 months? 1 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"/> 97% | Private vehicle without a trailer | <input type="checkbox"/> 0% | Refuge shuttle bus or tram | <input type="checkbox"/> 2% | Bicycle |
| <input type="checkbox"/> 0% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 0% | Motorcycle | <input type="checkbox"/> 21% | Walk/Hike |
| <input type="checkbox"/> 1% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 3% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 0% | 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"/> 58% | Signs on highways | <input type="checkbox"/> 6% | Directions from Refuge website |
| <input type="checkbox"/> 11% | A GPS navigation system | <input type="checkbox"/> 4% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 12% | A road atlas or highway map | <input type="checkbox"/> 9% | Directions from friends or family |
| <input type="checkbox"/> 8% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 49% | Previous knowledge/I have been to this Refuge before |
| | | <input type="checkbox"/> 4% | 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"/> 33%	<input type="checkbox"/> 11%	<input type="checkbox"/> 9%	<input type="checkbox"/> 31%	<input type="checkbox"/> 16%
...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"/> 6%	<input type="checkbox"/> 36%	<input type="checkbox"/> 11%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 21%	<input type="checkbox"/> 8%	<input type="checkbox"/> 8%	<input type="checkbox"/> 40%	<input type="checkbox"/> 23%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 34%	<input type="checkbox"/> 7%	<input type="checkbox"/> 12%	<input type="checkbox"/> 26%	<input type="checkbox"/> 21%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 22%	<input type="checkbox"/> 10%	<input type="checkbox"/> 11%	<input type="checkbox"/> 38%	<input type="checkbox"/> 21%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 19%	<input type="checkbox"/> 4%	<input type="checkbox"/> 12%	<input type="checkbox"/> 38%	<input type="checkbox"/> 26%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 0%	<input type="checkbox"/> 0%	<input type="checkbox"/> 18%	<input type="checkbox"/> 47%	<input type="checkbox"/> 35%

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

- 24% Yes 32% No 45% 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	
2%	15%	8%	50%	25%	Surface conditions of roads	3%	3%	3%	19%	73%	NA
5%	16%	9%	46%	23%	Surface conditions of parking areas	3%	1%	1%	11%	85%	NA
5%	7%	10%	37%	42%	Condition of bridges	3%	1%	9%	16%	71%	NA
3%	6%	8%	41%	43%	Condition of trails and boardwalks	2%	2%	7%	17%	71%	NA
4%	10%	6%	42%	39%	Number of places for parking	3%	1%	4%	9%	84%	NA
2%	9%	11%	44%	34%	Number of places to pull over along Refuge roads	4%	15%	11%	35%	35%	NA
4%	3%	7%	29%	56%	Safety of driving conditions on Refuge roads	2%	2%	7%	17%	72%	NA
4%	4%	9%	31%	54%	Safety of Refuge road entrances/exits	2%	1%	5%	18%	74%	NA
4%	3%	4%	33%	56%	Signs on highways directing you to the Refuge	2%	4%	5%	19%	71%	NA
4%	3%	5%	36%	52%	Signs directing you around the Refuge roads	2%	10%	7%	28%	52%	NA
4%	5%	11%	28%	53%	Signs directing you on trails	3%	5%	16%	30%	46%	NA
6%	7%	18%	21%	47%	Access for people with physical disabilities or who have difficulty walking	2%	3%	16%	25%	54%	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)?

69% Yes

31% No → How much time did you spend **in local communities** on this trip?

 2 number of hours OR 4 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	<u>Amount Spent in Local Communities & at this Refuge</u> <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
9%	19%	26%	17%	18%	2%	6%	0%	1%	2%	2%

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**.)*

6%	Far too low	6%	Too low	76%	About right	12%	Too high	0%	Far too high	92%	Did not pay a fee <i>(skip to Section 4)</i>
----	-------------	----	---------	-----	-------------	-----	----------	----	--------------	-----	---

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.

6%	Strongly disagree	0%	Disagree	6%	Neither agree or disagree	41%	Agree	47%	Strongly agree
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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.	1%	2%	5%	35%	57%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	1%	0%	4%	27%	67%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	1%	0%	5%	23%	70%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	0%	3%	24%	72%	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					Refuge Services, Facilities, and Activities	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
3%	2%	7%	44%	45%	Availability of employees or volunteers	1%	3%	4%	13%	79%	NA
3%	2%	4%	31%	60%	Courteous and welcoming employees or volunteers	2%	0%	3%	9%	87%	NA
3%	0%	2%	25%	70%	Knowledgeable employees or volunteers	1%	1%	4%	13%	81%	NA
3%	1%	5%	35%	57%	Printed information about this Refuge and its resources (for example, maps and brochures)	2%	2%	4%	20%	72%	NA
3%	2%	8%	36%	52%	Informational kiosks/displays about this Refuge and its resources	2%	2%	6%	20%	70%	NA
2%	4%	10%	47%	37%	Signs with rules/regulations for this Refuge	2%	2%	13%	19%	64%	NA
3%	1%	5%	34%	58%	Exhibits about this Refuge and its resources	2%	1%	3%	19%	75%	NA
3%	2%	10%	36%	49%	Environmental education programs or activities	2%	1%	10%	21%	66%	NA
2%	1%	3%	27%	68%	Visitor Center	2%	0%	2%	6%	90%	NA
2%	1%	4%	28%	66%	Convenient hours and days of operation	1%	2%	3%	18%	77%	NA
2%	1%	7%	25%	66%	Well-maintained restrooms	2%	0%	2%	6%	90%	NA
2%	2%	12%	42%	42%	Wildlife observation structures (decks, blinds)	2%	6%	15%	24%	53%	NA
2%	8%	17%	42%	31%	Bird-watching opportunities	1%	2%	18%	28%	52%	NA
2%	0%	2%	29%	67%	Opportunities to observe wildlife other than birds	3%	6%	5%	24%	63%	NA
2%	5%	8%	34%	52%	Opportunities to photograph wildlife and scenery	2%	6%	8%	21%	63%	NA
48%	8%	25%	10%	9%	Hunting opportunities	4%	1%	53%	13%	29%	NA
40%	8%	27%	17%	8%	Fishing opportunities	5%	5%	60%	10%	21%	NA
5%	2%	8%	38%	47%	Trail hiking opportunities	2%	2%	13%	31%	52%	NA
23%	10%	38%	19%	11%	Water trail opportunities for canoeing or kayaking	5%	5%	70%	5%	15%	NA
16%	6%	30%	34%	14%	Bicycling opportunities	2%	5%	48%	21%	23%	NA
11%	7%	35%	24%	23%	Volunteer opportunities	0%	1%	42%	19%	38%	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?

