



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

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

This Refuge is one of the most unique places to experience nature in its raw state. I can't imagine the Columbia Basin without the presence of McNary National Wildlife Refuge. Let us continue working together to keep this place beautiful.—Survey comment from visitor to McNary National Wildlife Refuge.



McNary National Wildlife Refuge. Photo Credit: Lamont Glass.

Contents

Acknowledgments	iv
Introduction	1
Organization of Results	1
Methods	2
Selecting Participating Refuges.....	2
Developing the Survey Instrument	2
Contacting Visitors	2
Interpreting the Results	4
Refuge Description.....	5
Sampling at This Refuge	7
Selected Survey Results	7
Visitor and Trip Characteristics.....	7
Visitor Spending in Local Communities	14
Visitor Opinions about This Refuge	15
Visitor Opinions about National Wildlife Refuge System Topics.....	20
Conclusion	24
References.....	24
Appendix A: Survey Frequencies for This Refuge.....	A-1
Appendix B: Visitor Comments for This Refuge	B-1

Figures

1.	Map of this refuge.....	6
2.	How visitors first learned or heard about this refuge.....	8
3.	Resources used by visitors to find their way to this refuge during this visit.....	9
4.	Number of visitors travelling to this refuge by residence.....	10
5.	Modes of transportation used by visitors to this refuge during this visit.	11
6.	Activities in which visitors participated during the past 12 months at this refuge.	12
7.	The primary activity in which visitors participated during this visit.....	13
8.	Use of the visitor center at this refuge..	13
9.	Overall satisfaction with this refuge during this visit.....	15
10.	Importance-satisfaction ratings of services and facilities provided at this refuge.....	17
11.	Importance-satisfaction ratings of recreational opportunities provided at this refuge.....	18
12.	Importance-satisfaction ratings of transportation-related features at this refuge.....	19
13.	Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future.....	21
14.	Visitors' personal involvement with climate change related to fish, wildlife and their habitats.....	22
15.	Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats.....	23

Tables

1.	Participating refuges in the 2010/2011 national wildlife refuge visitor survey.	3
2.	Sampling and response rate summary for this refuge.	7
3.	Influence of this refuge on visitors' decision to take this trip.	9
4.	Type and size of groups visiting this refuge.....	11
5.	Total visitor expenditures for this refuge expressed in dollars per person per day.	14

Acknowledgments

This study was commissioned by the U.S. Fish and Wildlife Service Division of Visitor Services and Communications Headquarters Office, Arlington, Virginia. The study design and survey instrument were developed collaboratively with representatives from U.S. Fish and Wildlife Service and researchers from the PASA Branch, U.S. Geological Survey. For their support and input to the study, we would like to thank Kevin Kilcullen, Chief of Visitor Services; Steve Suder, National Transportation Coordinator; Regional Office Visitor Services Chiefs and Transportation Coordinators; and the staff and any volunteers at McNary NWR who assisted with the implementation of this surveying effort. The success of this effort is largely a result of their dedication to the refuge and its resources as well as to the people who come to explore these unique lands. We also would like to thank the following PASA team members for their hard work throughout the surveying effort, which has included (among *many* things) the arduous tasks of stuffing more than 20,000 envelopes, managing multiple databases, and preparing numerous reports: Shannon Conk, Halle Musfeldt, Phadrea Ponds, Gale Rastall, Margaret Swann, Emily Walenza, and Katie Walters.

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 McNary 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 McNary 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 McNary National Wildlife Refuge

Located in southeastern Washington, McNary NWR is an important resting place for migratory birds along the Pacific Flyway. The refuge covers 15,000 acres, consisting of sloughs, ponds, streams and islands, as well as upland shrub-steppe and riparian woods. Management of this refuge is dedicated primarily to waterfowl. Up to half of the mallards traveling along the Pacific Flyway winter in McNary NWR and its surrounding area. McNary NWR is particularly important to Canada geese, mallards, and widgeons. In addition, green-winged teal, shoveler, canvasback, ring-necked and lesser scaup ducks also flock to the refuge for food and shelter. The refuge is also home to Chinook, steelhead and sockeye salmon, as well as deer, pheasant, quail and burrowing owls.

Around 700 acres of the refuge are irrigated croplands. Under a cooperative agreement, the refuge purchases a share of the crop, which is in turn left on the fields for wildlife. Farmers grow corn, wheat, and alfalfa which provide high energy food for migrating waterfowl. In additional efforts to provide wildlife habitat, the refuge also takes part in controlled burns, removal of exotic species, and planting native grasses, cottonwoods and willows.

Around 66,000 visitors come to McNary NWR each year (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.). Visitors come to the refuge for a wide variety of activities including bird watching, hiking, boating, fishing and hunting. In 2008, the refuge opened the McNary Environmental Education Center. Up to 60 students at a time can participate in nature walks, hands-on science activities and other educational programs. Much of this effort has been supported by volunteers and the local Friends of the Mid-Columbia River Refuges. Figure 1 depicts a map of McNary NWR. For more information, please visit <http://www.fws.gov/mcnary/index.html>.

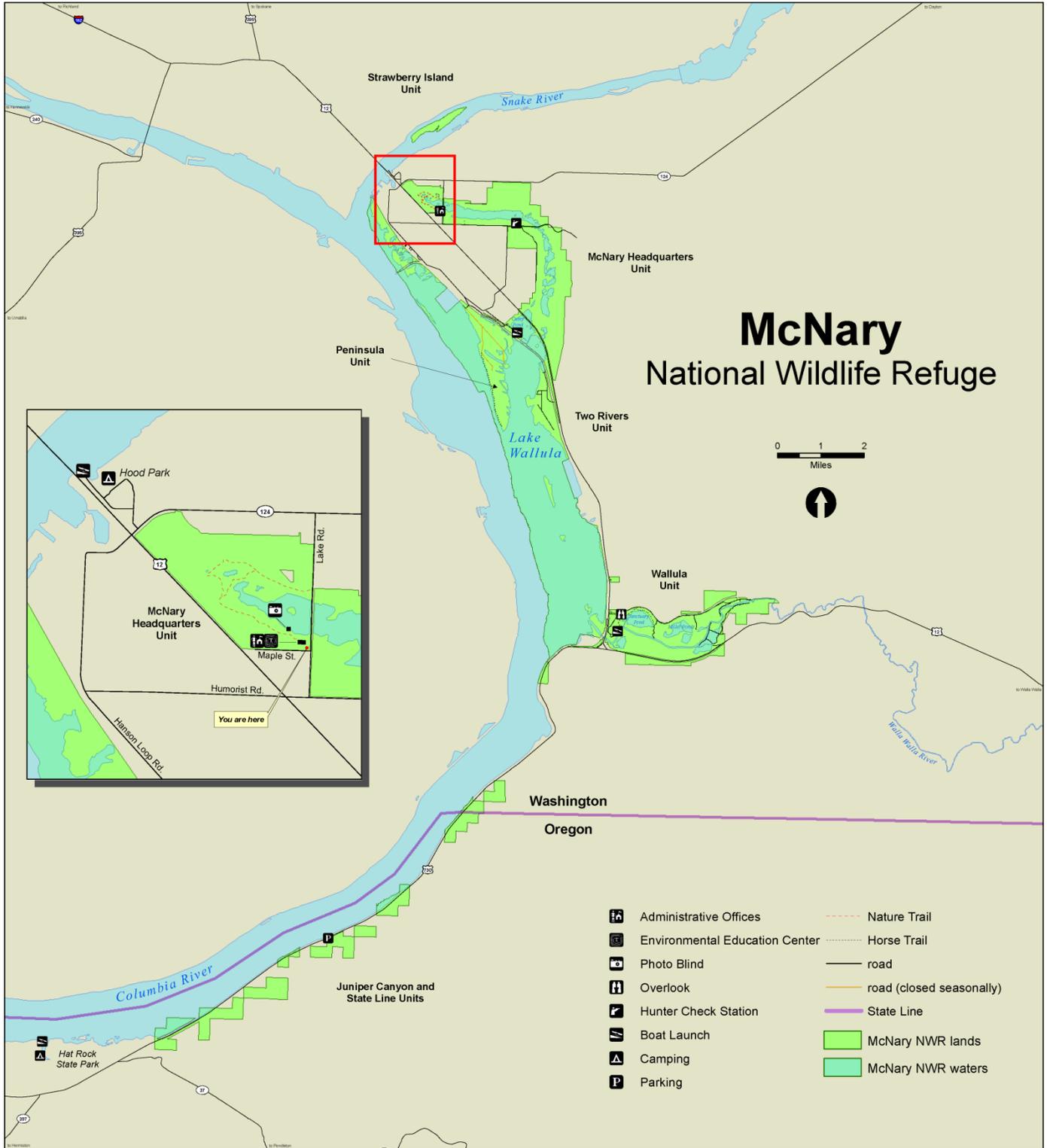


Figure 1. Map of McNary NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at McNary National Wildlife Refuge

A total of 198 visitors agreed to participate in the survey during the two sampling periods at the identified locations at McNary NWR (table 2). In all, 144 visitors completed the survey for a 75% response rate and $\pm 6\%$ margin of error at the 95% confidence level.¹

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

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	11/6/10 to 11/20/10	Refuge Headquarters Hunter Check Station Roaming Visitor Intercepts	95	1	73	78%
2	4/2/11 to 4/16/11	Refuge Headquarters	103	6	71	73%
Total			198	7	144	75%

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 McNary 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 (87%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (91%). Positive responses to these questions concerning the management and mission of the Refuge System do not indicate the degree to which these visitors understand the day-to-day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why. Compared to other public lands, many visitors feel that refuges provide a unique

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).

recreation experience (87%; 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. Most visitors to McNary NWR had been to at least one other National Wildlife Refuge in the past year (64%), with an average of 4 visits to other refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (36%) had only been to McNary NWR once in the past 12 months, while most had been multiple times (64%). These repeat visitors went to the refuge an average of 9 times during that same 12-month period. Visitors used the refuge during only one season (51%), during multiple seasons (33%), and year-round (16%).

Most visitors first learned about the refuge from friends/relatives (45%), people in the local community (20%), signs on the highway (16%); or refuge printed information (15%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (50%), signs on highways (38%), directions from friends/family (19%); or directions from refuge website (17%; fig. 3).

Most visitors (86%) lived in the local area (within 50 miles of the refuge), whereas 14% were nonlocal visitors. For most local visitors, McNary NWR was the primary purpose or sole destination of their trip (87%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of their trip (44%). Local visitors (n = 124) reported that they traveled an average of 21 miles to get to the refuge, while nonlocal visitors (n = 20) traveled an average of 217 miles. *It is important to note that summary statistics based on a small sample size (n < 30) may not provide a reliable representation of the population.* Figure 4 shows the residence of visitors travelling to the refuge. About 97% of visitors travelling to McNary NWR were from the state of Washington.

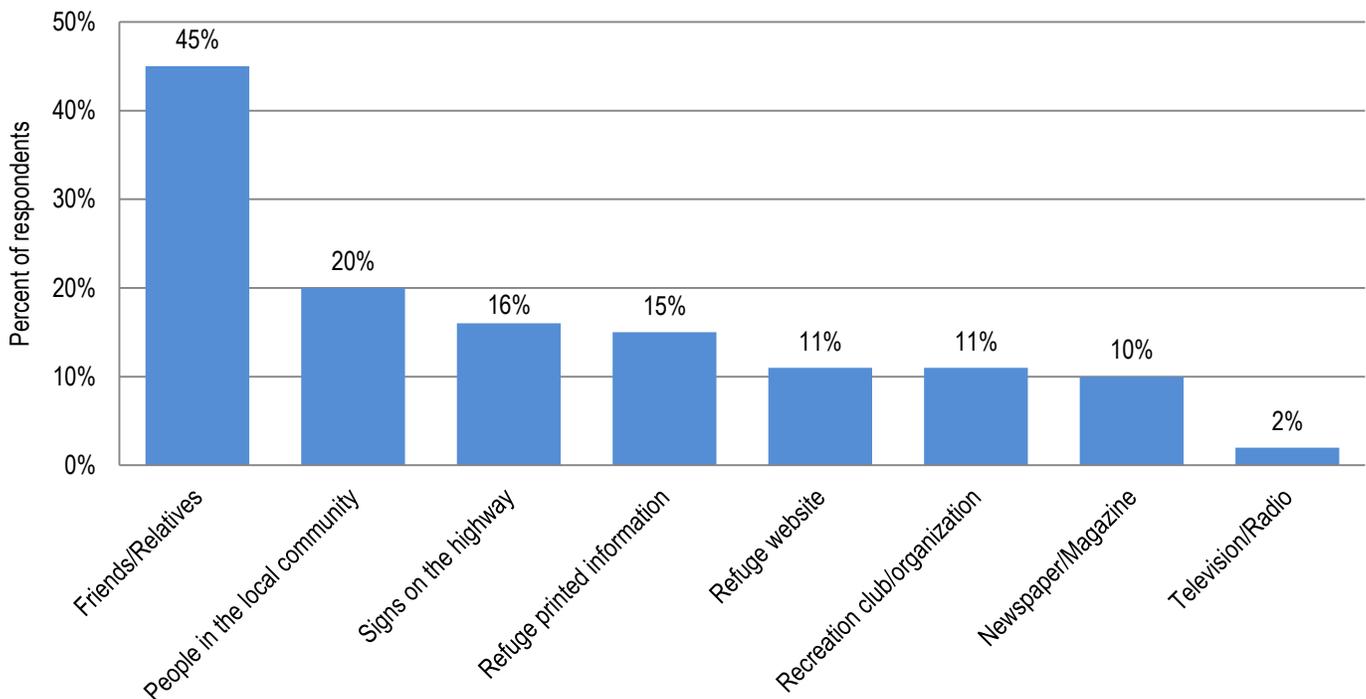


Figure 2. How visitors first learned or heard about McNary NWR (n = 141).

