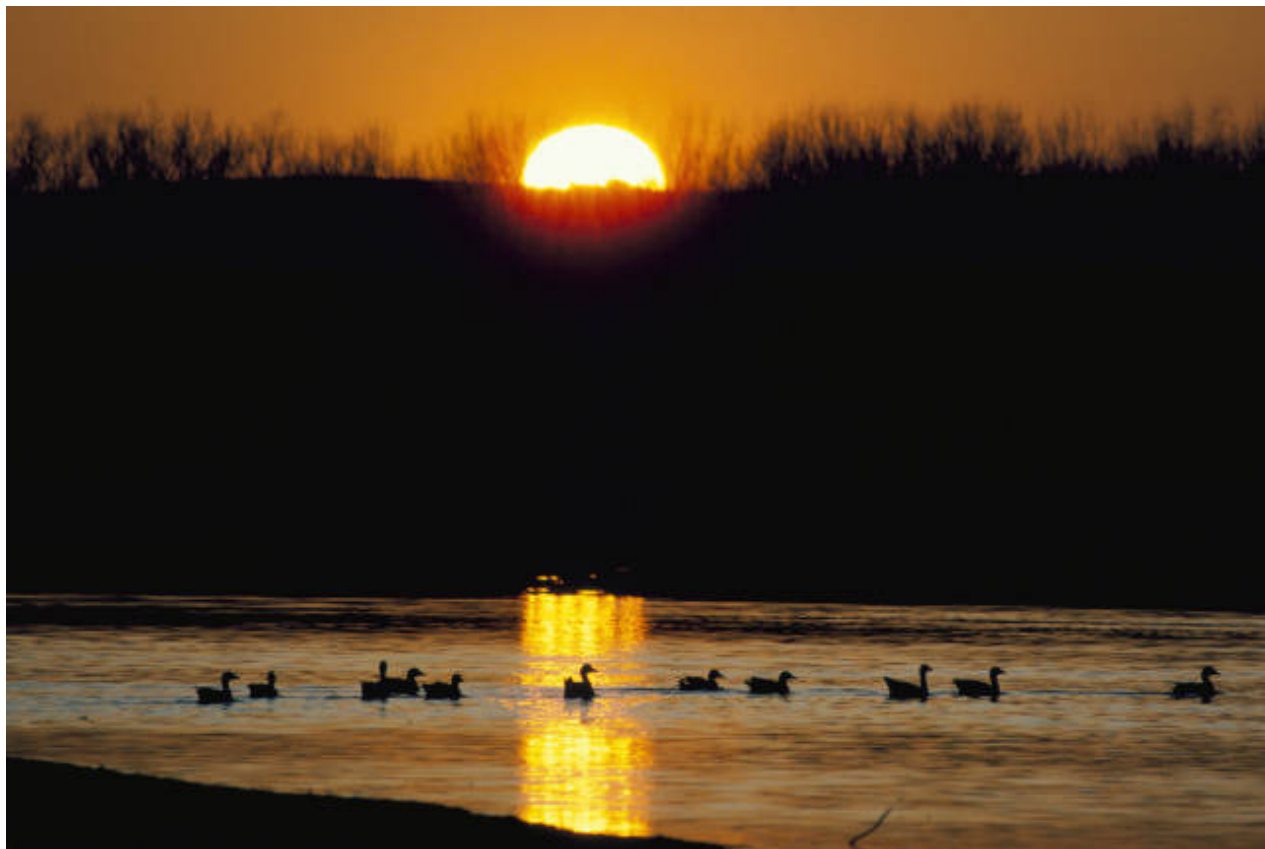




National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for DeSoto National Wildlife Refuge

By Natalie R. Sexton, Alia M. Dietsch, Andrew W. Don Carlos, Lynne Koontz, Adam N. Solomon and Holly M. Miller

Being on the Missouri flyway and the opportunity to see migratory birds in an enhanced setting is an opportunity not to be missed. The Bertram exhibit is an excellent glimpse into a way of transport long gone.—Survey comment from visitor to DeSoto National Wildlife Refuge.



DeSoto National Wildlife Refuge. Photo credit: Dave Menke/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 DeSoto 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):** A copy of 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 DeSoto 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 DeSoto National Wildlife Refuge

DeSoto National Wildlife Refuge straddles the Iowa/Nebraska border about 25 miles north of Omaha, Nebraska (Figure 1). This roughly 8,000-acre migratory bird stopover was established in 1958 for “use as an inviolate sanctuary...for migratory birds.” In September and October, as well as March through May, one can see warblers, gulls, shorebirds, snow geese, and more. In the summer months, mammals such as white-tailed deer, rabbits, raccoons, coyotes, opossums, and fox squirrels are abundant.

Nearly 200,000 visitors come to DeSoto NWR annually (based on 2008 RAPP data; U.S. Fish and Wildlife Service, 2011, written comm.) to observe migratory birds along the Midwest flyway and to participate in other refuge activities. Wildlife observation and hunting are the two most popular activities on the Refuge. In addition, visitors can enjoy hiking, bicycling, fishing, driving on the auto tour route, and mushroom gathering. Mushroom-picking season generally occurs from mid-April until the end of May. Visitors can experience history at the refuge’s Visitor Center which houses artifacts from the Steamboat Bertrand. The Bertrand sank in 1865, and was discovered in 1968. Artifacts and display booths can be observed by the public at the Visitor Center. For more information, go to <http://www.fws.gov/midwest/desoto/>.

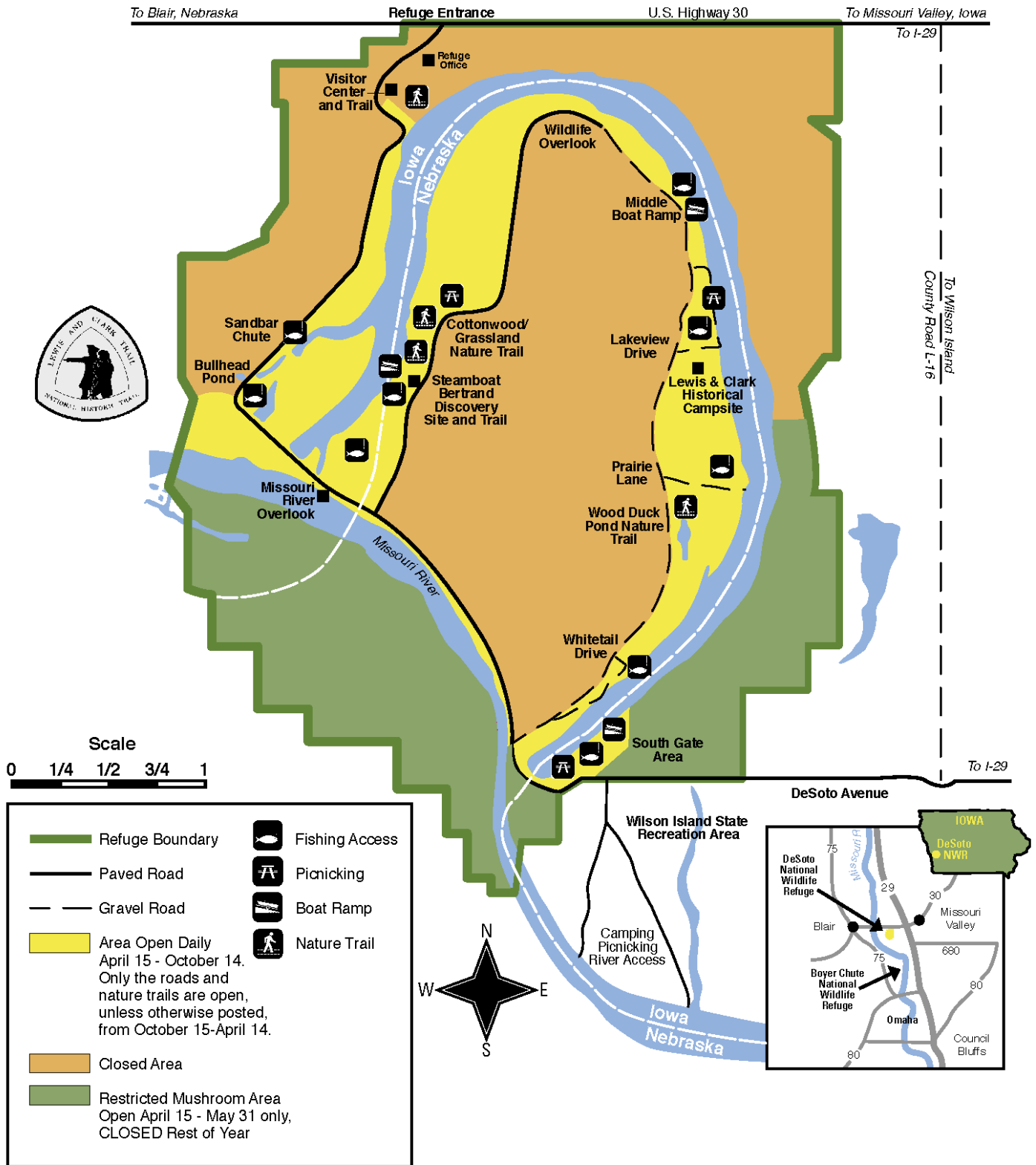


Figure 1. Map of DeSoto NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at DeSoto National Wildlife Refuge

A total of 203 visitors agreed to participate in the survey during the two sampling periods at the identified locations at DeSoto NWR (table 2). In all, 140 visitors completed the survey for a 70% response rate and $\pm 6\%$ margin of error at the 95% confidence level.¹ Because of severe flooding that occurred in the area in spring 2011, Sampling Period 2 could not be fully completed.

Table 2. Sampling and response rate summary for DeSoto NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	10/16/10 to 10/30/10	Visitor Center/Bertrand Museum Collection and Parking Bob Starr Wildlife Overlook Nebraska North Hunter Check Station #2	160	3	113	72%
2	05/28/11 to 06/11/11	Visitor Center and Parking Area Steamboat Bertrand Discovery Site Middle Boat Ramp South Gate Area	43	0	27	63%
Tota			203	3	140	70%

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 DeSoto 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 (88%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (89%). Positive responses to these questions concerning the management and mission of the Refuge

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).

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 (85%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. More than half of visitors to DeSoto NWR had been to at least one other National Wildlife Refuge in the past year (55%), with an average of 4 visits to other refuges during the past 12 months.

Visiting This Refuge

Half of visitors (50%) had only been to DeSoto NWR once in the past 12 months, while the other half had been multiple times (50%). These repeat visitors went to the refuge an average of 12 times during that same 12-month period. Visitors used the refuge during only one season (60%), during multiple seasons (25%), and year-round (15%).

Most visitors first learned about the refuge from friends/relatives (62%), signs on the highway (26%), 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 (55%), previous knowledge (50%), or a road atlas/highway map (17%; fig. 3).

Most visitors (63%) lived in the local area (within 50 miles of the refuge), whereas 37% were nonlocal visitors. For most local visitors, DeSoto NWR was the primary purpose or sole destination of trip (90%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of trip (50%). Local visitors reported that they traveled an average of 26 miles to get to the refuge, while nonlocal visitors traveled an average of 161 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 53% of visitors travelling to DeSoto NWR were from Nebraska and 31% were from Iowa.