83% Yes

17% No

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

90% Yes

10% No

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

90% Yes

10% 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.	7%	5%	13%	40%	36%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	7%	5%	11%	39%	38%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	13%	24%	20%	29%	14%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	2%	13%	34%	41%	10%
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.	4%	9%	22%	51%	14%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	4%	10%	33%	38%	15%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	27%	32%	21%	15%	5%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	5%	2%	14%	35%	43%
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.	8%	9%	36%	34%	12%

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?

100% Yes 0% 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? 1956 (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)			
					1%			17%				53%				29%			

5. What ethnicity do you consider yourself? 2% Hispanic or Latino 98% Not Hispanic or Latino

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

- 2% American Indian or Alaska Native 1% Black or African American 99% White
 0% Asian 0% 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"/> 3% Less than \$10,000 | <input type="checkbox"/> 18% \$35,000 - \$49,999 | <input type="checkbox"/> 15% \$100,000 - \$149,999 |
| <input type="checkbox"/> 8% \$10,000 - \$24,999 | <input type="checkbox"/> 25% \$50,000 - \$74,999 | <input type="checkbox"/> 3% \$150,000 - \$199,999 |
| <input type="checkbox"/> 7% \$25,000 - \$34,999 | <input type="checkbox"/> 19% \$75,000 - \$99,999 | <input type="checkbox"/> 3% \$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.)?

10 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 Neal Smith National Wildlife 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
Bison Round Up	1
Buffalo Days	6
Club meeting	1
Conservation project for cub scouts-collected seeds	1
Ding Darling Days	1
Earth Day Cleanup	1
International Migratory Bird Day, Christmas Bird Count	1
Iowa Ornithological Union	1
Kid's Program/Buffalo Round Up	1
Nature Tots program	1
Neal Smith Volunteer Work Day - invasive species	1
Once a month work day	1
Prairie Rescue Day	1
Research open house	1
Spinning yarn for Buffalo Day	1
Total	20

Other Activity	Frequency
Adopt a trail	1
Chair Member of Friends of the Prairie	1
Class field trip	1
Collection of specimens with park biologist	1
College field ecology course	1
District scout meeting	1
Education about the prairies	1
I perform research on the impact of bison on the restored prairie plants and insects.	1
Participation in prairie restoration	1
Research	1
Scouting	1
Senior Pass	1
Show grandchildren the prairie	1
Sightseeing	1
Toured the Visitor Center	1
Volunteer work days	1
Volunteering	6
Wedding	1
Work for Friends Group	1
Working as a contractor doing weed surveys	1
Total	25

2 nd Other Activity	Frequency
Collected seeds	1
Fall conservation	1
Research	1
Volunteering	1
Volunteering in the greenhouse	1
Total	5

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
Brought family	1
Collecting of seeds	1
Conservation project for cub scouts	1
Conservation/service	1
Demo Spinning	1
First visit - to learn what was available	1
Friends Group	1
Grandchildren	1
Just a re-visit to the refuge	1
My research activities	1
Nature Tots	1
Prairie restoration viewing	1
Removal of small trees	1

Research	1
Scouting site for IWLA Youth Convention	1
Seed cleaning	2
Senior pass	1
Sightseeing	1
Spinning yarn	1
Took grandchild	1
Visit	1
Working	1
Total	23

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

Other Visitor Center Activity	Frequency
Ate lunch	2
Attend meeting	1
Bird list	1
Brought our lunch and ate in the lunch room; hiked.	1
Brought our lunch to eat there.	1
Ecology Class	1
Observed buffalo	1
Passport stamp	2
Planting the adopt a trail	1
Provided lunch	1
Talked to other visitors	1

Teach	1
Viewed the buffalo	1
Visited bird blinds	1
Volunteering	1
Walked a trail	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
Educational class	1
I was with research colleagues	1
Izaak Walton League	1
Spinning/weaving guild members	1
Total	4

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

Other Website	Frequency
AEA	1
Google	1
Internet	1
Total	3

Other Ways Heard about This Refuge	Frequency
Book (Hiking Iowa)	1
Book (Nature and Birding Sites)	1
Book from St. Louis Botanical Gardens	1
College biology course field trip	1
Coworker	1
DeLorme's Map	1
Highway Map	1
Hurstville Interpretive Center (Maquoketa, Iowa)	1
Iowa Trails Guide	1
Red Rock/Central College	1
Refuge personnel	1
Staff trip	1
Stories	1
Teachers/School Field Trip	1
Travel Brochures	1
Wildlife Refuge Book	1
Work	1
Total	17