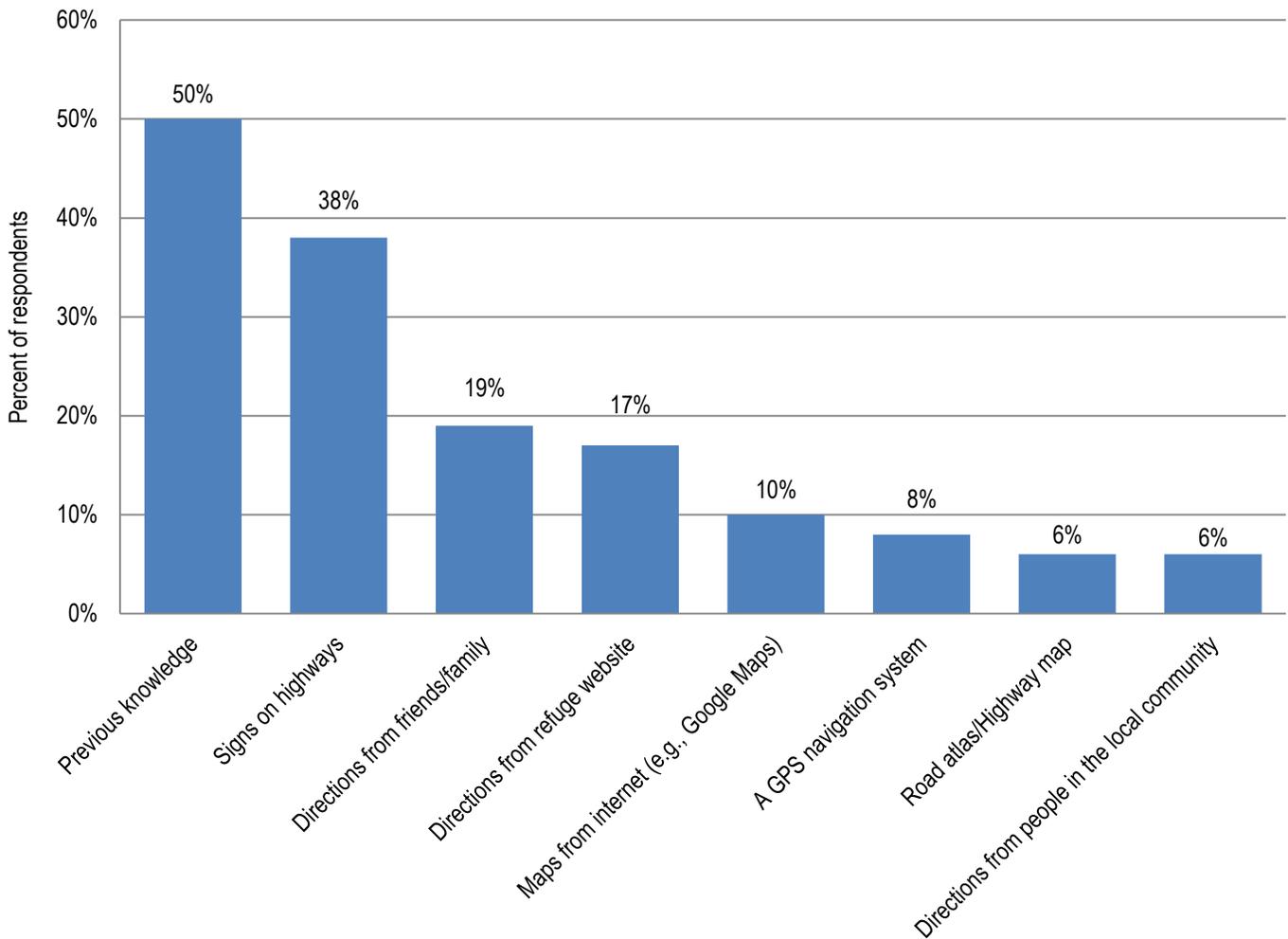


Figure 3. Resources used by visitors to find their way to McNary NWR during *this* visit (n = 143).

Table 3. Influence of McNary 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	45%	33%	22%
Local	87%	7%	6%
Total	81%	11%	8%

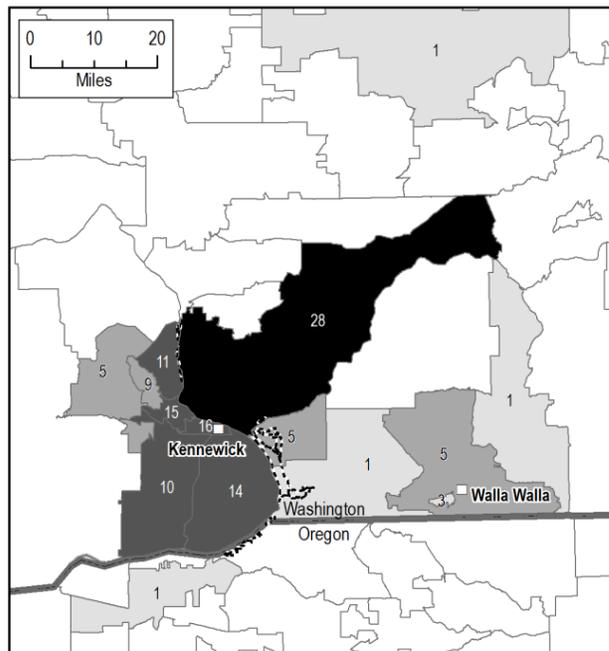
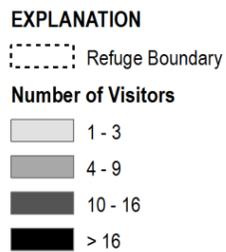


Figure 4. Number of visitors travelling to McNary NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 144).

Surveyed visitors reported that they spent an average of 4 hours at McNary 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 (20%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (76%) and walking/hiking (26%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (66%), travelling primarily with family and friends (table 4).

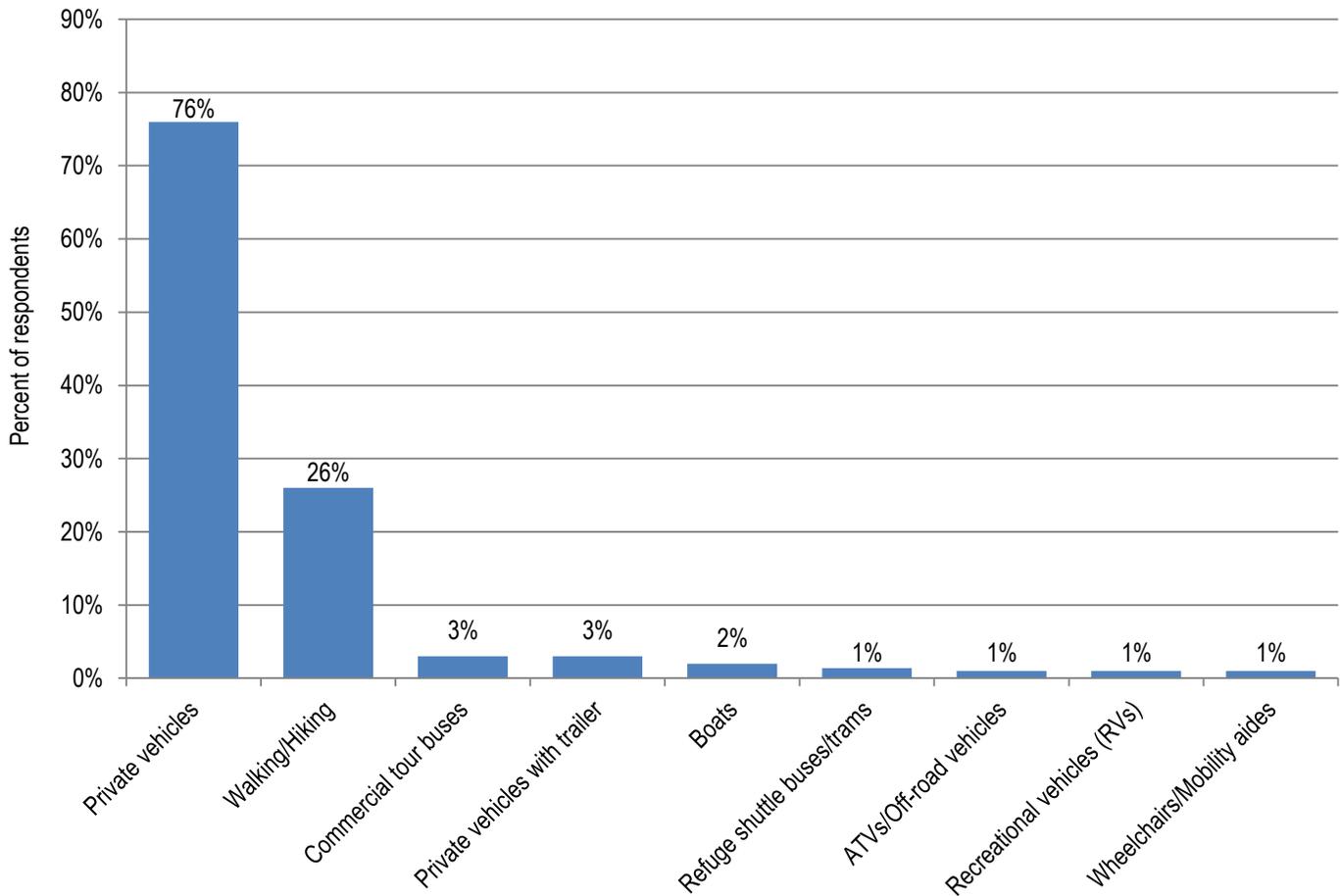


Figure 5. Modes of transportation used by visitors to McNary NWR during *this* visit (n = 143).

Table 4. Type and size of groups visiting McNary NWR (for those who indicated they were part of a group, n = 95).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	60%	2	1	3
Commercial tour group	0%	0	0	0
Organized club/School group	29%	10	40	50
Other group type	11%	8	5	13

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were bird watching (58%), wildlife observation (50%), and interpretation (32%). The primary reasons for their most recent visit included hunting (26%), bird watching (18%), and environmental education (16%; fig. 7). The visitor center was used by 80% of visitors, mostly to view the exhibits (78%), ask information of staff/volunteers (68%), and stop to use the facilities (for example, get water, use restroom; 42%; fig. 8).

