



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

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There is no place like the Rubies! It is beautiful, charming, and unique, not only to Nevada, but to any place I've been! There is amazing birding because it is so far out there!—Survey comment from visitor to Ruby Lake National Wildlife Refuge.



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

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Introduction

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

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

Organization of Results

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

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

Methods

Selecting Participating Refuges

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

Developing the Survey Instrument

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

Contacting Visitors

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

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

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

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

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

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

Interpreting the Results

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

Herein, the sample of visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for Ruby Lake 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 Ruby Lake National Wildlife Refuge

Established in 1938, Ruby Lake NWR was originally created as a refuge and breeding ground for migratory birds and other wildlife. Supporting the largest population of Canvasback ducks west of the Mississippi River (outside of Alaska), Ruby Lake NWR is vital to northeastern Nevada's high desert in Elko County. Encompassing 39,926 acres, Ruby Lake NWR consists of a marsh bordered by meadows, grasslands, and brush-covered uplands which serve the migrating birds as they travel along the Pacific and Central flyways.

At an elevation of 6,000 feet and flanked on the west by the rugged and scenic Ruby Mountains, Ruby Lake NWR is considered one of the most remote refuges in the lower 48 states. Beneath the snow-covered Ruby Mountains, its 17,000-acre marsh is a mere memory of a larger body of water known as the Ancient Lake Franklin, which existed during the Pleistocene Epoch. During that time, it covered nearly 470 square miles and was more than 200 feet deep. Now, Ruby Lake is much smaller, with depths less than 5 feet.

Ruby Lake NWR attracts over 22,000 visitors annually (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.). Visitors can partake in a wide variety of activities including waterfowl and migratory bird hunting, use of the Visitor Center, fishing, hiking, auto tour routes, boating, photography, wildlife observation, environmental education, and interpretation. Figure 1 displays a map of Ruby Lake NWR. For more information, please visit <http://www.fws.gov/rubylake/>.