Survey Section 2

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

Other Forms of Transportation	Frequency
School bus	4
Stroller	1
Total	5

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

Other Ways Found This Refuge	Frequency
Book	1
Coordinator of the Volunteer Day.	1
Directions from the map/signs once inside the refuge.	1
Followed/rode bus	1
Map in Neal Smith NWR brochure	2
Map obtained at the refuge	1
Total	7

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
Airboat	1
ATV	2
Canoeing	1
Commercial buses	1

Golf carts	1
Guided tour/hike	1
Horseback	5
Horseback/train	1
Large van	1
Maybe a motorized cart for people that can't walk the trail	1
Maybe horseback riding, or segways	1
Monorail	1
Personal vehicle	4
Tour bus	1
Total	22

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 = 32)

A few more pull-offs along the main road would be nice. Due to increasing rainfall, parking lots need to be rock to keep cars from getting stuck in the mud.

Asphalt trails were a little rough from the flooding this year, but were still very useable.

Available bicycles would be nice.

Could bicycle access on the 2 mile trail be allowed during specific hours? Better signage for availability of battery-operated wheelchair.

Good trail markings.

I have no trouble walking, so I did not really notice or was aware of possible problems for the handicapped.

I like being able to travel on the road through the live area, but have a difficult time getting to see the animals, especially if they're in another closed off area. One day, we could only see them from a distance while on the entrance road.

I like to see the buffalo/elk from time to time, but I do not stop in the middle of the road heading uphill, which I see others do often.

I thought, overall, that conditions were very good.

I would recommend bike lanes once in the park leading up to the refuge. Also, a bike rack would be helpful.

In times of tight budgets, I feel that habitat restoration and management; and visitor services activities should be funding priorities. However, I think that this refuge and its visitors could benefit from having a bike lane/trail adjacent to the entry road for bikers and pedestrians.

It was difficult to find our way back to the main highway.

It was raining during our visit and they had a school bus take tours. This was a welcoming touch and allowed visitors the option to driving on gravel roads to view buffalo.

It would be nice if you had a couple more spots to pull over. Also, better trail markers at the top of the trail. It was not very clear whether to turn before or after the signs.

It would be VERY nice to have more refuge roads around the animal enclosure to be able to see the buffalo and elk when they are not along the road.

Neal Smith NWR is small enough that I think it would not be feasible to offer a continuous shuttle service. I was in Yellowstone National Park over 20 years ago, and I remember that the places a person would like to visit could use a shuttle service, but not necessary at Neal Smith NWR. However, if there were a special event, such as night time hiking on the prairie, etc., then it would be nice to have transportation for that since some of the event would likely be in a place that can't accommodate several cars.

Need more parking or pullover places on refuge roads.

Nowhere to pull off when meeting another car and you have cars behind you, when viewing the buffalo, etc.

Not all areas should be easy access for everyone.

Our GPS did not navigate us well to the Visitor Center.

Our GPS sent us down a nearby dirt road. We did not like that.

People stop on the road to look at wildlife and it's not easy to take farm equipment through this area.

Placing a marker to correspond with the recorded narration would be helpful.

Some comments are related to flood damage to roadway near the bridge.

There is a need for better roads. If you go after a rain or snow, it is very sloppy and wet. Also, there is a need for a car to pull over along the side of the road; as it is now; you have to stay in the roadway.

There was one road going through the middle of the refuge, which would be fine if the wildlife was visible from that road. However, they weren't. It would be better if the road would wind its way through the refuge and not go straight though.

Tram tours with knowledgeable guides would be a plus.

Very easy driving and signs were very clear.

We have never walked the sidewalk just outside the Visitor Center; it is too hard for us at 80 years old.

We thought the roads and parking areas at Neal Smith were very well kept.

We were just in our car, but all my grandchildren love driving the tour and going inside the building to watch the video and see the bison and elk. The kids range from 3-11 years old.

We wish there was a route to see the elk and also an additional route through the buffalo area for better viewing of the animals.

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 = 61)

Excellent facility. Everything was clean and in working order. Activities need more advertising on TV and community calendars in Des Moines.

Excellent Visitor Center and facilities. Seems to lack organized tours on regular basis with knowledgeable guide.

Excellent!

Expand bison area and introduce prairie chickens.

Folks were very helpful and provided a lot of good information.

For the short time we were there, it was very interesting and enjoyable. Keep up the good work.

Good books to purchase. Like cleanliness of restrooms!

Great faculty and opportunities at Neal Smith.

Great job!

Great place and great people working there.

Great Visitor Center. It was difficult to locate buffalo, which was the point of our trip.

Had no idea how extensive the exhibits were there. Will have to come again when we have more time. Wonderful facility.

I am sorry to see that the building is showing its age. I saw the plants being watered and the water was all over the floor and no drain! The water was running under the wall and I could see it wicking up into the wall. The window trim was rotted out in this area and I find that so sad. This is a wonderful place to take our children from surrounding areas and if the building is not maintained, it will soon be a shambles. While I understand the lack of funds, it took a lot of money to get this wonderful place built and will take money to keep it up. I am very thankful we have the refuge to visit and we try getting out 1 or 2 times a month. The activities the staff put on are always fun and educational and we enjoy attending.

I believe hunting should be developed as a main attraction for the refuge, second to the prairie restoration. I believe the extermination of 'non-toxic' ammunition is unnecessary and had limited opportunity for everyone to hunt. I also believe banning the use of lead based ammo is an overreaction and should be reintroduced, since it has no real threat to the wildlife and surrounding environment.