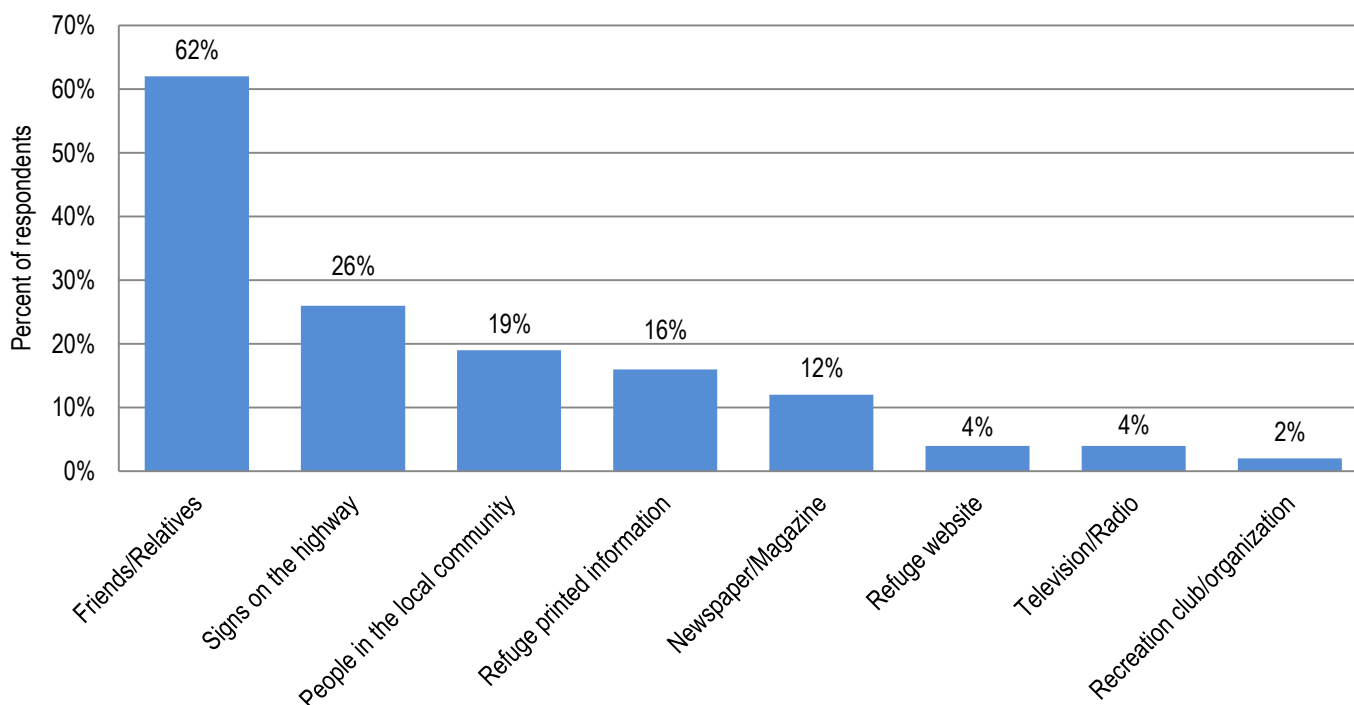


Figure 2. How visitors first learned or heard about DeSoto NWR (n = 128).

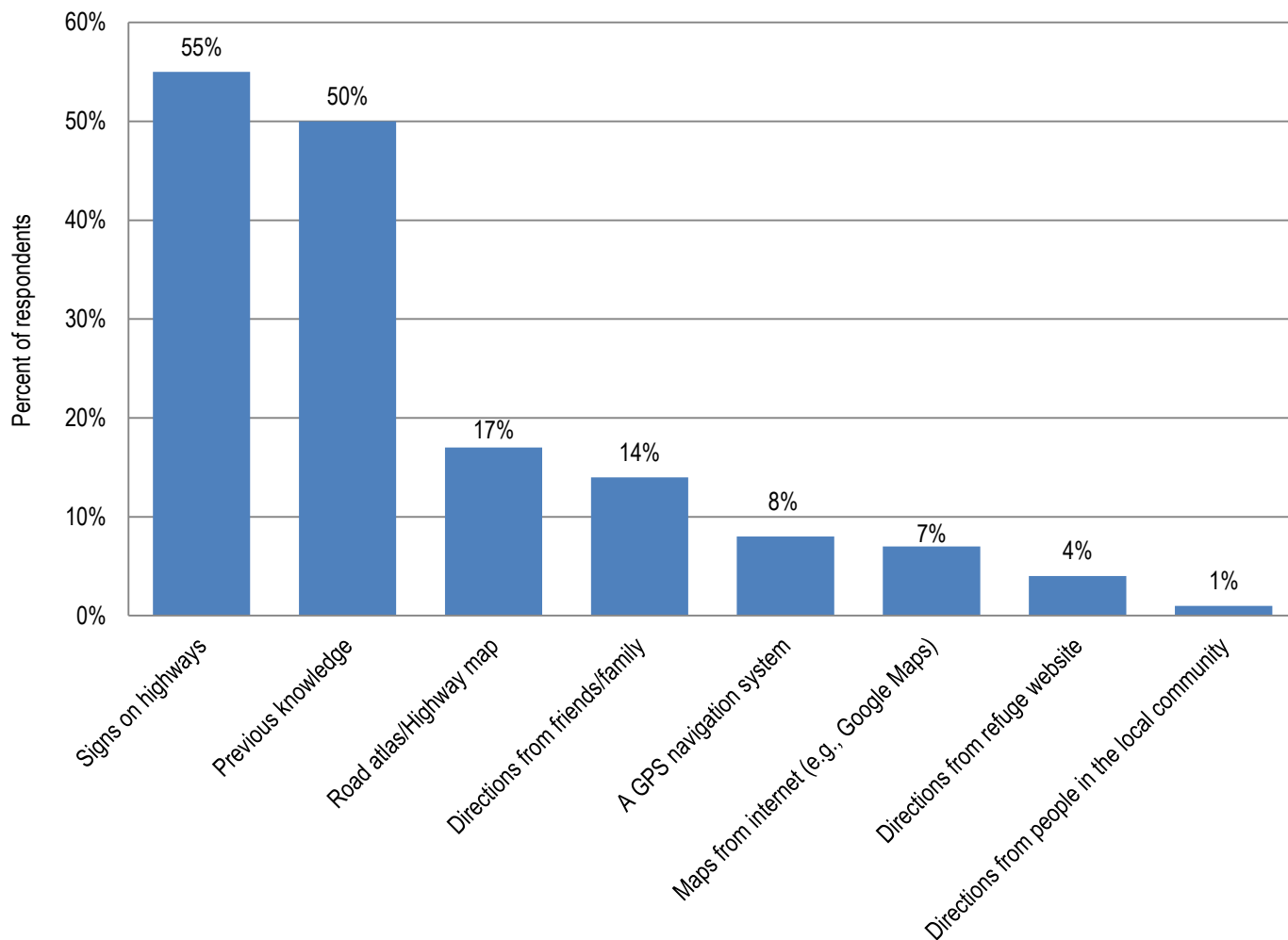


Figure 3. Resources used by visitors to find their way to DeSoto NWR during *this* visit (n = 139).

Table 3. Influence of DeSoto 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	50%	25%	25%
Local	90%	2%	8%
Total	74%	11%	15%

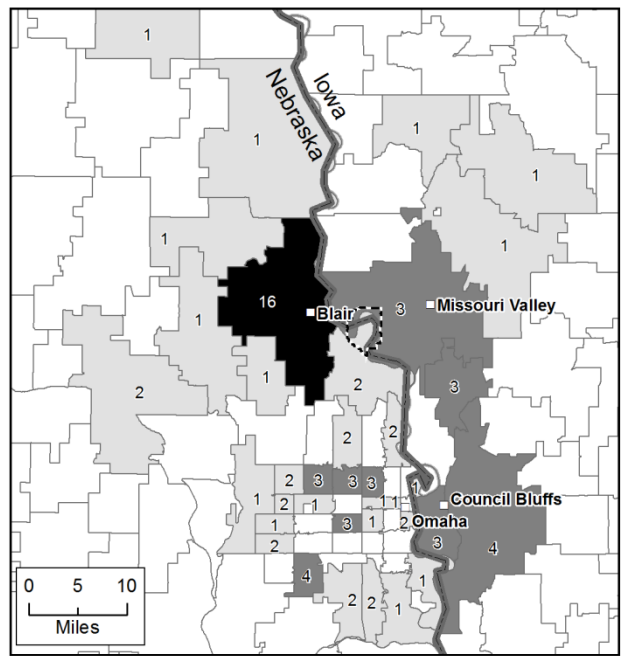
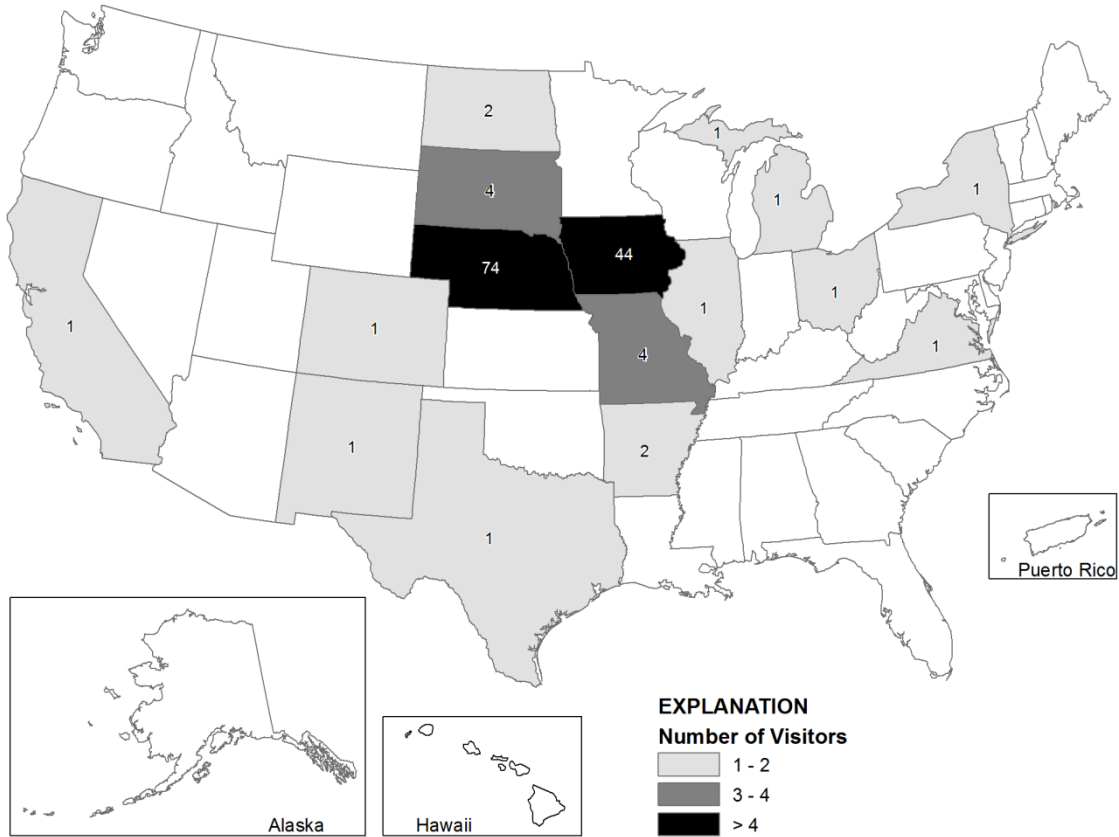


Figure 4. Number of visitors travelling to DeSoto NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 140).

Surveyed visitors reported that they spent an average of 3 hours at DeSoto 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 (32%). The key mode of transportation used by visitors to travel around the refuge was private vehicle (92%; 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).

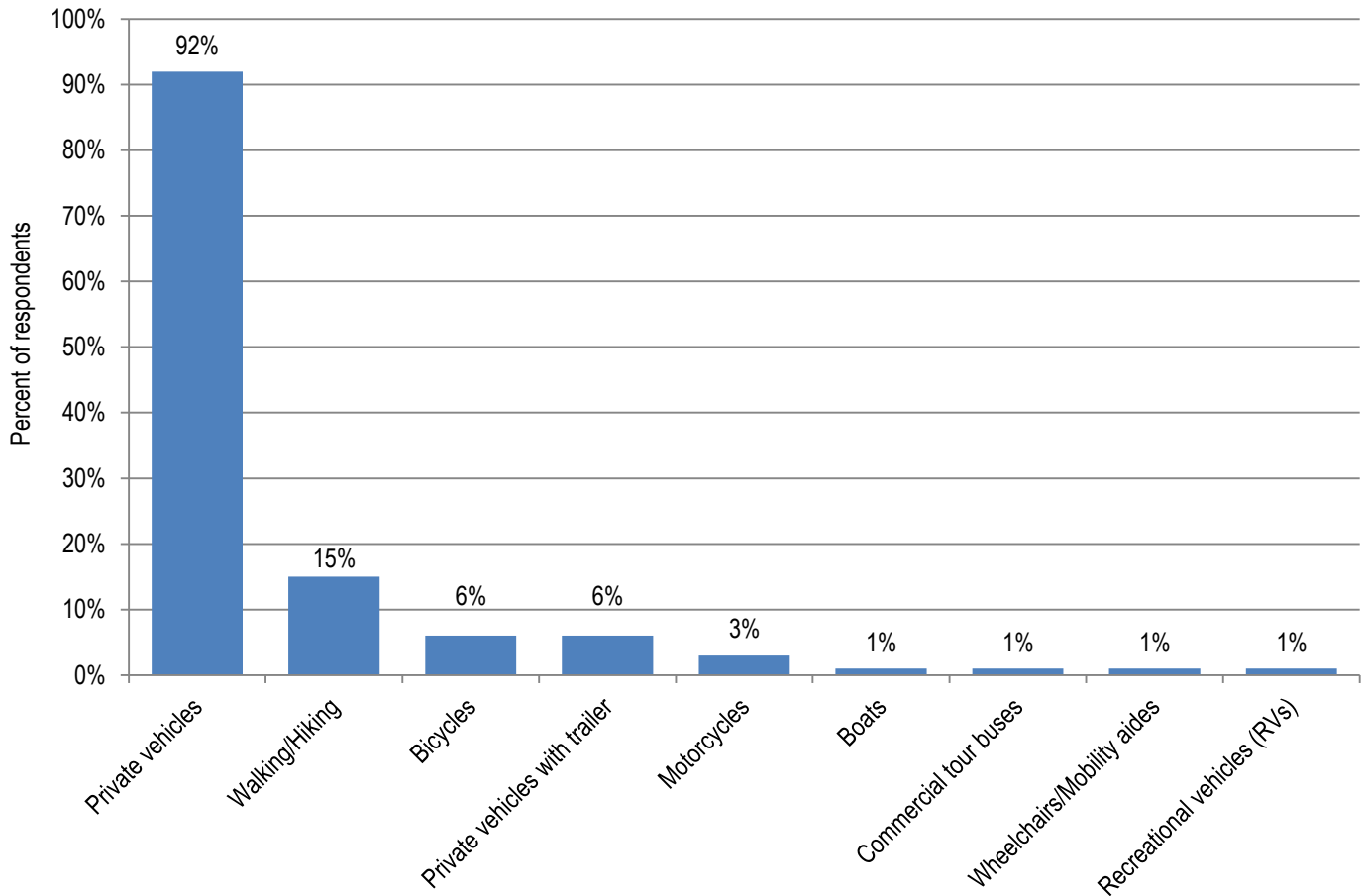


Figure 5. Modes of transportation used by visitors to DeSoto NWR during *this* visit (n = 139).