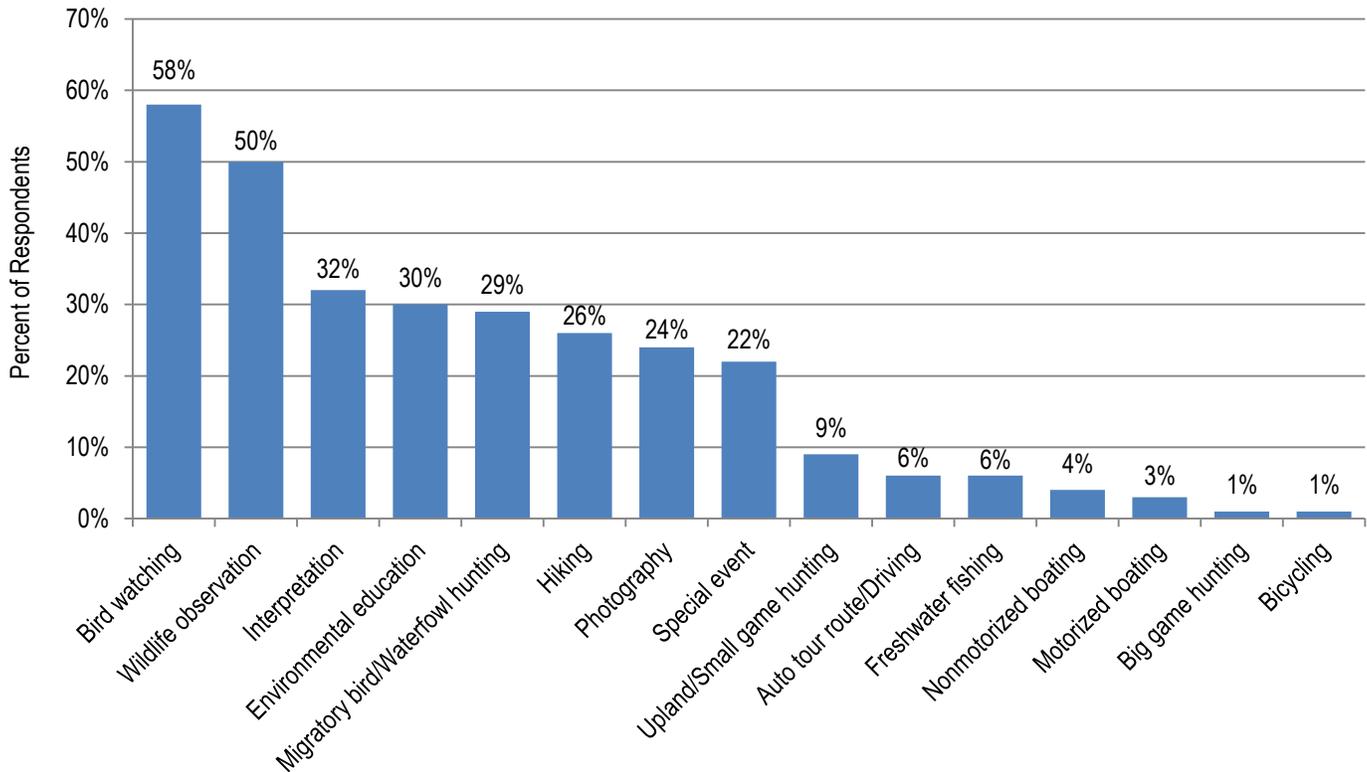


Figure 6. Activities in which visitors participated during the past 12 months at McNary NWR (n = 141). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (98%) surveyed visitors to McNary 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 50% male with an average age of 52 years and 50% female with an average age of 51 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$75,000–\$99,000. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

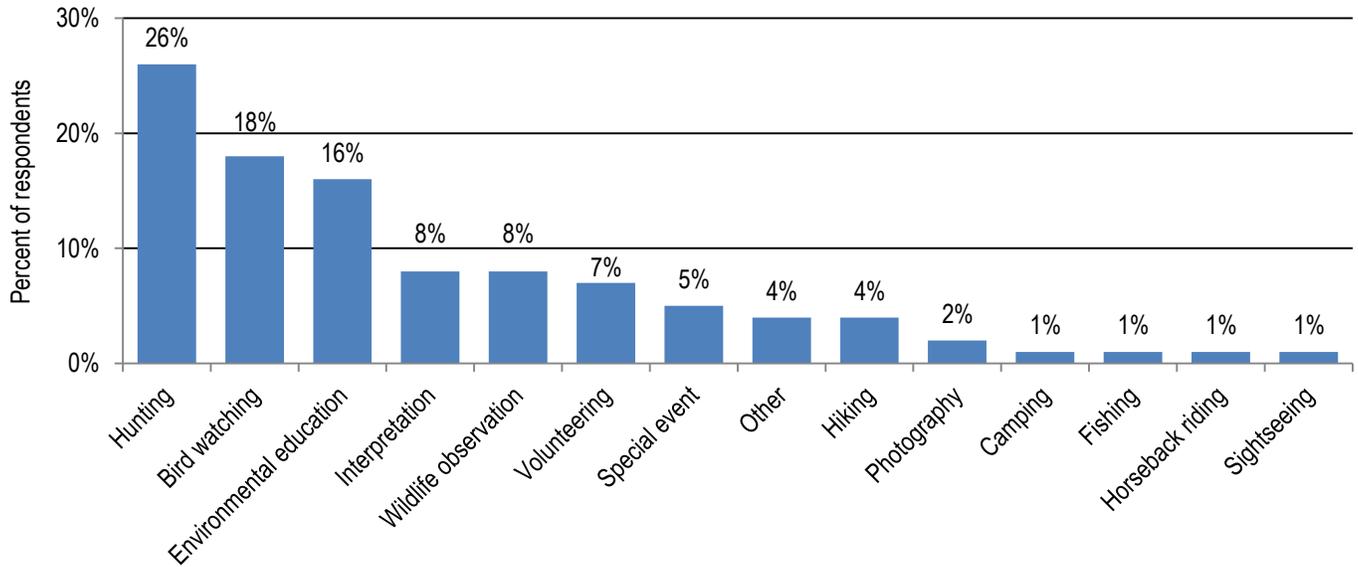


Figure 7. The primary activity in which visitors participated during *this* visit to McNary NWR (n = 134). See Appendix B for a listing of “other” activities.

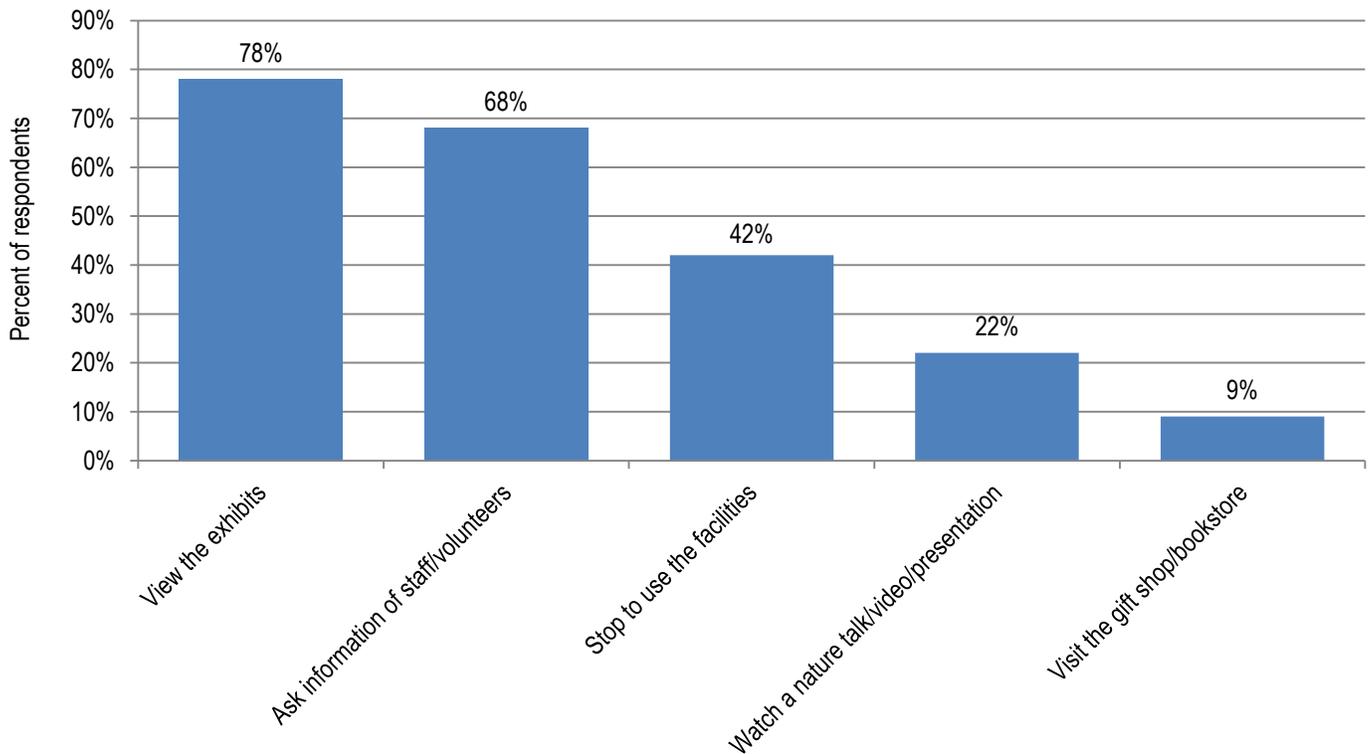


Figure 8. Use of the visitor center at McNary NWR (for those visitors who indicated they used the visitor center, n = 114).

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, 86% of surveyed visitors to McNary NWR indicated that they live within the local area. Nonlocal visitors (14%) stayed in the local area, on average, for 3 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. ***It is important to note that summary statistics based on a small sample size ($n < 30$) may not provide a reliable representation of that population.*** During the two sampling periods, nonlocal visitors spent an average of \$100 per person per day and local visitors spent an average of \$26 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 McNary NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	17	\$55	\$100	\$135	\$3	\$475
Local	94	\$10	\$26	\$38	\$0	\$200

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 McNary NWR were as follows (fig. 9):

- 87% were satisfied with the recreational activities and opportunities,
- 89% were satisfied with the information and education about the refuge and its resources,
- 91% were satisfied with the services provided by employees or volunteers, and
- 88% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 22% (n = 31) of visitors indicated that they paid a fee to enter McNary NWR, the refuge, does not charge an entrance fee. The refuge does have a fee for hunting on some areas; it may be that visitors were referring to that fee when answering the question.

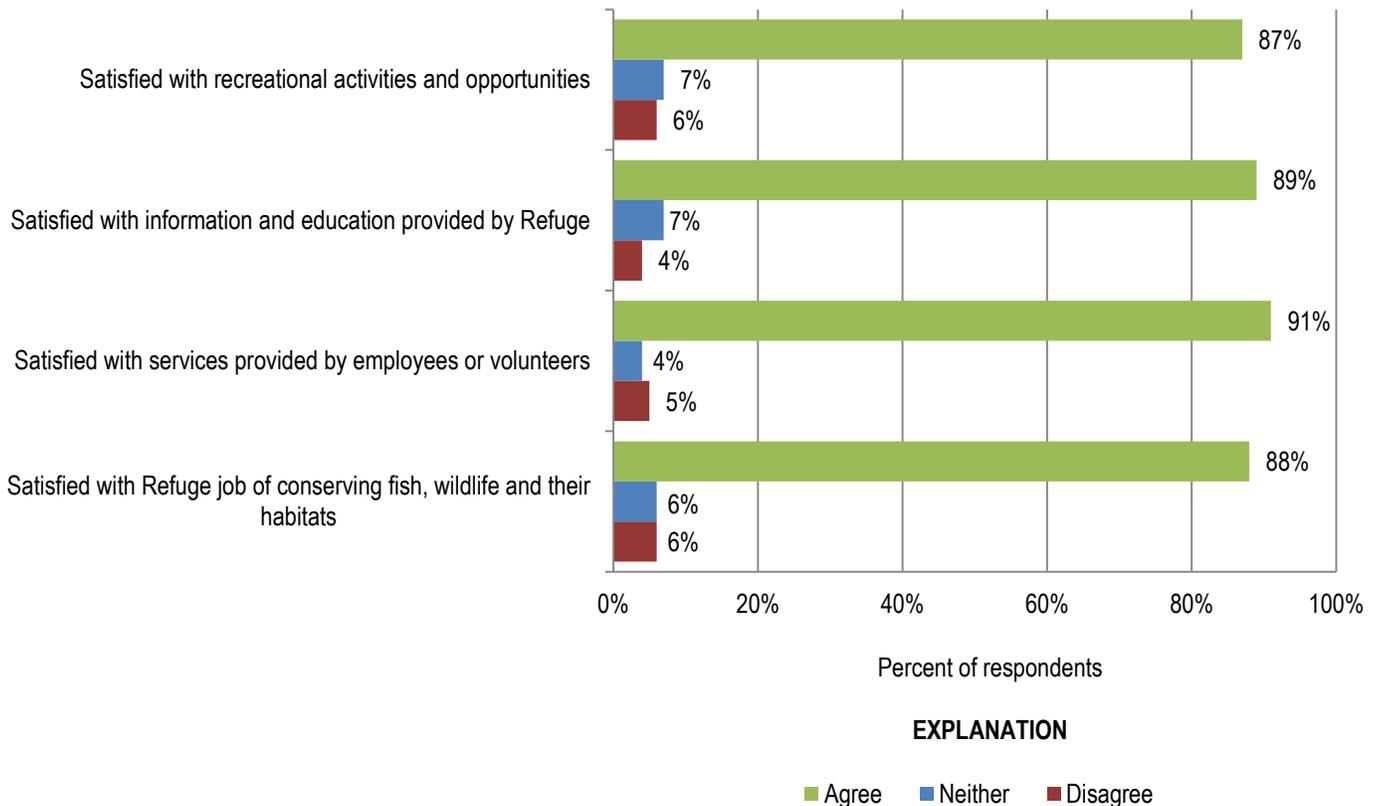


Figure 9. Overall satisfaction with McNary NWR during this visit (n ≥ 137).