I have been to the Neal Smith National Wildlife Refuge many times for tours with family and for meetings; everything is first class. The prairie will

have more importance as years go by. Wilderness needs more money for employees to take care of these gems of America.

I truly enjoy visiting this center and the restrooms are always clean. It truly makes it a nice place to visit and take children. Our grade schools (Oskaloosa Schools) have taken trips there and both my children enjoyed walking the trails, etc. The wild plants, animals, etc. are a very positive experience for children and adults. I have even enjoyed just stopping or driving thru on my way home from DM. It is relaxing.

I understand that volunteers run the gift shop, yet no hours were posted of how long that volunteers would be there and no announcements were made that it would be closing. The gift shop was to be the end of our trip. We only got a glance and when we were ready to shop, but it was closed and a main staff member had no clue what was going on with the gift shop.

I very much enjoyed the inside exhibits and wish we had started there earlier. They closed up early.

I was very impressed with all the work and exhibits offered.

I wish the refuge was open earlier in the day - especially in the summer to avoid the heat of the day. I don't know if bicycling is an option at this refuge and would be interested to learn. I am also unaware how the volunteer process works at this refuge.

I would like to have more opportunities to see the animals at a closer distance.

I would love to say that the world needs more people such as you all. My heart and respect goes out to any and all who preserve nature and the restoration of it.

I'm unsure if they have hunting, fishing, and biking opportunities at Neal Smith NWR. I was very impressed with their volunteer activities.

It should be much bigger. Buy more land! Otherwise, it's excellent.

Longer hours at the Visitor Center would be nice. As we were leaving the Visitor Center when they closed, we saw someone trying to go in.

More benches on the trail would be nice for people with disabilities.

More established trails are needed.

More interactive exhibits for younger children would be nice.

My children are ages 3-10 and love coming here, but the last time we went, many of the exhibits were broken or not working. Carpet needs to be replaced near exhibits. Would like more take-home educational materials to extend my children's learning of the refuge, plants, animals, etc.

Neal Smith National Wildlife Refuge contains a number of parcels of land. It would be great to know more about the prairie restoration history and efforts on various parcels. For instance, one parcel might have a prairie grass restored for 10 years, another for only 3. Would like to know more specific restoration efforts on different parts of the refuge.

Neil Smith is an excellent resource for recreation as well as learning about our ecosystem and American heritage. I would welcome an increase in opportunity to learn about the prairie and I would be willing to pay for the same.

Nice refuge. I will visit again when I have more time.

Nice Visitor Center. Would like to see exhibits change sometimes and be geared for adult visitors as well as children.

Restroom available when Visitor Center is closed. Primitive camping available next to or on the edge of the refuge. Better maps designating refuge lands, terrain, unique ecosystems, etc.

Staff and volunteers are great resources at this refuge. Let's keep them!

Staff is stretched too thin to provide the services that I think are important. In some cases, staff has not respected the volunteer effort by destroying or allowing the destruction of transplants.

Taking more land than necessary.

Thank you for being so nice to my grandchildren and answering their questions to the best of your knowledge. Wish we could have seen more buffalo though.

The best video and education displays that I have encountered anywhere.

The educational exhibits, displays, and kiosks were very nice. It was a great experience. Video was good, too.

The people working were great - very friendly and knowledgeable. A couple of the displays were broken, so that was disappointing for the kids, but they still had a great time with everything else.

The Visitor Center is a great learning experience. I just love it!

There is a need for maps which show the area and outline hunting. Maybe an aerial view map to show hunting and refuge. Also, an addition of ponds for fishing would be nice, and an addition of caribou, if possible.

This refuge did not have much wildlife to view. It may have been the wrong time of year. We were making a quick drive through, but did not see any signage or kiosk maps.

This refuge makes me proud to live in Iowa. Volunteers and staff are extremely friendly and knowledgeable. They do an excellent job. The place always looks amazing! My only complaint is noisy children who scare away the birds and sometimes ruin the peaceful atmosphere on the trails.

Very courteous and helpful staff.

Very impressive refuge and displays in the Visitor Center. A little complicated to find the refuge though.

Visitor Center and Park Ranger did an excellent job.

Visitor Center is really great. Nice variety of exhibits and information.

Volunteers greeting visitors at the Prairie Learning Center are friendly and welcoming; if they don't know the answer to a question, they usually do their best to find out from a book, brochure, or staff member. I appreciate the variety of activities available to volunteers, and that the refuge does a good job of announcing volunteer opportunities.

We arrived later in the day. The host, a young man, was very knowledgeable and accommodating; a credit to his business.

We come and walk the trails. It is always very enjoyable. We love it when the buffalo are close to the road.

We did a driving tour. It was well maintained and interesting.

We love the hiking trail and realize they want it kept in a wild-like state, but the trail becomes almost unwalkable late summer, because the vegetation growth overcrowds the walkway.

We love the Neal Smith National Wildlife Refuge. Great Visitor Center and it's nice that it is open on the weekends. Wish it stayed open a bit longer though.

We were very pleased; very friendly staff and knowledgeable.

Wonderful facility; will come back again and again.

Would be nice to have interpreters available on weekends.

Would like to see an expansion of the bison and elk herds and the area they access.

Would like to see more displays in the Visitor Center.

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 = 156)

A chance to see nature in its natural, unblemished state.

A free opportunity to learn about wildlife and conservation issues, in addition to Iowa's wildlife history.

A free way to expose the family to the wildlife that lives right in their own backyard. Volunteers are knowledgeable and answer questions.

A wide variety of wildlife, plants and their habitats.