Table 4. Type and size of groups visiting DeSoto NWR (for those who indicated they were part of a group, n = 78).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	92%	3	1	4
Commercial tour group	3%	56	0	56
Organized club/School group	5%	3	14	17
Other group type	0%	0	0	0

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top activities reported were wildlife observation (61%), interpretation (45%), bird watching (44%), and auto tour route/driving (43%). The primary reasons for their most recent visit included interpretation (28%), wildlife observation (15%), and hunting (11%; fig. 7). The visitor center was used by 90% of visitors, mostly to view the exhibits (86%), visit the gift shop/bookstore (70%), and ask information of staff/volunteers (69%; fig. 8).

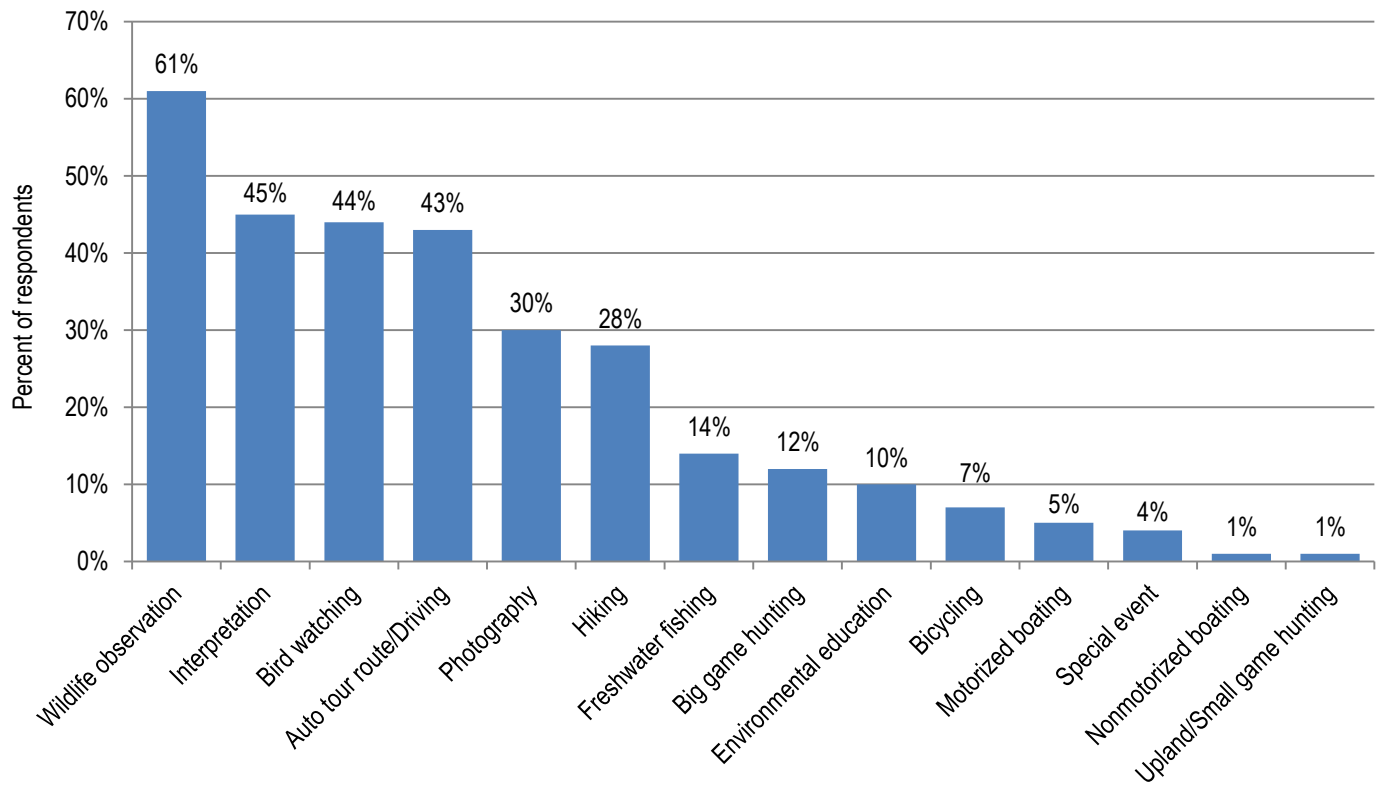


Figure 6. Activities in which visitors participated during the past 12 months at DeSoto NWR (n = 137). See Appendix B for a listing of “other” activities.

Visitor Characteristics

All surveyed visitors to DeSoto 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 57 years and 51% female with an average age of 56 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).

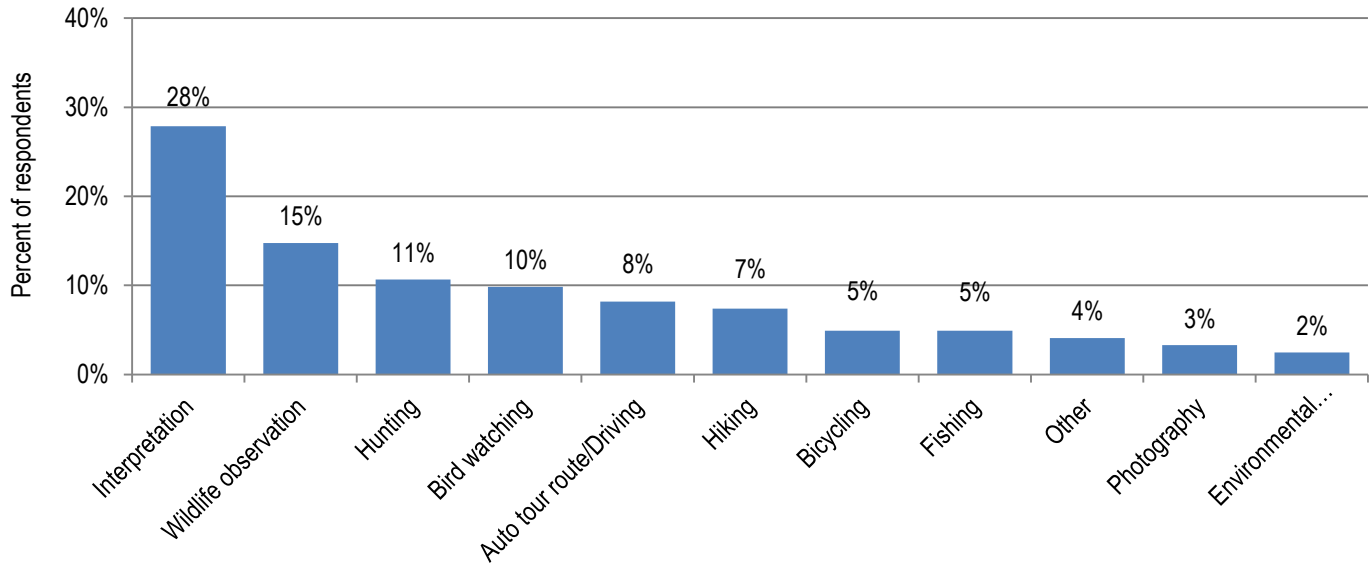


Figure 7. The primary activity in which visitors participated during *this* visit to DeSoto NWR (n = 122). See Appendix B for a listing of “other” activities.

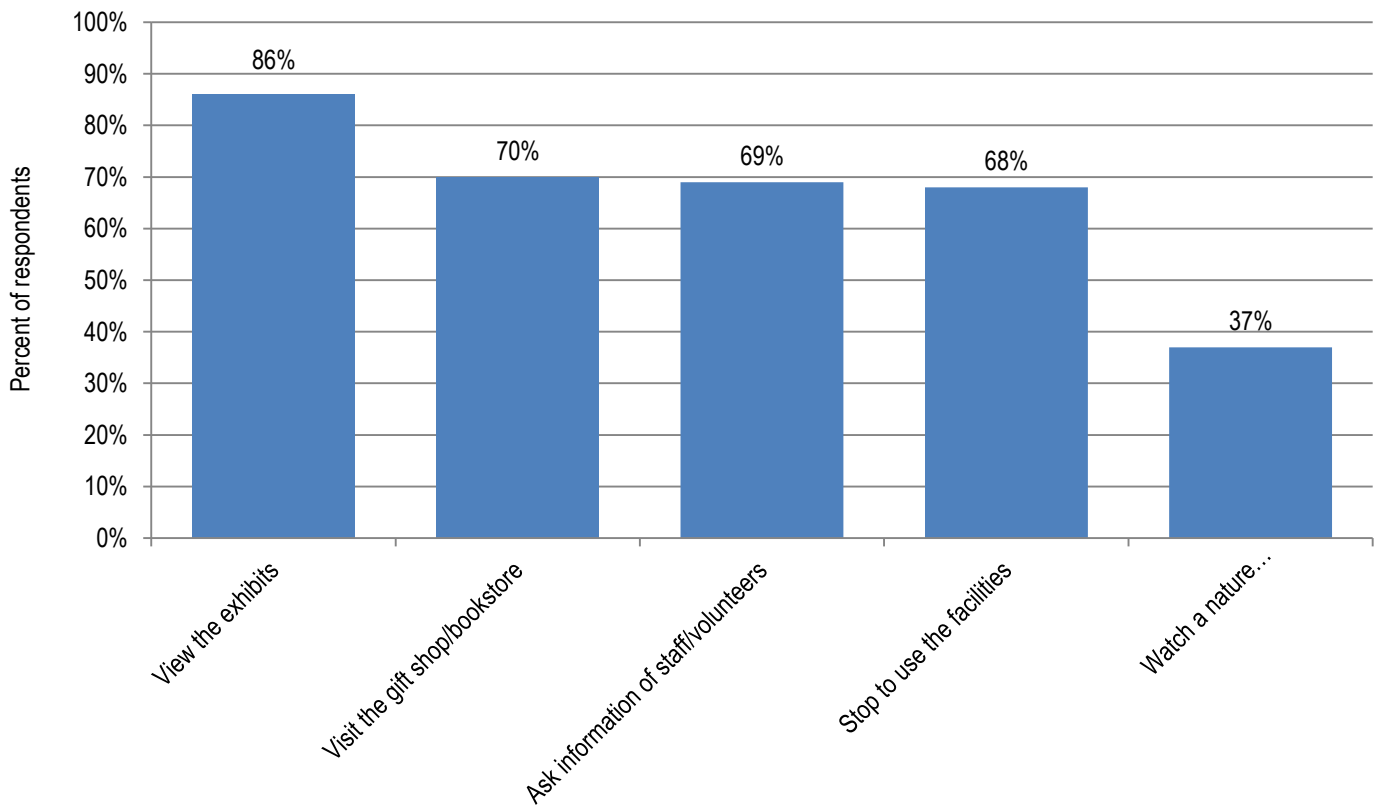


Figure 8. Use of the visitor center at DeSoto NWR (for those visitors who indicated they used the visitor center, n = 124).