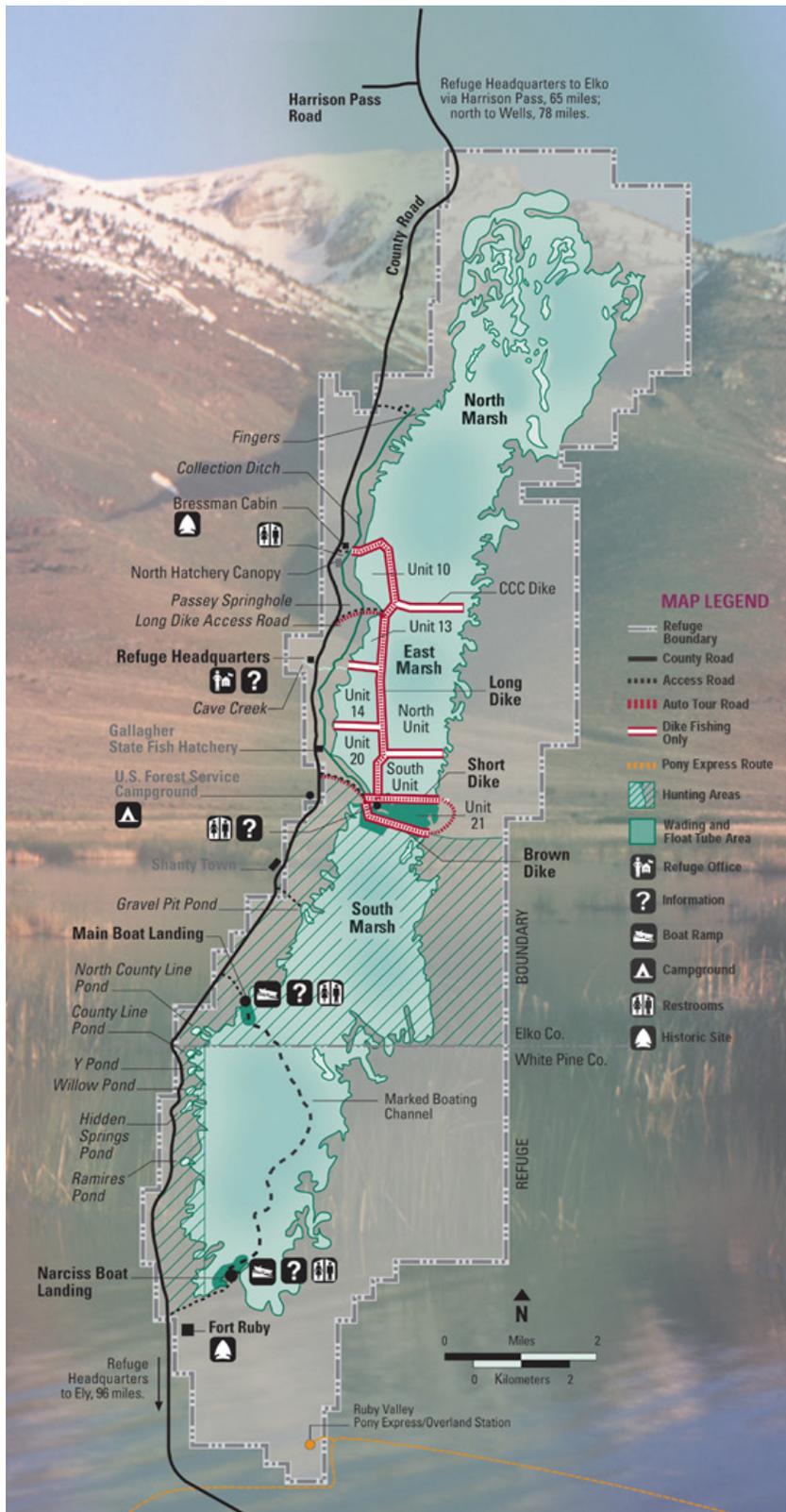


Figure 1. Map of Ruby Lake NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at Ruby Lake National Wildlife Refuge

A total of 230 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Ruby Lake NWR (table 2). In all, 178 visitors completed the survey for a 79% response rate and $\pm 6\%$ margin of error at the 95% confidence level.¹

Table 2. Sampling and response rate summary for Ruby Lake NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	07/31/10 to 08/14/10	Main boat landing	124	2	94	77%
		Auto-tour loop around Short and Brown Dykes				
		Auto-tour loop running along dykes of water management units				
		Narcisse Boat Landing				
2	07/11/11 to 07/25/11	Main boat landing	106	4	84	82%
		Auto-tour loop around Short and Brown Dykes				
		Auto-tour loop running along dykes of water management units				
		Narcisse Boat Landing				
		Refuge Headquarters				
Total			230	6	178	79%

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 Ruby Lake 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 (94%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife,

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

plants and their habitat (95%). 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 (86%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. More than half of visitors to Ruby Lake NWR had been to at least one other National Wildlife Refuge in the past year (54%), with an average of 3 visits to other refuges during the past 12 months.

Visiting This Refuge

Most surveyed visitors (63%) had only been to Ruby Lake NWR once in the past 12 months, while others had been multiple times (37%). These repeat visitors went to the refuge an average of 10 times during that same 12-month period. Visitors used the refuge during only one season (74%), during multiple seasons (18%), and year-round (8%).

Most visitors first learned about the refuge from friends/relatives (65%), people in the local community (18%), or refuge printed information (8%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (53%), a road atlas/highway map (35%), or signs on highways (34%; fig. 3).

Some visitors (30%) lived in the local area (within 50 miles of the refuge), whereas 70% were nonlocal visitors. For most local visitors, Ruby Lake NWR was the primary purpose or sole destination of their trip (72%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of their trip (52%). Local visitors reported that they traveled an average of 37 miles to get to the refuge, while nonlocal visitors traveled an average of 363 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 63% of visitors travelling to Ruby Lake NWR were from Nevada.