Ability to see once native animals in a natural setting!

Able to observe wildlife and plants.

Accessibility to the interstate. Prairie habitats.

An interesting place to visit throughout the year and watch the seasonal changes.

Animals and care of land. Protection of wildlife, restoration of native grasses and flowers, conservation message.

Animals that are otherwise unable to be seen.

Area to view plants and wildlife native to North America. Areas to allow native plants and animals more opportunities for survival.

Bison, elk and a very good opportunity to bird watch.

Bison, elk and prairie restoration is pretty neat.

Buffalo and elk.

Buffalo information and viewing. Information on prairie growth gaining interest.

Buffalo, prairie grass, and all the natural scenery.

Buffalo.

Dedication, knowledge, the "natural" feeling of the area, and the ability for us to do all of it at our own pace. Stop, read, reflect, enjoy!

Drive through wildlife area.

Education and sharing to understand the uniqueness of it.

Education for children.

Educational opportunities that public lands often do not offer.

Excellent wildlife viewing potential in a quiet semi-isolated environment.

For Iowa in particular, this refuge was very unique. Keep it up!

For people to see wildlife up close and know for sure it's real.

Great educational experience.

Great opportunity to learn about our natural environment.

Having bison and elk to view outside your car window and not having to travel hundreds of miles.

I always enjoy going to Neal Smith NWR. I don't always go to the Center, but do take the drive to see elk and buffalo. I hope acquiring the Savannah Oak area will actually happen.

I believe it is unique since it offers one of the few experiences of what a real, natural prairie is.

I believe you can hunt on parts of refuges while you cannot on national monuments and parks. I believe public hunting access is very limited in Iowa and the public needs more room to hunt and fish or these pursuits will die out.

I can go to all kinds of places that man has created, but the refuge is the one type that should reflect the way nature should be.

I enjoy the refuge's focus on wildlife and habitat. Sometimes I think more attention should be paid to aesthetics when designing the visitor experience. At Neal Smith, a great effort was made to design an interesting and unique prairie learning center, but the ugly maintenance building was built nearby on the skyline. So everyone driving through bison and elk herd sections looks out over a prairie vista including the Prairie Learning Center, which is well integrated into the landscape, but the ugly sheds are right there in full view. What were they thinking when the maintenance buildings were sited? This would not have happened with the National Park Service, or perhaps the US Forest Service.

I like the opportunity to talk with knowledgeable staff about the animals and plant life around the refuge.

I think it is very beautiful and so relaxing to go on the auto tour. There is nothing like it in the area.

I was totally unaware of the refuge's existence - imagine that. I am very impressed with them and believe in their primary mission, which is well worth the tax dollars.

I'm glad that I pay taxes to support our National Wildlife Refuge System, and I wish that congress would allocate more funds to our refuges. Our

refuges are open to all people - what could be more democratic than that? Due to peoples' choices to engage with more modern computer technology, they are removed from nature; so, having refuges with educational programs is very important. I take my college students to Neal Smith NWR as well as perform research there. I wish that more U.S. residents cared more for the wonderful resources we have at these national refuges.

Impressions of nature before man changed it in any way. I agree with selective areas for hunting. We need more wild places.

In general, they tend to be not as crowded as other federal recreation areas.

In many areas of our hemisphere, the land is changing and being changed. To find a place protected and restored is refreshing, inspiring and renewing to the body and soul. Much can be learned about life itself by getting reacquainted with the rhythm of the land and the life forms that make their homes there. God created these great "gardens" for our enjoyment and serenity. I am grateful to the committed men and women of the US Fish and Wildlife Service.

It is a controlled area to view birds and wildlife.

It is a great way for people to get out and enjoy the outdoors.

It is a place where animals and the ecosystems come first. It is restoring an ecosystem that is threatened in Iowa and surrounding states, not just for nostalgia, but because they are necessary for our survival both physically and spiritually. Reintroducing threatened and endangered species of wildlife: refuges should be large enough to support all the varieties of mammals that once roamed our prairies (Neal Smith has a way to go yet). They should also act as a seed bank of living plants, growing all that once grew on this particular type of prairie.

It is really nice to be able to get close to wildlife and see how big they are. They are beautiful animals.

It was nice to see wildlife moving about freely.

It's raw.

Larger scale of restoration and preservation.

Larger tracts of land that usually contain wildlife not found as often in other parks.

Learning is highly valued.

Learning opportunities and wildlife watching opportunities are close to home; free admission.

Lower intensity of usage, less commercial feeling.

Maintenance and available information.

Many chances to view wildlife (both flora and fauna).

More emphasis on education and historical information, and why these refuges make a difference in everyone's life.

Most, but not all, refuges are visitor-friendly. Some provide habitat for non-game species as the reason for the refuge existence. In any event, the opportunity for birding is terrific.

My experience is that refuges provide access to and learning experiences in environments that are less impacted by people than other areas I have visited.

Natural habitat. It's quiet, peaceful and offers an educational aspect that other places do not have.

Nature habitats are important to preserve.

Neal Smith is one of the largest restored prairies. They have a herd of elk and buffalo, although I've never seen the elk and it's just luck if you see a buffalo. This is also good, as they have lots of land to roam.

Neal Smith is the only National Wildlife Refuge that I have been to that is prairie. Every National Wildlife Refuge I have been to **has** had its own unique characters. They are all to be treasured.

Neal Smith NWR is a glimpse into the past when Iowa was covered by prairie and a chance to see bison in the wild. The Visitor Center is first rate. The volunteer at the desk is friendly and knowledgeable.