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, 63% of surveyed visitors to DeSoto NWR indicated that they live within the local area. Nonlocal visitors (37%) 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 \$54 per person per day and local visitors spent an average of \$24 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 DeSoto NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	39	\$30	\$54	\$60	\$0	\$252
Local	58	\$18	\$24	\$27	\$0	\$130

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 DeSoto NWR were as follows (fig. 9):

- 89% were satisfied with the recreational activities and opportunities,
- 96% were satisfied with the information and education about the refuge and its resources,
- 95% were satisfied with the services provided by employees or volunteers, and
- 95% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Of the 73% of visitors who indicated that they paid a fee to enter the refuge, 88% agreed that the opportunities and services were at least equal to the fee they paid; 85% felt the fee was about right, whereas 15% felt that the fee was too low or too high (fig. 10).

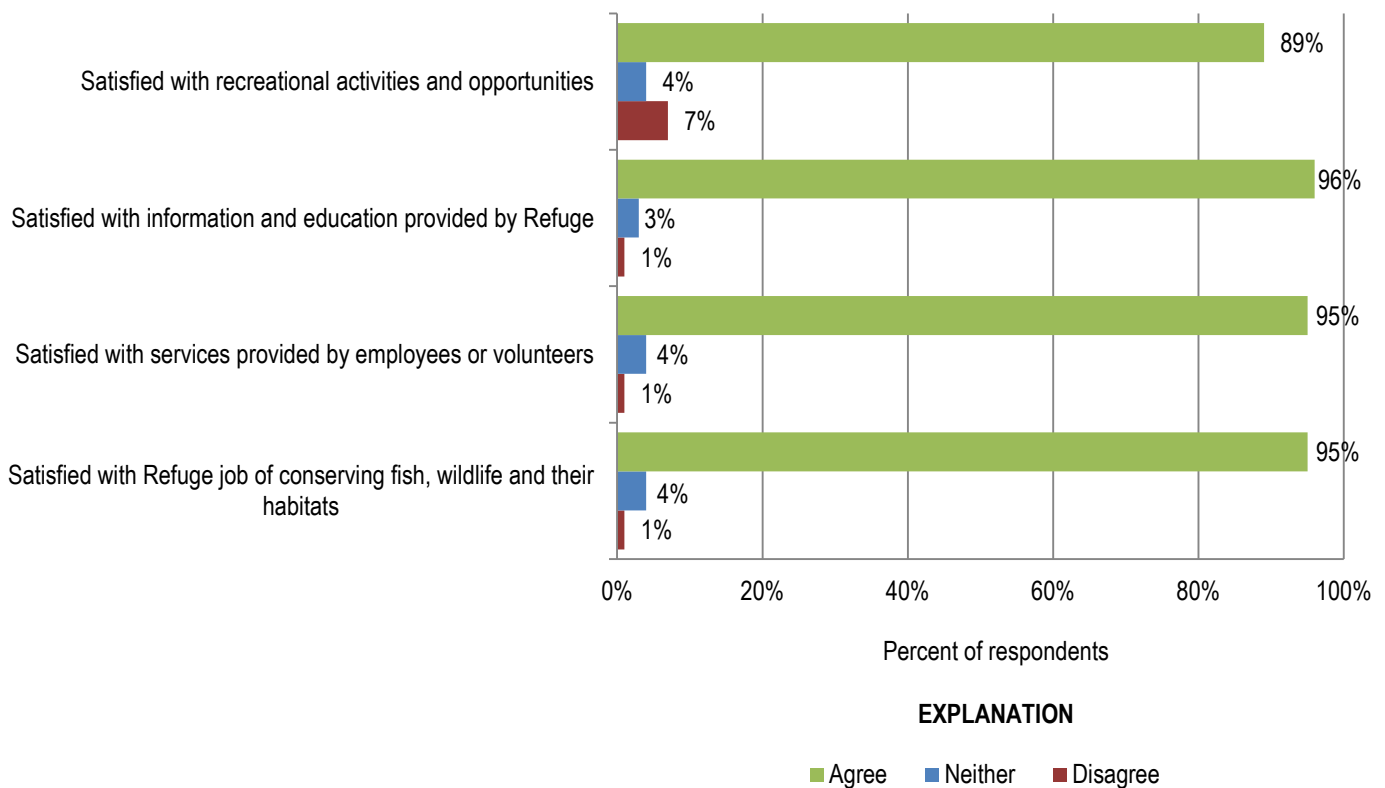


Figure 9. Overall satisfaction with DeSoto NWR during this visit (n ≥ 133).

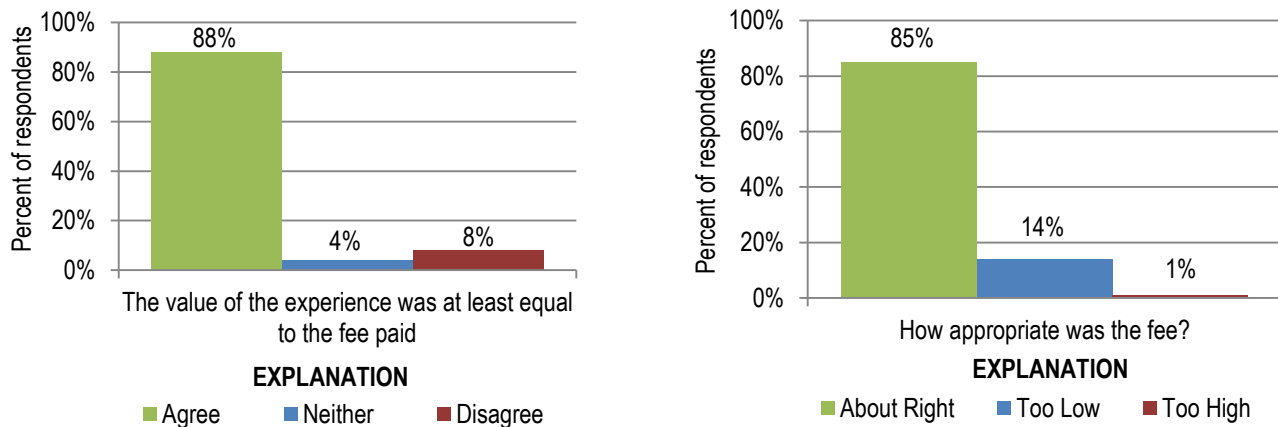


Figure 10. Opinions about fees at DeSoto NWR (for those visitors who indicated they paid a fee, n = 95).

Importance/Satisfaction Ratings

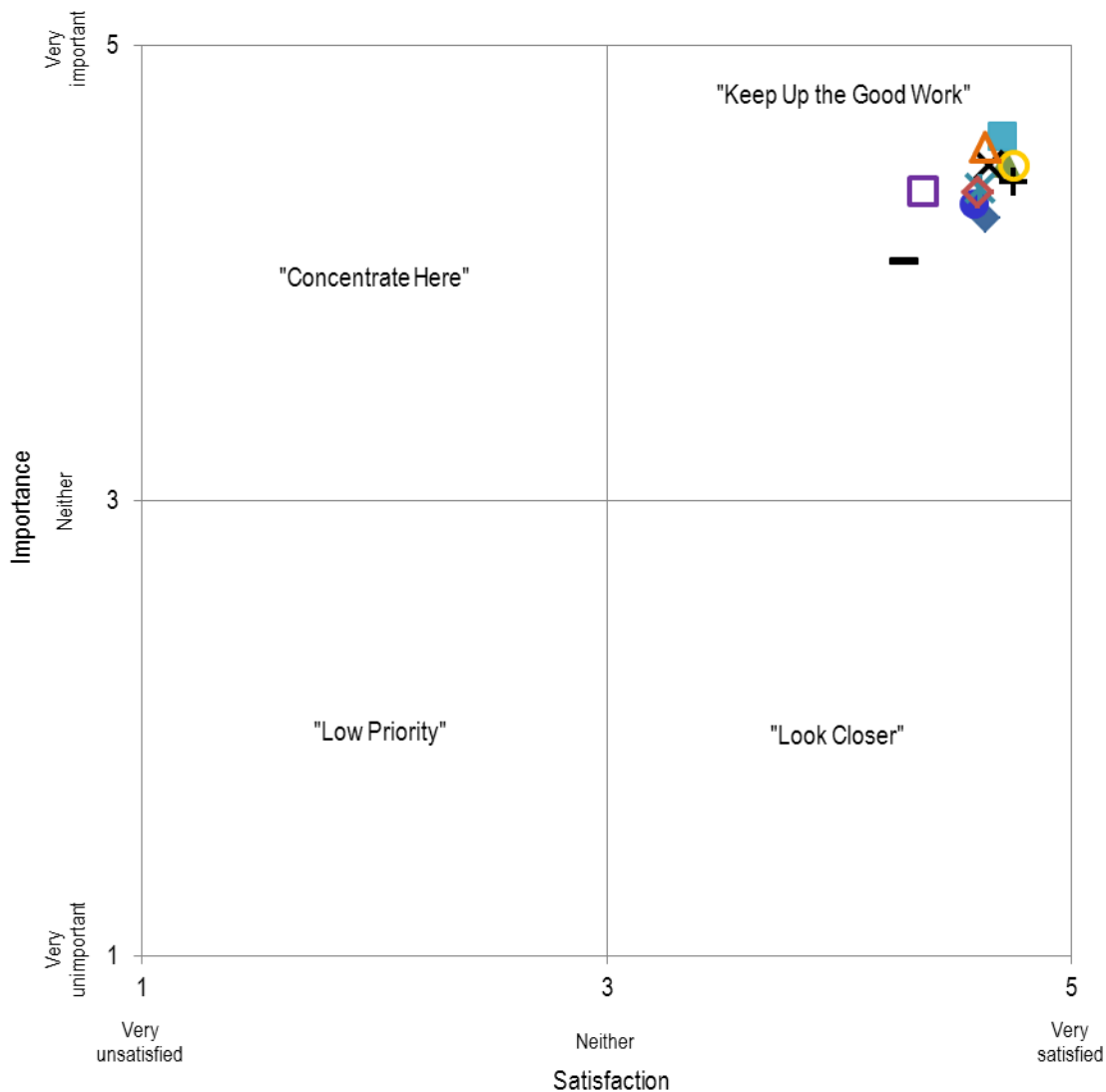
Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in 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 DeSoto 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 11-13 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at DeSoto NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 11). All refuge recreational

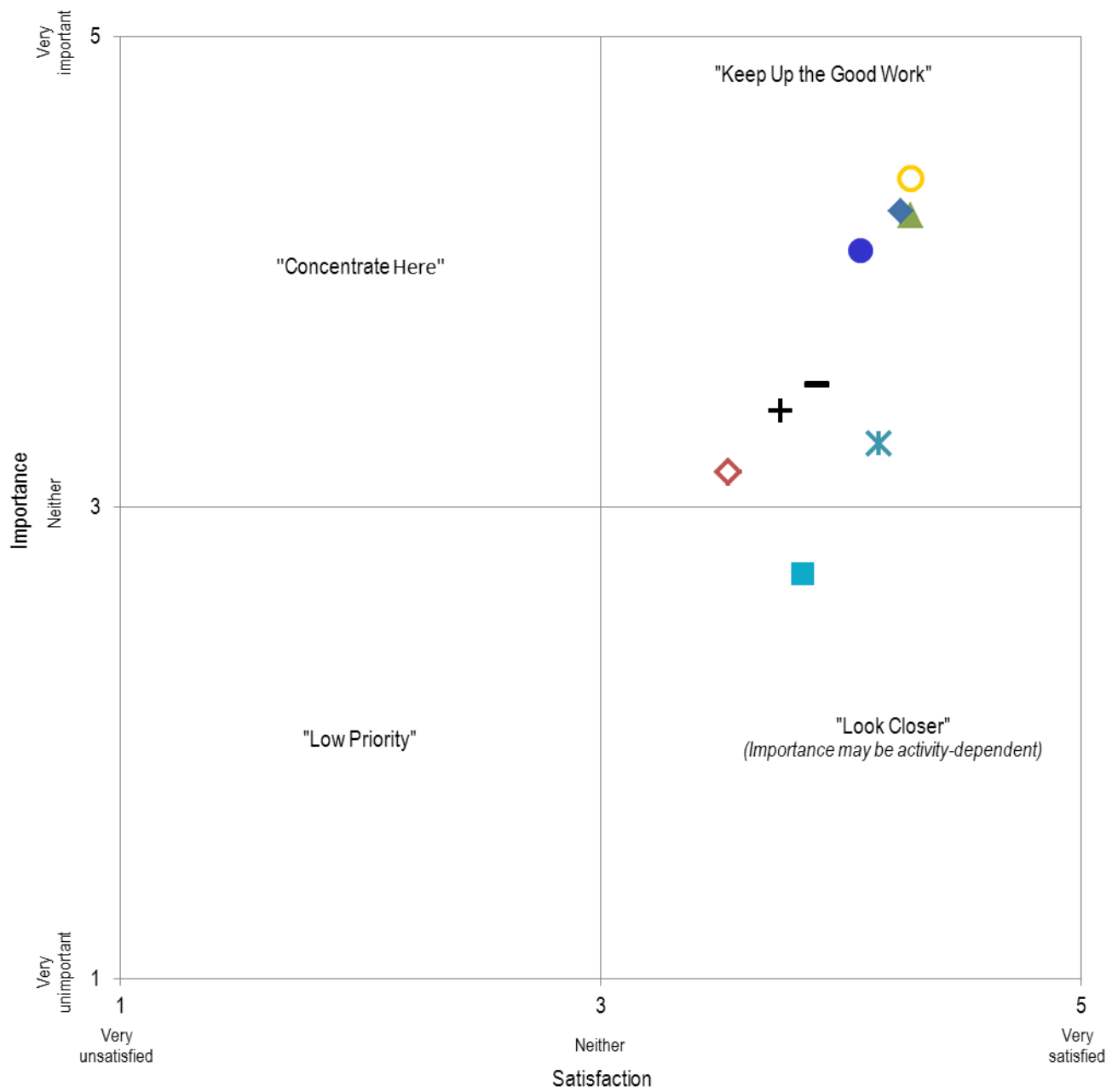
opportunities fell in the “Keep Up the Good Work” quadrant except hunting opportunities, which fell into the “Look Closer” quadrant (fig. 12). The average importance of hunting opportunities in the “Look Closer” quadrant may be higher among visitors who have participated in these activities during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants. All transportation-related features fell in the “Keep Up the Good Work” quadrant (fig. 13).