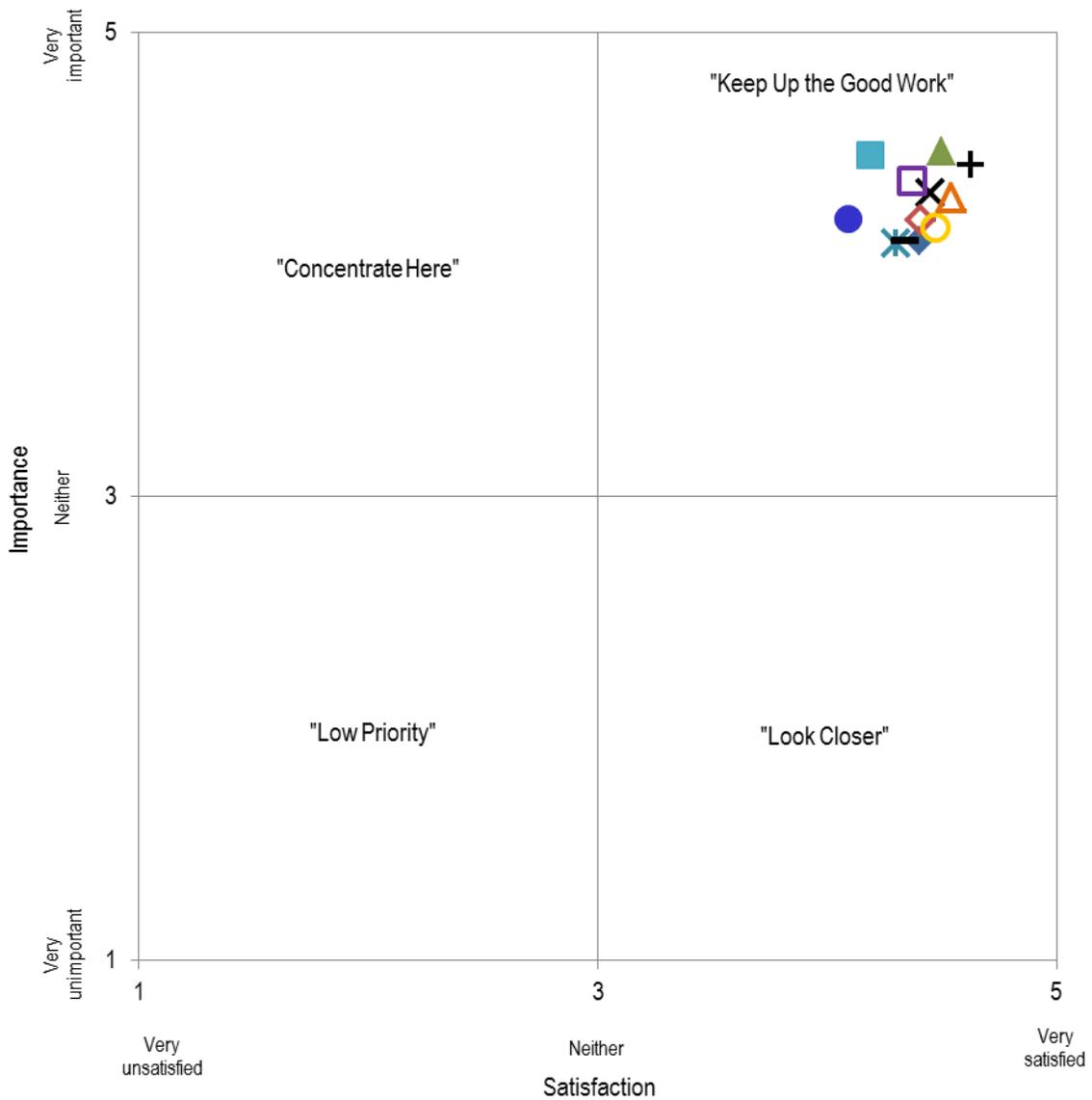
Importance/Satisfaction Ratings

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 McNary NWR. This consideration is especially important when reviewing the attributes that fall into the "Look Closer" quadrant. In some cases, these attributes may represent specialized recreational activities in which a small subset of visitors participate (for example, hunting, kayaking) or facilities and services that only some visitors experience (for example, exhibits about the refuge). For these visitors, the average importance of (and potentially the satisfaction with) the attribute may be much higher than it would be for the overall population of visitors.

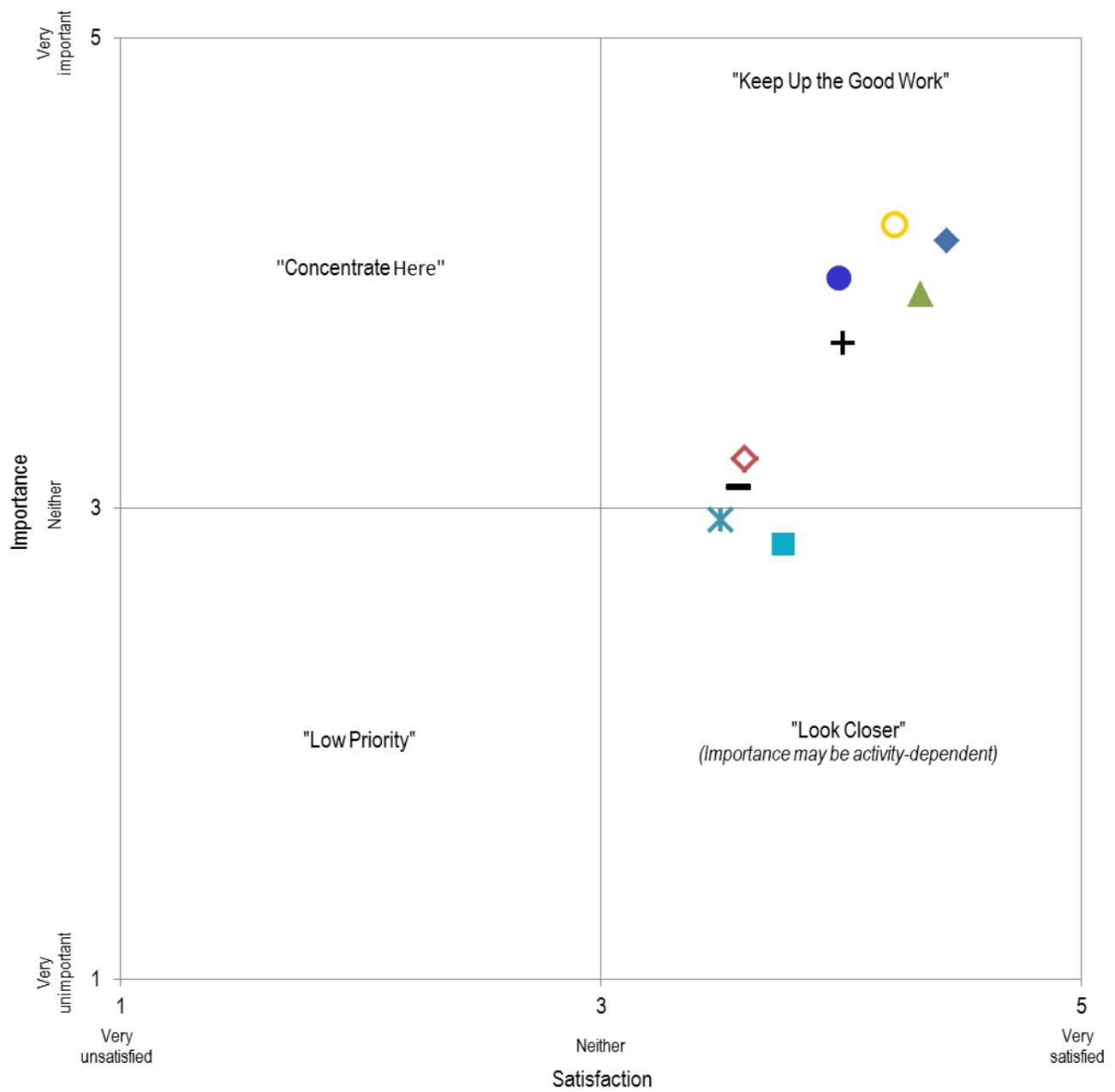
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at McNary NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except fishing and hunting opportunities, which fell into the "Look Closer" quadrant (fig. 11). The average importance for hunting opportunities in the "Look Closer" quadrant was much higher among visitors who indicated they participated in this activity (n = 40; mean importance score = 4.7), as compared to visitors who did not participate in hunting at all (mean importance score = 2.0). The average importance of fishing activities may be higher among visitors who have participated in this activity during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants. All transportation-related features fell in the "Keep Up the Good Work" quadrant (fig. 12).



EXPLANATION

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

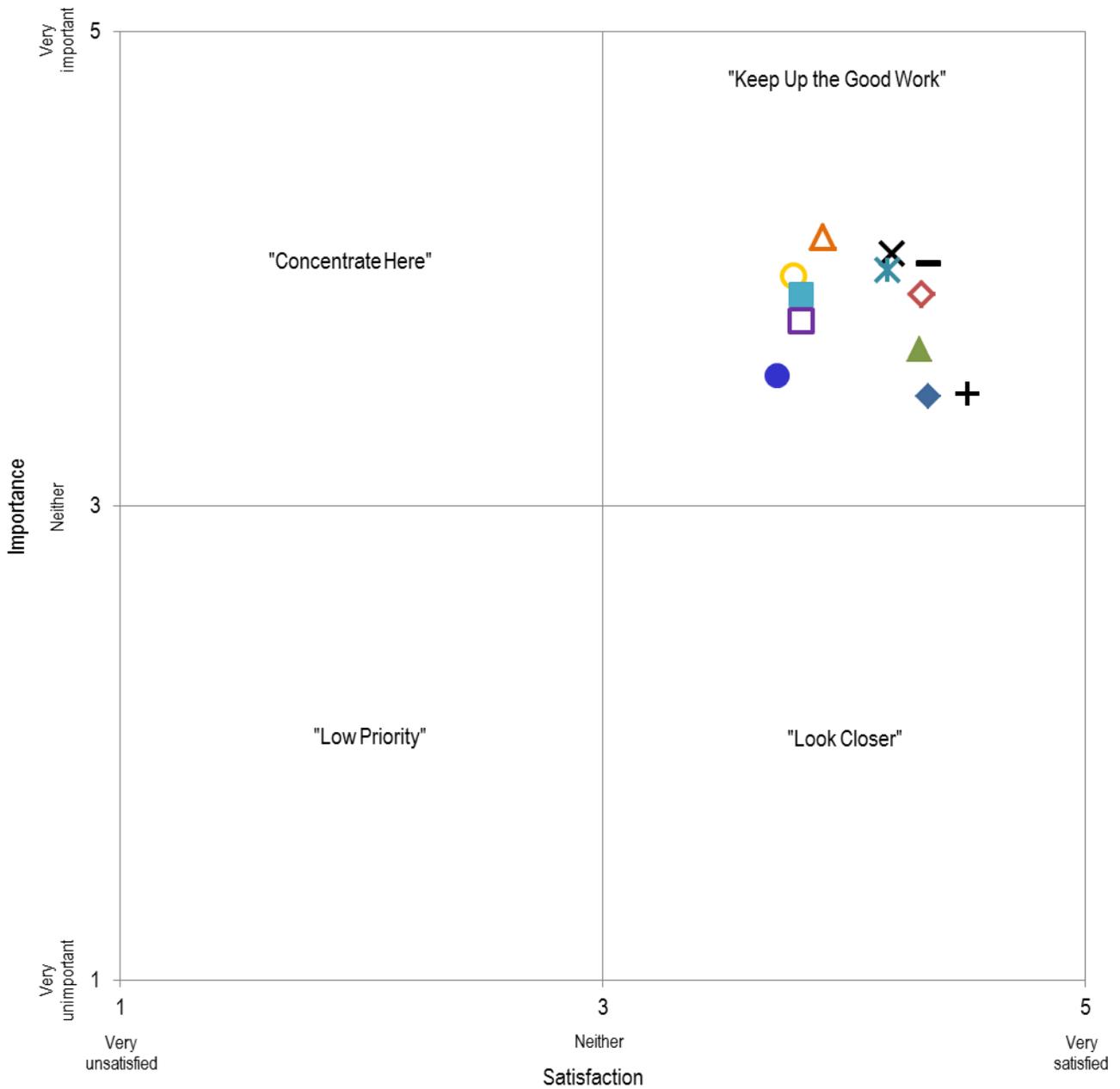
Figure 10. Importance-satisfaction ratings of services and facilities provided at McNary NWR.



EXPLANATION

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

Figure 11. Importance-satisfaction ratings of recreational opportunities provided at McNary NWR.



EXPLANATION

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

Figure 12. Importance-satisfaction ratings of transportation-related features at McNary 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 McNary 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 McNary NWR visitors who were surveyed were likely to use the following options at McNary national wildlife refuges in the future (fig. 13):

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

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. 13).

When asked about using alternative transportation at McNary NWR specifically, 33% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (29%) and others thought it would not (38%).