Neal Smith NWR is a restored park to represent the original wildflowers, native grasses, and wildlife that once were here.

Neal Smith NWR is local, and the chance to see the bison was just great!!!

Neal Smith NWR is nice, because it is a wide open unoccupied prairie land. It's unique in the fact that it has a buffalo and elk herd - that is really exciting for the kids to see.

Neal Smith NWR is the only prairie park that I know of. One in the "Flint Hills" of Kansas is somewhat similar, but this park was very user friendly. My only regret is that I live too far away to volunteer or visit often.

Neal Smith NWR shows plants and wildlife that is natural to the prairie.

Nothing else like it in the area. Very educational.

Observation of wildlife and plants in their natural habitat.

Open area for buffalo and elk.

Opportunities to observe and learn about wildlife in their own unique habitat.

Photography opportunities. Every season offers much for the camera.

Prairie restoration and the buffalo population are quite unique.

Preservation of a native prairie experience close to an urban area.

Preservation of habitat for wildlife while permitting human observation of plants and animals.

Protecting and preserving the environment.

Quality of displays, movies, etc.

Refuges are not crowded, making it very accessible to connect with nature. A great way to see science in action and learn about the whole ecosystem.

Refuges are unique because they are managed for wildlife and plant life. Islands of refuge in a world of decreasing habitat.

Refuges are unique because you get to view and experience the animal in its natural habitat rather than a man-made one, so to speak.

Refuges are unique in that their main purpose is the restoring and preservation of natural environments and making these areas accessible to visitors. Of lesser importance is the recreational aspect of these natural areas.

Refuges help educate people about what used to be and what can be again. They help preserve a way of life while teaching others how to preserve it as well.

Refuges make me aware that I am a part of the American experience and not just an observer. Nowhere else do I feel such a deep sense of connection with the land, the plants, and the wildlife. Visiting a refuge is truly a spiritual experience.

Refuges provide unique recreation experiences, because they are primarily managed for wildlife, unlike a state park, for example, which puts more effort toward managing for people (providing campsite amenities, mowing, etc.). If I go to a refuge, it's because I want to enjoy wildlife and wildlands, and I find it more rewarding to visit a place that puts wildlife first than people first.

Refuges take care of the land.

Refuges tend to have better opportunities to observe birds and other wildlife.

Restoration of native species is important and information I'd like my children to learn about. On our drive down the road, we were fortunate to encounter a large portion of the mother buffalo herd and the calves on and around the road - probably 70 animals. It was an unforgettable experience for my family.

Restoration research and implementation.

Restoring and maintaining wildlife refuges should be an important part of our country's goals. If we don't, future generations won't have it! Centers should be used by local schools for education and field work. This should be promoted in schools. In West Virginia, we have shared this with the DOW.

Retention of habitat for wildlife, education about wildlife at the refuge, and source of access to nature.

Seeing the buffalo and prairie grasses.

Seeing wildlife in natural settings.

Such a sizable attempt to recapture the original prairie. I hope they can round out the property over the years - this could become a real notable treasure.

The ability to see big game animals up-close. Also, to see wildlife in general up-close.

The ability to see unique habitats and animals along with nice Visitor Centers for free or a reasonable fee.

The bison roaming free. Interactive exhibits.

The buffalo and elk.

The chance to observe buffalo and elk in an area that best represents their natural surroundings.

The conscientious preservation and reconstruction of habitats and educational opportunities. I wish the advertising for refuges were greater so more local people and travelers would be made aware of the offerings. These are crucial for maintaining ecosystems that sustain the flora and fauna and soil and to educate on the importance of the same.

The different kinds of wildlife and habitat available to view in a refuge make it unique.

The educational aspect and how well educated the staff are.

The educational information for children.

The emphasis is on prairie habitat.

The exhibits inside explain how nature (animals and the environment) works.

The expanse of prairie that has been re-established. The buffalo; how wonderful to see them in their natural setting.

The facilities and activities are top of the line. I enjoyed being able to take my time and enjoy nature.

The fact that we have the opportunity to see both animal and plant wildlife in its natural habitat and to see a wide variety of prairie plant life.

The focus is on wildlife conservation, not recreation or tourism. The federal government is more willing to conserve than the state.

The focus on fish and wildlife increases the visitors' chances of viewing wildlife. Also, I really appreciated learning about the efforts to restore native prairie.

The hill, prairie grasses, and beautiful views unique to the Midwest. This is different than oceans and mountains, yet beautiful in **their** own way. When you are walking out in the refuge, you really can't see houses or highways and it feels like you are more immersed in the experience.

The information that one can get from staff and printed booklets is great. Planned activities are also a big plus for us.

The inside exhibits were awesome and the learning opportunities extraordinary.

The learning opportunities that exist. The proximity to urban life. The close-up wildlife. The excellent learning resources.

The long term effort to combine Neal Smith and Lake Red Rock and preserving a small segment of native Iowa make it unique.

The opportunity for kids to have hands-on experiences at the Visitor Center. Also, the opportunity to see the buffalo up-close.

The people and the level of care the place receives.

The prairie makes this refuge unique and seeing buffalo in their own environment.

The prairie restoration is very important and unique at this time.

The prairie restoration is very unique. We saw buffalo at quite a distance, but were unable to find any elk.

The preservation of what our country was hundreds of years ago.

The primary mission is for wildlife and habitat - other public lands are primarily for people.

The refuge is very accessible, preserving the land back to its unique state, providing young people the opportunity to become aware of nature, animals, and possible career opportunities.

The restoration and grandeur of the original habitat is essential to the survival of not only human kind, but of Mother Earth.

The restored prairie and the bison and elk.