EXPLANATION

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

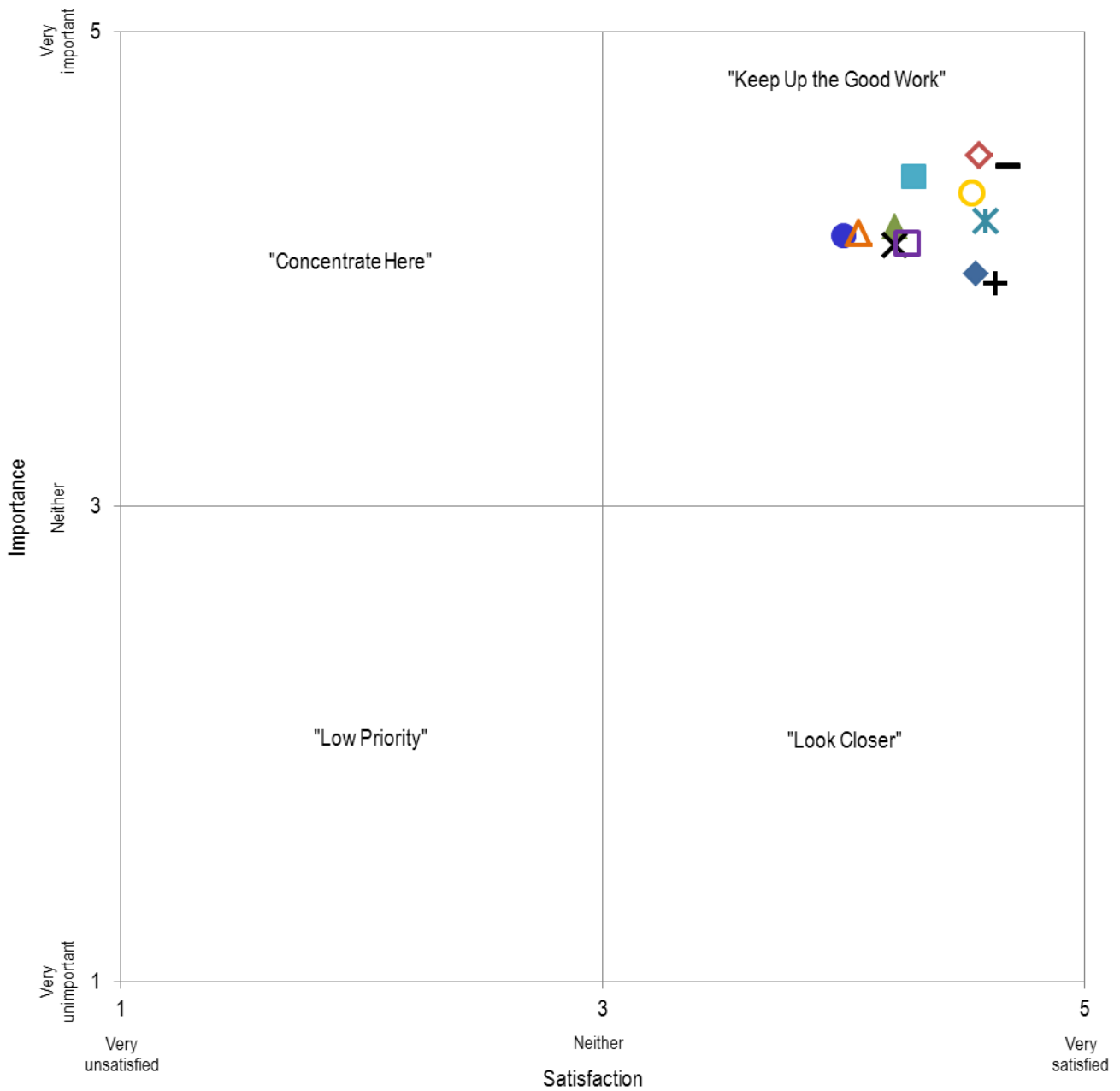
Figure 11. Importance-satisfaction ratings of services and facilities provided at DeSoto NWR.



EXPLANATION

- ▲ Photography opportunities
- ◆ Bird watching opportunities
- Wildlife viewing opportunities
- Hunting opportunities
- ✱ Fishing opportunities
- Hiking opportunities
- ◇ Kayak/Canoe opportunities
- Bicycling opportunities
- ✚ Volunteer opportunities

Figure 12. Importance-satisfaction ratings of recreational opportunities provided at DeSoto 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 13. Importance-satisfaction ratings of transportation-related features at DeSoto 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 DeSoto 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 DeSoto NWR visitors who were surveyed were likely to use the following options at national wildlife refuges in the future

(fig. 14):

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

The majority of visitors were *not* likely to use a bike share program, or a bus/tram that takes passengers to different points on national wildlife refuges in the future (fig. 14).

When asked about using alternative transportation at DeSoto 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 (25%) and others thought it would not (30%).

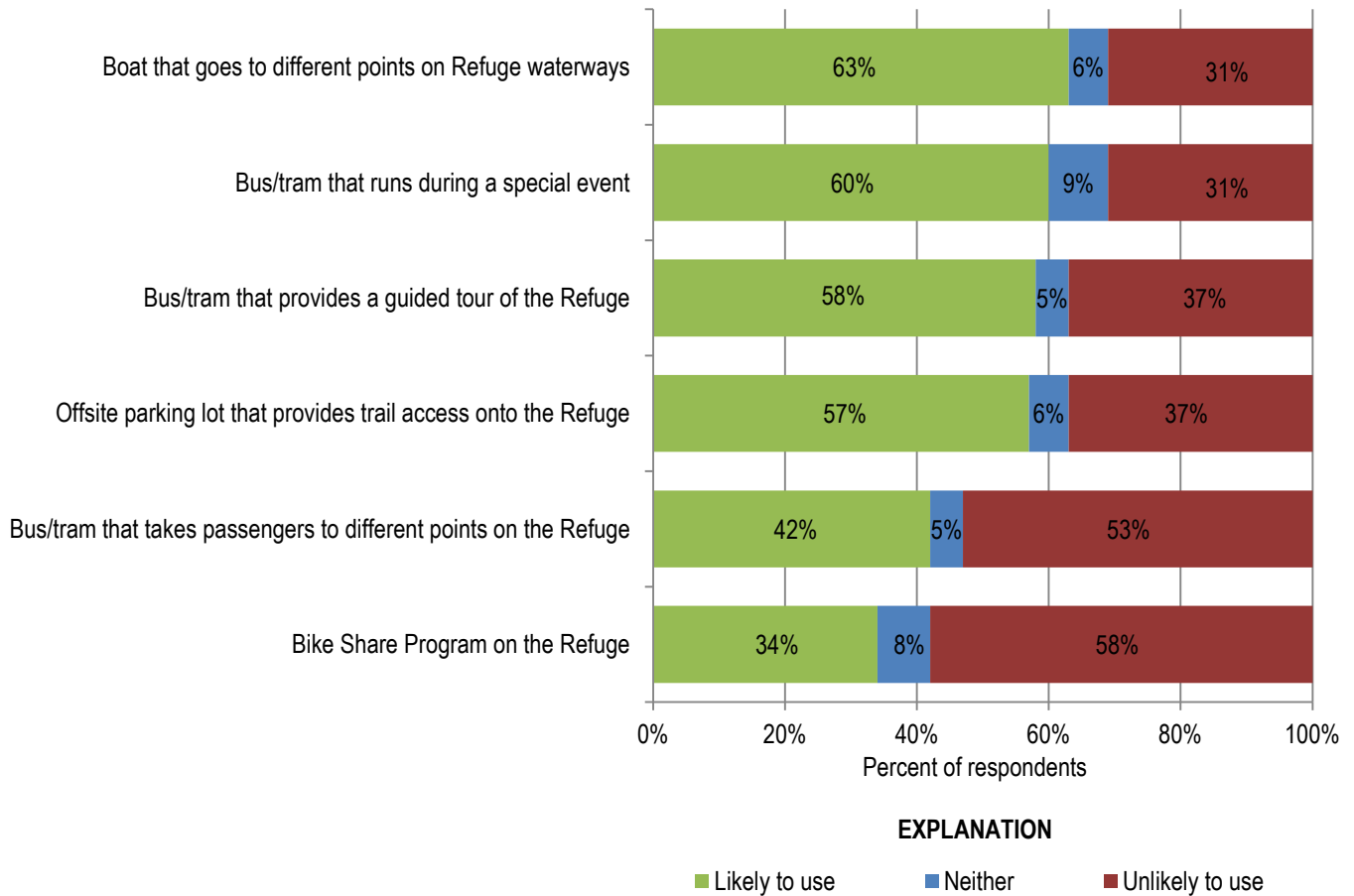


Figure 14. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 130).

Climate Change and the National Wildlife Refuge System

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

Factors that influence how individuals think about climate change include their basic beliefs, levels of involvement, policy preferences, and behaviors related to this topic. Results presented below provide

baseline information on visitors’ levels of involvement with the topic of climate change related to fish, wildlife and their habitats. The majority of surveyed visitors to DeSoto NWR agreed with the following statements (fig. 15):