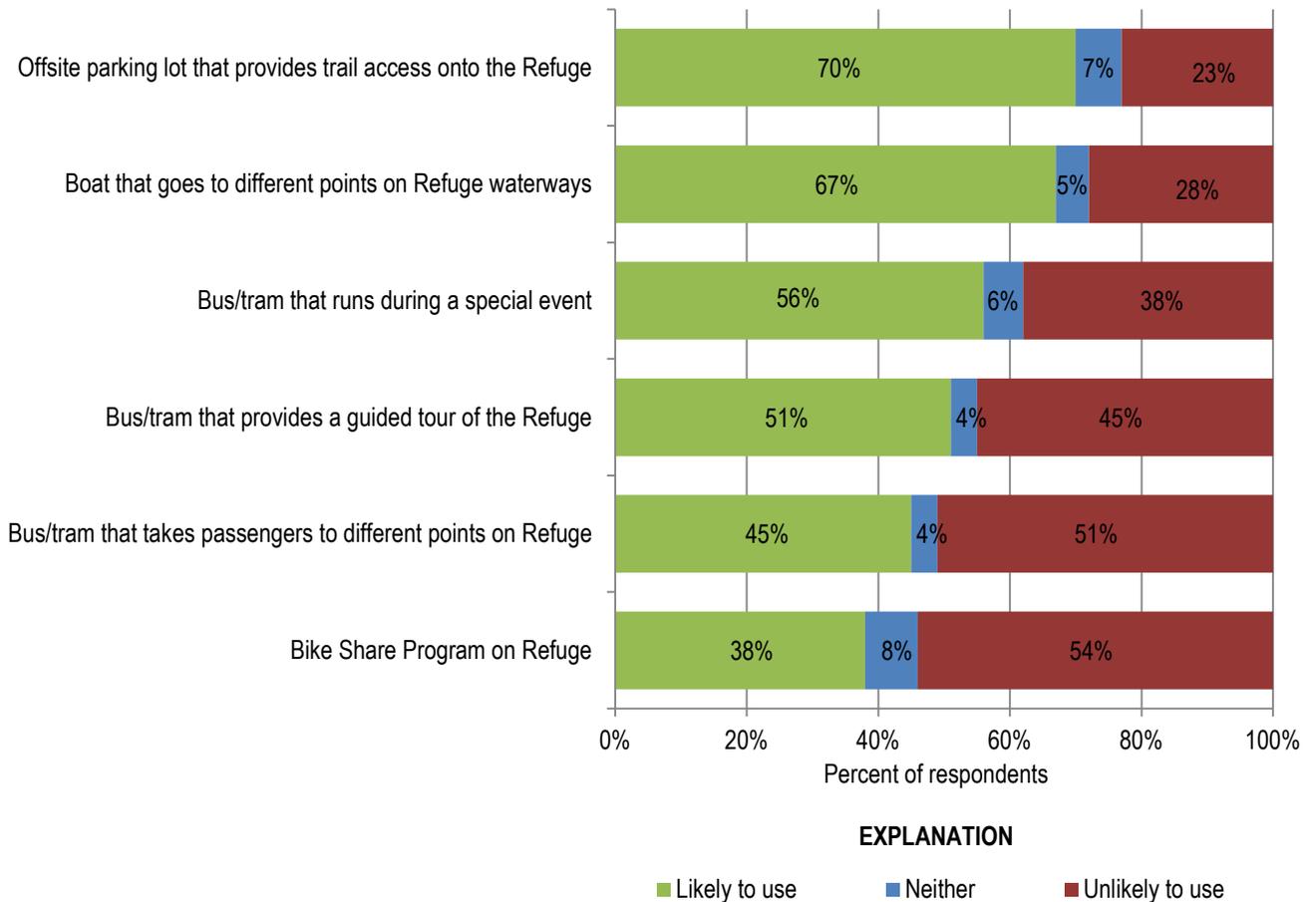


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 138).

Climate Change and the National Wildlife Refuge System

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

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

baseline information on visitors’ levels of involvement with the topic of climate change related to fish, wildlife and their habitats. The majority of surveyed visitors to McNary NWR agreed with the following statements (fig. 14):

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

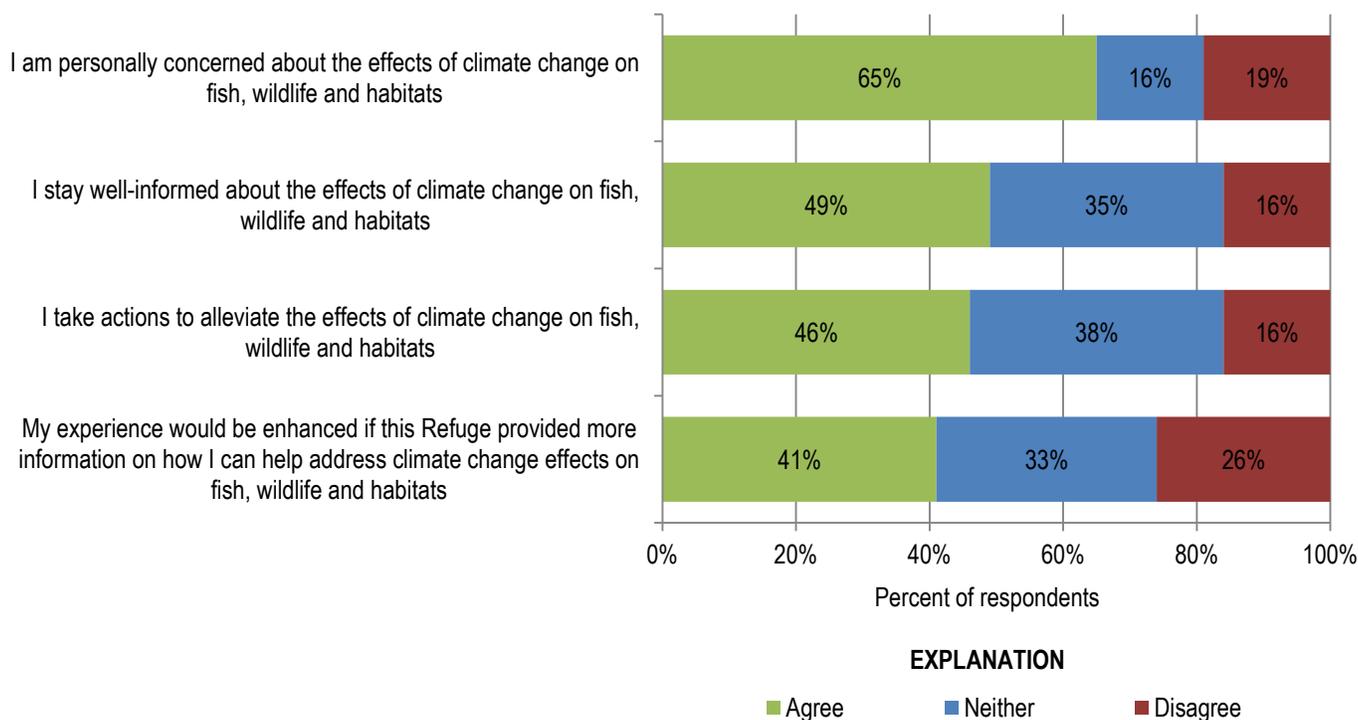


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 136).

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 McNary NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 15):

- “It is important to consider the economic costs and 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 some visitors (41%) indicated that their experience would be enhanced if McNary NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 14), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.

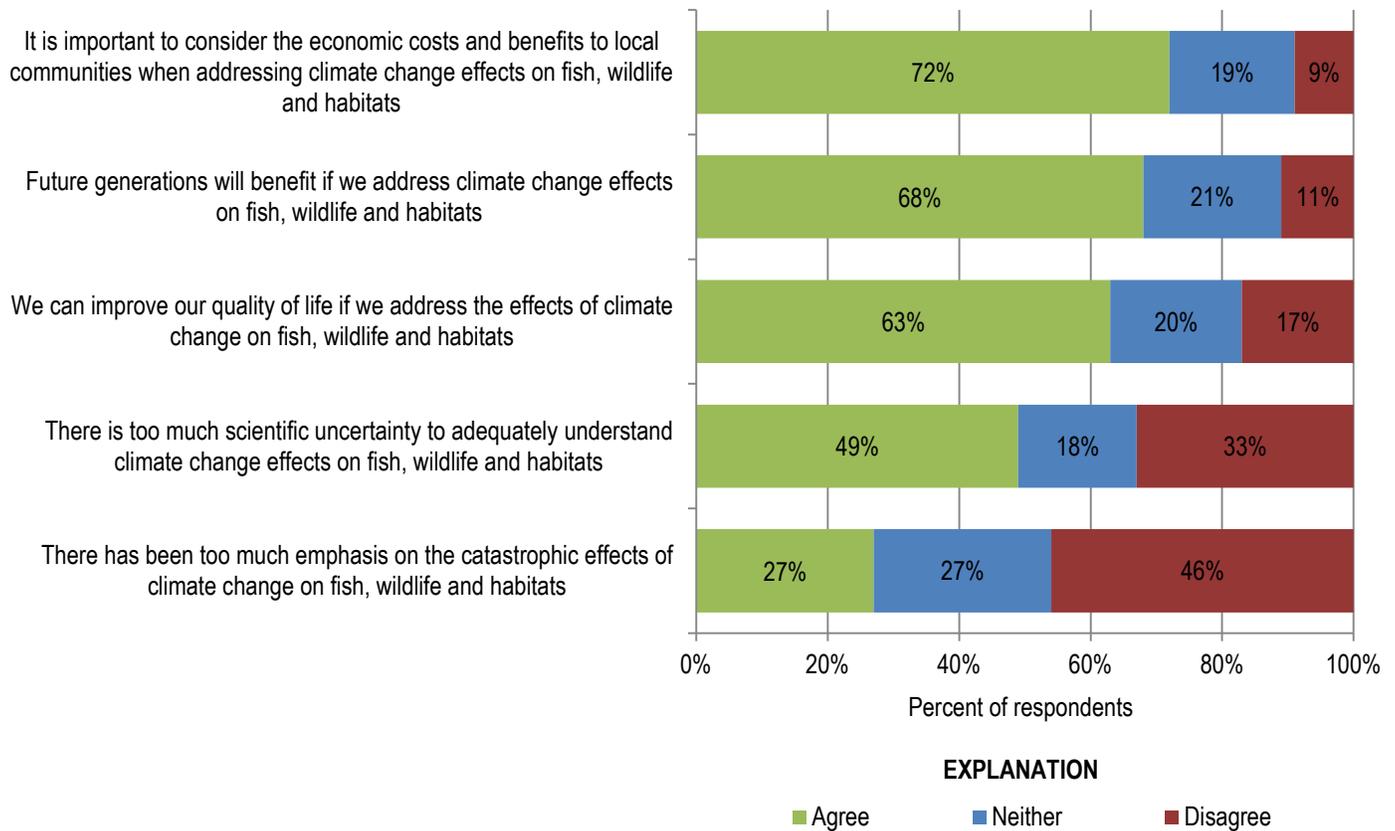


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 134).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to McNary 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.

References

- Bruyere, B.L., Rodriguez, D.A., and Vaske, J.J., 2002, Enhancing importance-performance analysis through segmentation: *Journal of Travel and Tourism Marketing*, v. 12, no. 1, p. 81-95.
- Carver, E., and Caudill, J., 2007, Banking on nature 2006: The economic benefits to local communities of National Wildlife Refuge visitation: U.S. Fish and Wildlife Service, Division of Economics, Washington, D.C., 372 p., accessed September 30, 2011, at http://www.fws.gov/refuges/about/msWord/BankingonNature_2006_11-23.doc.
- Clark, J.R., 2001, Mission and Goals (National Fish and Wildlife Service Director's Order #132–601 FW1), accessed November 18, 2011 at http://www.fws.gov/refuges/policiesandbudget/HR1420_missionGoals.html.
- Dillman, D.A., 2007, Mail and Internet surveys: The tailored design method. (2nd ed.): Hoboken, N.J., John Wiley and Sons, Inc., 523 p.
- Krechmer, D., Grimm, L., Hodge, D., Mendes, D., and Goetzke, F., 2001, Federal lands alternative transportation systems study – Volume 3 – Summary of national ATS needs: prepared for Federal Highway Administration, and Federal Transit Administration in association with National Park Service, Bureau of Land Management, and U.S. Fish and Wildlife Service, 80 p. (Also available at http://www.fta.dot.gov/documents/3039_study.pdf.)
- Leiserowitz, A, Maibach, E., and Roser-Renouf, C., 2008, Global warming's six Americas: An audience segmentation: New Haven, Conn., Yale University.
- Martilla, J.A., and James, J.C., 1977, Importance-performance analysis: *Journal of Marketing*, v. 41, p. 77–79.
- Nisbet, M.C., 2009, Communicating climate change: Why frames matter for public engagement: *Environment*, v. 51, p. 12-23.
- Salant, P., and Dillman, D.A., 1994, How to conduct your own study: New York, N.Y., John Wiley and Sons, Inc.

