



# National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for Deer Flat National Wildlife Refuge

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*This refuge would be worthwhile just for the number of different birds alone, but when you add in the nice Visitor Center, easy access and boating, fishing, swimming and hiking possibilities and the mild weather, this is a very worthy endeavor to preserve this lake and its habitat! — Survey comment from visitor to Deer Flat National Wildlife Refuge.*



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

## 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 .....	8
Visitor and Trip Characteristics.....	8
Visitor Spending in Local Communities .....	15
Visitor Opinions about This Refuge .....	16
Visitor Opinions about National Wildlife Refuge System Topics.....	21
Comparison of Visitors to This Refuge by User Group.....	24
Conclusion .....	34
References.....	34
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.....	9
3.	Resources used by visitors to find their way to this refuge during this visit.....	10
4.	Number of visitors travelling to this refuge by residence.....	11
5.	Modes of transportation used by visitors to this refuge during this visit. ....	12
6.	Activities in which visitors participated during the past 12 months at this refuge. ....	13
7.	The primary activity in which visitors participated during this visit.....	14
8.	Use of the visitor center at this refuge.. ....	14
9.	Overall satisfaction with this refuge during this visit.....	16
10.	Importance-satisfaction ratings of services and facilities provided at this refuge.....	18
11.	Importance-satisfaction ratings of recreational opportunities provided at this refuge.....	19
12.	Importance-satisfaction ratings of transportation-related features at this refuge.....	20
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
16.	Comparison of how visitors first learned or heard about this refuge .....	25
17.	Comparison of resources used by visitors to find this refuge.....	26
18.	Comparison of modes of transportation used by visitors to this refuge during this visit.....	27
19.	Comparison of activities in which visitors participated during past 12 months at this refuge. ....	28
20.	User group 1 importance-satisfaction ratings with services and facilities provided at this refuge. ....	30
21.	User group 2 importance-satisfaction ratings with services and facilities provided at this refuge. ....	31
22.	User group 1 importance-satisfaction ratings with recreational opportunities provided at this refuge.....	32
23.	User group 2 importance-satisfaction ratings with recreational opportunities provided at this refuge.....	33

## 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. ....	10
4.	Type and size of groups visiting this refuge.....	12
5.	Total visitor expenditures for this refuge expressed in dollars per person per day. ....	15
6.	Categorization of visitors to this refuge based on activity participation in the past 12 months. ....	24

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## Introduction

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

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

## Organization of Results

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

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

## **Methods**

### **Selecting Participating Refuges**

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

### **Developing the Survey Instrument**

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

### **Contacting Visitors**

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

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

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

<b>Pacific Region (R1)</b>	
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)	
<b>Southwest Region (R2)</b>	
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)	
<b>Great Lakes-Big Rivers Region (R3)</b>	
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)
<b>Southeast Region (R4)</b>	
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)
<b>Northeast Region (R5)</b>	
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)
<b>Mountain-Prairie Region (R6)</b>	
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)	
<b>Alaska Region (R7)</b>	
Alaska Maritime National Wildlife Refuge (AK)	Kenai National Wildlife Refuge (AK)
<b>California and Nevada Region (R8)</b>	
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  $n^{\text{th}}$  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 Deer Flat 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 Deer Flat National Wildlife Refuge

Nestled in the rolling sagebrush hills of southwest Idaho, Deer Flat NWR provides an important breeding area for birds, mammals, and other wildlife. The refuge is also a significant resting and wintering area for birds migrating along the Pacific Flyway, including spectacular concentrations of mallards and Canada geese. President Theodore Roosevelt established the refuge on February 25, 1909, making Deer Flat NWR one of the oldest refuges in the Refuge System. Deer Flat NWR has been recognized as a Globally Important Bird Area by the American Bird Conservancy.

The refuge has two units, Lake Lowell and the Snake River Islands. Lake Lowell includes nearly 9,000 acres of the 11,388 total refuge acreage (fig. 1), with the Snake River Islands sector of 101 islands encompassing another 800 acres. These islands are distributed along 113 river miles and are home to heron rookeries and gull colonies and provide feeding and resting spots for migratory birds.

Approximately 180,000 people visit Deer Flat NWR every year (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.) for opportunities such as fishing, auto tours, biking, canoeing, kayaking, birding, hiking, boating, horseback riding, wildlife observation, photography, use of the Visitor Center, environmental education, as well as waterfowl, upland, big game and other migratory bird hunting. For more information, go to <http://www.fws.gov/deerflat/>.



Figure 1. Map of Deer Flat NWR, Lake Lowell Unit only, courtesy of U.S. Fish and Wildlife Service.

## Sampling at Deer Flat National Wildlife Refuge

A total of 394 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Deer Flat NWR (table 2). In all, 210 visitors completed the survey for a 56% response rate and  $\pm 5\%$  margin of error at the 95% confidence level.<sup>1</sup> It is important to note that sampling at Deer Flat NWR only occurred during the summer months and only occurred on the Lake Lowell unit. As a result, some uses may not be effectively represented, such as hunting.

**Table 2.** Sampling and response rate summary for Deer Flat NWR.

Sampling Period	Dates	Locations	Total Contacts	Undeliverable Addresses	Completed Surveys	Response Rate
1	7/3/10 to 7/17/10	A Lower Dam Recreation Area	39	1	18	47%
		B Gott's Point	24	2	16	73%
		C Parking Lot 1	17	0	10	59%
		D Visitor Center	28	0	23	82%
		E Tio Lane Parking Lot	16	0	11	69%
		F East Upper Dam Boat Launch	37	4	21	64%
<i>Subtotal</i>			<i>161</i>	<i>7</i>	<i>99</i>	<i>64%</i>
2	7/17/10 to 7/31/10	A Lower Dam Recreation Area	37	0	19	51%
		B Gott's Point	71	7	24	38%
		C Parking Lot 1	27	4	12	52%
		D Visitor Center	31	0	19	61%
		E Tio Lane Parking Lot	7	0	6	86%
		F East Upper Dam Boat Launch	60	4	31	55%
<i>Subtotal</i>			<i>233</i>	<i>15</i>	<i>111</i>	<i>50%</i>
<b>Total</b>			<b>394</b>	<b>22</b>	<b>210</b>	<b>56%</b>

<sup>1</sup> 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).

## 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

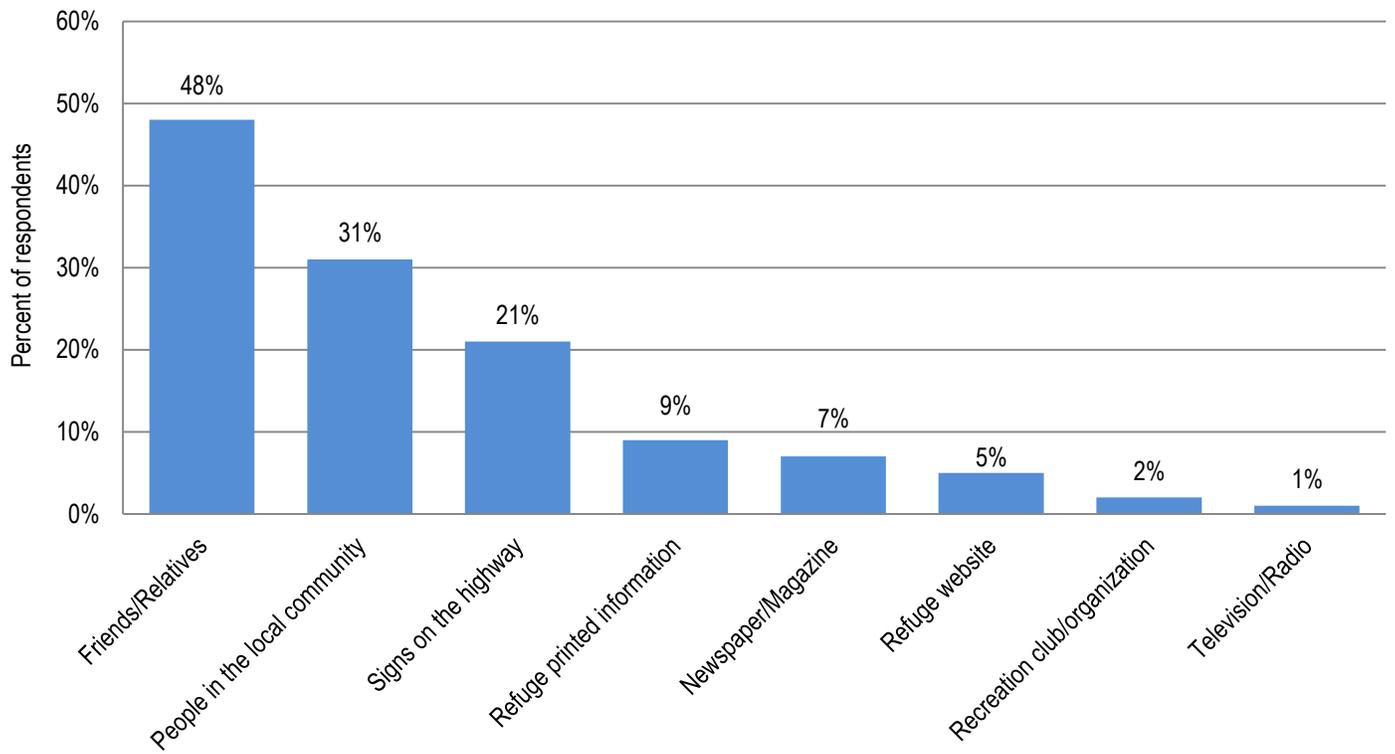
While we did not ask visitors to identify the mission of the National Wildlife Refuge System or the U.S. Fish and Wildlife Service, visitors to Deer Flat NWR reported that before participating in the survey, they were aware of the role of the U.S. Fish and Wildlife Service in managing national wildlife refuges (87%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (89%). Positive responses to these questions concerning the management and mission of the Refuge System do not indicate the degree to which these visitors understand the day-to-day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why. Compared to other public lands, many visitors feel that refuges provide a unique recreation experience (75%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. Some top reasons visitors to Deer Flat NWR find refuges unique include proximity to urban areas and where they live, and the diversity of recreational opportunities refuges (and Deer Flat NWR) provide. More than half of visitors to Deer Flat NWR had been to at least one other National Wildlife Refuge in the past year (57%), with an average of 5 visits to other refuges during the past 12 months.

### Visiting This Refuge

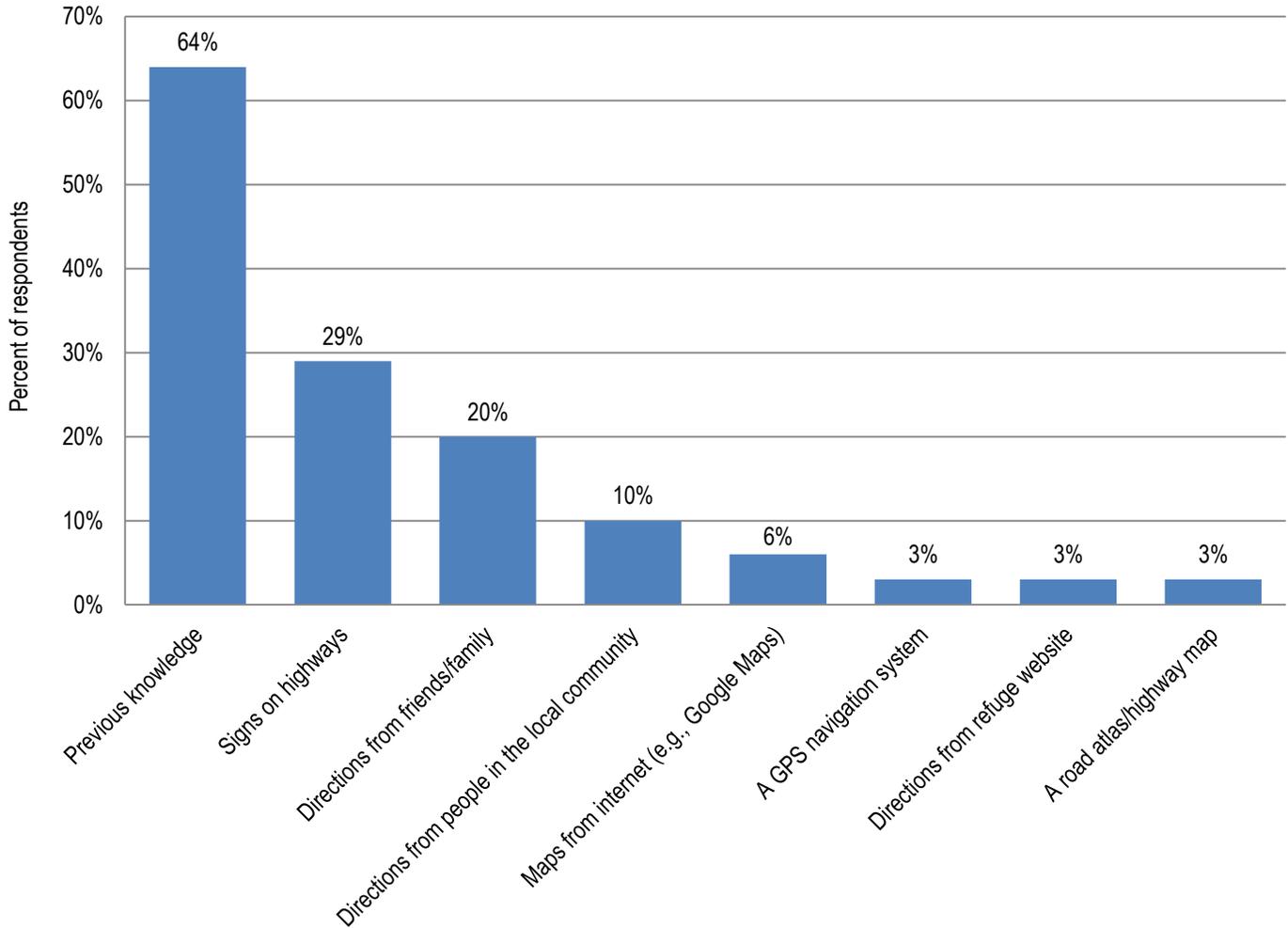
Some surveyed visitors (12%) had only been to Deer Flat NWR once in the past 12 months, while most had been multiple times (89%). These repeat visitors went to the refuge an average of 21 times during that same 12-month period. Visitors used the refuge during only one season (29%), during multiple seasons (43%), and year-round (27%).

Most visitors first learned about the refuge from friends/relatives (48%), people in the local community (31%), or signs on the highway (21%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (64%), signs on highways (29%), or directions from friends/family (20%; fig. 3).

Most visitors (96%) lived in the local area (within 50 miles of the refuge), whereas 4% were nonlocal visitors. For most local visitors, Deer Flat NWR was the primary purpose or sole destination of trip (76%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of trip (45%). Local visitors (n = 198) reported that they traveled an average of 11 miles to get to the refuge, while nonlocal visitors (n = 9) traveled an average of 359 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 95% of visitors travelling to Deer Flat NWR were from Idaho.



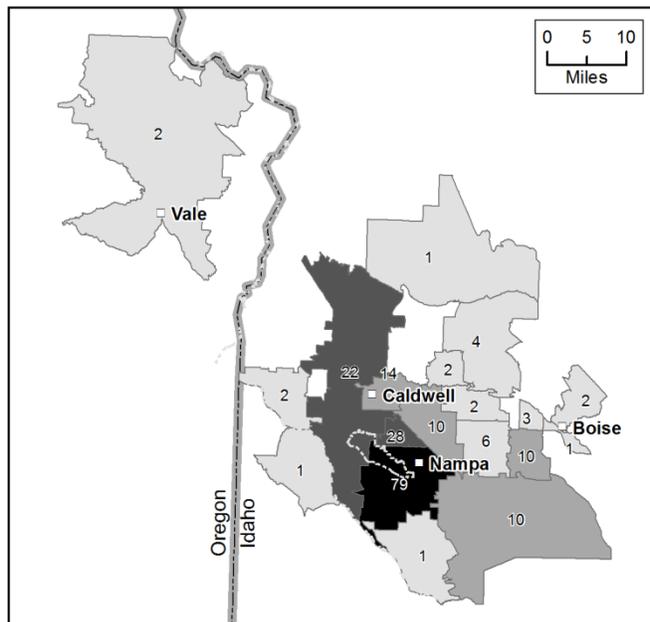
**Figure 2.** How visitors first learned or heard about Deer Flat NWR (n = 206).