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

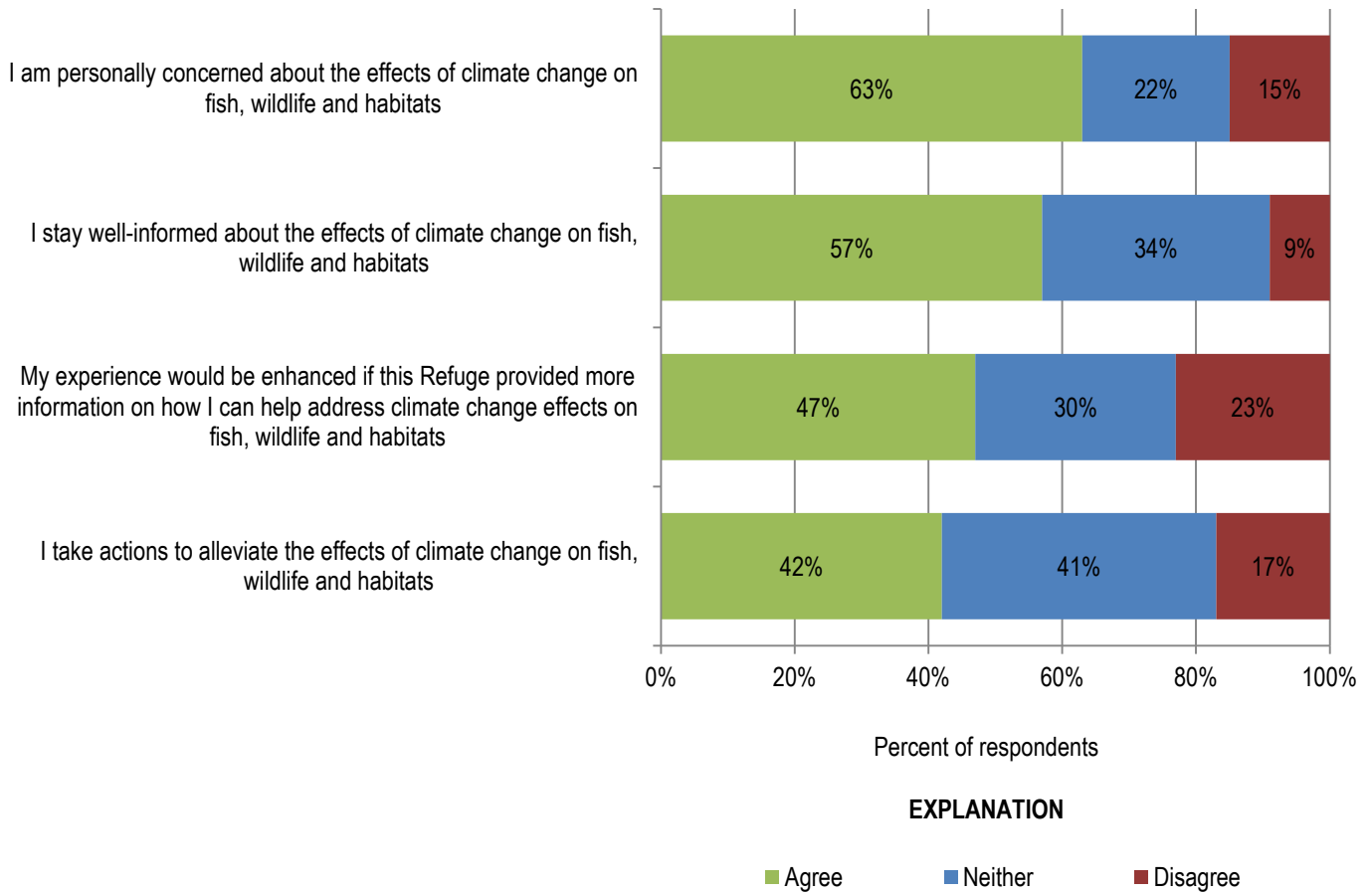


Figure 15. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 128).

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 DeSoto NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 16):

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

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because about half of visitors (47%) indicated that their experience would be enhanced if DeSoto NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 15), 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.

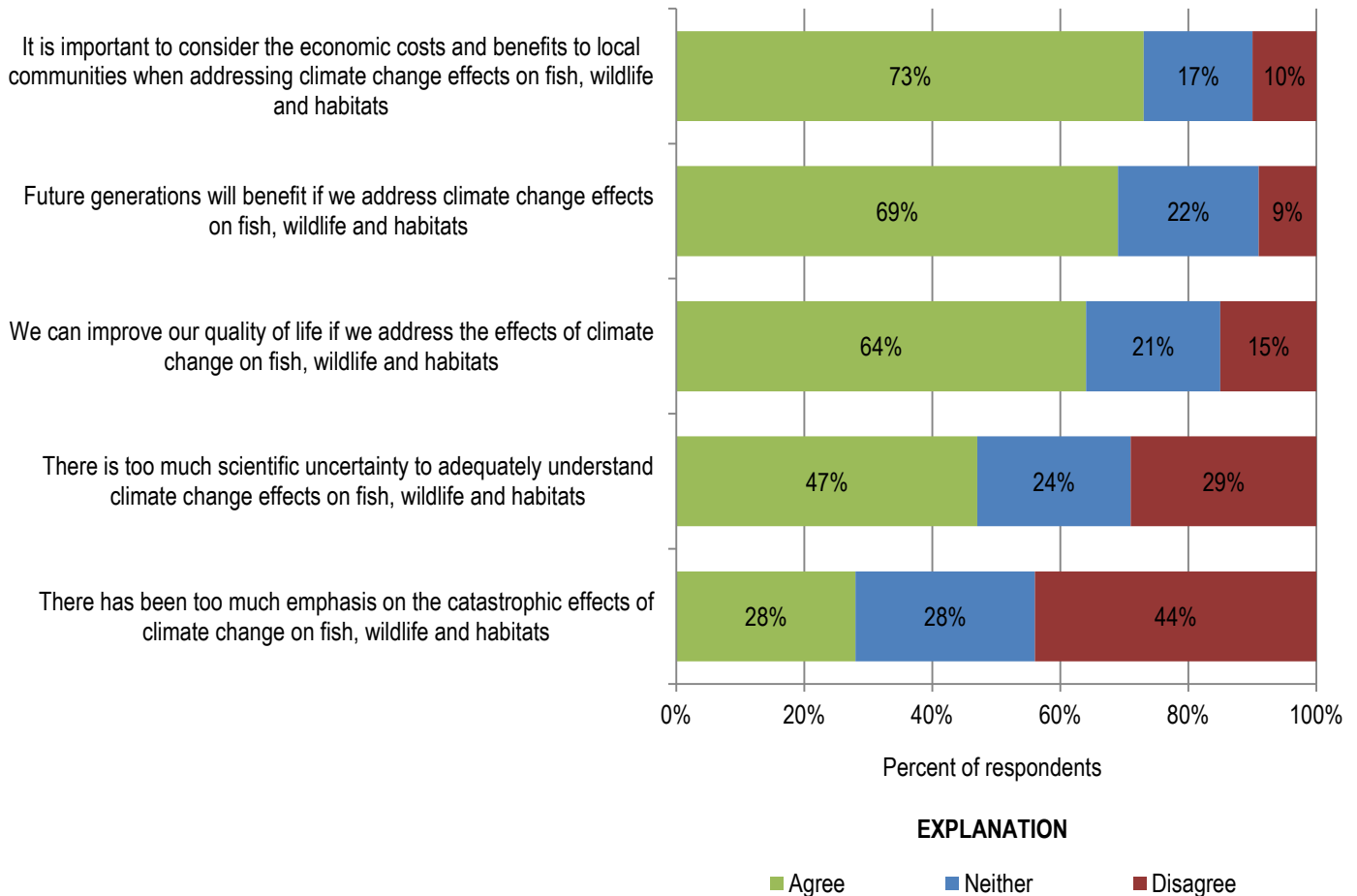


Figure 16. Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 131).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to DeSoto 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"/> 12% Big game hunting | <input type="checkbox"/> 28% Hiking | <input type="checkbox"/> 10% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 1% Upland/Small-game hunting | <input type="checkbox"/> 7% Bicycling | |
| <input type="checkbox"/> 0% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 43% Auto tour route/Driving | <input type="checkbox"/> 4% Special event (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 61% Wildlife observation | <input type="checkbox"/> 5% Motorized boating | <input type="checkbox"/> 12% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 44% Bird watching | <input type="checkbox"/> 1% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 1% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 14% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 45% Interpretation (for example, exhibits, kiosks, videos) | |
| <input type="checkbox"/> 30% 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?

- 10% No
- 90% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 70% Visit the gift shop or bookstore | <input type="checkbox"/> 37% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 86% View the exhibits | <input type="checkbox"/> 68% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 69% Ask information of staff/volunteers | <input type="checkbox"/> 11% Other (<i>please specify</i>) <u>See Appendix B</u> |

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

Nonlocal	Local	Total	
<input type="checkbox"/> 49%	<input type="checkbox"/> 90%	<input type="checkbox"/> 73%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> 25%	<input type="checkbox"/> 3%	<input type="checkbox"/> 11%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> 25%	<input type="checkbox"/> 8%	<input type="checkbox"/> 15%	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 161 number of miles

Local 26 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.***)

92% Family and/or friends

5% Organized club or school group

3% Commercial tour group

0% 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

 1 number 17 years and under

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

62% Friends or relatives

4% Refuge website

26% Signs on highway

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

2% Recreation club or organization

4% Television or radio

19% People in the local community

12% Newspaper or magazine

16% Refuge printed information (brochure, map)

5% 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.***)

36% Spring
(March-May)

38% Summer
(June-August)

86% Fall
(September-November)

19% Winter
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 6 number of visits

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

SECTION 2. Transportation and access at this Refuge

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

- | | | | | | |
|------------------------------|---|-----------------------------|----------------------------------|------------------------------|---------------------------------------|
| <input type="checkbox"/> 92% | Private vehicle without a trailer | <input type="checkbox"/> 0% | Refuge shuttle bus or tram | <input type="checkbox"/> 6% | Bicycle |
| <input type="checkbox"/> 6% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 3% | Motorcycle | <input type="checkbox"/> 15% | Walk/Hike |
| <input type="checkbox"/> 1% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 2% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 1% | Recreational vehicle (RV) | <input type="checkbox"/> 1% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 1% | 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"/> 55% | Signs on highways | <input type="checkbox"/> 4% | Directions from Refuge website |
| <input type="checkbox"/> 8% | A GPS navigation system | <input type="checkbox"/> 1% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 17% | A road atlas or highway map | <input type="checkbox"/> 14% | Directions from friends or family |
| <input type="checkbox"/> 7% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 50% | Previous knowledge/I have been to this Refuge before |
| | | <input type="checkbox"/> 2% | 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"/> 41%	<input type="checkbox"/> 12%	<input type="checkbox"/> 5%	<input type="checkbox"/> 26%	<input type="checkbox"/> 17%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 42%	<input type="checkbox"/> 16%	<input type="checkbox"/> 8%	<input type="checkbox"/> 23%	<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"/> 23%	<input type="checkbox"/> 14%	<input type="checkbox"/> 5%	<input type="checkbox"/> 36%	<input type="checkbox"/> 23%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 24%	<input type="checkbox"/> 7%	<input type="checkbox"/> 6%	<input type="checkbox"/> 38%	<input type="checkbox"/> 24%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 21%	<input type="checkbox"/> 11%	<input type="checkbox"/> 8%	<input type="checkbox"/> 42%	<input type="checkbox"/> 18%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 24%	<input type="checkbox"/> 13%	<input type="checkbox"/> 6%	<input type="checkbox"/> 36%	<input type="checkbox"/> 21%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 14%	<input type="checkbox"/> 0%	<input type="checkbox"/> 0%	<input type="checkbox"/> 14%	<input type="checkbox"/> 71%

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

- 25% Yes 30% 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
5%	9%	5%	48%	34%	Surface conditions of roads	4%	3%	1%	19%	73%	NA
5%	9%	9%	43%	35%	Surface conditions of parking areas	4%	0%	2%	17%	77%	NA
5%	2%	17%	24%	53%	Condition of bridges	7%	1%	17%	14%	61%	NA
7%	3%	8%	36%	46%	Condition of trails and boardwalks	7%	2%	9%	29%	53%	NA
3%	2%	8%	47%	40%	Number of places for parking	3%	2%	2%	19%	74%	NA
3%	6%	8%	42%	42%	Number of places to pull over along Refuge roads	2%	11%	11%	39%	38%	NA
3%	2%	4%	23%	67%	Safety of driving conditions on Refuge roads	3%	3%	3%	17%	74%	NA
3%	2%	4%	29%	61%	Safety of Refuge road entrances/exits	3%	0%	3%	13%	81%	NA
3%	4%	7%	29%	56%	Signs on highways directing you to the Refuge	6%	0%	2%	20%	72%	NA
2%	2%	6%	33%	57%	Signs directing you around the Refuge roads	5%	5%	6%	25%	59%	NA
3%	4%	14%	33%	46%	Signs directing you on trails	2%	6%	17%	33%	42%	NA
8%	5%	12%	18%	58%	Access for people with physical disabilities or who have difficulty walking	2%	0%	21%	23%	53%	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)?

63% Yes

37% No → How much time did you spend **in local communities** on this trip?

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

See Report for Results

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

 2 number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
5%	21%	31%	10%	14%	3%	9%	1%	2%	1%	3%

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**.)