- Sexton, N.R., Dietsch, A.M., Don Carlos, A.W., Koontz, L., Solomon, A. and Miller, H., 2011, National wildlife refuge visitor survey 2010/2011: Individual refuge results: U.S. Geological Survey Data Series 643.
- Stynes, D.J., 2008, National Park visitor spending and payroll impacts, 2007: East Lansing, Mich., Michigan State University, Department of Community, Agriculture, Recreation and Resource Studies.
- Tarrant, M.A., and Smith, E.K., 2002, The use of a modified importance-performance framework to examine visitor satisfaction with attributes of outdoor recreation settings: *Managing Leisure*, v. 7, no. 2, p. 69–82.
- Uniack, T., 1999, The citizen's wildlife refuge planning handbook: Charting the future of conservation on the National Wildlife Refuge near you: Defenders of Wildlife, Washington, D.C., accessed April 2010 at http://www.defenders.org/resources/publications/programs_and_policy/habitat_conservation/federal_lands/citizen's_wildlife_refuge_planning_handbook.pdf.
- U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau, 2007, 2006 National survey of fishing, hunting, and wildlife-associated recreation: U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C., 168 p.
- U.S. Fish and Wildlife Service, 2007, America's national wildlife refuges, Fact Sheet, last updated July 31, 2007.
- U.S. Fish and Wildlife Service, 2010, Rising to the urgent challenge: Strategic plan for responding to accelerating climate change: U.S. Fish and Wildlife Service, Division of Refuges, Washington, D.C., 32 p., accessed April 2011 at <http://www.fws.gov/home/climatechange/pdf/CCStrategicPlan.pdf>.
- Vaske, J.J., Beaman, J., Stanley R., and Grenier, M., 1996, Importance-performance and segmentation: Where do we go from here?: *in* Fesenmaier, D.R., O'Leary, J.T., and Uysal, M., eds., *Recent advances in tourism marketing research*: New York, The Haworth Press, Inc., p. 225-240.
- Wade, D.J. and Eagles, P.F.J., 2003, The use of importance-performance analysis and market segmentation for tourism management in parks and protected areas: An application to Tanzania's National Parks: *Journal of Ecotourism*, v. 2, no. 3, p. 196-212.

This page left intentionally blank.

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"/> 1% Big game hunting | <input type="checkbox"/> 26% Hiking | <input type="checkbox"/> 30% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 9% Upland/Small-game hunting | <input type="checkbox"/> 1% Bicycling | |
| <input type="checkbox"/> 29% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 6% Auto tour route/Driving | <input type="checkbox"/> 22% Special event (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 50% Wildlife observation | <input type="checkbox"/> 3% Motorized boating | |
| <input type="checkbox"/> 58% Bird watching | <input type="checkbox"/> 4% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 13% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 6% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 32% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 2% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 24% 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?

- 20% No
- 80% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 9% Visit the gift shop or bookstore | <input type="checkbox"/> 22% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 78% View the exhibits | <input type="checkbox"/> 42% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 68% Ask information of staff/volunteers | <input type="checkbox"/> 14% 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	
44%	87%	81%	It was the primary purpose or sole destination of my trip.
33%	7%	11%	It was one of many equally important reasons or destinations for my trip.
22%	6%	8%	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 217 number of miles

Local 21 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?

34% No (*skip to question #9*)

66% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

60% Family and/or friends

29% Organized club or school group

0% Commercial tour group

11% Other (*please specify*) See Appendix B

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

5 number 18 years and over

11 number 17 years and under

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

45% Friends or relatives

11% Refuge website

16% Signs on highway

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

11% Recreation club or organization

2% Television or radio

20% People in the local community

10% Newspaper or magazine

15% Refuge printed information (brochure, map)

20% 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.***)

61% Spring
(March-May)

29% Summer
(June-August)

58% Fall
(September-November)

40% 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? 3 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"/> 76% | Private vehicle without a trailer | <input type="checkbox"/> 1% | Refuge shuttle bus or tram | <input type="checkbox"/> 0% | Bicycle |
| <input type="checkbox"/> 3% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 0% | Motorcycle | <input type="checkbox"/> 26% | Walk/Hike |
| <input type="checkbox"/> 3% | Commercial tour bus | <input type="checkbox"/> 1% | ATV or off-road vehicle | <input type="checkbox"/> 10% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 1% | Recreational vehicle (RV) | <input type="checkbox"/> 2% | 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"/> 38% | Signs on highways | <input type="checkbox"/> 17% | Directions from Refuge website |
| <input type="checkbox"/> 8% | A GPS navigation system | <input type="checkbox"/> 6% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 6% | A road atlas or highway map | <input type="checkbox"/> 19% | Directions from friends or family |
| <input type="checkbox"/> 10% | 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"/> 6% | 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"/> 43%	<input type="checkbox"/> 8%	<input type="checkbox"/> 4%	<input type="checkbox"/> 25%	<input type="checkbox"/> 20%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 42%	<input type="checkbox"/> 12%	<input type="checkbox"/> 8%	<input type="checkbox"/> 22%	<input type="checkbox"/> 15%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 37%	<input type="checkbox"/> 8%	<input type="checkbox"/> 4%	<input type="checkbox"/> 29%	<input type="checkbox"/> 22%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 23%	<input type="checkbox"/> 6%	<input type="checkbox"/> 5%	<input type="checkbox"/> 33%	<input type="checkbox"/> 33%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 33%	<input type="checkbox"/> 5%	<input type="checkbox"/> 6%	<input type="checkbox"/> 34%	<input type="checkbox"/> 21%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 18%	<input type="checkbox"/> 4%	<input type="checkbox"/> 7%	<input type="checkbox"/> 30%	<input type="checkbox"/> 40%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 7%	<input type="checkbox"/> 0%	<input type="checkbox"/> 0%	<input type="checkbox"/> 27%	<input type="checkbox"/> 67%

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

- 29% Yes 38% No 33% 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
8%	15%	14%	50%	14%	Surface conditions of roads	6%	3%	4%	24%	63%	NA
8%	15%	13%	50%	14%	Surface conditions of parking areas	5%	2%	5%	17%	72%	NA
8%	8%	23%	30%	30%	Condition of bridges	3%	0%	23%	10%	64%	NA
4%	6%	9%	43%	38%	Condition of trails and boardwalks	6%	5%	6%	31%	52%	NA
5%	6%	9%	44%	36%	Number of places for parking	7%	5%	5%	29%	54%	NA
9%	7%	20%	47%	17%	Number of places to pull over along Refuge roads	3%	14%	17%	37%	28%	NA
9%	4%	15%	34%	38%	Safety of driving conditions on Refuge roads	3%	4%	8%	28%	57%	NA
7%	4%	12%	36%	41%	Safety of Refuge road entrances/exits	5%	2%	7%	24%	62%	NA
4%	8%	10%	44%	34%	Signs on highways directing you to the Refuge	7%	14%	8%	34%	37%	NA
7%	2%	15%	50%	27%	Signs directing you around the Refuge roads	5%	12%	15%	33%	36%	NA
4%	2%	10%	41%	42%	Signs directing you on trails	4%	10%	12%	37%	36%	NA
8%	10%	15%	28%	39%	Access for people with physical disabilities or who have difficulty walking	10%	9%	17%	20%	45%	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)?

86% Yes

14% No → How much time did you spend **in local communities** on this trip?

 5 number of hours OR 4 number of days

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

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

See Report for Results

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

 4 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
14%	32%	23%	7%	12%	1%	5%	1%	1%	2%	1%

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**.)*

0%	Far too low	3%	Too low	90%	About right	3%	Too high	3%	Far too high	78%	Did not pay a fee <i>(skip to Section 4)</i>
----	-------------	----	---------	-----	-------------	----	----------	----	--------------	-----	---

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

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

3%	Strongly disagree	3%	Disagree	10%	Neither agree or disagree	52%	Agree	32%	Strongly agree
----	-------------------	----	----------	-----	---------------------------	-----	-------	-----	----------------

SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	1%	5%	7%	38%	48%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	1%	4%	7%	30%	58%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	2%	3%	4%	28%	62%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	3%	3%	7%	25%	63%	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
4%	6%	6%	42%	41%	Availability of employees or volunteers	2%	6%	3%	26%	62%	NA
4%	1%	4%	30%	61%	Courteous and welcoming employees or volunteers	2%	3%	1%	20%	75%	NA
4%	0%	1%	31%	63%	Knowledgeable employees or volunteers	2%	4%	1%	27%	66%	NA
2%	1%	4%	46%	46%	Printed information about this Refuge and its resources (for example, maps and brochures)	4%	2%	2%	30%	63%	NA
2%	4%	12%	47%	35%	Informational kiosks/displays about this Refuge and its resources	3%	3%	11%	26%	57%	NA
1%	4%	9%	43%	42%	Signs with rules/regulations for this Refuge	4%	6%	13%	34%	44%	NA
2%	3%	10%	43%	42%	Exhibits about this Refuge and its resources	2%	2%	9%	29%	59%	NA
7%	2%	13%	30%	48%	Environmental education programs or activities	2%	4%	13%	21%	61%	NA
4%	4%	11%	36%	46%	Visitor Center	3%	1%	11%	18%	67%	NA
1%	1%	7%	32%	59%	Convenient hours and days of operation	2%	9%	5%	35%	49%	NA
5%	3%	3%	36%	53%	Well-maintained restrooms	3%	2%	2%	23%	70%	NA
4%	1%	3%	36%	56%	Wildlife observation structures (decks, blinds)	4%	6%	5%	21%	65%	NA
5%	5%	12%	28%	50%	Bird-watching opportunities	2%	1%	11%	25%	61%	NA
5%	2%	11%	31%	50%	Opportunities to observe wildlife other than birds	1%	4%	13%	35%	47%	NA
5%	8%	17%	32%	38%	Opportunities to photograph wildlife and scenery	1%	3%	15%	26%	55%	NA
40%	8%	12%	8%	32%	Hunting opportunities	6%	10%	21%	29%	34%	NA
30%	9%	20%	17%	23%	Fishing opportunities	8%	11%	33%	21%	27%	NA
5%	5%	13%	41%	36%	Trail hiking opportunities	1%	9%	18%	34%	38%	NA
17%	9%	27%	31%	16%	Water trail opportunities for canoeing or kayaking	1%	10%	44%	16%	29%	NA
19%	7%	32%	29%	13%	Bicycling opportunities	1%	8%	50%	13%	28%	NA
6%	8%	25%	30%	31%	Volunteer opportunities	2%	5%	23%	28%	41%	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?

87%

Yes

13%

No

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

91%

Yes

9%

No

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

87%

Yes

13%

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.	11%	8%	16%	36%	28%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	10%	7%	20%	37%	26%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	9%	24%	17%	30%	20%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	2%	14%	35%	39%	9%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	2%	7%	19%	53%	19%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	4%	13%	38%	35%	10%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	14%	32%	27%	17%	10%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	4%	7%	21%	34%	34%
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%	14%	33%	30%	11%

SECTION 6. A Little about You

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

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

98% Yes 2% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 50% Male 50% Female

3. In what year were you born? 1959 (YYYY)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					1%			12%				49%				38%			

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

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

- 5% American Indian or Alaska Native 0% Black or African American 98% White
 1% Asian 0% Native Hawaiian or Pacific Islander

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

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

- | | | |
|---|--|--|
| <input type="checkbox"/> 2% Less than \$10,000 | <input type="checkbox"/> 13% \$35,000 - \$49,999 | <input type="checkbox"/> 21% \$100,000 - \$149,999 |
| <input type="checkbox"/> 5% \$10,000 - \$24,999 | <input type="checkbox"/> 23% \$50,000 - \$74,999 | <input type="checkbox"/> 5% \$150,000 - \$199,999 |
| <input type="checkbox"/> 5% \$25,000 - \$34,999 | <input type="checkbox"/> 24% \$75,000 - \$99,999 | <input type="checkbox"/> 2% \$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.)?

18 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

This page left intentionally blank.