**Figure 3.** Resources used by visitors to find their way to Deer Flat NWR during *this* visit (n = 204).

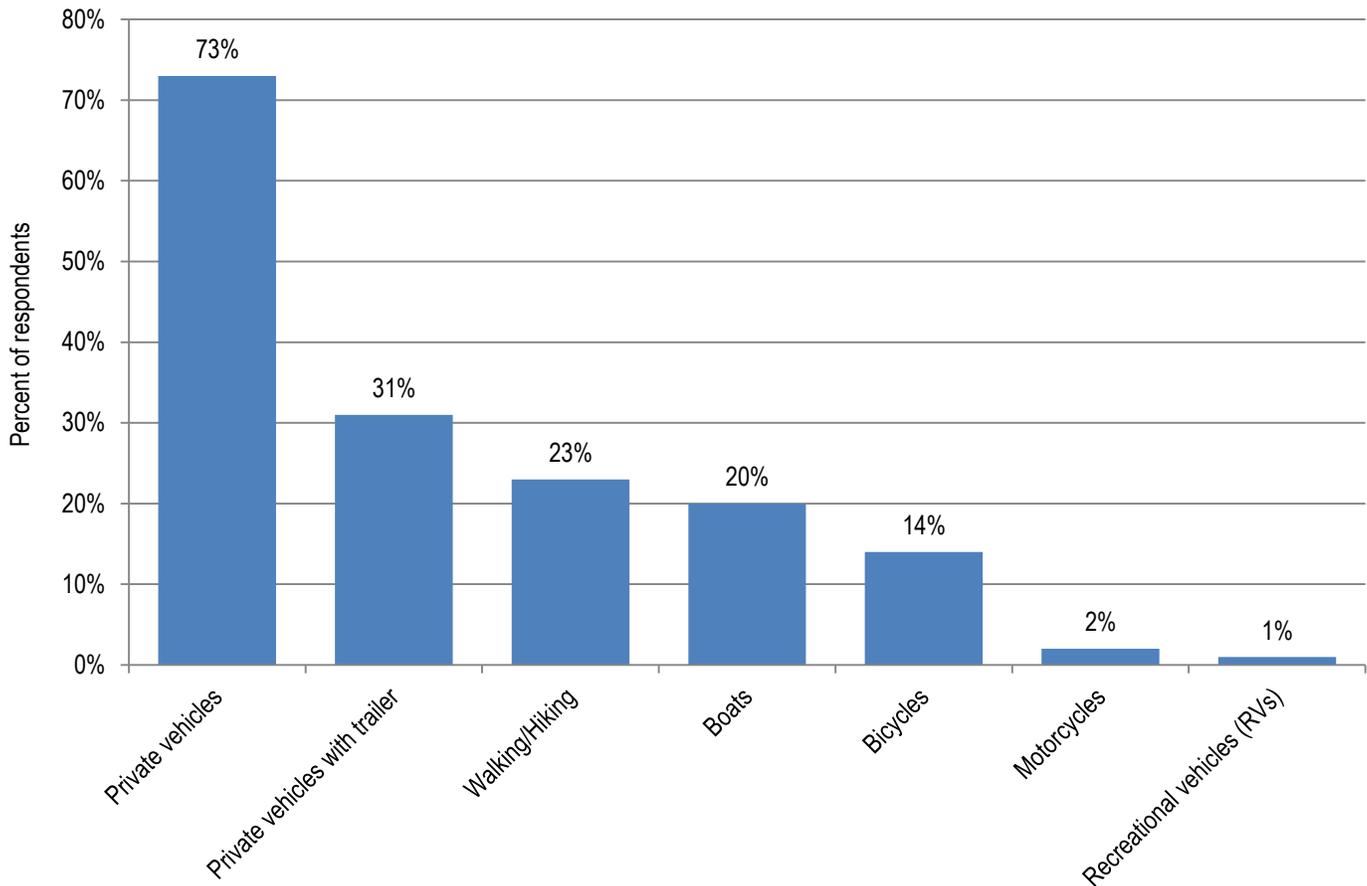
**Table 3.** Influence of Deer Flat NWR on visitors' decision to take *this* trip.

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	76%	11%	13%
Total	74%	12%	14%



**Figure 4.** Number of visitors travelling to Deer Flat NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 208).

Surveyed visitors reported that they spent an average of 4 hours at Deer Flat 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 (18%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (73%), private vehicle with trailer (31%), and walking/hiking (23%; fig. 5). More than half of visitors indicated they were part of a group on their visit to this refuge (58%), travelling primarily with family and friends (table 4).

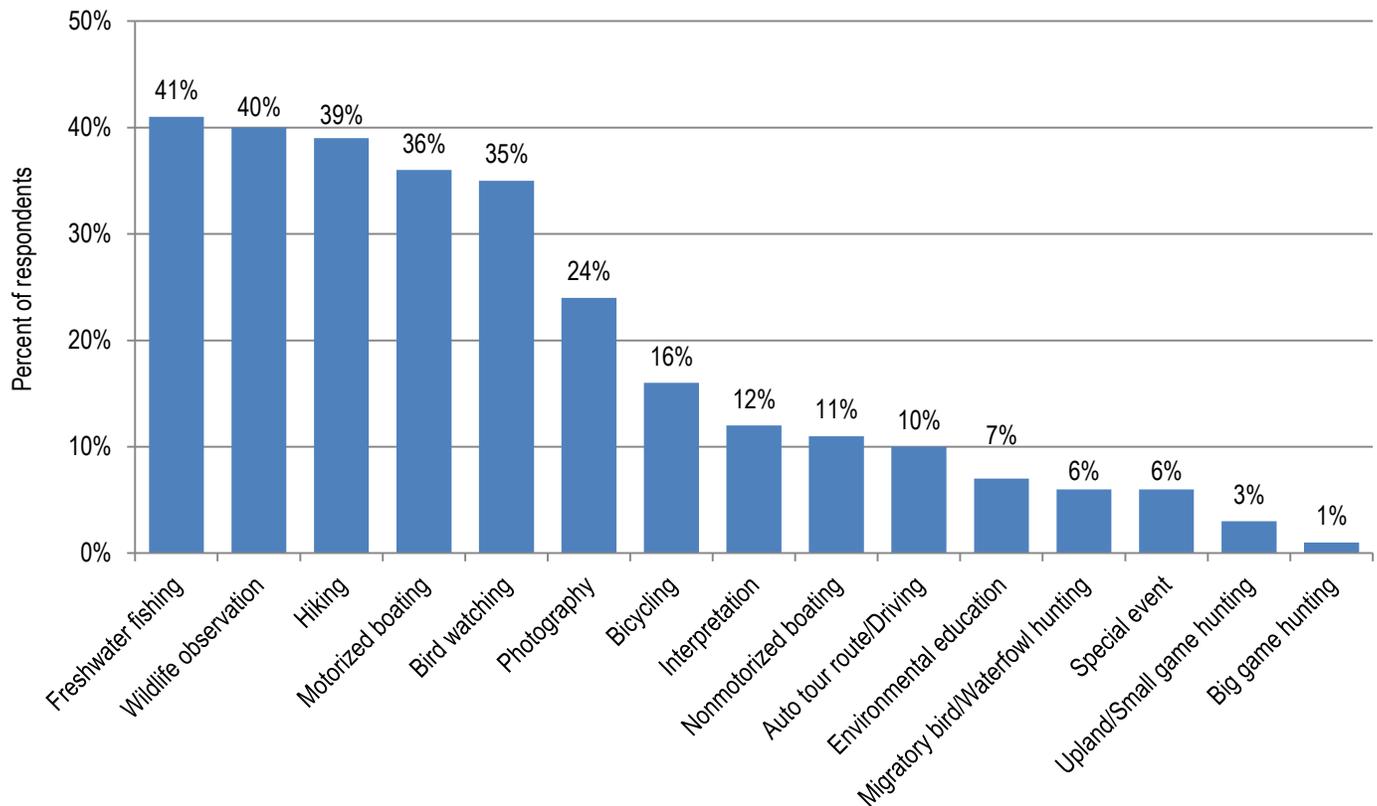


**Figure 5.** Modes of transportation used by visitors to Deer Flat NWR during *this* visit (n = 205).

**Table 4.** Type and size of groups visiting Deer Flat NWR (for those who indicated they were part of a group, n = 118).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	89%	4	2	6
Commercial tour group	1%	5	1	6
Organized club/School group	5%	15	15	30
Other group type	5%	2	0	2

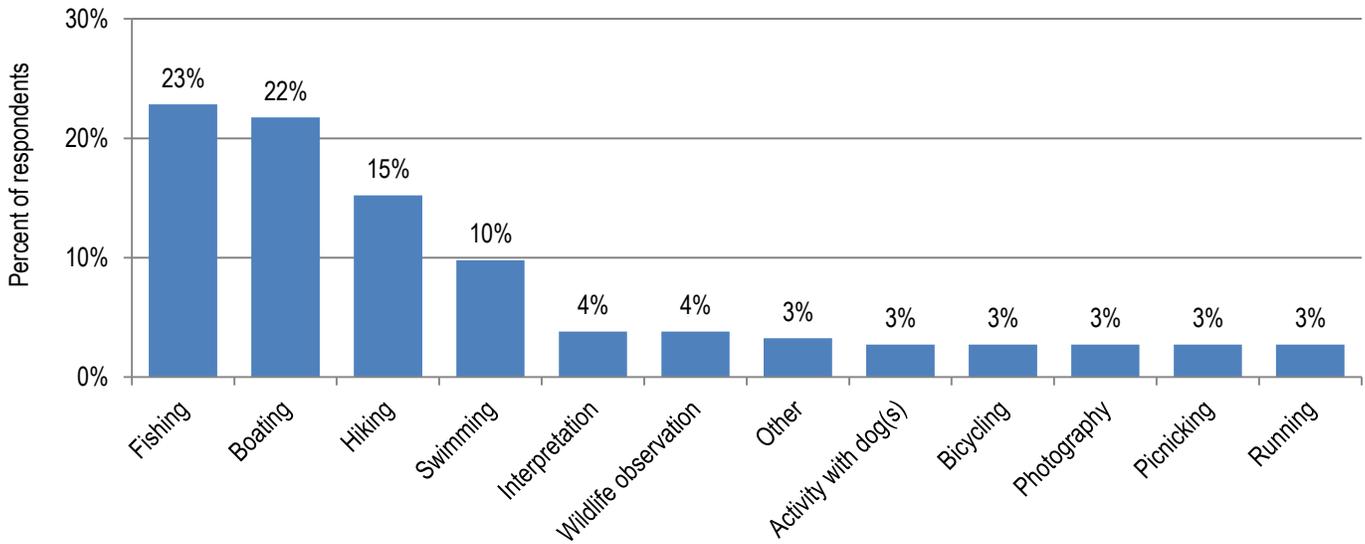
Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were freshwater fishing (41%), wildlife observation (40%), and hiking (39%). The primary reasons for their most recent visit included fishing (23%), boating (22%), and hiking (15%; fig. 7). The visitor center was used by 36% of visitors, mostly to view the exhibits (80%), stop to use the facilities (47%), and ask information of staff/volunteers (43%; fig. 8).



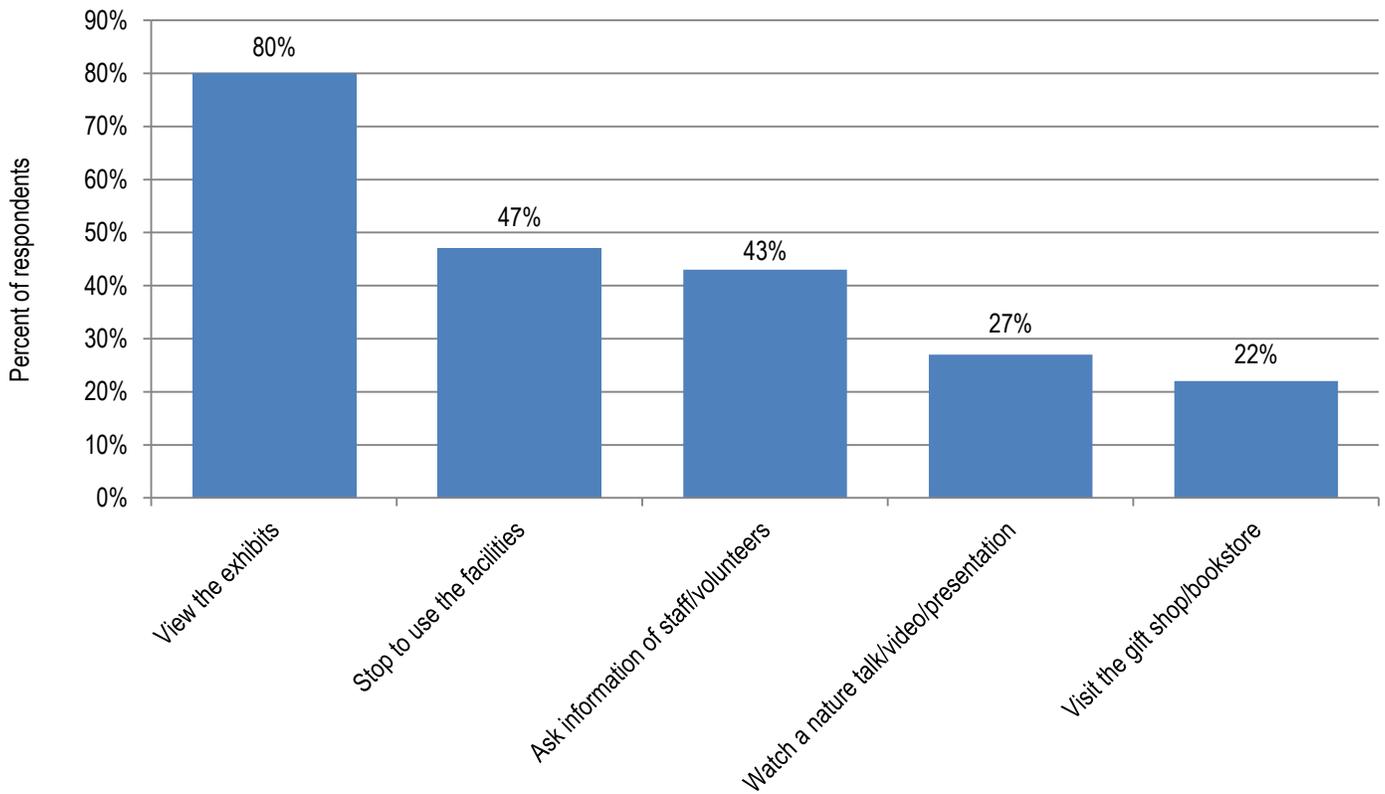
**Figure 6.** Activities in which visitors participated during the past 12 months at Deer Flat NWR (n = 206). See Appendix B for a listing of “other” activities.

### Visitor Characteristics

All surveyed visitors to Deer Flat 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 60% male with an average age of 52 years and 40% female with an average age of 47 years. Visitors, on average, reported they had 15 years of formal education (college or technical school level). The median level of income was \$35,000–\$49,999. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).



**Figure 7.** The primary activity in which visitors participated during *this* visit to Deer Flat NWR (n = 192). See Appendix B for a listing of “other” activities.



**Figure 8.** Use of the visitor center at Deer Flat NWR (for those visitors who indicated they used the visitor center, n = 74).

## 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, 96% of surveyed visitors to Deer Flat NWR indicated that they live within the local area. During the two sampling periods, nonlocal visitors (4%) stayed in the local area, on average, for 8 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.*** Nonlocal visitors spent an average of \$42 per person per day and local visitors spent an average of \$32 per person per day in the local area. Several factors should be considered when estimating the economic importance of refuge visitor spending in the local communities. These include the amount of time spent at the refuge, influence of refuge on decision to take this trip, and the representativeness of primary activities of the sample of surveyed visitors compared to the general population. Controlling for these factors is beyond the scope of the summary statistics presented in this report. Detailed refuge-level visitor spending profiles which do consider these factors will be developed during the next phase of analysis.

**Table 5.** Total visitor expenditures in local communities and at Deer Flat NWR expressed in dollars per person per day.

Visitors	n <sup>1</sup>	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	6	\$23	\$42	\$55	\$5	\$148
Local	143	\$15	\$32	\$48	\$0	\$275

<sup>1</sup>n = 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.