4%	Far too low	9%	Too low	85%	About right	0%	Too high	1%	Far too high	27%	Did not pay a fee (skip to Section 4)
----	-------------	----	---------	-----	-------------	----	----------	----	--------------	-----	--

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

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

4%	Strongly disagree	3%	Disagree	4%	Neither agree or disagree	45%	Agree	43%	Strongly agree
----	-------------------	----	----------	----	---------------------------	-----	-------	-----	----------------

SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	2%	5%	5%	38%	51%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	1%	0%	3%	40%	56%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	1%	0%	4%	34%	61%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	0%	4%	33%	62%	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
2%	2%	9%	42%	44%	Availability of employees or volunteers	2%	1%	7%	14%	76%	NA
3%	2%	5%	33%	57%	Courteous and welcoming employees or volunteers	2%	0%	4%	11%	83%	NA
4%	1%	4%	26%	66%	Knowledgeable employees or volunteers	2%	1%	2%	15%	80%	NA
3%	1%	2%	33%	61%	Printed information about this Refuge and its resources (for example, maps and brochures)	2%	3%	1%	13%	80%	NA
2%	1%	7%	41%	50%	Informational kiosks/displays about this Refuge and its resources	1%	1%	8%	17%	73%	NA
2%	2%	5%	44%	47%	Signs with rules/regulations for this Refuge	1%	1%	7%	23%	69%	NA
2%	4%	8%	29%	57%	Exhibits about this Refuge and its resources	1%	3%	5%	17%	74%	NA
4%	6%	15%	31%	44%	Environmental education programs or activities	3%	1%	19%	20%	58%	NA
3%	4%	2%	24%	66%	Visitor Center	1%	2%	2%	12%	83%	NA
2%	0%	3%	25%	70%	Convenient hours and days of operation	3%	1%	1%	13%	82%	NA
4%	0%	3%	23%	70%	Well-maintained restrooms	3%	3%	4%	9%	81%	NA
3%	3%	7%	28%	59%	Wildlife observation structures (decks, blinds)	3%	6%	9%	19%	64%	NA
3%	4%	9%	31%	53%	Bird-watching opportunities	4%	5%	13%	16%	61%	NA
2%	2%	6%	34%	56%	Opportunities to observe wildlife other than birds	2%	4%	13%	29%	54%	NA
2%	3%	13%	30%	51%	Opportunities to photograph wildlife and scenery	3%	4%	15%	20%	59%	NA
39%	5%	23%	12%	22%	Hunting opportunities	3%	2%	41%	17%	38%	NA
23%	9%	17%	20%	31%	Fishing opportunities	3%	3%	23%	17%	54%	NA
7%	3%	12%	32%	47%	Trail hiking opportunities	2%	3%	20%	34%	41%	NA
21%	6%	30%	23%	20%	Water trail opportunities for canoeing or kayaking	6%	3%	47%	19%	25%	NA
12%	7%	27%	24%	30%	Bicycling opportunities	3%	5%	32%	19%	41%	NA
13%	7%	32%	24%	24%	Volunteer opportunities	3%	2%	46%	15%	34%	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?

88%

Yes

12%

No

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

89%

Yes

11%

No

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

85%

Yes

15%

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.	8%	7%	22%	31%	32%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	8%	7%	21%	32%	32%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	13%	16%	24%	30%	18%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	2%	6%	34%	45%	12%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	2%	8%	17%	56%	18%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	5%	12%	41%	30%	13%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	18%	25%	28%	13%	15%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	6%	3%	22%	37%	31%
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.	12%	11%	30%	29%	18%

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? 1955 (YYYY)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					0%			21%				60%				19%			

5. What ethnicity do you consider yourself? 0% Hispanic or Latino 100% Not Hispanic or Latino

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

- 1% American Indian or Alaska Native 0% Black or African American 96% 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 checked="" type="checkbox"/> 1% Less than \$10,000 | <input type="checkbox"/> 19% \$35,000 - \$49,999 | <input type="checkbox"/> 19% \$100,000 - \$149,999 |
| <input checked="" type="checkbox"/> 8% \$10,000 - \$24,999 | <input type="checkbox"/> 21% \$50,000 - \$74,999 | <input type="checkbox"/> 2% \$150,000 - \$199,999 |
| <input type="checkbox"/> 9% \$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.)?

14 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 DeSoto 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
Bluebird presentations	1
Girl Scout Outing	1
Kids fishing clinic	1
Refuge Festival	2
Youth Turkey Hunt	1
Total	6

Other Activity	Frequency
Bertrand	1
Bertrand Exhibit	1
Board meetings	1
Buy senior life time card	1
Just looked at Steamboat	1
Landscape painting	1
Museum visit	1
Out of state visitors	1
Picnicking and visitor center	1
The Bertrand view for school	1
To get a pass	1
To show our grandson the beauty of Iowa.	1
To visit the boat that sank many years ago	1
Tour of permanent exhibit	1
Was visiting the state of Iowa.	1
We were going to hike, but it was too wet.	1
Total	16

2 nd Other Activity	Frequency
Bus Tour	1

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
Cub Scout outing	1
It was a nice fall day and we were in the area and decided to visit.	1
Out of state visitors	1
To get a pass	1
Was visiting the state of Iowa.	1
Total	5

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

Other Visitor Center Activity	Frequency
Bird Feeders, lake view	1
Deer hunting - muzzle loader	1
Hiked a trail.	1
Historical exhibits	1
Observe Nature	1
Outing in the Fall	1
Purchase senior citizen entry permit.	1
Take pictures of wildlife	1
Used lookout to view wildlife.	1
View migratory birds in observation area.	1
Viewed wildlife.	1
Waterfowl watching	1
Wildlife Observation from observation windows	1
Total	13

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?”

N/A

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

Other Website	Frequency
Google Maps	1

Other Ways Heard about This Refuge	Frequency
Blair Community Schools	1
Bus Tour	2
Former employee	1
School Field Trip	1
School Trip	1
Total	6

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	2
School vehicle	1
Total	3

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

Other Ways Found This Refuge	Frequency
AAA Tour Book	1
Bus Tour	1
Rest Area	1
Total	3

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
4 wheelers would be fun!	1
Drive ATVs around the refuge.	1
Four wheeler, jeep.	1
My own car, truck, or boat.	1
My own transportation.	1
Personal vehicle	1
Scooters	1
We are seniors and can't walk very far, so don't know.	1
Total	8

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 = 19)

A guided tour would be nice for seniors. Car maps used to be available. We missed it this time somehow and so I didn't find the lookout area from the main building with bird descriptions and peep holes to look through. I never found it for some reason. We drove around and there was no one to ask where to turn. That's the first time that has ever happened. Not sure why, usually it's easy to find!

As I have no trouble walking, I never thought about access for people who have difficulties, so I did not pay attention to how accessible it was.

Bicyclists riding side by side is unsafe. The cyclists seemed oblivious to how well a car sees around curves to pass them.

I go to this refuge to ride my bicycle. It could use more (wider) shoulders when cars pass.

I guess we have the 4 wheel drive option always available while pulling boats, etc. so condition is 4 to us. I understand for many safety it might be 5.

I was not able to access most areas mentioned above due to a deer hunt I was not aware of until arrival!

I was very satisfied with the refuge. I enjoyed it many years ago and found it to be very well kept when we visited this year.

Need bike trails and bike lanes marked or bikers who don't turn in front of drivers without signaling.

Part of the road in the loop is gravel. It is maintained very well, however when using it to view the landscapes, wildlife, and to take pictures, the dust from the gravel is heavy (particularly when it is dry outside). The dust is very annoying, dirty, and seems to happen when one is watching wildlife. It makes it very difficult to get a clear picture of the wildlife. I'm done whining; it's just one of those things that doesn't help to make the refuge "user friendly." Also, with only a two-lane road, it is uncomfortable at times when other traffic does not pass or go around you. Also, when shooting wildlife, sometimes it is important and enjoyable to stay in one spot for a longer amount of time. It seems that in some places where the grass and croplands are clear, there is some foliage and / or small trees or bushes in the way. I know it's a refuge, but making viewing of wildlife more user friendly along some of these areas would probably be more inviting to the public. The big tree stands would not be included in the last statements; some longer pullouts would be great to view waterfowl and other wildlife. Again, I know we can't go everywhere, but there may be a few places where we could have access to see better. Maybe a raised road that gets a person up higher but stays far from disturbing the wildlife. I've seen some raised deck type structures at other refuges where it made it easier to view things. This is all meant to be positive. Thank you for providing this space for sharing.

Signs to get to the Steamboat Exhibit were not clear. Stopped at the first building (which was for employees) to ask for directions - they said it was just "up" the road a little ways. Well we went "down" the road and figured out that we must have gone the wrong direction. Also, the website said there was no fee for the exhibit but when we got there we bought a \$3 pass to get in. You need to be more clear about that.

The boardwalk to Bertrand was under water.

The maps that I was provided for my hunt on the refuge were difficult at times due to the fact that several roads and other points were not marked on the maps. There should be "White Tail Trail" marked on the maps just as there are signs on the roads themselves.

The refuge was closed both times for hunting.

The refuge was very late getting the boat dock in the water in Spring 2010 and made it very congested at the one functioning boat dock for about a month. It took the refuge far too long to get the docks in the water.

There was a hunt going on when we were there and we were unable to see the entire refuge.

They keep the roads very safe.

We felt it was no problem to find it because our tour guide had found it and it worked in our schedule.

We've been very disappointed that many of our favorite trails and bridges are inaccessible due to spring and summer flooding.

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 = 41)

Could control fish population better.

Great place and all workers are very friendly. Very educational for children to learn to take care of our environment. Keep up the good work.

I am not sure if many of these ARE actual options at De Soto.

I am still outraged by the deer hunt which resulted in the death of a hunter, the details of which have never been released. Why?

I enjoyed my visit very much.

I enjoyed the displays very much. The gentleman at the front counter was also very helpful and very friendly. Great guy! (Sorry...forgot his name)

I have always been very happy with DeSoto Bend. This was the first time we missed so much because we couldn't find the usual map and thought signs would remind us where to go, but we went to the end of the road seeing nothing, not even the bird watching peep hole wall. It was also the end of the day so we didn't repeat the road as the refuge was closing very shortly. We got a later start than we had hoped, but we enjoyed what we saw and did visit the visitor center and saw the video.

I have been coming here since 1979 and have always enjoyed the experience very much. That is why I keep returning.

I have been going to DeSoto Wildlife Refuge many many years, long before it was a refuge. I visit often. It has become a family tradition spanning 4 generations to go to DeSoto to "count the deer" and "see the geese." We absolutely love it there. It has made for wonderful family time and also served as quiet time when needing to "just get away". We would support it at any cost.

I have visited this refuge and hunted it for a long time. The employees are very professional and helpful. I've enjoyed getting to know staff and law enforcement. Law enforcement does a good job.

I love the museum. Unfortunately we missed the bird migrations this year.

I think when hunting one should be able to park closer to the hunt or be able to drive back in to retrieve their kill.

I wish it was completely open to the public all year.

I would love opportunities to hunt other species as well as the deer. I saw large numbers of turkey and waterfowl on the refuge.

In the past year the refuge maintained some crop land during hunting season. This year the refuge was nearly all crop which changed the number of deer and their patterns in a negative way during hunting season. The food source needs to be improved to maintain good deer hunting.

It would be nice to have BBQ areas or places where one can make a fire legally and safely for cooking purposes.

Let's treat everyone the same. Fishermen are treated fair. Hunters are treated like dirt and mushrooms. Hunters and birders are allowed to do anything. Get people here to fix up the screwed up fishery. They stock walleye in warm water lake. We had great crappie fishery then some moron stocked white bass. Crappie

gone. Bass gone. Get someone here with 1/2 living brain.

Not enough viewing areas for birds on lake (windows, etc.)

Only one major concern! While hunting I was in a ground blind. There were too many hunters walking around instead of being in blinds. This poses a big safety concern. All hunters should be stationary and not walking the brush to scare the game.

Our family regularly enjoys this refuge. We love to look for wildlife, walk on trails, picnic, and learn about nature. We visit during every season and look forward to the changing activities that each season will bring.

Overall great. I would love to help and make other people happy.

Overall the facilities were clean and well maintained. I was very disappointed in the cleanliness of the bathroom. They were very dirty and they did not have an infant changing station.

People at the visitor center were friendly and helpful. Trails are marked for people to watch people on bikes. Roads were well maintained for bicycles to ride on.

The first time we went deer hunting was taking place on refuge, however it was not posted on the internet. The second time I did not see any birds or wildlife (Thanksgiving weekend) so I am disappointed, although I realize the second disappointment was just bad timing for birds.

The flooding had begun. The visitor center grounds needed attention. We would like more picnic areas.

The map was very confusing or the directions at the park and the workers did not give us info that aided us. They told us things, but we were still lost. It was very sad at the end to find a walk that took us only feet from the visitor center when we thought we were going to view a different area.

The observation area was under construction.

The service has always been great.

The staff we talked to were very courteous and helpful.

The visitor center is very well maintained. I just wish they had more of the view finders to watch the wildlife in the observation section in the center.

There was construction going on while we were there.

This is a wonderful place to visit. The visitor center and staff are excellent. The Bertrand exhibit is first rate. When the remodeling project is finished it will be even more spectacular!

This refuge was closed for a scheduled deer hunt, but the visitor center was open. The very helpful employee directed us to another refuge (as well as other areas) which were also closed for a waterfowl hunt so trails were not accessible. He was unaware of this. The two areas had not communicated about being closed at the same time.

Viewing wildlife is a big reason for my visits, and I hardly saw anything. I'm not blaming the Refuge (not much they can do unless they want to tether them near the pathways), but it was a disappointment.