The size, walking, hiking trails, education, and history.

The specific scope of focus makes refuges unique. I believe preservation and knowledge related to the prairie are very important.

The things within them may be lost if not kept in refuges.

The uniqueness comes from restoring natural habitats. The tall and short grass prairies are a thing of the past, except here at the refuge. I knew of the conservation and management issues, but I was not aware of the mission to restore the original natural environment and that is invaluable to me and my descendants. Five stars to the National Wildlife Refuges!

The Visitor Center was extraordinary! Very well done!

Their chief aim is to preserve life.

There are not too many places where you can still find this many acres of natural prairie left. Being from the Midwest, this is a treasure that we must keep to remember the history of the land we work and live on.

There is a bison herd, elk herd, native grasses, and plants at this refuge which make it unique.

There just isn't anything like it in Iowa that I am aware of.

They are a preserved land, or land under restoration, giving you a chance to see something you wouldn't normally be able to see just driving around.

They are setting aside portions of history along with creating space for numerous animal habitats.

They are trying to save a specific animal/species/type of land to have for generations to come.

They combine recreation with preservation. Ecosystem destruction jeopardizes human wellbeing and survival, as such professionals make clear.

They control access better than the National Forests we have visited while allowing less restrictive access than the National Parks.

They have opportunities that you may not find at the state or county level.

They help people understand what used to be and how our ancestors lived.

They keep the land how it used to look back before there were major highways and all this modern stuff.

They provide a unique experience to get away from your daily life and connect with nature.

They show natural things in danger of disappearing, like prairies. Our history must be a part of educating the young to help them in interpreting and predicting present and future life and making wise choices. Politicians should have to pass a comprehensive history test! So should all bureaucrats, not just those in preservation jobs.

This is an opportunity to preserve refuges and to maintain and preserve them as nature, prior to being damaged by humans. The Neal Smith National Wildlife Refuge is a very unique piece of land in our state of Iowa.

This one has no entrance fee; if a family could not afford it, we can give donations, but with no entrance fee, it makes it available to all. In these times, families need to be able to have free places where children can learn that are safe and educational.

To me, they provide the best experiences to see wildlife outside of National Parks, which, in my case, are far away. Refuges are closer. I appreciate that this refuge allows you to drive in and see animals like buffalo and elk up-close.

To see animals in their natural habitat.

Viewing wildlife in their natural habitat. Also, learning how to preserve that habitat.

Visit to the buffalo pasture.

Visitor Centers, activities, and great photography opportunities.

We enjoy bird watching and we like to get our Blue Goose Book stamped at as many refuges as possible.

We love the trails, and to see the buffalo in their natural habitat is wonderful. We have never been lucky enough to see the elk.

Well maintained. Interesting learning experiences. Butterflies in the milkweeds.

Wildlife in its natural habitat.

Wildlife!

Wonderful to see what prairie is like; the vastness and opportunity to see buffalo.

You can actually go in and really know that the wildlife is protected from harm. It gives you such a warm feeling when you leave.

Additional Comments (n = 49)

A great experience. Glad we made the trip. Loved the learning center.

A very enjoyable visit - we will plan to visit the Neal Smith National Wildlife Refuge again in the spring!

Again, Neal Smith National Wildlife Refuge is a great place and has great people working there.

Always enjoyable to drive through.

As a nature photographer, I organize nearly all trips to multiple National Wildlife Refuges and State and National Parks.

Enjoyed the trip and want to be able to take my 7 grandchildren to the refuge.

Excellent place to take out-of-state visitors.

Good luck with funding requests in this era of decreased funding!!!!

Great place. Love the buffalo and elk. Would like to see more access to the more remote parts of the refuge.

I have always had a great time at Neal Smith and the staff has always treated me well. Having the opportunity to do volunteer work really enhanced my experience there.

I have been a volunteer at the Neal Smith National Wildlife Refuge since 1992 with almost 5,000 volunteer hours as of September 2010.

I hope funding doesn't get cut for our National Wildlife Refuge System. Places like the Neal Smith National Wildlife Refuge are important and it would be a crime to see this excellent public offering go down the drain. Thank you for the opportunity to take this survey.

I really enjoyed my visit with my family. If the day had been a bit cooler, we would have stayed longer and walked more trails. We will definitely be returning later in the fall.

I was wondering if the wildlife refuge has ever introduced prairie chickens to this area, and if not, would that be possible?

I would like to see more elk and maybe jack rabbits someday again.

I would love to see more adult education on the following topics: the need for different ecosystems, effects of climate change, wildlife, birding, biodiversity, prairies as a means for flood and erosion control (just to name a few). I would love to see the refuge continue to grow and reintroduce all native wildlife of the area and all threatened and endangered flora of the prairie. I would also like to see the oak savannas reestablished. I would like to see a few primitive campsites (with no open fires - stoves only) on the edge of the refuge. I like the refuge and would like to see more in Iowa.

It is a great place. We are glad that we live close enough to visit it often.

It was a wonderful trip. Really enjoyed the outdoors. Only thing I would wish to see would be a posting of hours that the volunteers would be running the gift shop.

Keep up the good work and many blessings. (Signed)

Keep up the good work and take care of the facility so people can enjoy it for years to come.

My daughter and family have moved into Des Moines area within the past four years. She is a professor at Drake and I came to see the refuge with her. I plan to stay longer next time and bring my grandchildren out as well.