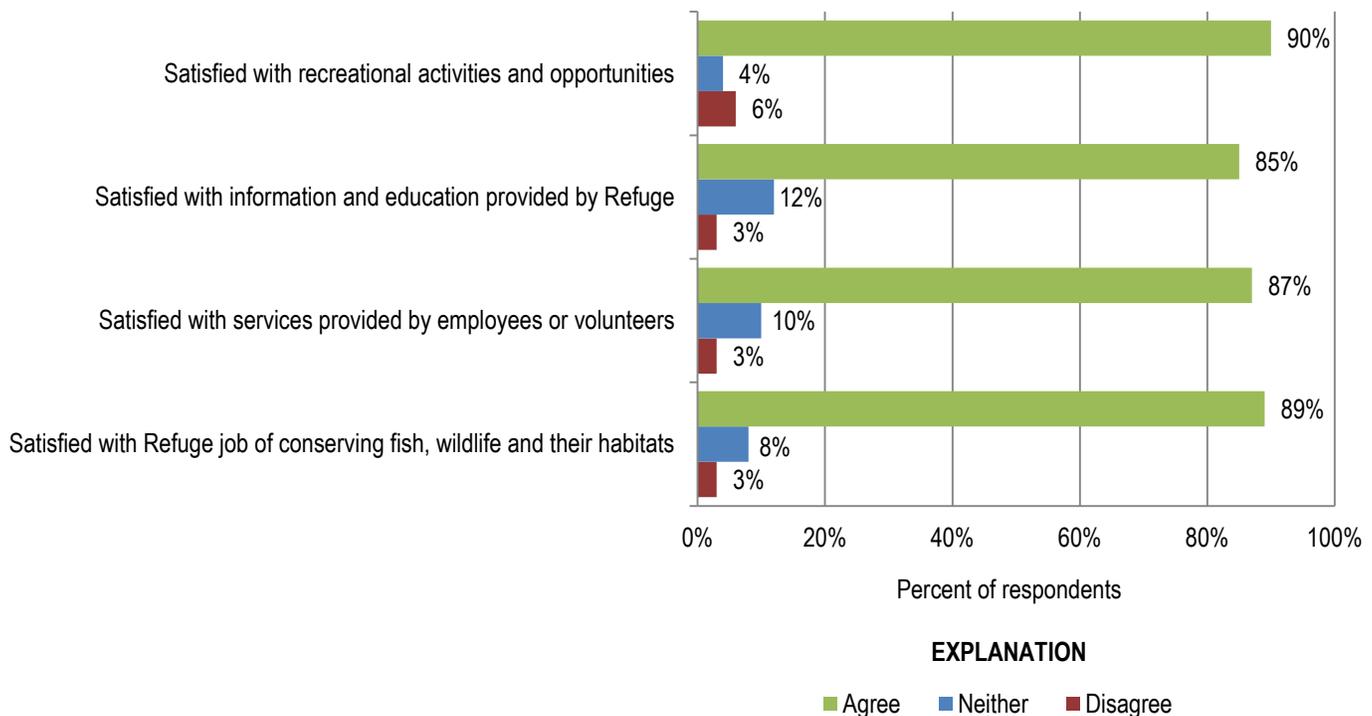
## Visitor Opinions about This Refuge

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 Deer Flat NWR were as follows (fig. 9):

- 90% were satisfied with the recreational activities and opportunities,
- 85% were satisfied with the information and education about the refuge and its resources,
- 87% were satisfied with the services provided by employees or volunteers, and
- 89% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

At the time of this survey there was no fee to enter Deer Flat NWR, though 11% of visitors indicated they had paid a fee (n = 22). It may be that some visitors thought that they paid a fee to Deer Flat NWR when purchasing their boating license, as boat owners can choose to designate that their state license fees be applied to Lake Lowell. However, those funds are disbursed to Canyon County and not provided directly to the refuge. There are also several fee-based activities at Deer Flat NWR, including fishing tournaments and use of the Environmental Education building.



**Figure 9.** Overall satisfaction with Deer Flat NWR during *this* visit (n ≥ 179).

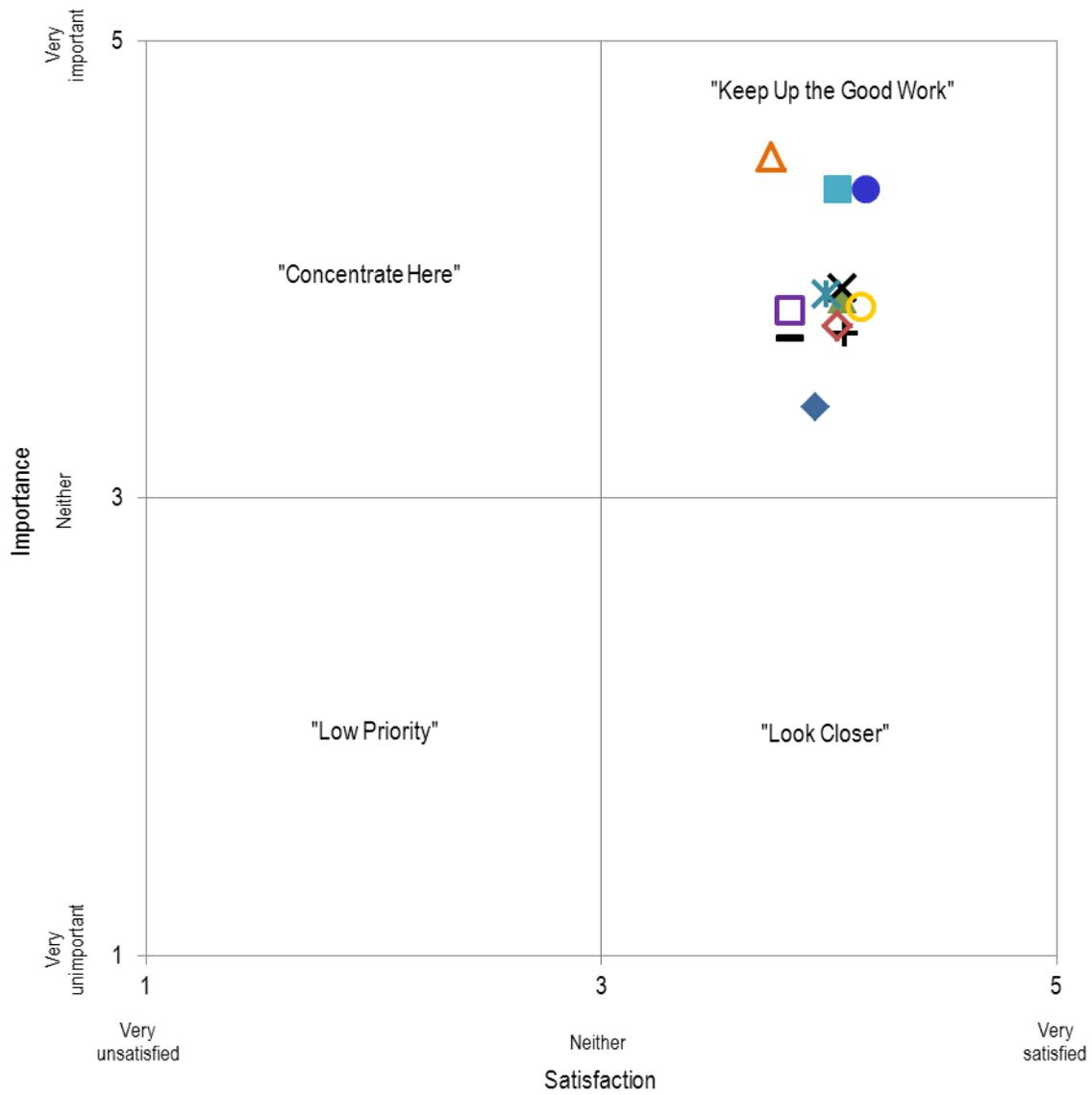
## Importance/Satisfaction Ratings

*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 Deer Flat 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.*

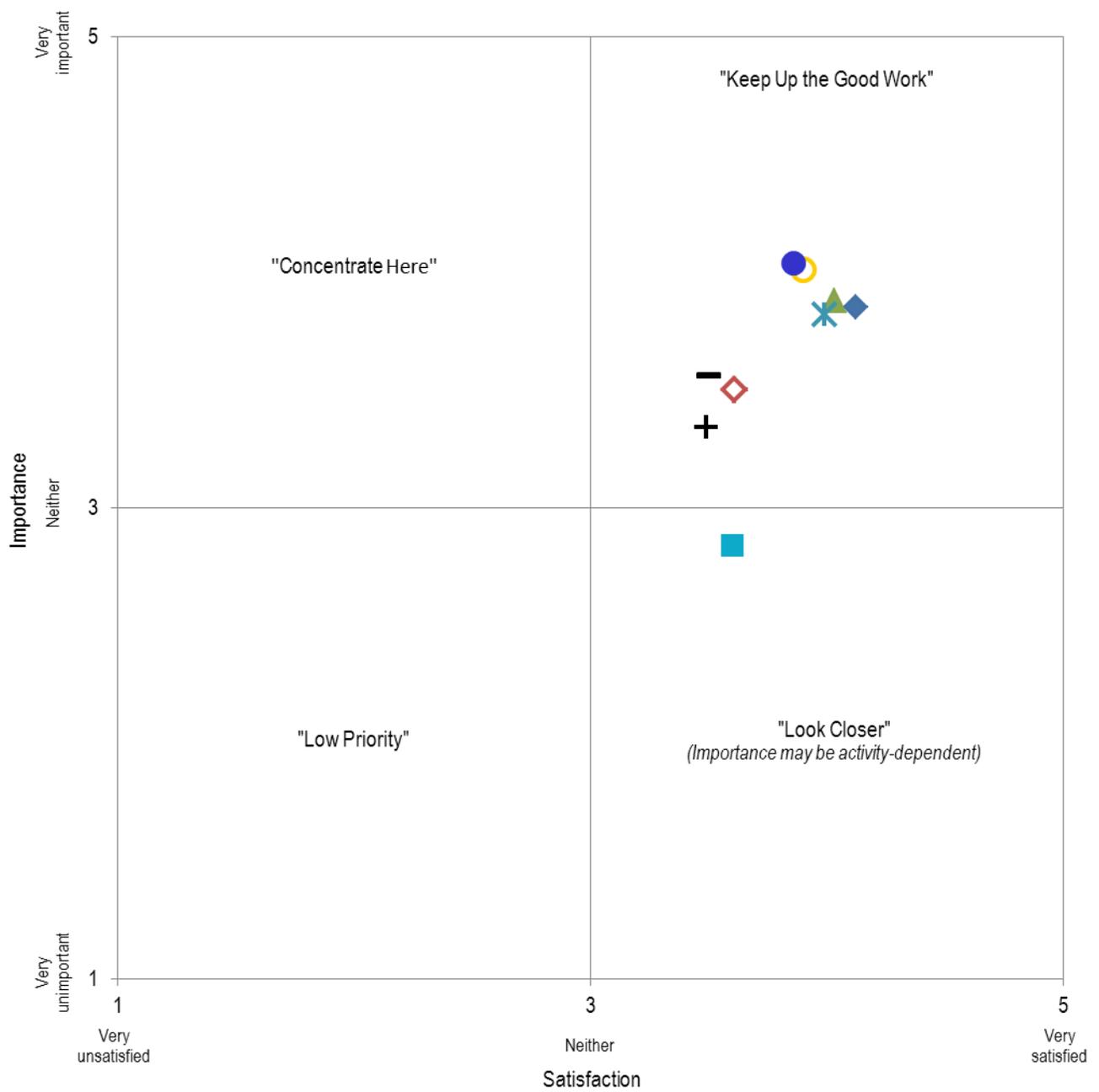
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Deer Flat NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). All refuge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

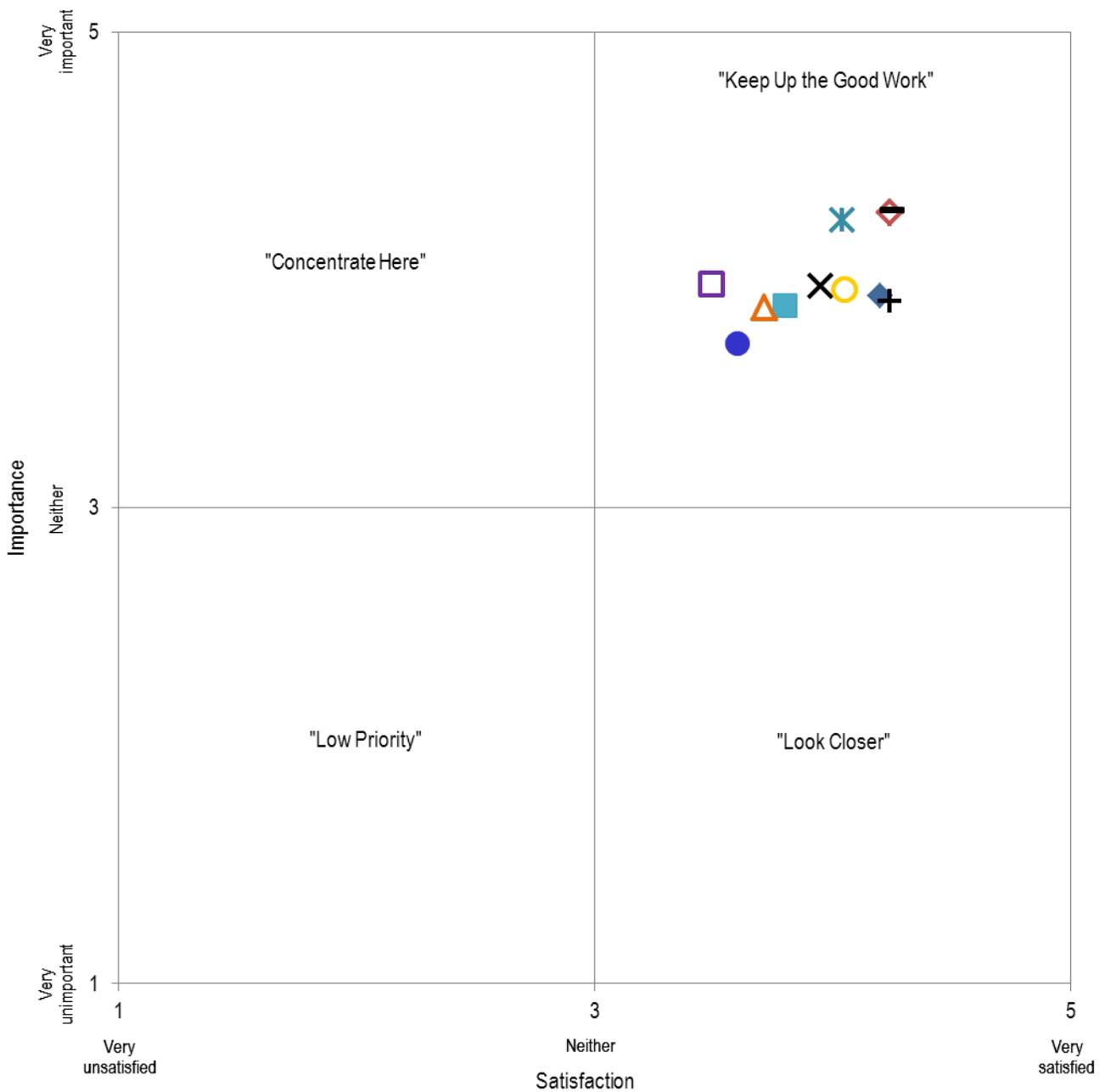
**Figure 10.** Importance-satisfaction ratings of services and facilities provided at Deer Flat NWR.



**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 Deer Flat NWR.



**EXPLANATION**

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

**Figure 12.** Importance-satisfaction ratings of transportation-related features at Deer Flat NWR.

## Visitor Opinions about National Wildlife Refuge System Topics

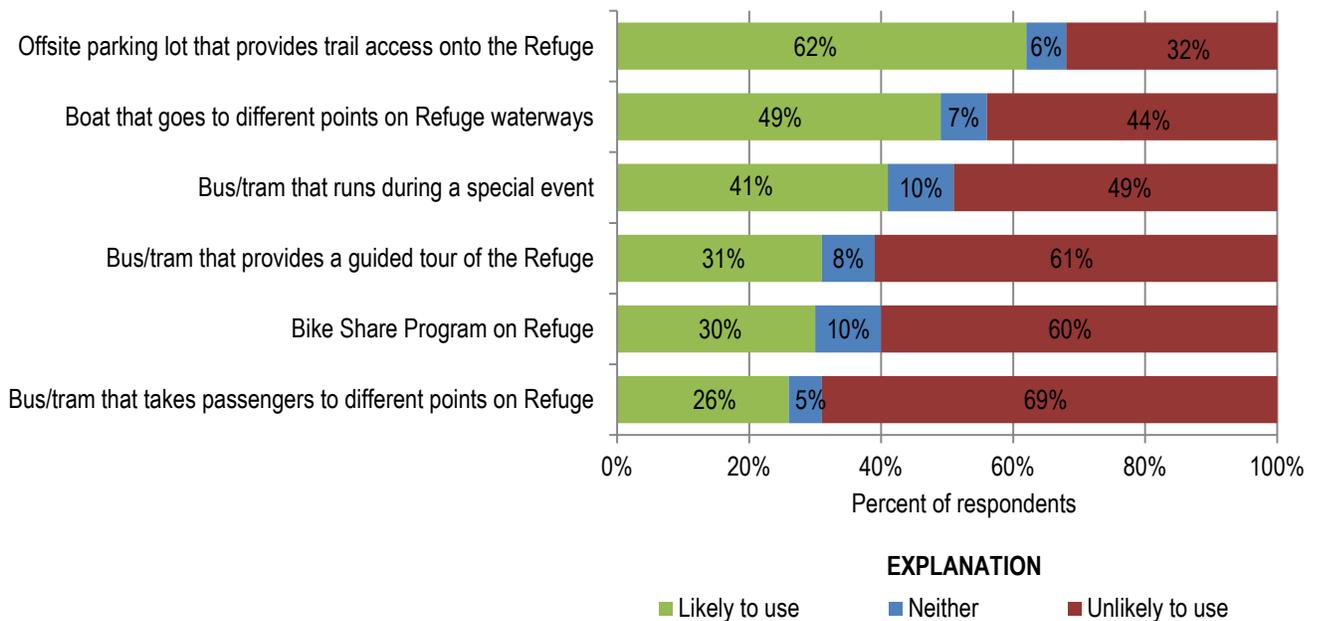
One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results to these questions will be most meaningful when they are evaluated in aggregate (data from all participating refuges together). However, basic results for Deer Flat 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 Deer Flat NWR visitors who were surveyed were likely to use an offsite parking lot that provides trail access at national wildlife refuges in the future (fig. 13). The majority of visitors were *not* likely to use a bus/tram that takes passengers to different points on Refuge, a bus/tram that provides a guided tour, or a bike share program at national wildlife refuges in the future (fig. 13).