Waterfowl refuge that no longer attracts waterfowl. No snow geese as in the past and few ducks. Very little corn or beans planted.

We arrived at a time when very little wildlife viewing was possible due to migration off season.

We have always enjoyed visiting DeSoto.

What we saw was good and will be great once completed.

Why can't Iowa and Nebraska stock the lake with more fish? And you people need to replace that smart *** federal game worker. He is an ****. Just talk to him; he thinks he is the ***. Or he thinks he is above everyone else. (Fire him) or ship him out to western Nebraska. Iowa doesn't need him.

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 = 86)

A safe sanctuary for wildlife and laws are enforced; keeps poaching to a minimum.

A unique opportunity to observe and learn about animals and wildlife up close. We should preserve what we have instead of always destroying it in the name of progress.

A way to be closer to nature located fairly close to a city.

A well maintained reserve promotes natural resources that this great country is known for.

Accessibility for hunting opportunities. DeSoto staff does an excellent job managing the archery areas and the controlled deer hunts.

All that I have visited offered a glimpse at the "real" American wild, and most importantly they provide access for all.

All the animals and fish.

Allows you to escape from the city life, enjoy the birds chirping, take a deep breath in the fresh air, enjoy nature as is. There is no need to build more roads or parking lots. It is about getting away from all those things. Please do not change anything!

An opportunity to view wildlife in a more natural habitat and also interact with them. These refuges offer opportunities to keep species from going extinct and allow for natural evolution of species.

Back when it first opened we water skied and it was great. Now I'm 80 years old and we just go see it.

Beautiful, very interesting, a wonderful nature experience.

Being on the Missouri flyway and the opportunity to see migratory birds in an enhanced setting is an opportunity not to be missed. The Bertram exhibit is an excellent glimpse into a way of transport long gone.

Better maintained and managed with the intent to educate the public as well as offer a place to enjoy God's creation and a place to relax with family and meet a few local people as well as people from further away.

Can view nature in its wild habitat.

Contrary to some, we feel that the primary purpose should be for wildlife. The animals we encounter seem more at ease (probably because they know they're safe in the refuge).

Displays, info, and conservation.

Due to the fact that people and vehicles are frequently seen by the animals here they are not as likely to run away when you pass by and stop to observe them. The abundance of wildlife in one location is unique and appreciated.

Education while enjoying wildlife. I, in turn, share what I learn at refuges.

Everything was so interesting but there were many areas not open during our visit as there was a special deer hunt and high water at that time.

Gives everyone an opportunity to see and observe wildlife in their natural environment.

How well displays are placed and how clean the total area was.

I am a nature lover so I enjoy every aspect of a refuge.

I believe the opportunities for activities: volunteering, hunting, fishing, visitor center displays, etc., are providing a place to spend much available time for people who enjoy the great outdoors.

I like how it is kept to its natural being. There are not a lot of manmade facilities in the park.

I liked the overlook area for watching birds even though I didn't see any.

I really enjoyed the visitor center, displays, etc. The roads and trails were closed that day for a hunt.

I thought what made them unique was being able to enjoy the beauty of nature on a wonderful fall day. Instead we were turned away because of a deer hunt on a weekend that should have been devoted to enjoying nature. Instead a horrible accident ensued resulting in a young man's death. As a taxpayer I find this to be an outrage! If you need to thin the deer population there are certainly more intelligent ways to accomplish that goal.

I would like to see better lighting in the museum area and a better display. I think the items are a treasure and could use more labels and explanations of what they are and their purpose. I was very impressed with this treasure.

Indoor viewing area overlooking the water and the Bertram display.

Interesting points of the refuge. Nice and clean center.

It gives me the chance to get outside, away from people, roads, etc. It also allows me to learn more about nature.

It gives us an opportunity to see wildlife in their natural habitat.

It is unique to me because it is close to where I live so I can visit often either by bike, motorcycle, or car.

It's away from the big city and gives me some pleasure of what being an American is all about.

It's clean and has brought the past Missouri River back to see for all. It's what we could have seen 150 years ago.

It's a great place for families to spend time with each other and children to learn how important it is to have a place for wildlife to be safe.

It's the only area on the Missouri that I have visited.

Just the opportunity to observe wildlife in its natural and mostly undisturbed habitat.

More opportunity to learn about conservation and possibly less commercial tourism.

No commercialization and hunting opportunities.

Opportunity to observe wildlife you don't get elsewhere.

Our son and we are volunteers with the Nature Conservancy in California, and we are very concerned with this .

Outstanding exhibits.

Protecting our wildlife and managing their habitat is very important. Wildlife should be in a natural environment and the refuge supplies this.

Quite simple--it's not commercialized.

Refuges are laid out with information centers that help explain their mission and purpose. Also they provide a lot of information about the wildlife.

Safe bicycling, bird watching platforms and viewing of lake, picnic area.

Seeing wildlife.

The access to the wetlands and the wildlife. The museum exhibit is unique to this site.

The amount of artifacts restored from the Bertrand was amazing. The stories of those on board were very interesting.

The amount of wildlife is the most important thing I go there for, and you see a lot of it at DeSoto.

The barge discovery.

The Bertrand.

The best opportunity to be close to nature.

The chance to see wildlife in their natural habitat.

The exhibits of the items recovered from the Missouri River and how it was done (including restoration). I plan to return when the river is down to "see it"--hopefully the other flood damage will be repaired by then.

The history of area and the relaxing atmosphere.

The history of the DeSoto Bend area.

The history of the ship, the museum of its contents, and the preservation of history. The uniqueness of DeSoto is far more interesting than some where you just pull off the highway to have a chance to view an elk or deer. Although I have been to Yellowstone 6 times never have I seen a bear. I have watched flocks of geese and ducks and have seen many other birds here.

The museum and the opportunity to see massive flocks of birds.

The natural quality of the land; there is minimally human impact.

The opportunity to view wildlife is excellent.

The opportunity to visit an area that is as close to its original state prior to the settlement in that particular area, and the chance to observe that which has not been subject to human interference as much as is possible.

The protective environment places a high priority on preservation of habitat for all wildlife while offering the human visitors a glimpse of what nature offers us (if we only care to look).

The uniqueness comes from the Bertrand River boat display.

The variety of wildlife and how close we were able to observe them. The eagle observation area was magnificent and the white (almost) bison was the first I had seen.

The visitor center and display.

The well displayed contents from the sunken Bertrand.

The word "refuge." It is a refuge for the animals to go to.

These areas conserve the natural environment and protect it from future development. However, the expansion of these areas needs to be considered to be considerate of financial costs and impacts to the private sector/ economy.

They are geared towards the different interests of visitors in a protected area.

They give greater opportunity to view wildlife in nature and to observe many more varieties of wildlife than we normally see around our homes.

They give you more chances to see wildlife in their own habitat.

They provide habitat for animals and birds in which they can carry on their important and unique lives with relative safety from farming and hunting.

This one is unique because it has a great visitor center and Bertrand articles.

Visitor Center and Bertrand exhibit.

Visitor Center with information.

Water. There are views of water, boaters, and if lucky birds.

We love DeSoto as it is close, offers a nice afternoon on the water, fishing, animal watching, AND has an amazing keel boat exhibit that we never get tired of seeing!

We've never used DeSoto Bend as an overnight area although many do. It's always been a 2 to 4 hour stop and visit for us. It's enjoyable always, even this last time when we didn't locate the 2 places we usually add to the visitor center: plank walk through reeds and over the marsh, and the peep wall onto the lake to see the birds. Both you have to walk a short distance to after parking, but we missed finding them this time. Our fault as I am sure they were there. We just missed them.

Wildlife is the main purpose. Quiet and natural.

Wildlife viewing and fishing.

Yes. My children had a wonderful opportunity to observe small insects on a wetland environment.

You get really close to habitats.

You see things you don't normally see.

Additional Comments (n = 23)

About climate change, I think it is slow enough that the animals will adapt themselves to it or migrate to a warmer or cooler area.

As a young man I came into the south end of DeSoto Bend after they cut the river. And it was one heck of a lake.

Comments are throughout the survey when questions brought the comment to mind. We enjoy visiting state and national parks and refuges wherever we travel! Favorite parks are Yosemite (CA), Muir Woods (CA), Rocky Mountain (CO), Grand Canyon (AZ), Tahoe area (CA), Branson area (MO), Fairfield Bay (AR), Dinosaur Park, etc. Also national parks back east, but those had more buildings than fields and nature.

Great place. How about boating? Boating and running used to be great.

I enjoy going to the DeSoto Refuge to watch the wildlife and to hunt. We have been going there for many years and have used the facility to hunt and fish. This year I felt very uncomfortable during hunting season because of the different styles of hunting going on. Some hunters used ground or tree stands while others walked the brush. I do not feel these two styles work together and are dangerous. The refuge needs to look at policy and rules for how to hunt! The hunting season following the one I was in, a gentlemen lost his life in a hunting accident. I'm not sure of the reason but feel the two styles of hunting may have contributed to it.

I enjoyed my trip to DeSoto Bend. Thanks!

I found the displays much more fascinating than the refuge. We live only one hour from Montezuma WR near Syracuse NY so we probably expected too much wildlife.

I really didn't stay the day, I was there walking the trails. I found out the geese changed their route of migration. That was my purpose of the visit. I love how they are fixing it up. Maybe someday the geese will return.

I try to visit DeSoto Bend a couple of times per year. It is very well maintained in all areas and the staff are knowledgeable about any bird activity going on such as where to see eagles.

I will definitely go back as I found this refuge to be very unique and the personnel were very interesting.

I would just like the river to go down so we can get back over there to fish. (DeSoto is closed because of the river.)

I would like to reiterate my feelings about hunting which prevented my family from enjoying an annual trip to DeSoto Bend Refuge. The fact this hunt is scheduled for 2 of the 4 weekends in October indicates whomever planned this ridiculous idea cared more about hunters than wildlife lovers. I would like to know who is responsible for this decision; the park ranger was unable to tell me. This foolishness resulted in a death of a young man. I would like to know if this practice is going to discontinue after this tragedy. It is unfortunate because this was predictable by anyone with common sense. I would appreciate a full explanation. Thank you. (Name Signed)

It seems that refuges are still somewhat of a "secret" to the general public. One could go visit the refuge, not see much, and think that it was a waste of time. The refuge needs to become more inviting from the entrance, to the far corners, to newspapers, flyers, invitations, etc. The entrance could attract many more people by telling what is happening, what kinds of species are out now, future events, etc. Most people don't normally think about the environment and visiting the refuge, since it's presented as somewhat of a secret and not a big deal. It seems that the refuge could be the area leader in promoting the natural environment, outdoor classroom, and environmental education. The refuge does these things, but the general public I don't think feels "welcome." Connecting with the community seems to be the "life blood" of the refuge and its future. We need PR and marketing people to go to the communities around the state(s), around the area. A concession stand used to be on the refuge. I think that people would come over and spend more time if they were able to get a sandwich and/or a snack. Yes, I know again, this is vulnerable for a few reasons, but you have to admit that food brings people. It would create more jobs too. Live video feeds to the visitor center would create

interest in people about the refuge, and some people would possibly just come over for that, and people would watch it especially when weather conditions are not favorable. Wheelchair and elderly may enjoy this immensely. The video cameras could be placed in areas that would not disturb the environment and give access to areas that the public does not go. For many it's hard to get to the refuge during prime time viewing, early morning and evening, but a video feed could help with that. Also, the video could be made into a product to sell and could be rerun at different "viewing stations" at the visitor center.

Please continue to upgrade this facility as the observation platforms were in disrepair and under construction. This facility could use an infusion of money to make it a first class facility. The film could also use some updating. The employees were very friendly and courteous.

Please don't ever close down.

Please get the boat docks in early this year when the refuge opens for Spring. I will be there early for bow-fishing.

The number of visitors has been greatly reduced in the past 20 years as fishing, hunting, and bird watching has gone down every year. The crop fields are 6 foot weed patches.

The staff members were friendly and helpful.

We have enjoyed going to DeSoto Bend for many years. It is enjoyable having something like this so close to where I live so we can visit often.

We like: picnics, listening to the birds in the woods, short walks and hikes, refreshing our knowledge of the Bertrand. It was 5 and essential that I viewed the Missouri Dam map. I became familiar with the dams' location and names. I appreciated it so much. It got me paying attention, understanding, and looking for more info and learning more about this historic flood. Thanks.

Wonderful and well informed staff! I look forward to each visit!

Wonderful display of the Bertrand Stores! Absolutely wonderful! The park was closed due to a deer hunt so we weren't able to take the drive or go on any trails, but, we plan to on our next visit!