Appendix B: Visitor Comments to Open-Ended Survey Questions for McNary 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
Birds of prey exhibit	1
Bugs galore	1
Class trip for middle school	1
Cleanup Refuge	8
Duck tagging and release	1
Earth Day Activities	1
Educational Films	1
Field day with various activities by different clubs	1
Field Trip	1
Field trip with elementary school	1
Film Festival	1
Local refuge (new facility!)	1
Migratory Bird Day	1
Open House/Film Festival	1
Refuge Clean-up Day	1
Second Saturday monthly program	2
Tour of refuge - new location for volunteer coordinator	1
Urban Rangers Field Trip	1
Volunteer clean-up	1

Volunteer Orientation Training, bird-banding	1
White-fronted Goose Survey, Waterfowl Surveys, Burrowing Owl Surveys, Raptor Surveys	1
Wildlife Films	1
Total	30

Other Activity	Frequency
Camping	1
Classroom field trip	1
Cleanup after hunting season	1
Duck banding	1
Friends Board Meeting	1
Got senior pass	1
Grand opening	1
Grand Opening	1
Horseback riding	1
Live Raptors Exhibit	1
Meet with staff	1
Revisited childhood activity area	1
Volunteer	3
Volunteer Orientation	1
Volunteer White-fronted Goose Survey and Water Fowl Surveys	1
Volunteer Work	1
Waterfowl Surveys	1
Total	19

2 nd Other Activity	Frequency
Friends Website	1
Viewing water-ski jump we built over 50 years ago	1
Volunteer Burrowing Owl Survey, tree planting and cattail collecting	1
Total	3

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
Got senior pass	1
Horseback riding	1
I was primarily interested in viewing the grounds and facilities.	1
Meet with staff - Lamont Glass	1
Obtain a senior's pass and to look over the area	1
Organize to harvest sagebrush seed	1
Walla Walla River	1
Total	7

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

Other Visitor Center Activity	Frequency
Ate lunch in the building	1
Bird watch	1
Check in	1
Clean-up	1

Clean-up volunteer	1
Collected Brochures	1
Draw exhibits	1
Migration Games	1
Participated in verbal presentation and activities	1
Pick up day schedule, data sheets, GPS units, maps, vehicles and other equipment necessary	1
Volunteer	3
Volunteer Orientation	1
Write down bird observations	1
Total	15

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

Other Group Type	Frequency
Cleanup	1
Cub Scout Troop	1
Cub Scouts	1
Duck hunting	1
Family and Cub Scouts	1
Homeschooling family field trip	1
Hunting	1
Retirement home	1
To harvest sagebrush seed	1
Volunteer Group	1
Total	10

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

Other Website	Frequency
Audubon	1
google.com	1
Job listing - federal site	1
Web search for bird watching	1
Total	4

Other Ways Heard about This Refuge	Frequency
Audubon Club Field Trip	1
Audubon Society	1
Club newsletter (Audubon)	1
Company email of events	1
Day Hike Book	1
Field trip	1
Hiked Steens Mountain	1
Home school community	1
I went there last year with my son's first grade class on a field trip.	1
Local Audubon Society	1
Local School	1
Lower Columbia Basin Audubon Society	1
Othello, WA Chamber of Commerce	1
Park ranger	1
Recent refuge employee	1

Richland Rod and Gun Club	1
Road Map	1
School	3
School teachers/coworkers	1
Teacher Organizing Field Trip	1
Took class from your employee at Community College	1
Volunteer presentation at State Park, Newsletter, Website	1
Walla Walla High School classmates	1
While passing, we could see the lake, so we went to see it.	1
Work colleague	1
Total	27

Survey Section 2

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

Other Forms of Transportation	Frequency
2 wheeled cart for goose decoys on closed roads.	1
Bus escolar (School bus)	1
Camion de la escuela (School bus)	1
Government Vehicle	1
School bus	10
Total	14

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

Other Ways Found This Refuge	Frequency
Bus driver	2
Directions from refuge employees	2
From a book I bought through amazon.com	1
Phone	1
Signs on fence line	1
Staff member	1
Total	8

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
Better trails	1
Boating, canoe, row boat	1
Cross-country skiing	1
Foot paths to key hunting points that are signed well.	1
Four wheeler	1
Horse and buggy	1
Horseback	4
Hot air balloon	1
Need to let us drive at Burbank Slough.	1
Own car	1
Personal ATV	1
Personal boat	1

Shuttle to the blind or access to driving to the blind to drop off decoys.	1
Total	16

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 = 27)

Allow personal vehicles access to drive to the blinds to drop off decoys. Have a cut-off time of when you can drive into the blinds before shooting starts.

Bigger signs and more of them; it is an important refuge and people traveling on the highway need to know you are there.

En la visita que ise al refugio no tuve ninguna experiencia en ningun tipo de transporte del refugio el unico transporte que use fue el bus escolar que me llevo de pascoal refugio. (During our visit to the refuge, I did not use any type of transportation. The only transportation used was the school bus which took me to the refuge.)

Generally, roads at McNary are adequate. Trails could be better maintained. Handicapped access needs to be improved.

Getting the bus to and from was easy.

I am very happy with the transportation and condition of roads on this refuge and surrounding systems. I do volunteer work and have never been in an unsafe situation because of a transportation reason. There is wonderful care and up-keep to the road and trail systems.

I enjoy this refuge due to the terrain and the year round availability that I have so I am able to keep riding my horses in a safe environment.

I was very upset by the loss of wildlife on the side of the road. We found a dead beaver, a dead muskrat, a dead duck, and a dead great blue heron. The fact that the county is going to be increasing the traffic on that road running straight through the refuge really concerns me. I don't know if a bridge over the refuge is an option, but it would be a huge improvement for the animals.

I would like to see more options for disabled people on the water front for duck hunting.

It is a relatively small refuge so transportation isn't an issue. It is easy to get around the facilities.

It's hard for people with physical disabilities to walk around the slough area. There isn't any real pathway. It's uneven.

Maintaining the trails is critical for hunting and this year it's the worst I've ever experienced in 15 years. Some trails didn't even look like they were cut and others cut way too early.

More parking areas; there are two and there used to be three.

On the third item, I am "very unsatisfied" with the condition of the land bridge on Lake Road which crosses the McNary NWR pond at HQ. To explain, when I get to the end of the nature trail, I have to cross the land bridge to get back to the parking lot. There are no safe shoulders to walk on and Lake Road is very heavily trafficked with semis, trucks, commuters, etc. I think either the (Walla Walla) county or NWR or both could build a safe bridge, preferably one with a pedestrian walkway and one that is raised up so that wildlife (e.g. mink, beavers, raccoons, turtles, etc.) could pass under it instead of on the bridge itself. The road kill is excessive.

Only two places for handicapped hunting with no access to other hunting sites. Could allow transport of equipment to site and park at designated parking sites.

Patterson wildlife roads need work!

Please let us drive our personal vehicles to hunting blind sites at McNary Burbank Slough to drop off gear.

Sign in map/board at entrance is so old, out of date, and of little use. Many pits and blinds shown on maps/signs don't exist anymore or are in such poor shape they are unusable. Concentrate your budget efforts here or the best access in the world is of no use. There have been no efforts in this area for years except what I have done on my own to rebuild pits, etc. Also no crops have been planted for years which reduces wildlife enhancement for hunters and non-hunters alike. Surely there can be some revenue benefits from leasing crop land like you did back in the 1980's or early 1990's.

Small refuge - no roads, only trails.

The area I visited was for a hike. Boat rides or the availability of bikes would be nice (non-motorized boats).

The Corps of Engineers maintain Habitat Units (HMU's). They are better maintained, better areas posted as HMU's and they have campgrounds that produce revenue. Try this - Take a look at the way they do it.

The gift shop area could use a better design for people with walkers/wheelchairs. There really isn't enough room for this type of movement.

The only thing I would change would be permission to drive to the field blinds to drop off 10 dozen geese decoys and then drive back to the parking area to park. It was a pain and a long walk back and forth getting all the gear out to the field before shooting time.

The trails out to the blinds should be leveled and graveled.

There are no ways to get to the other side.

This survey said I was to critique only my last visit to the refuge, which was to the headquarters. I go to other areas regularly and the roads do need some maintenance.

Trails to different blind sites are somewhat difficult for persons with disabilities in some cases.

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 = 42)

A good opportunity to enhance all aspects of wildlife management and better use the public's property (and at least supplement management costs/expenses) would be to actually cultivate, plant and harvest crops as was done back in the 1980's and 1990's through leases. Now weeds (many are noxious and out of compliance with local, county, state and federal regulations) are simply being mowed or burned along with the meager residual grasses that haven't been replanted for years. This does nothing to attract migratory birds and in fact the Peninsula Unit is no longer visited even by the local geese as a feeding/roosting area. Also 60% of the field pits shown on the property have caved in, rotted or are otherwise unusable. Yet they still show up on the maps every year. This indicates a very low interest in providing quality hunting opportunities and an overall lack of management's knowledge of what is even out there anymore. This is what was allowed to slowly happen to the portion of the refuge located on the east side of highway 12 and now there is no hunting allowed at all. This has forced us to move to the Peninsula Unit where hunting is now being limited and restricted by simple lack of maintenance of what was a great facility. Most of the types of enhancement I am recommending are very low cost and last for many years. The last time the original hunting field pits were upgraded they lasted over 10 years before they needed significant improvements. Surely the refuge managers are aware that most of your recreational funding is from hunters' Pitman/Robertson taxes, isn't it about time we spent some of those dollars more wisely on this portion of the refuge? I would be glad to provide any assistance I can and would volunteer as well as long as I know hunting opportunities would be enhanced as a result. Thank You.

Better construction of duck blinds - need for better camo - lids.

Blinds could be much better and made to accommodate 3-4 hunters and a dog.

Creo que las personas que trabajan ahí hacen un buen trabajo, pero me gustaría que la información que ahí se brinda pudiera darse en Español para así poder saber de que me están informando (I believe that the people that work there do a good job, but I would appreciate it if the information there were offered in Spanish so that I would be able to understand the information).

Duck blinds need some work!

Emphasis on littering and cleaning up after a visitor's stay should be emphasized at all times. Accumulation of litter is your biggest problem.

Excellent facilities and staff!

From a disabled hunter's point of view, regulations of access to some blinds could use updating, such as roads near some blinds to allow vehicle access before shooting hours. Blind #8 is okay, but blind #2 is a poor location. If disabled, you have to drive to #22, 21 or 20 and park in that area.

Generally McNary is well maintained and provides good opportunities. Access restrictions (hunters only) frustrates ability to recruit "next generation" of hunters. Some non-hunting access (fishing, etc.) during August/September and February/March would not unduly impact McNary's primary purpose.

Goose hunting pits are in shambles, they haven't been kept up for years--cutting the fields too late in the year to allow for vegetation to grow for hunting seasons.

Hunting season is way too long and many areas are only open for hunters/closed to birders. Quit spring burning on refuges, it's not natural. Quit burning Russian olives, 60 generations of native species are using these trees and there is no replacement.

I am very unsatisfied with the new hunting regulations and lack of enforcement. There are no signs informing hunters of new entry times at Penn unit, Schoolhouse unit, Wallula unit. There are very few hunters obeying new rules and many not!

I attend this refuge because of the sandy trails and the availability year round. I have to condition my horses.

I especially enjoyed the building on the water and all the info in it. It fits well into the surroundings.

I feel that this refuge manager should allow employees in charge of hunter checks to email current harvest statistics to interested people at least on a bi-weekly basis. The last several years this was done at this refuge. The new manager does not allow employees to do this. This is a very interesting and helpful service.

I liked it.

I liked the facilities and the displays.

I would like a hiking trail around the pond across the road where snow geese usually go.

I'd like the visitor center to be open more often.

I'm very impressed with the facility and staff, and volunteers are great!

Kindergarten students attended--volunteers did a great job of bringing information to their level.

Mas centros para poder observar las aves (More centers to be able to observe birds).

McNary National Wildlife/Waterfowl Refuge is huge. Open it up; make trails, visitor centers, campgrounds that are maintained, not closed to the public like it is now.

My nephews love the Visitors Center but it is often closed when we are there. We are always there on a Saturday. We do try to make the special events that happen the 2nd Saturday of the month.

Not enough access to all hunting blinds by handicapped persons.

Questionable blind placement. Lack of management to encourage waterfowl retention for the purpose of hunting (i.e. crop rotation & harvest schedule). More patrols to keep people out during closed days and control of CRP growth.

The center is great - when it is open. Rest rooms are only open when the center is open.

The facility is well maintained and the volunteers are fantastic. Again, it is a small facility so long hikes, bike trails, and water activities aren't much of an option.

The McNary Wildlife Refuge has been a great experience for my third grade (low income Hispanic/bilingual) students to learn and respect wildlife in their area. They wouldn't have likely gone if it weren't for our field trip experience. They were very excited and the volunteers/employees were wonderful. Thanks for the no entrance fee.

The new facility is very nice. The duck hunting opportunities are excellent.

The overall hunting management of McNary is the worst I've experienced in 15 years. It's absolutely sickening how this wonderful resource has been mismanaged. This place could return to its glory, but management needs to be willing to change and listen to the experience of people that have hunted McNary for decades. It's time for change and a progressive McNary/hunter resource team.

The Rangers that were working were very friendly, and highly knowledgeable. They made our visit a wonderful experience.

The staff is courteous, helpful, and terrific!

The staff person was friendly and helpful. The trails were well maintained and the wildlife viewing platform areas were well done.

This refuge has an Education Center which is a little different than a Visitors Center. An Education Center has a different focus which I like.

This unity has been expanded (management use) it has great potential, mainly for waterfowl!

Very friendly and helpful

Very neat and organized facility and knowledgeable staff.

Very nice and well maintained. The staff answered our questions and asked us to volunteer with school groups (we home school and I was there with my kids).

Volunteers were extremely knowledgeable and dealt with the teenage group very well.