When asked about using alternative transportation at Deer Flat NWR specifically, 42% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (10%) and others thought it would not (48%).

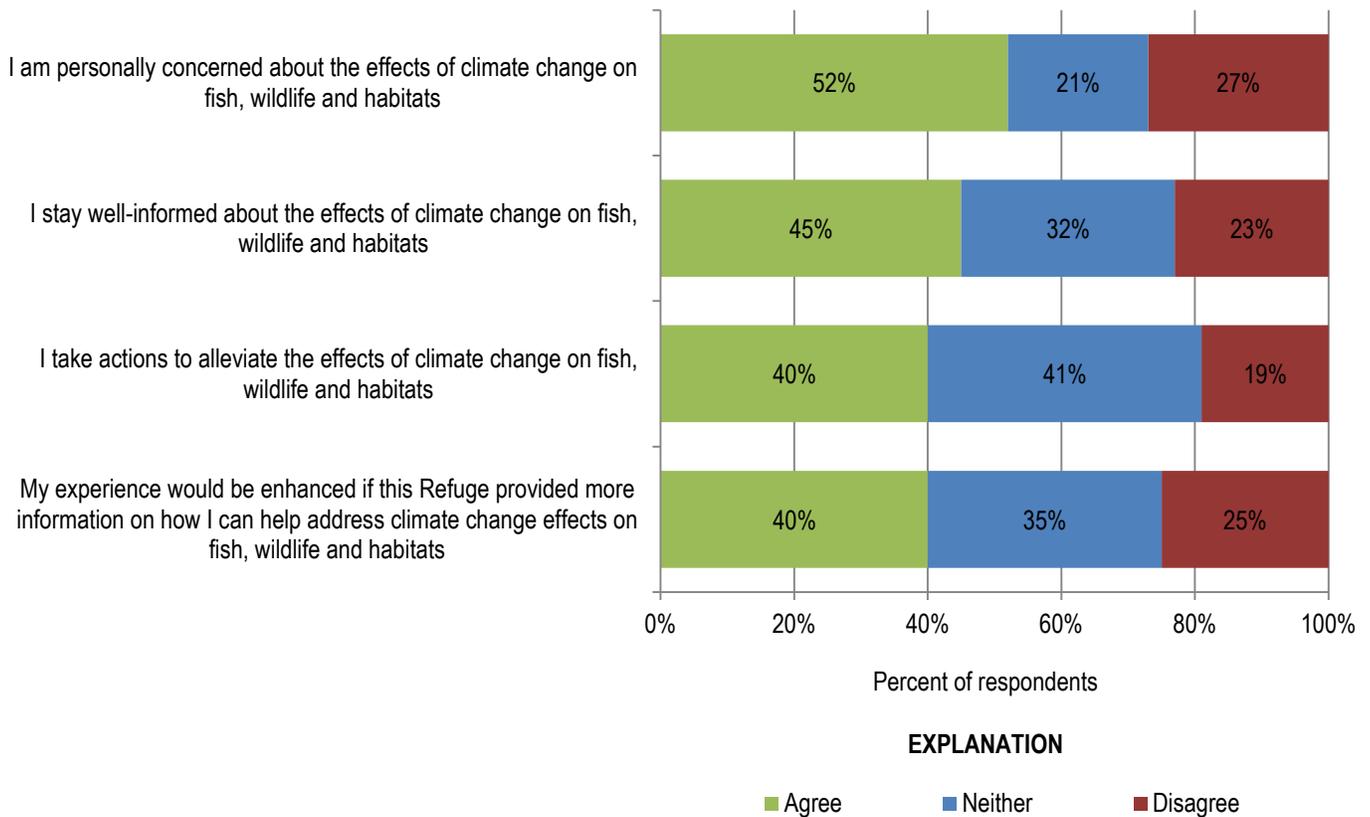


**Figure 13.** Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 195).

## Climate Change and the National Wildlife Refuge System

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

Factors that influence how individuals think about climate change include their basic beliefs, levels of involvement, policy preferences, and behaviors related to this topic. Results presented below provide baseline information on visitors’ levels of involvement with the topic of climate change related to fish, wildlife and their habitats. The majority of surveyed visitors to Deer Flat NWR agreed with the following statement (fig. 14): “I am personally concerned about the effects of climate change on fish, wildlife and habitats.”



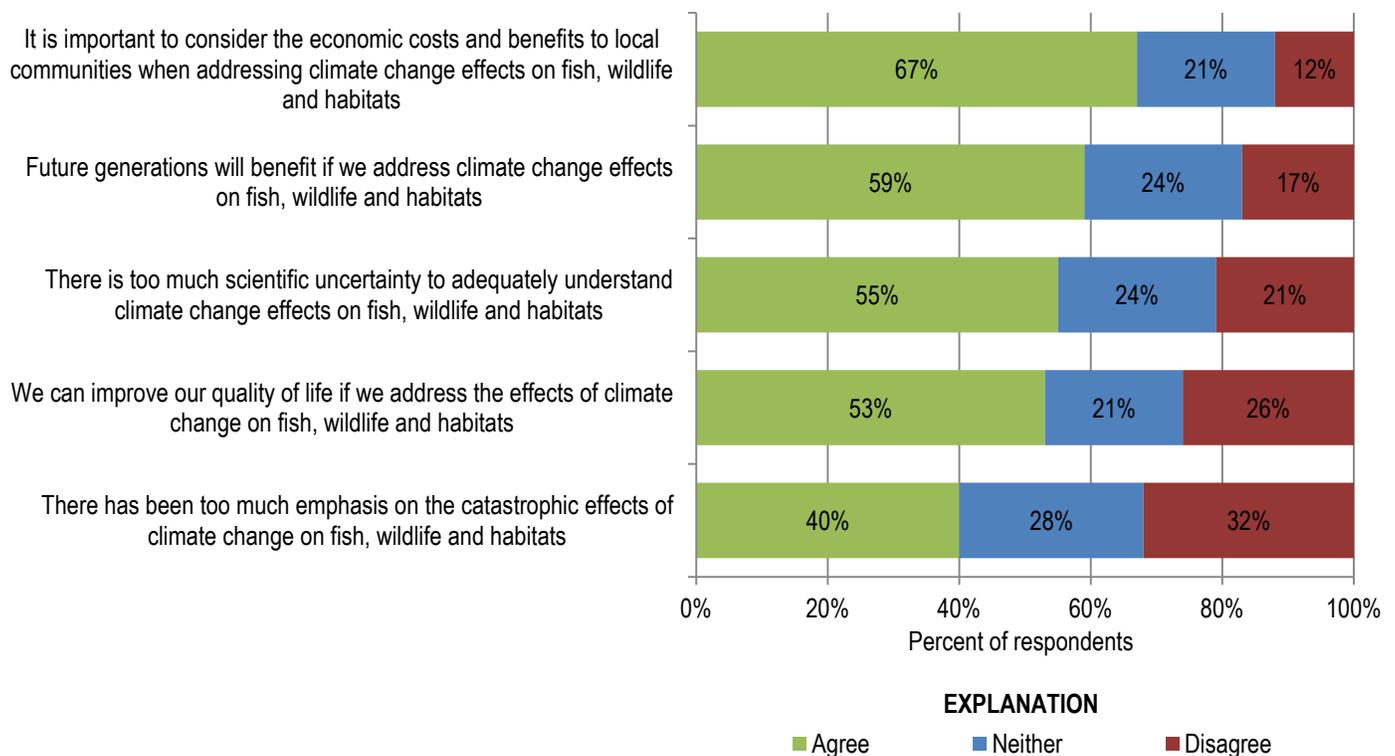
**Figure 14.** Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 188).

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 Deer Flat 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 benefits to local communities when addressing climate change effects;”
- “Future generations will benefit if we address climate change effects;”
- “There is too much scientific uncertainty to adequately understand 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 (40%) indicated that their experience would be enhanced if Deer Flat 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 ≥ 188).

## Comparison of Visitors to Deer Flat NWR by User Group

The following section provides the results of comparisons of key survey responses between certain Deer Flat NWR visitors. These comparisons were made at the request of Deer Flat NWR in an effort to provide a more in-depth characterization of visitors to the refuge. Part of the Refuge System mission is “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). Understanding differences that may exist between user groups, for example between “Priority Use visitors” (those who only participate in hunting, fishing, wildlife observation, photography, interpretation, and environmental education) during the past 12 months and “Mixed Use visitors” (those who participated in those same activities as well as others such as biking, boating, hiking, etc.) can help refuge management develop appropriate strategies for the diversity of visitors using the refuge.

### Methods for Comparison

Visitors were segmented into two groups on the basis of their self-reported participation in recreational activities during the past 12 months at Deer Flat NWR (table 6): “Priority Use Visitors” (35%) and “Mixed Use Visitors” (65%). Visitors who *only* participated in hunting, fishing, wildlife observation (including bird watching), photography, interpretation, and environmental education during the past 12 months were categorized as “Priority Use Visitors.” All other visitors, who participated in nonpriority use activities such as biking, boating, swimming, etc. (and, in some cases, additionally participated in priority use activities) were categorized as “Mixed Use Visitors.” Of the Mixed Use Visitors, 29% (n = 39) participated in only nonpriority use activities, while 71% (n = 96) participated in a variety of priority and nonpriority use activities.

Responses (frequency distributions and mean responses) to survey questions were compared by using cross-tabulations with Chi-Square tests of independence ( $\chi^2$ ) and Independent Samples T-tests (*t*). The alpha level for determining statistical differences in response was  $p < .05$  for all tests. Statistical differences between Priority Use Visitors and Mixed Use Visitors are noted in the text and marked by footnotes in the figures on the horizontal axis labels.

**Table 6.** Categorization of visitors to Deer Flat NWR based on activity participation in the past 12 months.

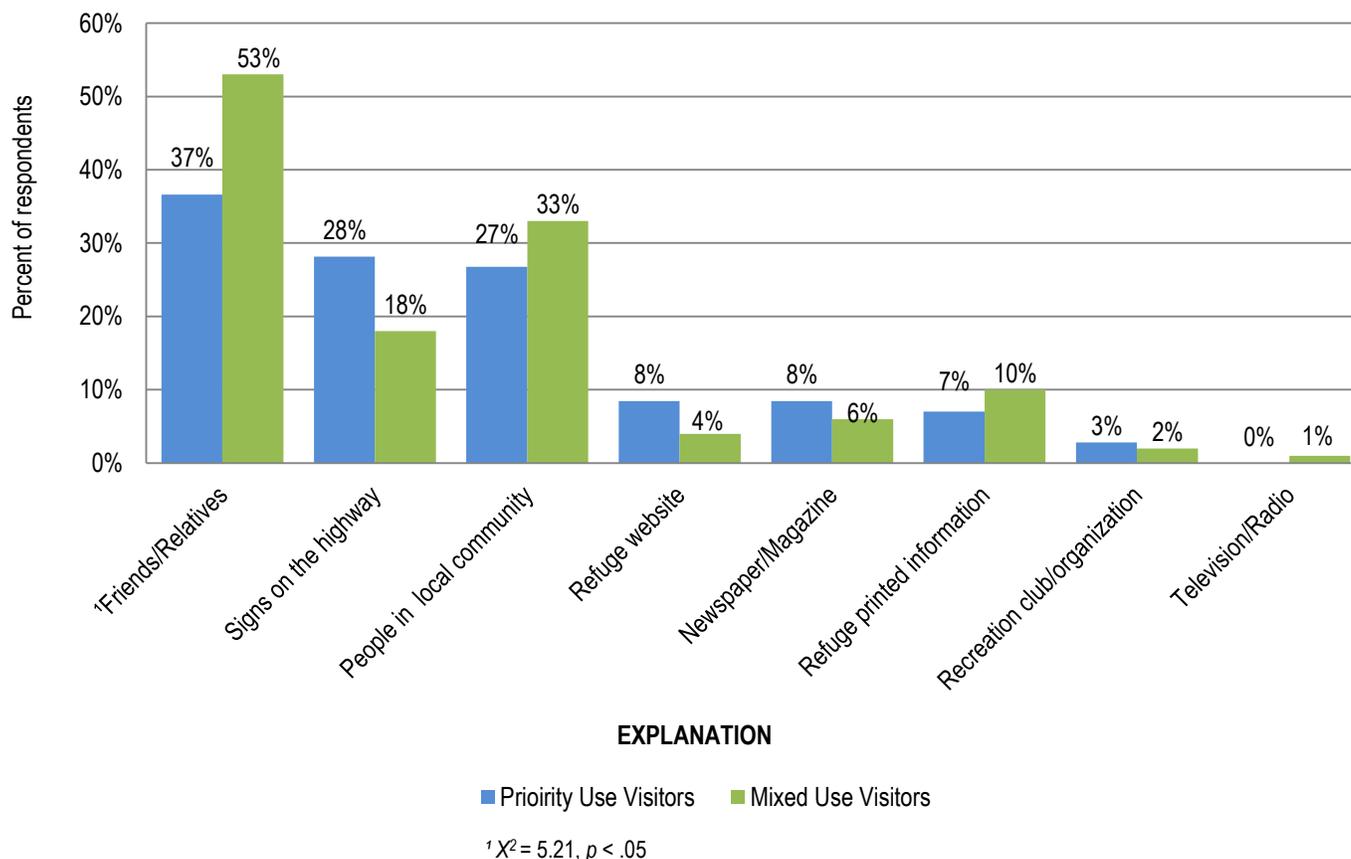
User group	n	Proportion of sample	Activity participation in past 12 months	
Priority Use Visitors	71	35%	Environmental Education Interpretation Fishing Hunting	Photography Wildlife Observation Hiking Auto tour route
Mixed Use Visitors <sup>1</sup>	135	65%	Bicycling Dog Walking Motorized Boating Nonmotorized Boating	Picnicking Swimming Jogging Horseback Riding

<sup>1</sup>Mixed Use Visitors, in addition to participating in at least one of the activities listed, may have also participated in one or more priority use activity.

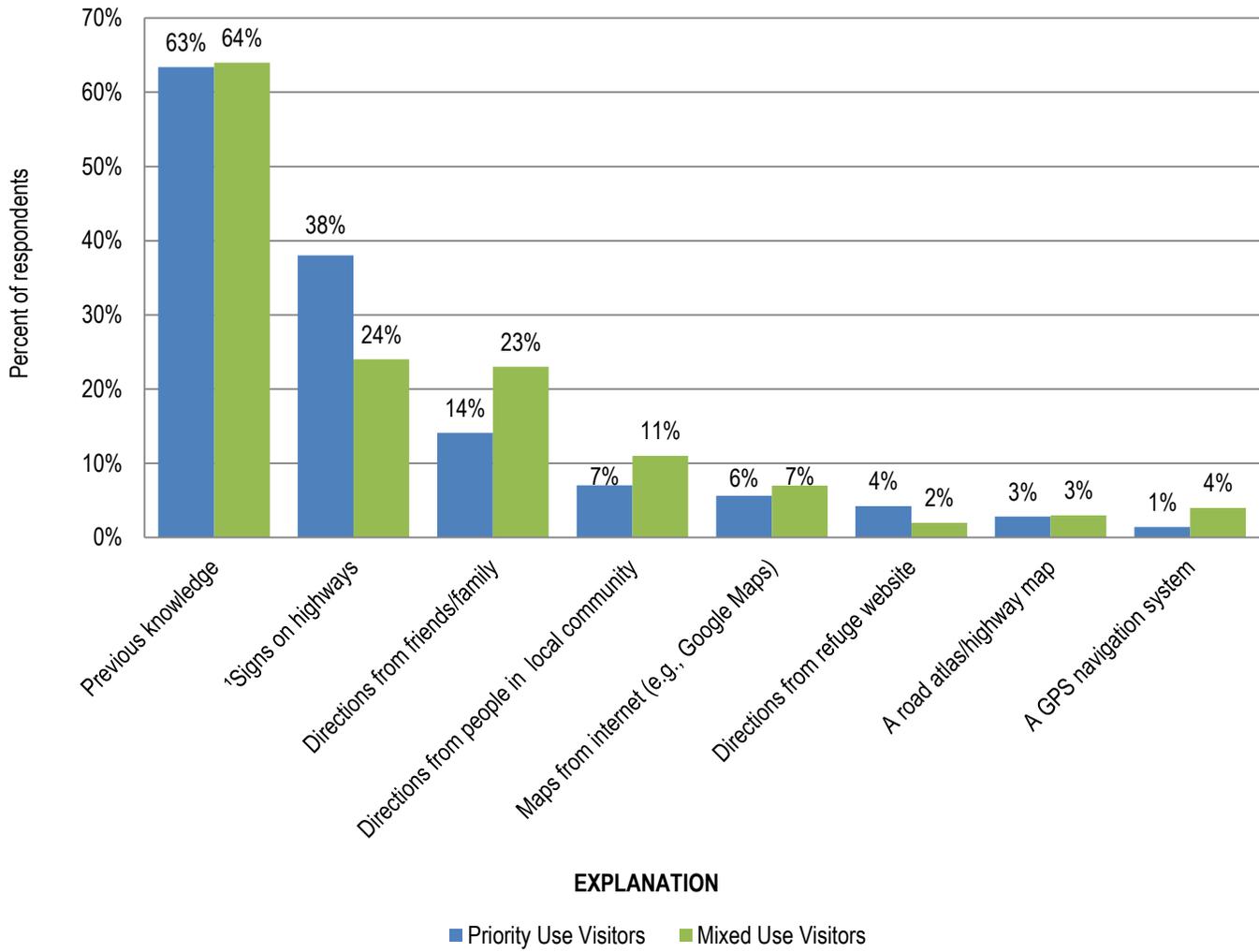
## Visitor and Trip Characteristics

Priority Use Visitors and Mixed Use Visitors are familiar with the Refuge System, reporting that they were aware of the Service’s role in managing national wildlife refuges prior to receiving the survey (92% and 84%, respectively) and of the Refuge System mission (93% and 87%, respectively). Priority Use Visitors and Mixed Use Visitors also indicated that compared to other public lands, refuges provide a unique recreation experience (81% and 71%, respectively). A higher percentage of Priority Use Visitors were first-time visitors to Deer Flat NWR when compared to Mixed Use Visitors (19% and 8%;  $\chi^2 = 5.87$ ,  $p < .05$ ). Though nearly all of the overall sample of visitors to Deer Flat NWR were from the local area, more Priority Use Visitors (13%;  $n = 9$ ) were from outside the local area than Mixed Use Visitors (0%;  $\chi^2 = 17.89$ ,  $p < .05$ ). ***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.***

Generally, both types of visitors first heard or learned about Deer Flat NWR in similar ways (fig. 16), although a lower percentage of Priority Use Visitors heard/learned about the refuge from friends or relatives than did Mixed Use Visitors (37% and 53%, respectively). Visitors also used different information sources to find their way to the refuge. While both groups predominantly relied on their own previous knowledge (or they had been to the refuge before; fig. 17) to find their way, Priority Use Visitors were more likely than Mixed Use Visitors to rely on signs on the highway (38% and 24%, respectively). These differences in familiarity with the refuge and wayfinding may be related to the percent of first time visitors in each group, as a higher percentage of Priority Use Visitors were first-time visitors than were Mixed Use Visitors.