My recreational trips in the previous question were not related to research, and so many within that number were not on wildlife refuges. I enjoy my trips to Neal Smith National Wildlife Refuge, but due to limited time, I wish that I could stay longer on a given day to collect more data. However, the other aspects of the refuge are very good. Aside from being two hours (one way) from where I live, the refuge is easy to get to, well marked, well maintained, and I am excited for it to expand its prairie restoration. I understand that the current facility does not have all of its property into native vegetation yet, and I wish them success. Also, I hope that the bison continue to thrive.

My wife and I love this refuge, and we bring the grandchildren here and want it to continue.

National Wildlife Refuges are very important and I am very willing to pay extra taxes so they can continue. When we travel, we always take a refuge map so we can visit all that are possible. We have taken out of state trips with sole purpose of visiting refuges. We always urge friends to visit refuges.

Neal Smith is a real asset to the area.

Neal Smith National Wildlife Refuge is a gem. It is a great learning opportunity for all ages. I think it is under publicized and that lots of people don't know what it's about. But that means no lines or congestion when reading exhibits. Volunteers know lots of information and are very pleasant and sharing. Excellent staff.

Neal Smith needs money to better maintain the Environmental Center. I hate going there and seeing that none of the displays work. How are we supposed to teach kids when they can't even get excited about the displays?

One thing I was REALLY disappointed in was the lack of shade at the benches on the walking trails at the Visitor Center. My kids and I went on a hot, sunny day and we really needed shade to stop and rest, but didn't have any. There was no point in stopping because we were trying to get shade. My daughter wasn't doing good and really needed that shady rest. I had to carry her and that wasn't good for me. I think there are a lot of people who would agree with me that shade needs to be provided. We couldn't enjoy our walk; in fact, it was miserable. This would be my only complaint. Otherwise, I really like going to the refuge. This is the first time I've been in a year, but we used to go almost every weekend for months years ago. We'd go when it was raining, snowing, sunny, hot and cold. It's a fun place.

Our family enjoys out trips to the wildlife refuge. The walking trails are among our favorite and wildlife makes every trip worthwhile.

Preserving our land and wildlife is very important to me. I want my grandchildren to experience what I have shown my daughter. They already like to collect rocks and recycle at the age of 4 and 6. (Signed)

Refuges with a combination of wildlife, birds, and fish are the most interesting. This refuge is more about plants and native vegetation, so it did not hold my interest quite as much. However, it was well presented.

Thank you for having a refuge close to home so we can enjoy the wonders of wildlife, especially those darn buffalos. Wish they would quit hiding all the time. Thank you.

Thanks for the opportunity to participate. Please keep up the good work.

The majority of Americans are not tuned into nature. It is vitally important that our youth (K-8) have the opportunity for hands on education. We, in Iowa, live close to nature, but our materialistic society has a minimum time to spend with planet earth and its many wonders of nature. I have been fortunate to grow up and live on a farm. I have also spent many days hiking and visiting parks in all areas of the US. With the industrialization of agriculture, farm families prize their machinery and profits. You do not get very close to the sounds and beauty of nature in your big machines and in the Midwest without monocultures of corn and soybean rotation. This practice, in my mind, is not sustainable.

The Neal Smith National Wildlife Refuge is fantastic!

The staff was very friendly to our walking group. We had a beautiful day and experience. We will return again. Thank you!

This is a wonderful facility. What a worthy project to set aside a sizable area to recapture original Iowa prairie. It is not glamorous, but incredibly valuable. Keep up the good work. We will be back.

This is a wonderful refuge. It's somewhat frustrating to see their relatively small prairie restoration efforts considering the large size of Iowa. It appears that the loss of prairie and the tile drains on the farmlands have contributed greatly to Iowa's problems of flooding in recent years (there are little wetlands and therefore, little sponge effect). I hope the education efforts at Neal Smith are helpful, but the challenges of reintroducing more prairies must be overwhelmed by big agriculture and big ethanol. I encourage efforts to protect the land and wildlife by policies to set-aside land for other prairie restorations. Thanks for this survey!

This was a very nice facility. Enjoyed the bookstore as well, as it had a great selection.

Very good experience and it is an asset to Iowa.

We could not stop very long at this refuge. We saw a brochure at a rest area. It looked interesting, so we stopped. It looked like a valuable learning opportunity.

We enjoyed having a place to drive that was peaceful and seeing nature at its best.

We have several "wildlife" areas in our vicinity that we visit periodically, including the Mason Valley Wildlife Management Area and the Stillwater National Wildlife Refuge. Our grandchildren saw their first bald eagle in the wild at Mason Valley. Sometimes, we see many "critters," sometimes not many; however, we always enjoy the search.

We love the Neal Smith National Wildlife Refuge - we have told a lot of people about it and we visit frequently. It's always enjoyable.

We loved our experience and will visit again with our nephews this time!

We really wanted to see the bison, but the road didn't allow us to get anywhere that the bison would be comfortable. I think adding a few turn offs just to try to get closer would be helpful in bringing more people in.

When did it change from being a prairie reserve to a wildlife refuge? I'm more interested in a prairie reserve and the natural refuge that would occur because the wildlife would have a habitat. Climate change is and has been happening since the beginning of time. We cannot stop it and can only change it by watching and eliminating wasteful attitudes.

While I enjoy visiting National Wildlife Refuges, I think in some cases that the USFWS is a little overly concerned with the visitor experience. The top priority should remain the mission: establishing and maintaining a refuge for wildlife. If this means that visitor opportunities must be limited to the benefit of wildlife, then that should be done. I have visited around 40-50 refuges in the last several decades and my experiences have been overwhelmingly positive.

Would like to see more opportunities to hunt on the refuges. Example: Duck hunting on Reelfoot or Wheeler National Wildlife Refuges.