We have enjoyed this refuge over the years and some of the special events they have sponsored. I have trouble walking and they allow me to park in the refuge parking lot which is much closer to the blind for bird watching than the visitor's lot. I appreciate this consideration.

We have stopped twice and have not found the visitor center open. It is only open one weekend a month. That is NOT ENOUGH. I would like to see additional wildlife (bird watching) locations at this refuge.

Survey Section 5

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

Comments on What Makes Refuges Unique? (n = 100)

A chance to see birds and animals undisturbed in their natural setting.

A greater opportunity to observe wildlife in the natural habitat.

A place to go that is preserved and in a natural state.

A refuge differs from a park in that the nature comes first, not the people visiting it. This allows for a unique experience with the flora and fauna of our natural environment--much needed by many people in this day and age.

Ability to hunt waterfowl and upland birds in a well managed, regulated situation.

Abundance of Waterfowl.

Active conservation, education and opportunity to "get up close".

Activities for students.

Actually I feel they provide a limited "recreation" experience and their primary goal should be conserving, managing, and restoring fish, wildlife, plants and their habitats. That focus should never change and should be fought for regardless of popular or public demand. If anyone wants to experience our beautiful National Wildlife Refuges there are volunteer opportunities. Those chances should be advertised, promoted and made available on all refuges so willing volunteers can be included and utilized.

An opportunity to see nature in its natural habitat.

Better opportunity to observe birds.

Close proximity.

Controlled fee hunting.

Depends, but mostly the natural resource that is being protected.

Education emphasis.

Educational opportunities and facilities are important.

Educational opportunities for students.

Explanations by knowledgeable people about the habitat when we just visit.

Gives people an opportunity to see wildlife in a natural habitat.

Helping to preserve wildlife. Giving people the opportunities to learn about and see wildlife.

Hunting allowed on Saturdays, Sundays, and Wednesdays. Blinds are spread out. Limited number of shells.

I am not qualified to elaborate, but my opinion is that refuges are intended for a unique purpose about which the title conveys.

I believe the educational opportunities are the most prominent example of the uniqueness of wildlife refuges. Beyond easy access to wildlife are the lessons and knowledge that we can gain from a wildlife refuge interpretive or Education Center.

I can't hunt in the Parks.

I love every aspect of McNary Wildlife Refuge. I volunteer a lot and enjoy working with the dedicated staff.

I loved it.

I really like the educational opportunities and the ability to observe and photograph birds and wildlife in their natural settings. There is no zoo close by and as an artist I appreciate the chance to see this close up.

Impact on wildlife, education.

Information provided.

It has special features not available at parks: bird viewing/turtle viewing room, teepee, educational lessons, a building with wildlife displays.

It is on a migration route which is visited by thousands of different birds.

It provides access to the shooting sports and promotes hunting and fishing for youth.

It serves to protect local wildlife in an area near where I live.

It's a Refuge.

It's great that you get to go into a natural habitat, and take beautiful pictures.

It's a great place to bring family and friends for outdoor activities.

Just having public land that is nice to hunt on.

La experiencia unica de convivir con la naturaleza de conocer mas sobre los animales silvestres. Y su avitad. (A unique experience to co-exist with nature, and to learn more about wildlife and their habitat.)

Land is left naturally undisturbed. One usually sees wildlife. The real concern is public footprint. Usually excellent information and resources (maps, history, etc.).

Limited hunting access.

Maintain open land and provide wildlife habitat.

More highly regulated.

Natural beauty and the opportunity to witness wildlife in its own habitat.

Nature is at its best.

Nice facility, well maintained, helpful staff, good displays (would like to see rattlesnake display), good information handouts like maps and posters.

No matter how bad things are looked after on the refuge, I still love going there and always will.

Not improved.

One is able to see flora and fauna relatively undisturbed in its natural setting.

Opportunities for young children--first time experiences with wildlife habitat.

Participation and education.

Pay to hunt (lottery). No need to get to the hunt site early.

People have to hunt assigned blinds, not as crowded.

Planting of game.

Por las aves que llegan a ese lugar son hermosas. (Because the birds that come to this area are beautiful.)

Preservation of wildlife areas is a priority (or it should be). Refuges are vital for migrating birds and other creatures that call it home. It's imperative that we preserve and enhance these areas and establish more.

Primary mission of conservation.

Protection for wildlife.

Provide easy access to mostly undeveloped land without the crowding, cost, and restrictions of State and National Parks.

Provide opportunity to experience wilderness and all the wonders associated with that experience.

Provides an opportunity for fathers to teach their children how to hunt waterfowl.

Quality of habitat, heavy demand, limits hunting success, need to expand wildlife habitat.

This Refuge is one of the most unique places to experience nature in its raw state. I can't imagine the Columbia Basin without the presence of McNary National Wildlife Refuge. Let us continue working together to keep this place beautiful.

Refuges are unique because they provide natural settings in which a person can learn, observe, and re-prioritize how important each habitat and its dwellers are. For me, I feel refreshed, happy, and eager to volunteer after each visit.

Refuges are usually within a short distance from your home. They provide education opportunities for young and old. You are able to take small children and introduce them to nature. The cost is usually zero and for a family this is very important.

Refuges give access to habitat that is often hard to find on publicly accessible land.

Seeing animals and plants in their natural, undisturbed setting greatly enhances my educational experience, which I share with family and friends.

Seeing animals in their natural habitat instead of at a zoo.

Small with easy access.

The ability to have a controlled and closely managed environment.

The ability to observe wildlife in its natural habitat.

The abundance of observable birds and other wildlife.

The dams on the Columbia and Snake rivers have been and are being managed well since the dams were installed, however the installation needs to be kept up better to justify their existence.

The focus is on the animals and generally ways to observe them. Other public lands (national parks) tend to focus on geological features and unique animals or (national forests) woodlands and hiking, (BLM) minerals and hiking.

The kids got to see what is in our own back yards and learn about them.

The number of eagles during duck season, however pheasant hunters have little opportunity. I believe US Fish and Wildlife Service should allow regular scheduled pheasant plantings by state agencies because there is NO upland hunting allowed until noon. This is the peninsula and Wallula area especially.

The preservation and care of our wildlife. And given opportunities to share the areas with the people.

The refuge provides a safe haven for wildlife in a more natural setting, while also providing a managed amount of hunting pressure.

The refuge provides an experience unlike anywhere else in the area. Locally there is no other place that provides educational exhibits of fish

and wildlife biology and science. I first visited this refuge 30 some years ago and still remember at least one of the visits. I remember seeing exhibits of live raptors and netting birds. DUCK HUNTING. Nowhere else locally can I go and have an organized system, numbered blinds, trails, etc. for duck hunting; great program! Everything is private or leased these days. The refuge provides the only opportunity for some people to hunt.

The refuges are unique in that the focus of the service fits with nature viewers and sportsman's objectives better than some other public lands.

The support of the US Fish & Wildlife Service and organization, management and dedication of the volunteers.

There are only a couple groups that can hunt.

There are usually some employees and volunteers that are actually interested in all wildlife, not just game birds and animals.

There is an academic atmosphere when talking to the staff. The focus is on wildlife as opposed to National Parks where the focus seems is on recreation such as hiking and photography. With National Parks, wildlife just happens to be there. With Refuges, wildlife is there because of the refuge.

These are large and small habitat resources that wildlife need and provide opportunities for people to interact with nature.

They are natural habitats.

They are rather specific to the area and conditions, and they provide much opportunity for learning about conserving resources and wildlife, and they provide opportunities to volunteers in unique ways other than everyday life.

They exist e.g., they keep the land from being developed and they are available to the public.

They maintain a natural setting in a park-like atmosphere. The wildlife is priority, NOT humans. I prefer the natural balance the refuge offers.

They protect wildlife habitat and they offer us the opportunity for viewing birds.

They show you things you do not always see on your own and let you observe special animals.

They're a perfect oasis in and around the metropolitan areas where most people can get to easily.

This is a more natural habitat for the birds and wildlife.

This refuge is amazing for the number of birds and viewing opportunities. LOVE IT!!

To help provide the nature that we have.

Unlike most National Parks, hunting opportunities are provided in the context of the refuge's overall "conservation" purpose. Most National Parks/Monuments are more "preservation" oriented. National Forests, BLM, etc., provide good opportunities, but tend to be more "production/extraction" oriented, than "conservation".

Usually provides a good hunting experience. NEED to have fewer blinds on the water for a better hunting experience.

Watching and hunting waterfowl.

Wilder habitat, less commercial, more educational than many places.

Wildlife need "their place" in the world without intrusions.

Without the refuge system, outdoors persons of all types would have very limited access to our natural resources specifically related to upland birds and waterfowl. Private property owners have closed 100's of thousands of acres of land to the public every year. Pay to hunt/use or watch is not possible for most of us so we absolutely rely on the NWR'S mandate to not only preserve and protect wildlife, habitat and fisheries but to provide and enhance recreation use including hunting and fishing. Your survey indicates an emphasis on access and travel through the refuge system. This can be extremely expensive and before you focus on new access or new types of transportation I urge you to maintain and utilize what you already have. This is not the National Park System; this is the National Wildlife Refuge System where most users are used to limited access involving walking, etc... Please concentrate on the quality not the quantity or technology of the access. Simple high clearance vehicle access, well spaced parking areas (not one at each end), good signage and a small boat launch that provides a water depth greater than 3" and allows a person to turn around a trailer for a 14' long boat. How about some garbage cans or maybe picking up the garbage a couple times a season? Just the basic stuff, we don't even need toilets!! Keep the system open and don't force us off our own public land by poor maintenance and other forms of disallowing use. Thanks for an opportunity to vent my concerns.

Additional Comments (n = 18)

A great place to waterfowl hunt and train young hunting dogs.

Beautiful facilities. Welcoming staff.

I am a Forester and have worked for over 40 years to protect and enhance fish and wildlife from the urban interface up through the National Forest. I know the importance of weather on our natural resources and I am very aware of the importance of carbon sequestration and old growth trees to provide clean oxygen; however, the greatest hoax of all time is "Global Warming." The US Forest Service has utilized all its limited resources in recent years to address this hoax. The result is lack of forest management and devastation of our forest lands through insect and disease mortality and catastrophic wildfires. Now where is the carbon sequestration that was so vital to curtail global warming? Please do not allow the NWRs to fall by the way side in the same manner. Do not lose sight of your objective to provide, protect and enhance our lowland natural resources. If you choose to use your limited funds to follow the Global Warming hoax you will end up with a vacant refuge system, off limits to everyone, just growing noxious weeds without even enough money to mow them!! Who will you be serving then and how will you be able to justify using my Pitman/Robertson taxes? Thanks again for your time, I do appreciate your efforts.

I know I am turning into an opinionated old man, but the USFWS is steadily working to take away opportunities for hunters by overregulation. Generally speaking, it seems to be a little OVER regulated, such as the 25 limitations on the School House and Peninsula areas; these had no limitations in years past when under control of other agencies like the Corps of Engineers or WDFW. Also, when WDFW was in control, they sought to enhance game hunting opportunities (such as, maintained fields as "pits"). At this point, there really is no opportunity in any of the 12 pits or the weed fields that surround them. Just burning the bunch grass to allow new green shoots to come up is pretty LAME. Plowing these roads of bunch grass each year would be a real help. Allowing someone to plant and harvest winter wheat would be just great, like when the state's Game Department did it in the 60's and 70's. You asked for opinions and comments; I don't mean to be a pain. Hopefully some suggestions to help hunters during these poor hunting years. Most respectfully, (signature and phone number).

I teach elementary students and this was an educational field trip.

I visited with my 2 and 7 year old nephews.

I'm more than willing to help create a McNary steering committee to help improve the hunting at the refuge. This relationship is at an all time low and it needs to be corrected quickly. I've seen other refuges across the country go through similar issues and recover.

I'm not fully sold on the "Global Warming" theories due to the natural climate changes in the last ten thousand years. On another note: I hope that Washington can come up with a management plan for the wolves before they decimate the ungulate population like our neighboring states. It's not looking good for the sportsman and outdoor enthusiasts.

Me gustaría que las personas que se encargan de dar información en el refugio hicieran más énfasis en cómo cuidar el ambiente y los efectos que cuidando a consciencia. (I would like for the people in charge of providing information at the refuge to put more emphasis on how to care for the environment and the effects that are caused if we don't continue to consciously care [about the environment].)

Thankful that it was there!

The management of the Columbia and Snake River has been and is great! In the areas you are responsible for, you are doing a great job. But you need to maintain and keep up the earlier installation. Thank you.

There is a large homeschooling community in the Tri-City area that would utilize this refuge and its exhibits and resources if there were community related activities at this refuge. This location seems very disconnected from the community.

Valuable resource. Thank you.

Very informative and helpful volunteers.

We had an enjoyable and educational visit with the school kids we brought. It kept children interested.

Well located, interesting, educational, welcoming. I don't feel qualified to be useful with my answers to such a survey. I am interested, but not very knowledgeable.

Would be nice to help the disabled hunters more.