**Figure 16.** Comparison of how visitors first learned or heard about Deer Flat NWR (n = 206).

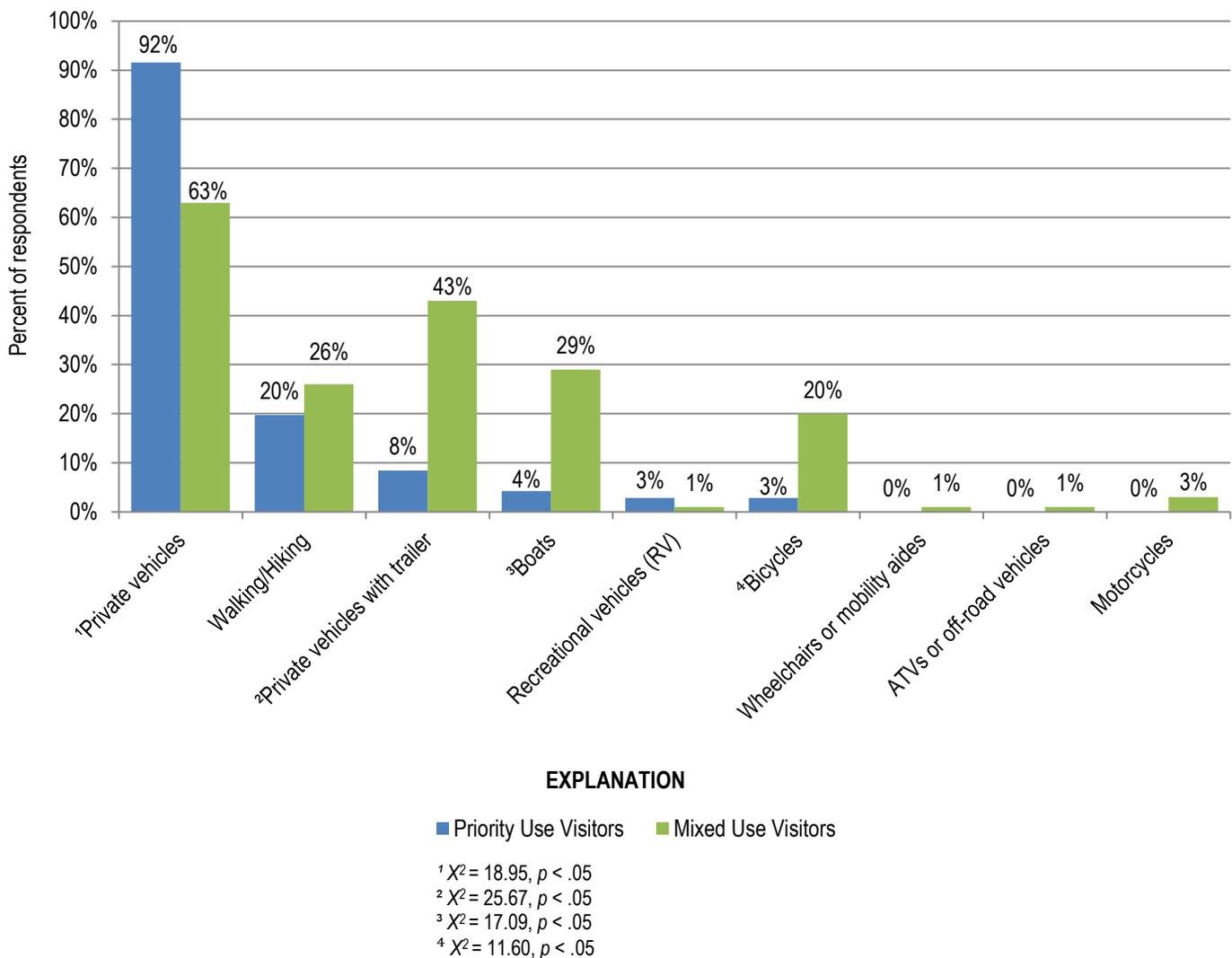


<sup>1</sup>  $\chi^2 = 4.26, p < .05$

**Figure 17.** Comparison of resources used by visitors to find Deer Flat NWR (n = 203).

A lower percentage of Priority Use Visitors reported being part of a group during their visit (48%) than did Mixed Use Visitors (64%;  $\chi^2 = 5.00, p < .05$ ). Among visitors that reported being part of a group, “family and friends” was the most common type for Priority Use Visitors and Mixed Use Visitors, although Priority Use Visitors were more likely to visit with family and friends than were Mixed Use Visitors (94% and 77%, respectively;  $\chi^2 = 2.75, p < .05$ ). The average number of adults in a group was similar for both groups; however, Priority Use Visitors reported bringing fewer children with them to the refuge than did Mixed Use Visitors (mean = 1 and 3, respectively;  $t = 2.75, p < .05$ ).

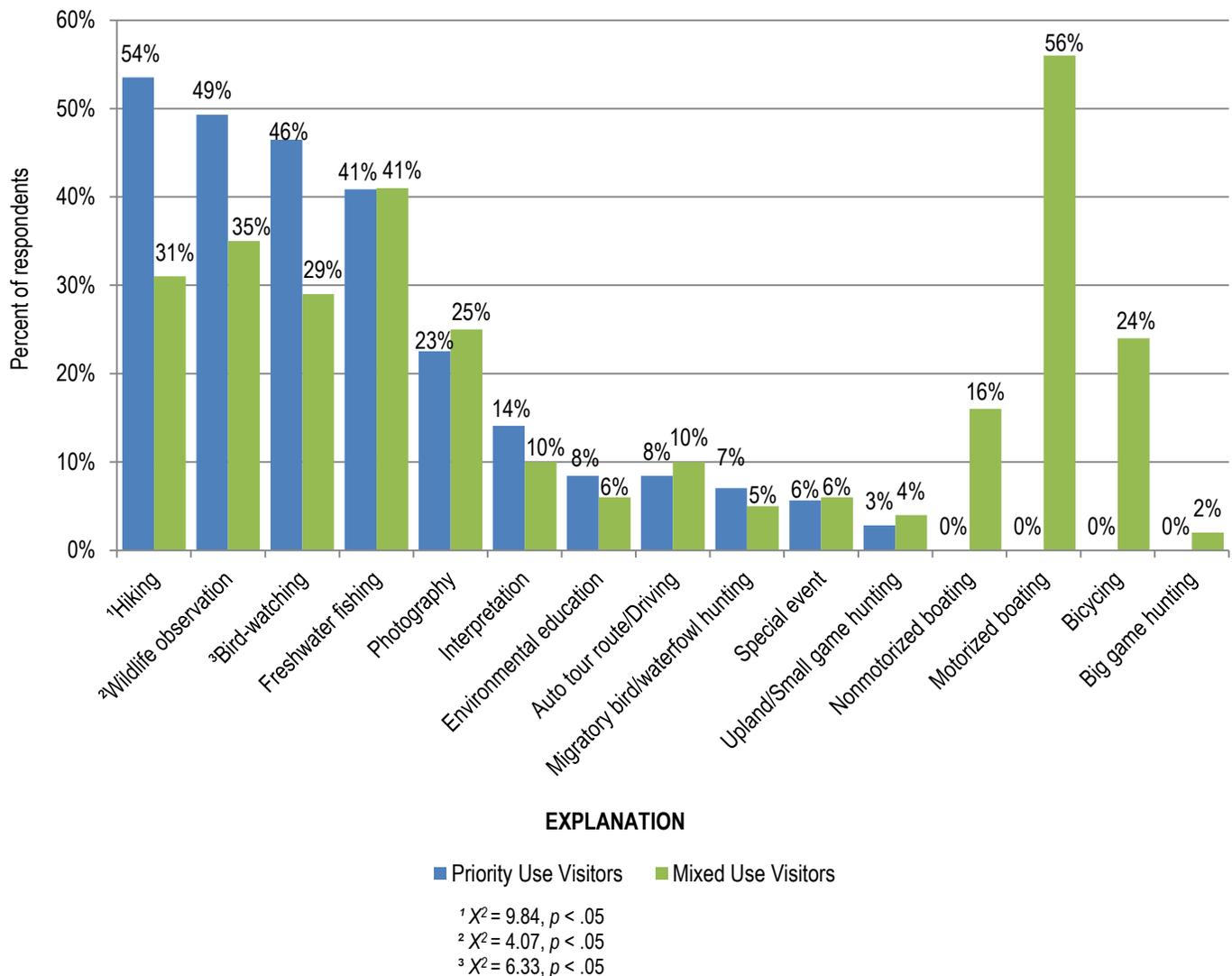
Time spent and transportation used during a visit to Deer Flat NWR differed by user type. Priority Use Visitors spent an average of about 3 hours at the refuge, while Mixed Use Visitors spent around 4 hours there ( $t = 2.75, p < .05$ ). More Priority Use Visitors (92%) indicated that they used their private vehicle on their visit than did Mixed Use Visitors (63%). Priority Use Visitors were less likely than Mixed Use Visitors to have used a private vehicle with a trailer (9% and 43%, respectively) or a bicycle (3% and 20%, respectively; fig. 18).



**Figure 18.** Comparison of modes of transportation used by visitors to Deer Flat NWR during this visit (n = 204).

Variation in these trip characteristics between user types may reflect their differences in the degree of participation in refuge activities during the past year. Priority Use Visitors reported higher levels of participation in wildlife observation, bird watching, and hiking than did Mixed Use Visitors (fig. 19). Priority Use Visitors and Mixed Use Visitors reported similar levels of participation in other wildlife-dependent activities, including fishing, hunting, photography, interpretation, and environmental education. Mixed Use Visitors also reported participation in nonwildlife-dependent activities such as motorized boating (56%), bicycling (24%), and nonmotorized boating (16%). Priority Use Visitors were more likely than Mixed Use Visitors to have used the refuge visitor center on the day when they were recruited to participate in the survey (52% and 28%, respectively;  $\chi^2 = 12.08, p < .05$ ).

Few demographic differences existed between the two groups. A higher percentage of Priority Use Visitors identified themselves as of Hispanic or Latino ethnicity when compared to Mixed Use Visitors (14% and 3%, respectively;  $\chi^2 = 8.96, p < .05$ ). Additionally, Priority Use Visitors were 5 years older on average than Mixed Use Visitors (53 years and 48 years;  $t = -2.17, p < .05$ ).



**Figure 19.** Comparison of activities in which visitors participated during past 12 months at Deer Flat NWR (n = 206).

## Visitor Opinions about This Refuge

When asked about overall satisfaction, Priority Use Visitors and Mixed Use Visitors indicated they were highly satisfied with their recreational and informational/educational experiences on the refuge, and the service provided by refuge staff. Both visitor groups also strongly felt that the refuge does a good job of conserving fish, wildlife, and their habitats. No statistical differences on these measures were indicated.

When asked about specific features, Priority Use Visitors reported higher importance ratings for several refuge services and facilities. Figures 20 and 21 show the ratings for those services and facilities that were statistically different between the groups. These importance/satisfaction ratings are explained on page 17. Priority Use Visitors placed more importance on services of refuge staff (availability, courteousness, and knowledge) than did Mixed Use Visitors. Priority Use Visitors also reported higher levels of importance than Mixed Use Visitors on information provided by the refuge (printed information, kiosks, exhibits). Priority Use Visitors further rated the visitor center and wildlife observation structures as more important to their refuge visit than Mixed Use Visitors did. Although there were differences in some of these ratings, all refuge services and facilities fell in the “Keep Up the Good Work” quadrant. Both visitor types reported consistently high levels of satisfaction with the services and facilities offered at this refuge.

Priority Use Visitors placed more importance on certain wildlife-dependent recreation opportunities (bird watching, photography, trail hiking, and volunteering) than did Mixed Use Visitors. Satisfaction ratings with these same recreational opportunities were similar for both groups, with the exception of Priority Use Visitors reporting a higher satisfaction level with bird watching and hiking opportunities than those reported by Mixed Use Visitors (figs. 22 and 23). Despite some differences in these ratings, all recreational opportunities fell in the “Keep Up the Good Work” quadrant for both groups except hunting opportunities, which fell into the “Look Closer” quadrant. As mentioned previously in this report, the average importance of hunting opportunities in the “Look Closer” quadrant may be higher among visitors who have participated in these activities during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants.

Finally, Priority Use Visitors and Mixed Use Visitors reported similar ratings for the importance of transportation-related features while visiting Deer Flat NWR. One exception was that Priority Use Visitors indicated a higher average importance rating for “signs directing you on trails” than did Mixed Use Visitors (mean = 4.1 and 3.7, respectively;  $t = -2.15$ ,  $p < .05$ ). Both visitor types reported consistently high levels of satisfaction with the transportation-related features of the refuge.



**EXPLANATION**

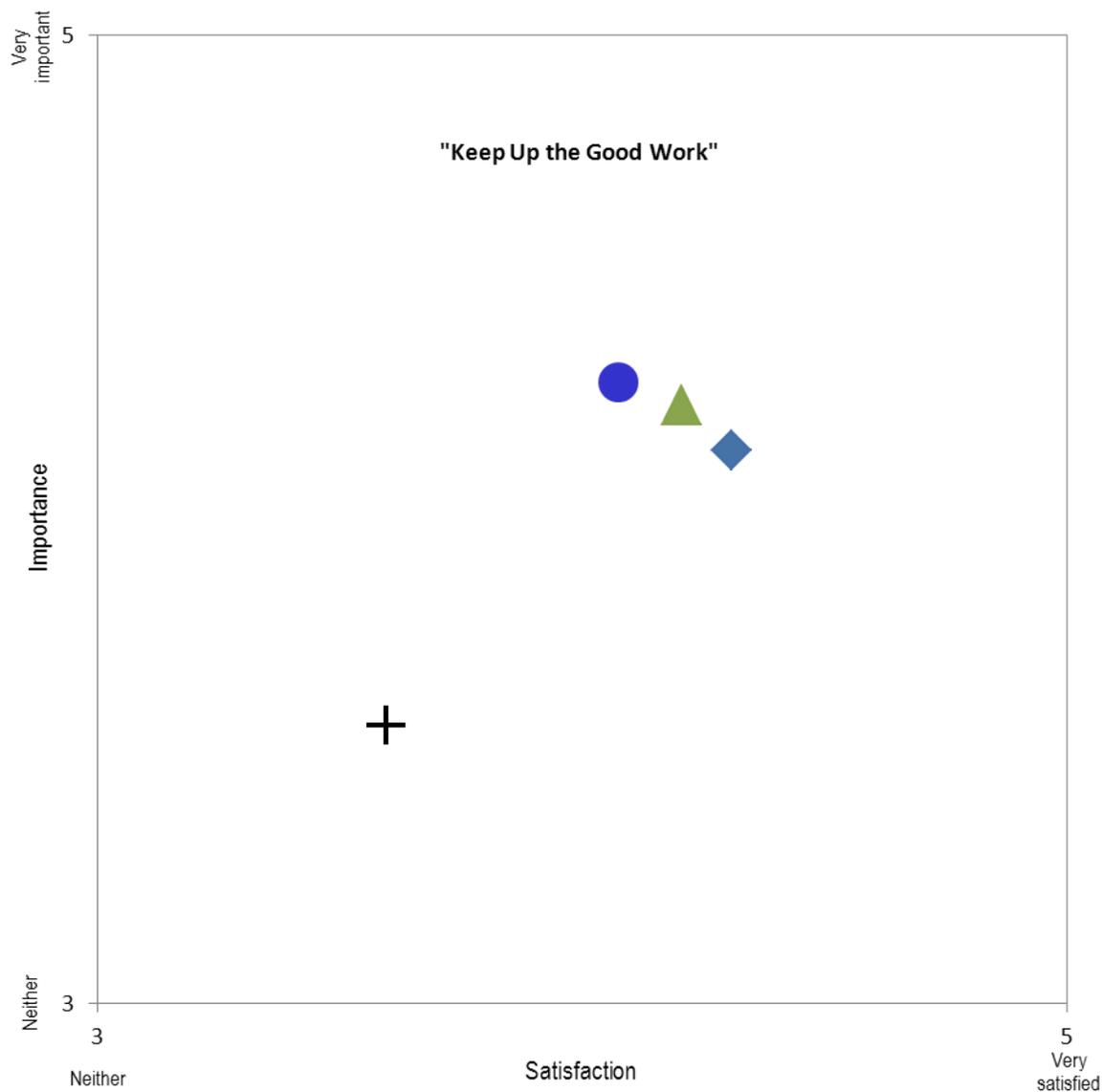
- ◆ <sup>1</sup>Availability of employees/volunteers
- ▲ <sup>3</sup>Knowledgeable employees/volunteers
- ✦ <sup>5</sup>Informational kiosks/displays about this Refuge
- <sup>7</sup>Visitor Center
- ✚ <sup>2</sup>Courteous/welcoming employees/volunteers
- ✕ <sup>4</sup>Printed information about this Refuge
- ◇ <sup>6</sup>Exhibits about this Refuge
- <sup>8</sup>Wildlife observation structures

<sup>1</sup>  $t = -2.56, p < .05$   
<sup>3</sup>  $t = -3.34, p < .05$   
<sup>5</sup>  $t = -3.28, p < .05$   
<sup>7</sup>  $t = -2.59, p < .05$

<sup>2</sup>  $t = -4.11, p < .05$   
<sup>4</sup>  $t = -3.18, p < .05$   
<sup>6</sup>  $t = -3.28, p < .05$   
<sup>8</sup>  $t = -3.32, p < .05$

**Figure 20.** Priority Use Visitors' importance-satisfaction ratings with services and facilities provided at Deer Flat NWR. Only those differences in services and facilities between the two groups are shown. All differences were in importance ratings. Only the "Keep Up the Good Work" quadrant is shown for clarity.

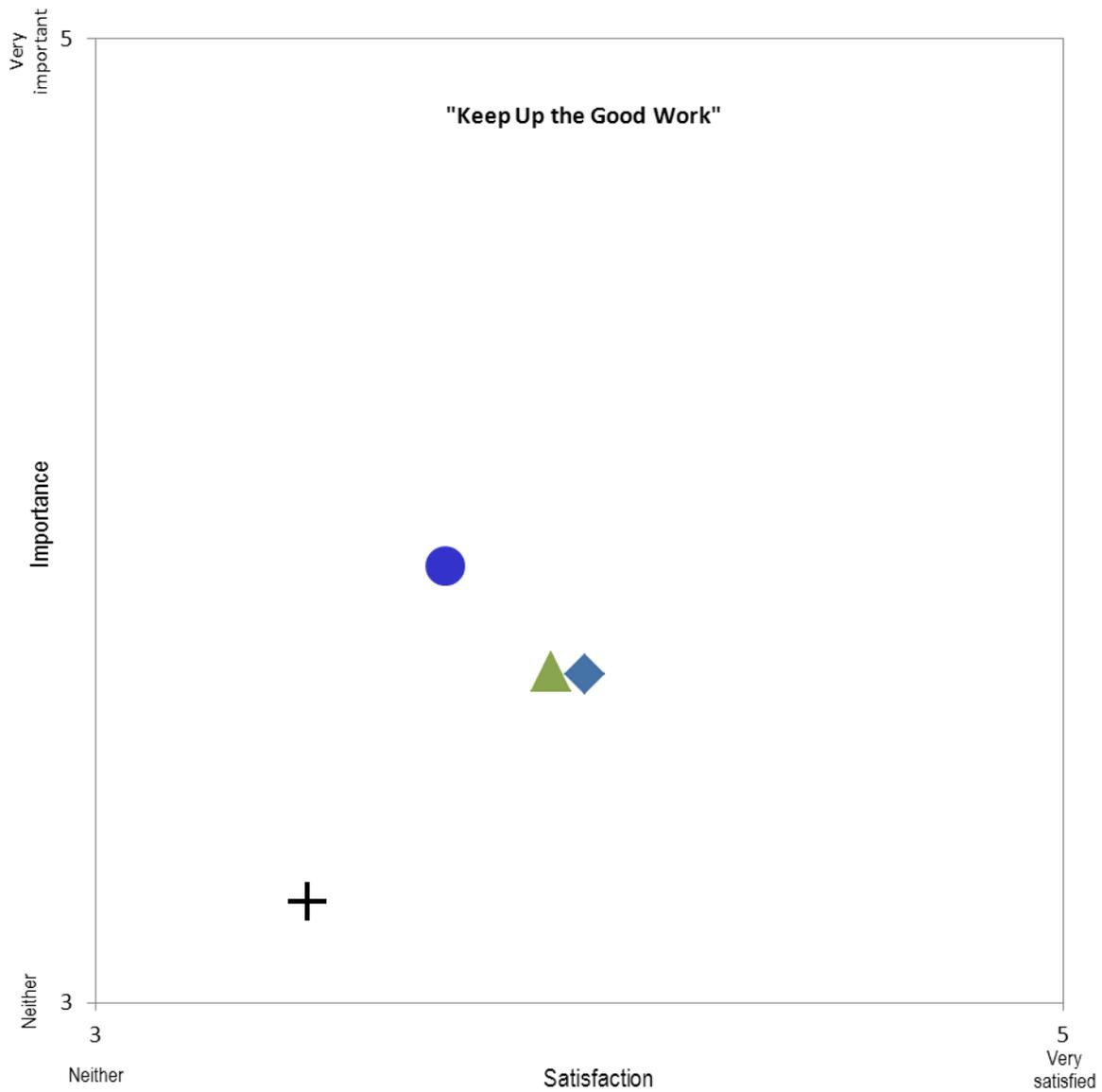




**EXPLANATION**

- ◆<sup>1</sup>Bird watching opportunities
  - ▲<sup>2</sup>Photography opportunities
  - <sup>3</sup>Hiking opportunities
  - ⊕<sup>4</sup>Volunteer opportunities
- <sup>1</sup>  $t = -2.66, p < .05$  (importance)  
<sup>1</sup>  $t = -1.99, p < .05$  (satisfaction)
- <sup>2</sup>  $t = -3.25, p < .05$
- <sup>3</sup>  $t = -2.12, p < .05$  (importance)  
<sup>3</sup>  $t = -2.14, p < .05$  (satisfaction)
- <sup>4</sup>  $t = -2.02, p < .05$

**Figure 22.** Priority Use Visitors' importance-satisfaction ratings with recreational opportunities provided at Deer Flat NWR. Only those differences in recreational opportunities between the two groups are shown. All differences were in importance ratings, except for bird watching and hiking opportunities, where both importance and satisfaction ratings differed. Only the "Keep Up the Good Work" quadrant is shown for clarity.



**EXPLANATION**

◆ <sup>1</sup>Bird watching opportunities

▲ <sup>2</sup>Photography opportunities

● <sup>3</sup>Hiking opportunities

✚ <sup>4</sup>Volunteer opportunities

<sup>1</sup>  $t = -2.66, p < .05$  (importance)

<sup>2</sup>  $t = -3.25, p < .05$

<sup>1</sup>  $t = -1.99, p < .05$  (satisfaction)

<sup>3</sup>  $t = -2.12, p < .05$  (importance)

<sup>4</sup>  $t = -2.02, p < .05$

<sup>3</sup>  $t = -2.14, p < .05$  (satisfaction)

**Figure 23.** Mixed Use Visitors' importance-satisfaction ratings with recreational opportunities provided at Deer Flat NWR. Only those differences in recreational opportunities between the two groups are shown. All differences were in importance ratings, except for bird watching and hiking opportunities, where importance and satisfaction ratings both differed. Only the "Keep Up the Good Work" quadrant is shown for clarity.

## Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Deer Flat NWR during 2010. 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 the refuge 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](mailto:national_visitor_survey@usgs.gov) or 970.226.9205.

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# National Wildlife Refuge Visitor Survey



**PLEASE READ THIS FIRST:**

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

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

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**SECTION 1. Your visit to this Refuge**

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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"/> 39% Hiking   | <input type="checkbox"/> 7% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 3% Upland/Small-game hunting        | <input type="checkbox"/> 16% Bicycling  |  |
| <input type="checkbox"/> 6% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 10% Auto tour route/Driving                                | <input type="checkbox"/> 6% Special event ( <i>please specify</i> )<br><u>See Appendix B</u> |
| <input type="checkbox"/> 40% Wildlife observation            | <input type="checkbox"/> 36% Motorized boating                                      | <input type="checkbox"/> 25% Other ( <i>please specify</i> )<br><u>See Appendix B</u>        |
| <input type="checkbox"/> 35% Bird watching                   | <input type="checkbox"/> 11% Nonmotorized boating (including canoes/kayaks)         | <input type="checkbox"/> 6% Other ( <i>please specify</i> )<br><u>See Appendix B</u>         |
| <input type="checkbox"/> 41% Freshwater fishing              |   |  |
| <input type="checkbox"/> 0% Saltwater fishing                | <input type="checkbox"/> 12% Interpretation (for example, exhibits, kiosks, videos) |  |
| <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?

- 64% No
- 36% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- |  |   |
|--|---|
| <input type="checkbox"/> 22% Visit the gift shop or bookstore    | <input type="checkbox"/> 27% Watch a nature talk/video/presentation                               |
| <input type="checkbox"/> 80% View the exhibits                   | <input type="checkbox"/> 47% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 43% Ask information of staff/volunteers | <input type="checkbox"/> 9% 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%	76%	74%	It was the primary purpose or sole destination of my trip.
33%	11%	12%	It was one of many equally important reasons or destinations for my trip.
22%	13%	14%	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**  359  number of miles

**Local**  11  number of miles

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

See Report for Results

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

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

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

89% Family and/or friends

5% Organized club or school group

1% Commercial tour group

5% Other (*please specify*)  See Appendix B

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

4  number 18 years and over

2  number 17 years and under

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

48% Friends or relatives

5% Refuge website

21% Signs on highway

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

2% Recreation club or organization

1% Television or radio

31% People in the local community

7% Newspaper or magazine

9% Refuge printed information (brochure, map)

5% Other (*please specify*)  See Appendix B

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

64% Spring  
(March-May)

100% Summer  
(June-August)

55% Fall  
(September-November)

31% Winter  
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months?  19  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"/> 73% | Private vehicle without a trailer                             | <input type="checkbox"/> 0%  | Refuge shuttle bus or tram       | <input type="checkbox"/> 14% | Bicycle                               |
| <input type="checkbox"/> 31% | Private vehicle with a trailer<br>(for boat, camper or other) | <input type="checkbox"/> 2%  | Motorcycle                       | <input type="checkbox"/> 23% | Walk/Hike                             |
| <input type="checkbox"/> 0%  | Commercial tour bus   | <input type="checkbox"/> 0%  | ATV or off-road vehicle          | <input type="checkbox"/> 2%  | Other ( <i>please specify below</i> ) |
| <input type="checkbox"/> 1%  | Recreational vehicle (RV)                                     | <input type="checkbox"/> 20% | Boat                             | <u>See Appendix B</u>        |                                       |
|                              |   | <input type="checkbox"/> 0%  | Wheelchair or other mobility aid |                              |                                       |

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

- |                              |  |                              |   |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 29% | Signs on highways  | <input type="checkbox"/> 3%  | Directions from Refuge website                        |
| <input type="checkbox"/> 3%  | A GPS navigation system  | <input type="checkbox"/> 10% | Directions from people in community near this Refuge  |
| <input type="checkbox"/> 3%  | A road atlas or highway map                                      | <input type="checkbox"/> 20% | Directions from friends or family                     |
| <input type="checkbox"/> 6%  | Maps from the Internet (for example,<br>MapQuest or Google Maps) | <input type="checkbox"/> 64% | Previous knowledge/I have been to this Refuge before  |
|                              |  | <input type="checkbox"/> 2%  | Other ( <i>please specify</i> ) <u>See Appendix B</u> |

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

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 58%	<input type="checkbox"/> 12%	<input type="checkbox"/> 5%	<input type="checkbox"/> 19%	<input type="checkbox"/> 7%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 47%	<input type="checkbox"/> 13%	<input type="checkbox"/> 10%	<input type="checkbox"/> 22%	<input type="checkbox"/> 8%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 44%	<input type="checkbox"/> 17%	<input type="checkbox"/> 8%	<input type="checkbox"/> 23%	<input type="checkbox"/> 8%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 30%	<input type="checkbox"/> 14%	<input type="checkbox"/> 7%	<input type="checkbox"/> 34%	<input type="checkbox"/> 15%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 39%	<input type="checkbox"/> 11%	<input type="checkbox"/> 10%	<input type="checkbox"/> 29%	<input type="checkbox"/> 12%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 22%	<input type="checkbox"/> 9%	<input type="checkbox"/> 7%	<input type="checkbox"/> 28%	<input type="checkbox"/> 34%
...some other alternative transportation option? ( <i>please specify</i> ) <u>See Appendix B</u>	<input type="checkbox"/> 46%	<input type="checkbox"/> 3%	<input type="checkbox"/> 32%	<input type="checkbox"/> 8%	<input type="checkbox"/> 10%

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

- 10% Yes       48% No       42% Not Sure

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

Importance						Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
4%	11%	9%	44%	32%	Surface conditions of roads	4%	10%	5%	25%	56%	NA
5%	9%	7%	52%	27%	Surface conditions of parking areas	5%	8%	3%	24%	59%	NA
NA	NA	NA	NA	NA	Condition of bridges	NA	NA	NA	NA	NA	NA
8%	7%	10%	36%	40%	Condition of trails and boardwalks	6%	6%	13%	38%	38%	NA
5%	5%	4%	36%	50%	Number of places for parking	4%	14%	5%	28%	49%	NA
5%	8%	23%	41%	24%	Number of places to pull over along Refuge roads	5%	14%	24%	31%	26%	NA
4%	2%	11%	32%	51%	Safety of driving conditions on Refuge roads	2%	4%	13%	28%	52%	NA
3%	3%	8%	36%	50%	Safety of Refuge road entrances/exits	3%	4%	9%	31%	52%	NA
6%	4%	17%	36%	36%	Signs on highways directing you to the Refuge	3%	8%	16%	31%	44%	NA
7%	4%	15%	43%	30%	Signs directing you around the Refuge roads	4%	10%	22%	33%	32%	NA
6%	8%	14%	42%	30%	Signs directing you on trails	4%	10%	24%	36%	26%	NA
5%	6%	18%	31%	40%	Access for people with physical disabilities or who have difficulty walking	7%	12%	30%	26%	25%	NA

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

See Appendix B

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**SECTION 3. Your expenses related to your Refuge visit**

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

96% Yes

4% No → How much time did you spend **in local communities** on this trip?

NA number of hours OR 8 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 &amp; at this Refuge</u> <i>(within 50 miles of this Refuge)</i>
Motel, bed & breakfast, cabin, etc.	
Camping	
Restaurants & bars	
Groceries	
Gasoline and oil	
Local transportation (bus, shuttle, rental car, etc.)	
Refuge entrance fee	
Recreation guide fees (hunting, fishing, wildlife viewing, etc.)	
Equipment rental (canoe, bicycle, kayak, etc.)	
Sporting good purchases	
Souvenirs/clothing and other retail	
Other <i>(please specify)</i> _____	

See Report for Results

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

2 number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
18%	34%	21%	9%	10%	2%	4%	1%	1%	1%	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	9%	Too low	77%	About right	5%	Too high	9%	Far too high	89%	Did not pay a fee <i>(skip to Section 4)</i>
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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.**

5%	Strongly disagree	0%	Disagree	23%	Neither agree or disagree	55%	Agree	18%	Strongly agree
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#### SECTION 4. Your experience at this Refuge

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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%	6%	4%	45%	45%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	0%	3%	12%	47%	38%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	1%	2%	10%	44%	43%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	3%	8%	48%	41%	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
9%	12%	28%	31%	20%	Availability of employees or volunteers	3%	7%	25%	22%	43%	NA
8%	8%	17%	38%	29%	Courteous and welcoming employees or volunteers	6%	2%	21%	22%	49%	NA
7%	4%	16%	40%	33%	Knowledgeable employees or volunteers	4%	2%	23%	25%	46%	NA
6%	4%	11%	50%	29%	Printed information about this Refuge and its resources (for example, maps and brochures)	3%	6%	14%	37%	40%	NA
7%	3%	12%	49%	29%	Informational kiosks/displays about this Refuge and its resources	4%	6%	17%	34%	39%	NA
2%	2%	5%	44%	48%	Signs with rules/regulations for this Refuge	4%	6%	6%	40%	45%	NA
7%	6%	19%	44%	25%	Exhibits about this Refuge and its resources	3%	2%	22%	33%	40%	NA
8%	6%	21%	38%	27%	Environmental education programs or activities	3%	4%	31%	32%	30%	NA
7%	3%	18%	42%	29%	Visitor Center	2%	1%	23%	27%	46%	NA
1%	3%	7%	38%	51%	Convenient hours and days of operation	6%	6%	9%	33%	45%	NA
3%	2%	3%	29%	63%	Well-maintained restrooms	11%	10%	8%	32%	38%	NA
8%	2%	20%	40%	30%	Wildlife observation structures (decks, blinds)	3%	6%	28%	32%	31%	NA
7%	4%	19%	39%	32%	Bird-watching opportunities	1%	3%	24%	30%	43%	NA
4%	3%	13%	48%	31%	Opportunities to observe wildlife other than birds	1%	7%	26%	35%	31%	NA
6%	4%	19%	38%	33%	Opportunities to photograph wildlife and scenery	1%	2%	26%	37%	35%	NA
34%	6%	20%	21%	18%	Hunting opportunities	4%	2%	46%	24%	23%	NA
16%	5%	8%	24%	47%	Fishing opportunities	3%	8%	16%	34%	39%	NA
7%	4%	12%	34%	44%	Trail hiking opportunities	2%	6%	24%	39%	28%	NA
11%	7%	27%	33%	23%	Water trail opportunities for canoeing or kayaking	3%	7%	39%	26%	24%	NA
11%	7%	23%	34%	25%	Bicycling opportunities	4%	9%	37%	34%	17%	NA
12%	5%	35%	34%	14%	Volunteer opportunities	3%	4%	54%	18%	21%	NA

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

See Appendix B

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

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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?

89%

Yes

11%

No

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

75%

Yes

25%

No

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

See Appendix B

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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.	13%	15%	20%	30%	23%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	13%	13%	21%	31%	22%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	8%	13%	24%	37%	18%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	5%	18%	32%	34%	11%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	4%	7%	21%	48%	20%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	6%	13%	41%	30%	10%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	15%	16%	28%	25%	15%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	8%	9%	24%	33%	26%
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.	14%	12%	35%	25%	15%

## SECTION 6. A Little about You

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

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

100% Yes  0% No → If not, what is your home country? See Figure 4 in Report

2. Are you?  60% Male  40% Female

3. In what year were you born? 1961 (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%			22%				54%				23%			

5. What ethnicity do you consider yourself?  7% Hispanic or Latino  93% Not Hispanic or Latino

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

- 8% American Indian or Alaska Native
- 1% Black or African American
- 95% White
- 2% Asian
- 2% 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?

- 4% Less than \$10,000
- 19% \$35,000 - \$49,999
- 10% \$100,000 - \$149,999
- 10% \$10,000 - \$24,999
- 22% \$50,000 - \$74,999
- 2% \$150,000 - \$199,999
- 19% \$25,000 - \$34,999
- 12% \$75,000 - \$99,999
- 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.)?

21 number of trips

**Thank you for completing the survey.**

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

See Appendix B for Comments

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## Appendix B: Visitor Comments to Open-Ended Survey Questions for Deer Flat 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
4th of July	1
BBQ's	1
Bio Blitz	3
Birthday	1
Birthday parties	1
Butterfly lecture	1
Family gathering	1
Family reunion	1
Psychosocial rehab interventions	1
Reading to kids program	1
Total	12

Other Activity	Frequency
BBQ	1
Birthday party	1
Church activities	1
College Art drawing class	1
Exercising my dog	1
Family picnics	1
Fishing and swimming	1
Horseback riding twice a week	1
I run by the lake.	1

Jogging	1
Picnic	3
Picnic at the park	1
Picnic in the park	1
Picnicking	1
Preschool Reading Time	1
Riding my horse	1
Running	2
School tours	1
Sitting on the docks and chatting!	1
Swim dogs	1
Swimming	22
Swimming and picnic	1
Swimming at the lake	1
Visited Refuge office	1
Volunteer orientation	1
Walking the dog	1
Walking the dogs	1
Wild About Life refuge lecture	1
Total	52

2 <sup>nd</sup> Other Activity	Frequency
Dog walking	1
Friends of Deer Flat Wildlife Refuge meeting	1
Jog refuge roads and pathways 3x per week	1
Picnic	3
Picnicking	1
Swimming	3
Watching nature	1
Work related therapy with youth	1
Total	12

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
College art drawing class	1
Enjoying nature	1
Family gathering	1
Horseback riding	1
Psychosocial rehab therapy	1
Riding my horse	1
Spending time with a friend in nature - sitting on the docks	1
To have fun with my family	1
Total	8

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

Other Visitor Center Activity	Frequency
BBQ, needs more restrooms for big events	1
Bioblitz	1
Check level of lake	1
Gather info	1
Gem State Fly Fishing Meeting	1
Reading time/preschool	1
Self-guided walking tour	1
Total	7

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
Developmental therapy	1
Friends of the refuge	1
Just 1 other friend	1
One other	1
Walking partner	1
With my Psychosocial client	1
Total	6

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

Other Website	Frequency
Audubon Society, Southwest Idaho Birders Association	1
Southwest Idaho Tourism/Idaho Tourism Bureau	1
Total	2

Other Ways Heard about This Refuge	Frequency
A speaker at retired educators meeting.	1
Exploring Nampa/Caldwell Passport for 2009	1
I came upon it.	1
I traveled to Lake Lowell.	1
Idaho Fish and Game brochures	1
Local map	1
Long walk and passed by.	1
School teacher	1
Someone asked me at the site.	1
State map	1
Total	10

## Survey Section 2

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

Other Forms of Transportation	Frequency
Horse	1
Horse trailer	1
Horseback	1
School bus	1
Total	4

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

Other Ways Found This Refuge	Frequency
Followed others	1
From Fish and Wildlife employee at another site	1
Happened upon	1
The ways or backward	1
Total	4

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

Other Transportation Option Likely to Use	Frequency
A friends when/if my outfit broke down (for example)	1
Bike path	1
Car	1
Hike	1
Horse back	1
Horseback	1
Less sand on beach	1
My own truck	1
Own bike and motorized boat	1
Own car	1
Own transportation personal	1
Rented motorbikes	1
Train	1
Travel on my own	1
Truck with horse trailer	1
We generally have our dogs, so we'd be happy to use the above mentioned means if they were dog-friendly.	1
Total	16

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

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Comments on Transportation-related Items at This Refuge (n = 27)

Access down to the water's edge is not very family friendly. There needs to be easy access stairs on every beach.

As I mentioned before an informative map directed toward beaches, bathrooms, and swimming/fishing areas so we don't find out we have reached dead ends and have to turn around using more time and gas.

Bicycle lanes would be an excellent addition and would immensely increase safety for cyclists!

Could use more parking on the Upper Dam at Lake Lowell.

Entrance and exit of Nampa parking lot is too restrictive for pickups towing boats.

Entrance gate is too narrow which can cause problems on busy days.

I could not park close to the water for disabled use except at large park area, boat ramp area: very crowded with other swimmers and smelled like rotten fish. My first choice area was closed off due to vandalism according to the Park Ranger.

I'd like to see more explanatory signs on trails and roads. The signs along the Centennial Trail are excellent and I'd like to see more.

It would be nice to have parking access for the walking trails while the refuge is open, but after the Visitor Center is closed.

It's a lake so it would be nice to have one continuous trail all the way around.

Keep trails non-motorized.

More bike paths.

Needs more handicap spaces.

Parking is scarce on paved areas, but a large gravel lot is available. There is no map, however, which is very frustrating because Google maps has next-to-nothing on Lake Lowell.

Road marking and route to headquarters is limited or non-existence since road over middle dam and lower road has been closed.

Some of the trails need to have the cheat grass removed. Some of the trails are muddy and damaged by users in the spring time. I disagree with the practice of closing off certain trails to protect baby eagles in the spring time.

South boat access is very hard. There is a boat ramp, but it was very shallow, and initial waterway was clogged with branches and a beaver dam. Maybe a duck boat or small canoe could but a ski boat would have a very hard time of it. Needs a good south side boat ramp.

The docks could use some repair, and the road could be repaired in some places.

The first time I visited Deer Flat NWR, I ended up on the wrong side of the dam. The signs to the Visitor Center were not sufficient.

There are a lot of weeds on trails.

There are few trails along this refuge. I have only found the one by the Visitor Center. The refuge is missing a key factor - hiking and biking trails. We are disappointed there are not any trails for exploring, animal watching or even just a relaxing walk. Need hiking and biking trails!

There are way too many people using the boat accesses.

They have already shut down almost all the roads around the lake. Only 2 parking spots are left on Nampa side.

Trails should be a little more open. Wish you would open up Gotts point again for fishing even if it means charging to fish, swim there to help keep it clean and open.

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Would like to see more mountain bike trails along the south edge of the lake. I like to ride around the lake and must do a lot of it along the busy road. A gravel trail would be great.

Would love to have some biking/hiking trails around the lake.

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## 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."

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### Comments on Services, Facilities, and Activities at This Refuge (n = 70)

8-9-2010 I understand as of 2 days ago there are some people with nothing better to do, they want to take all activities away from the people. 2 years ago it was to close the road to the lower dam. After all these decades, what next?

Absolutely horrible restroom facilities.

Areas to let pets off leashes, i.e. the north side of the reservoir.

As we were canoeing, we noticed a number of motorized boats with skiers/wake boarders in the no wake zone. Obviously, they were not observing the no wake regulations. Between the noise of their motors and stereos, it made what could have been fantastic bird watching a bit challenging. Also, though the smartweed encircling the lake probably creates habitat, it does leave non-motorized boaters at a loss to find access to the bank if needed.

Beautiful, well kept throughout.

Better maintenance on restrooms would be awesome.

Both times I have been there the restrooms were filthy and had no toilet paper.

Dumpsters are always full and stink, bathrooms are over-used and under maintained. The police only write tickets to boaters and neglect the drunk and fighting "Latino" population on the family picnic area.

En general, todo esta bien. (In general, everything is good -SC)

Everyone I have met at the refuge has been great.

Great displays. I appreciated the evidence for children's involvement and educational outreach.

Great staff at Deer Flat.

Hope you keep Lake Lowell open to motorized boating.

I am satisfied with how it's run and kept up.

I appreciate the clean bathrooms. Again, the roads leading nowhere is quite annoying.

I believe there are a lot of things to do for the visitors, families, friends, etc. in this area. I was really impressed with the great and amazing job that the employment and employees of the state parks in Oregon did. How wonderful people work together with passion and knowledge for their job in Oregon!

I have fished and hunted on and around the lake for 60 years.

I hope they don't close the lake to motorized boats. It's a man-made lake so there is no reason to close it. If managed properly boats and wildlife can co-exist.

I think the refuge is perfect the way it is run today. There is little I would change. I'd definitely not close any portion for environmental concern.

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I visit and stay with a friend that lives nearby this refuge. I understand that the local schools visit the refuge regularly.

I was pleasantly surprised by the availability of refuge volunteers. They were very knowledgeable and friendly. Their guidance absolutely enhanced my visit.

I wish the Refuge would do more to increase the amount of quality fish. Maybe a catch and release program. Start charging a day use fee.

I wish there were more picnicking and trail opportunities on the south side of Lake Lowell. We don't go to the beach anymore at this facility due to glass and trash that are left or are washed onto the shoreline presumably by boaters.

If you teamed up with Canyon County you could use the "inmates" to clean up the garbage, graffiti, and bathrooms of Refuge Parks. Open up closed areas, add more garbage cans, stay open for night fishing (allowing fires in designated areas).

Information about plant life would have been helpful.

It is nice to have a walking trail in the area, but there is only the one long trail; it would be nice to have another option. Also, there is no trash service here. That would be a nice addition.

Keep the gates open as much as possible for visitor usage. Maintain the facilities for public use.

Lake Lowell has always been a great place to take the family and it would be a shame if it were closed to public use.

Lake Lowell, Canyon County, Idaho, needs more and better restrooms.

Launch areas for canoes (sandy beach areas) would be helpful. Legal hunting areas are poorly defined.

More access to southern part of the refuge.

Mosquitoes are a problem in the picnic areas. Needs a general spray done. Needs sun protective areas. Needs nice swimming area for kids with sand. Needs some floating docks out in the water and some designations that only boats can go to, example Lucky Peak Res.

My family and I will be very upset if you take away our rights to swim and boat at Lake Lowell. More and more of our rights and freedoms are being taken away... quite frankly - I, for one, am sick of it!!!

Need better waterfowl hunting opportunities.

Needs more parking for boating.

Needs more restrooms, needs camping facility.

No access to any fishing opportunities for children. We are not allowed to fish off any docks. I don't like this at all.

No restroom facilities! After bobbing about on the lake for hours, a place to go would be nice. No trash receptacles. Boat ramp in fair condition, but the bank overgrowth limits efficient egress. Would like to see a fluorescent marker on the lake side to find the opening back to the boat ramp. Flagging tape has been thrown into the trees, but something more official would be nice.

Not really a good place to go often; hard to tell what kind of people are around; concerned about safety and insects. No green lawn area; no running water restrooms that I know of.

One restroom/portal-potty by Lake Lowell's upper dam is not sufficient. It is disgusting. Women would like to have a place to use the bathroom while visiting.

Parking lots need refuse cans.

Please keep this refuge available to motorized boating and day picnicking and play time in the water.

Please keep this refuge open to horseback riding. I ride here at least once a week and it is my favorite place to ride.

Recently the lake has been overrun with pelicans that did not come from here. The pelicans are a nuisance; can you do something?

See section 2, #6. I also like the fact that a portion of the lake is designated as "no wake" which makes my canoeing and sailing experience more enjoyable. Would like to see more effort on goat head control along current trails.

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The bathroom could have a sweet aroma, rather than being trashy. The fountains could have a clean, not fishy, taste.

The bathrooms stink.

The condition of the outhouse was disgusting. My kids decided it was better to wait until we left the refuge, which ended up cutting down the time that we spent there.

The lake gets very murky late summer.

The lake should be open for night boating and fishing.

The restrooms are closed down and there is trash all over the place.

The water is drained too early in the year making it difficult to launch and use small fishing boats later in the season (August).

There are not enough places on the front side or back side of the lake for handicap people to get to the water to fish.

There is a problem with spending too much for things like Visitor Centers. People want to be left alone to enjoy themselves.

They are just fine.

This refuge is a wonderful place to observe birds. We were there just a short time at the Visitors Center, but plan to return. I imagine the fishing is good too as we observed fish jumping in the evening to catch bugs. We come to the lake fairly often. Swimming is great, but best in early summer. I want to buy a little boat to go around the lake shore. That would be fun!

Water sports via motorized boats are a very important part of the lake. Taking those opportunities away from the public would be a tragedy. The refuge already has a good balance between wildlife habitat and human recreation interests and should not be changed.

We are extremely happy with our wildlife refuge! The Cub Scouts really enjoy visiting the exhibits and seeing the wildlife. The volunteers are great to work with. I still remember going to the wildlife refuge when I was a young boy and will never forget the experience. We are so glad this is in our city! Thanks!

We did not visit the Visitor Center or restrooms or see any of the kiosks though I do believe they exist for this refuge. We just were not in that particular area of the refuge. I do not know if there are hiking or biking trails available.

We had a great time!

We like Lake Lowell. As far as we know we can't camp there but would like to. We do fish and swim in the area to do that and spend our summer fishing there. I wish there was an area to camp. As an adult I'm sure at this refuge, it may not be a good idea because kids are wild.

We need the lake boating curfew removed.

We need to keep open to all uses.

We use the refuge about 5 days a week. My wife and I enjoy the peacefulness of the refuge.

When are you going to open Deer Season for short range weapons?

Would like to see improved fishing opportunities at this refuge, i.e. better fish populations.

Would like to see overnight camping.

Would like you to stock Walleye, I love to eat and catch Walleye.

You should leave it alone except for the bathrooms and parking lots.

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## Survey Section 5

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

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Comments on What Makes Refuges Unique? (n = 115)

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A close area to enjoy with water sports and fishing.

A great place to take the family.

A safe experience for all people.

A safe place to fish and swim without disturbing the natural order of life.

Able to view the bird's habitat without disturbing them and being able to view them on-line. I always enjoy going there and taking guests from out of town to the refuge.

All visitors can use Lake Lowell which include boating (skiing) fishing, hunting, along with wildlife and other groups can coexist.

Availability, beautifully kept up.

Because it is so close to home it's very convenient and the fishing is always fun for the kids.

Because it's a safe place for wildlife.

Because they can't be destroyed or done away with.

Because you can water ski all summer and shoot ducks all winter and there are always geese to watch.

Being in city limits and being able to see the wildlife that we do is always a joy. I always scold myself for forgetting my camera.

Boating, tubing, swimming, fishing.

Close to home. We have fun. Kids can be kids. Seeing all family and friends enjoying the moment.

Environmental education programs, tours, observing wildlife and birds.

Fishing, boating and hunting opportunities.

Good access to some areas around the lake.

Great effort on wildlife habitat protection, especially for birds. At Deer Flat, they have a great bird viewing blind. Anything that gets you closer to the birds is helpful.

Great sailing.

Hunting on public lands which makes private land out of reach due to cost.

I like year around activities: bird watching, fishing.

I liked the bird watching experience, you don't get that at many other places.

I see more wildlife on a refuge.

I visit every year to see the osprey and their young. I also enjoy the opportunity to see the bald eagles and chicks this year. The website to watch the osprey is awesome!

It allows a place for the natural Flora and Fauna to exist without a large human footprint, but it allows people to experience what is important to them be it hunting, fishing, or just observing .

It has everything from boating, fishing, and hiking, to bird watching. Without all the recreation it has to offer my family and I would not appreciate the wildlife as we do now.

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It is a good place to go when you just want to go somewhere away from people.

It is an oasis in a metropolitan area. I love having nature so close. It will teach my family to love nature as well.

It is just important to provide an area of conservation.

It is nice to be able to kayak through the refuge and see a variety of birds.

It is not overbearing with people that lack respect for the refuge of animals, plants, and the land. To keep it with designated places for all and a reasonable time to enjoy the lake.

It is so close to Nampa but the vast majority of the year - there are many places to hike and walk it for solitude and bird watching.

It is very close to local residents, it's free, you can boat, fish, and BBQ. The park is shady and beautiful.

It is very close to the local towns and cities and that makes it cost effective to use.

It is very well kept, there is a lot of wildlife, the birds were great, there are lots of crows.

It keeps a majority of recreational population from over using the area and preserving it for people who are there to enjoy it and not take it for granted.

It offers a little bit of everything, I like to hunt waterfowl but don't hunt on the refuge at all. I don't mind having some limited hunting opportunities there, but the birds need somewhere to hang out and rest. Especially the migrating birds, like to go out and just look at the different species that come through.

It offers natural settings and opportunities for people who may not have access to such an environment.

It still has a small town feel. It is not like going to Lucky Peak and fighting crowds. If you develop it too much everyone and their dog will be out there polluting and littering.

It was nice to have areas set aside for the public to use and experience.

It was very interesting.

It's close to home.

It's closer to home.

It's hard to compare to others, but it is unique in our local area. We were pleased and somewhat surprised at the high quality of the visitors center.

It's in an urban setting. Most of the public lands I visit are rural.

It's just a recreation experience. Not necessarily unique to me anyway.

It's kept clean, free of litter, and the wildlife is preserved nicely.

It's unique for me because I do not have to get in a car and drive to it.

It's very close - right in town close to recreation.

It's a great place for a family outing.

Its primary mission is conservation of habitat for flora and fauna, where as other public lands are for recreation.

Just the way the refuges were structured and managed.

Keep the full year around fishing.

Los hace unicos porque lo mas bonito de los animales es verlos en su habitat natural. (It is unique because you can see the most beautiful wildlife in their natural habitat - SC)

Lots of birds, fairly clean, few people!

Lots of signs, seems to have more rules. Ideally more wildlife.

Many different uses/biologist available for concerns.

More hiking and boating opportunities as well as visitor center.

More recreation than other areas, more space to roam, or to be with nature and friends.

Nice park setting, trees, grass, waterfront picnic tables, good boat access, water skiing, nice lake!

Nice volunteers at the Visitors Center but we like to go where there is no one at all.

No one else makes you get off the water at a certain time.

Not human priority but environmental.

Opportunities to recreate and educate ourselves in one trip. Various health related activities and a chance to learn.

Peace and nature. They don't always go hand in hand, but for the most part :-). It will always amaze me how much life is going on when you sit quietly and enjoy.

Proximity to residential communities allows easy access on a typical work day or weekend activity. Also, as our city limits expand to surround the refuge, I find myself appreciating the refuge for preserving "what used to be and what might have been." I no longer observe the grassland birds and animals at home, but can always find them 10 minutes away at the refuge.

Quietness, alone time, it's out in nature away from the hustle and bustle of everyday life.

Refuges are nice because you can really get away from the hustle and bustle of towns. It's not some commercialized place surrounded by businesses; you are truly out in the forest, and that makes it fun. It's exciting to catch a glimpse of a deer or pelican; you know they're not in some exhibit, that's actually where they live.

Refuges provide a protected area that people can visit and interact with wildlife. Refuges also provide a multipurpose management system.

Running path, fishing, and easy boat access.

School children can learn a lot by show and tell at places like this.

The ability to provide a place for wild animals to live so our ancestors will be able to enjoy them also.

The amount of wildlife to see.

The balance between recreation and wildlife habitat.

The close proximity to the city of Nampa. The wide variety of wildlife and a great indoor facility.

The information about each and every display.

The Lake Lowell refuge has a wide variety of fish and game.

The location and activities you can participate in.

The long trails are nice, there are many animals like deer, birds etc. I enjoy looking at the lake while I run, it helps relax my day!

The natural settings are maintained with no development encroaching on the preserve.

The opportunity to interact with nature.

The refuge accommodates many aspects for animals and people to intermingle.

The refuge has a unique blend of recreation for exercise and observation of wildlife. We often watch for the bald eagles and other birds. We love this refuge.

The refuge visitor center is educational for young and old.

The relatively unspoiled condition of the natural resources and the ability to enjoy natural surroundings in a somewhat protected environment.

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The user friendly area.

There are generally more services offered and better wildlife viewing opportunities, though I've never understood how a refuge can allow hunting. Seems like an oxymoron to me.

There's usually more wildlife to see on refuges.

They are animal-centered and humans are invited as opposed to the opposite.

They are better cared for and maintained than many other public lands. They offer a place for wildlife to thrive.

They are kept in their natural state.

They are natural and full of nature's creatures. I love to be out in the "wild".

They give the opportunity to teach our youth about native animals and plants. This also allows our youth to learn about natural habitat and what we all need to do to protect them. (Especially if the school has programs to bring students to these National Wildlife Refuges.)

They provide a great opportunity to find concentrated wildlife for photography.

They provide an opportunity to experience nature in a unique and informative way by minimizing the impact on the wildlife, plants and waters that humans have while still allowing access to the area.

They provide peaceful sanctuaries for wildlife and humans.

They seem to not have all of the campgrounds and motor vehicles that detract from the nature experience.

They tend to not be as abused as other public areas.

This is the only place close to a small town that one can go and enjoy the wildlife and quiet of the undeveloped areas.

This NWR has an incredible display of taxidermy of local animals.

This refuge is close to home and provides quick and easy access to the lake and public land.

This refuge is close to home, convenient, beautiful, well managed, and has a good (but short) birding trail. The top of the dam is great for an early morning walk.

This refuge is very close to our town and it is neat to see all the ducks and geese.

This refuge would be worthwhile just for the number of different birds alone, but when you add in the nice Visitor Center, easy access and boating, fishing, swimming and hiking possibilities and the mild weather, this is a very worthy endeavor to preserve this lake and its habitat! I think the people running this refuge are doing a fine job!

Usually a more concentrated area to visit.

Usually it is the amount of land/resources that are protected and that means the variety and amount of animals living within the area are also protected.

Very family oriented and allows dogs.

Visiting, wildlife, boating.

We love to compare species and environments different from our area of the country and see the connections with the schools and communities, which are important to continue saving habitats to keep wildlife around us.

We need areas where birds and animals are not polluted and exploited by humans. Litter/trash is always a problem -- Volunteers!! Pick up entrance/exit fee or show bag of trash that you picked up! People can fish but can we deer hunt, bird hunt? We need more info on what can be done, when can you do it and where and which areas of the recreation area can we use. An overnight area with a boat ramp would be nice.

What a wonderful place to visit wildlife and enjoy the scenery. Too bad the hiking and biking doesn't allow this inside the refuge. In order to see the birds you have to nearly get killed biking on the outer road along the refuge against traffic.

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What makes refuges unique is the vast recreational opportunities. One can walk, ride a bike, ride a horse, boat, fish, hunt or just sit and enjoy the wildlife.

What makes them unique is that you can't shoot geese, which I really want to do. It should no longer be a goose refuge; we need to kill all the geese.

You get to see animals that you would not normally see out in the open.

You have an opportunity to visit nature without taking all of their land, but sharing it with the animals.

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#### Additional Comments (n = 39)

As for Wilson Ponds: It is filthy; grass needs cutting, trails are inaccessible, water is so algae ridden you can't fish. Park has gone to POOP in the last couple of years. Embarrassing this year!!!

Boating should be allowed during the summer season on Deer Flat NWR (Lake Lowell).

I have two grandsons and we have been fishing Lake Lowell 2 to 3 times per week for the last 5 years. Both their parents work and I get the privilege of being with them during school vacation. Time with your grandchildren equals memories that last forever. Case in point my youngest grandson has caught three bass over four pounds; I have never caught one close to four pounds. My grandsons have invited many of their friends who have never fished before. If the Lake was closed to boating I would be required to go to CJ Strike, Lucky Peak, or Anderson, all of which are 30-40 miles away. Grandpa is on fixed income and the cost would be prohibitive. Not only would I be penalized, but everyone who owns a boat would be on the road going to one of those options. The additional usage on those areas would be a problem plus the added fuel needed would not be going "green". I have read a number of the information sheets printed of the mission of the U.S. Fish and Wildlife Service and the key word appears to be "compatible". According to Webster, compatible is "able to exist together." I understand there can be an argument over the human usages and purpose of the refuge but I prefer to ask the question is there a negative impact to the purpose and usage? When I moved here from Minnesota in 1979 and avid duck hunter the refuge had 500,000 to 750,000 ducks and geese at the refuge. I believe it is less than 150,000 now. This appears to be a habitat problem in their nesting areas. The point being that the "usage" of Lake Lowell has not had a negative impact on your mission. I do have a major concern about the Lake and feel that it should be addressed in your long range plan. That being the chemicals and silt that is filling the Lake. In Minnesota many of the lakes were vacuumed out and the top soil was recycled. I also see an overpopulation of carp in the lake and worry about the mercury levels. I feel that

Great experience as always!

I already commented; please don't close down the lake that I grew up at... My family, friends, and I will be very upset if you take our rights away to swim... We love coming out the Lake Lowell, taking the dogs swimming, and cooling off ourselves... Thank you.

I also enjoyed their webcam on the osprey.

I am concerned that the staggering numbers of migratory waterfowl, which used to darken the skies around this refuge in decades past, seem to have dropped dramatically. I am pleased that the refuge has finally reinstated a wildlife biologist after an absence of far too many years. I think we need to try to determine why these numbers have declined so sharply.

I can remember the way the lake was when the community was much smaller and it was much more enjoyable. Those times have passed so we need to ensure that the summer boaters and barbeques don't kill off all the fish and wildlife.

I enjoy the refuge every Sunday morning with my wife and a couple of cups of hot chocolate.

I have been running at the Deer Flat refuge for 20 years. I love the place- even though I'm not wildlife, it's a refuge for me, too. I guess my main concern is the things I hear about Lake Lowell, how polluted and awful and dangerous it is. Is this true? (I'm not talking about the algae, but the farm chemicals, unless they are related. I am not very educated about this.) Is the lake itself under management of the Refuge? I'd like the public to know more about the chemicals put in the lake from farm drainage. I know it's important for agriculture, but can we do something about it? How can it possibly be okay for the birds and animals? Also, I love it when the refuge closes off areas (e.g. Gott's Point) when people have trashed it or burnt it: sends a strong message. Finally: I wish there was some sort of a restroom facility at Tio Lane!!! PLEASE!!

I have been told not to ride along the burn barriers or fire roads. I was told there are signs stating this and that is not true. I have been

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riding my horse here for the last eight and a half years and just recently (this summer 2010) was told horses are not allowed on the burn roads.

I only use the Deer Flat Refuge for bass fishing.

I personally would not object if you closed it to visitors, but I would go more often if it were more like a state park. Not sure if I would pay a fee though. Would like to go windsurfing there. Good for non-motor boating, I'm not fond of the loud power boats and wakes, those could go.

I strongly urge you to leave Lake Lowell as it is for use of boating and fishing.

I think that the refuge needs to be taken better care of. It's a dirty lake and someone needs to maintain it.

I would like to see Lake Lowell divided in half. The east half for hunting, fishing, wildlife viewing. The west half for jet skiing, motorized boating, picnicking, swimming, etc.

I would like to see loud motor boats and jet skis removed from Lake Lowell on the refuge. They interfere with the peaceful environment of the refuge for wildlife and humans. There are many lakes and reservoirs nearby for these activities but few places of peace and quiet in which humans can enjoy nature and animals can feel safe and secure this close to population centers. I can't see how they meet refuge criteria.

I would like to see more trail areas available within the refuge for hiking and non-motorized travel. I would also like to see more areas available for responsible, respectful dog owners to enjoy the refuge with their pets, although I am not really sure how you can limit it to the responsible people.

I would really like to see Gott's Point (Lake Lowell, Idaho) gate open so we could drive down there. It is sad that someone vandalized the area and the rest of the public is paying the price of this.

In regards to Deer Flat National Wildlife Refuge I would recommend the following. 1. Create a nominal use fee \$5.00 per vehicle or an annual pass with strict enforcement! I know I would pay \$50 a year if that is what it takes to be able to have a good place to go for relaxing and fishing. 2. Have annual spring and fall cleanup days coordinated through the many groups who use Lake Lowell. 3. If people do not abide by the rules make the penalties stiff enough and even ban them from entering the area if they fail to comply. 4. Work with local law enforcement in regards to speed limits on the water. I am a bass fisherman and regularly see people in bass boats doing over 60 and go to 80 miles per hour on the water. Set a max speed of 45 or 50 and enforce it even when there are bass tournaments on the lake.

It seems to us the government could spend some more on hiring more employees to cover the large Deer Flat area instead of more taxes going to welfare for more lazy people to sit around getting fat and doing drugs so we can send them to rehab - what a big mess! We are just two old retired civil service workers from California that now reside in Nampa, ID. We love our adopted state and all it has to offer, but we feel the pain for all those out of work because our government is failing all of us! So Uncle Sam - if you are listening - if you want more land turned into National Wildlife Refuges, do your part and put people back to work!

It would be a shame for the community to lose this lake. It would cut down on the trips we could afford if we had to travel farther to take the grandkids fishing for the day. The environment is ever changing. With that, the people, animals, and fish will adapt. One thing is constant: we all need clean water and air to survive. The fish are impacted now by the pelicans that have recently taken over the lake. It seems to me that the time, energy, and money should be better spent to protect what we have here, not to try to close it off to the public who care about and enjoy it. We the people would like to keep our lake just the way it is.

Lake Lowell is a disgusting joke. The person responsible for managing the facilities should be fired but someone worse would probably take over. Other than that the main problem is water quality. You can't allow runoff from every farm in the region to saturate the river and lake and expect to operate a viable Refuge for wildlife or recreation. I know I'm wasting my time here but it's frustrating when the answer is maybe not simple, but obvious. My prediction: you folks will shut the lake down to boats and restrict recreation and you'll be left with the same blue-green algae filled, phosphorous laden water that is the true problem.

Lake Lowell is important to recreation of this area: picnicking, boating, and fishing. We all enjoy this area and have for years.

Lakes need to be for all to enjoy: motorized boating, non-motorized boating, fishing, educational wildlife, a place for family to enjoy time together.

Let's keep Lake Lowell open to motor boats!

Regarding the previous page discussing the effects of climate change on fish and wildlife, there would be a far greater benefit in reducing water and soil contaminants leeching into the environment rather than trying to limit the effects of global climate change. The focus of efforts has been misplaced and needs to be re-evaluated.

Restrict - 2 cycle engines

The only problem I have with the lake is the smell of dead fish permeating the water and the amount of broken glass on the beaches.

The refuge is sorely in need of more hiking/wildlife viewing trails, and viewing all wildlife, not just birds.

There should be more access to fishing at Lake Lowell. By this I mean being able to drive to the fishing areas without having to walk so far to these areas. This is a great inconvenience for seniors and little children. (signature) P.S. I believe the noxious weeds around the lake should be killed off to improve the fishing. At one time this was a great lake to fish in. Not anymore. (signature and address)

There should be more observation of the use of the beach areas for alcohol and maybe a few more garbage cans for use along the trails. I have encountered numerous people drinking, including teens, in the evening hours. The sheriff does drive but does not get along the shores in the trees. Lots of beer cans get left behind. I love the refuge and the beautiful evenings and mornings. Thanks for your work! (signature and phone number)

This refuge is maintained very well. I would like to see better warm water fish populations at this site for my kids to catch. Thank you.

Volunteers will do a lot of things if they are given a specific task. Ask in the news and/or paper. Trash is discouraging: pick up programs, no glass at the beach. Given the tools people will help with the beauty of the picnic areas. Empty shotgun shells at the ponds north of Caldwell and trash on land and in the water. Lake Lowell needs some place to get out of the hot sun, shade areas.

Watch out for E. coli. Boating, hunting and fishing are less important than wildlife. Conservation is key. Lead the way.

Wish they would open up Deer hunting for one season to thin out some deer on the lake.

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