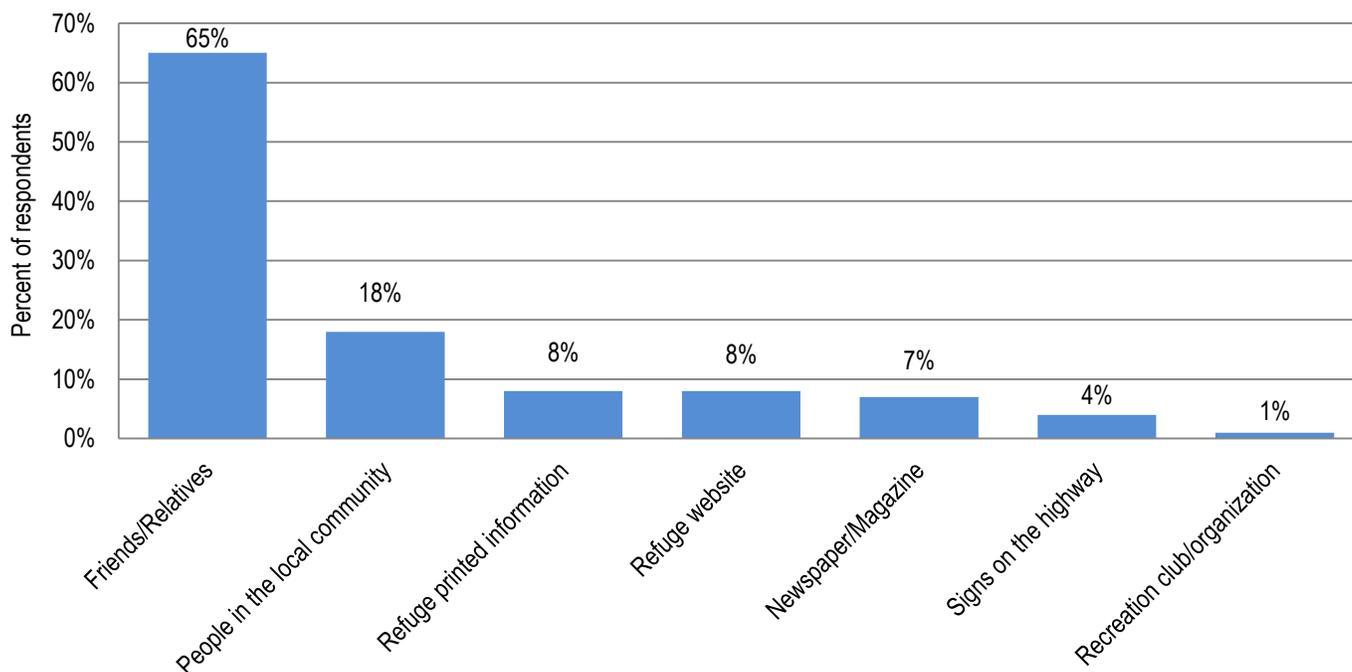


Figure 2. How visitors first learned or heard about Ruby Lake NWR (n = 169).

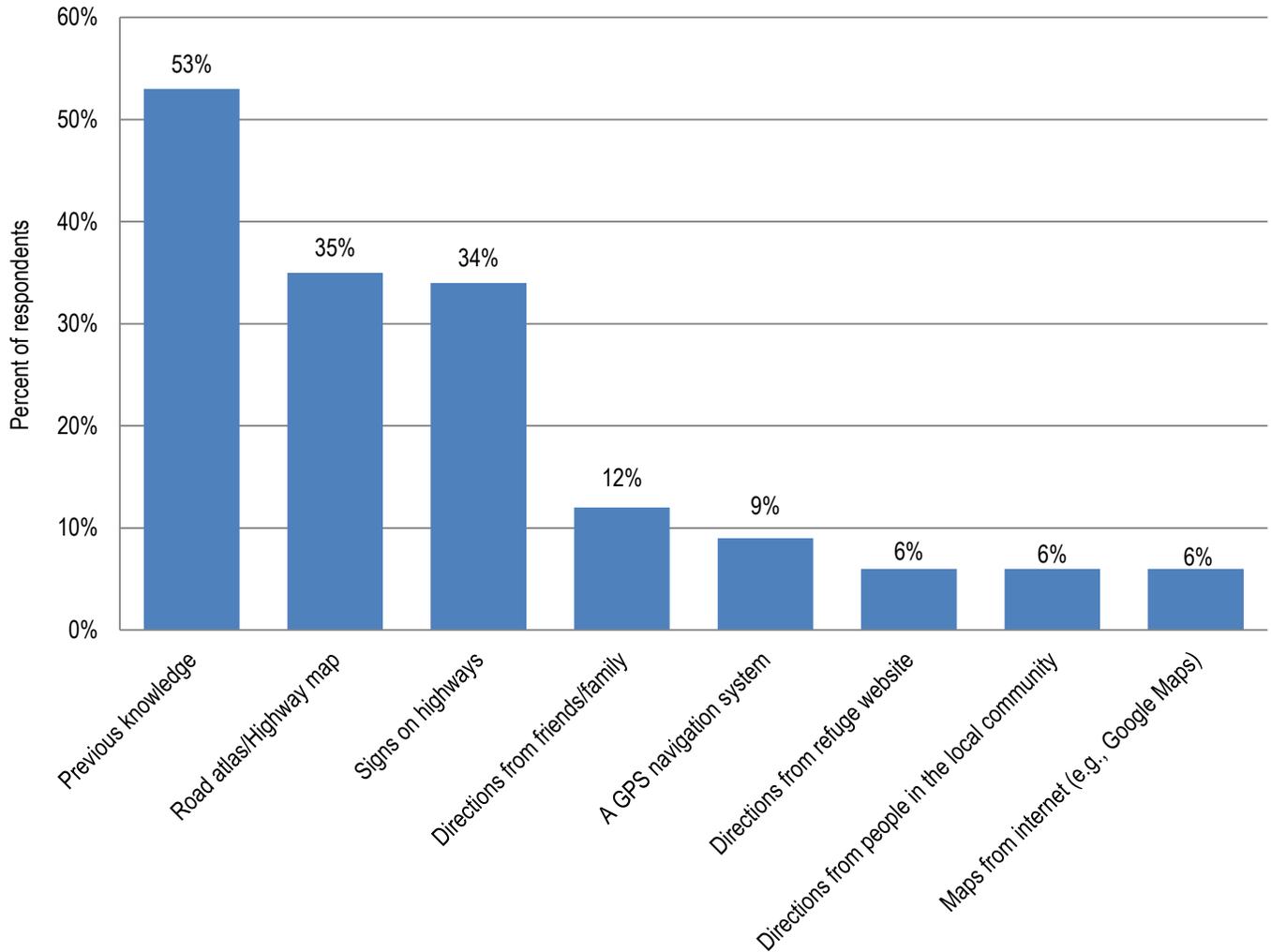


Figure 3. Resources used by visitors to find their way to Ruby Lake NWR during *this* visit (n = 176).

Table 3. Influence of Ruby Lake 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	52%	42%	6%
Local	72%	18%	10%
Total	58%	35%	7%

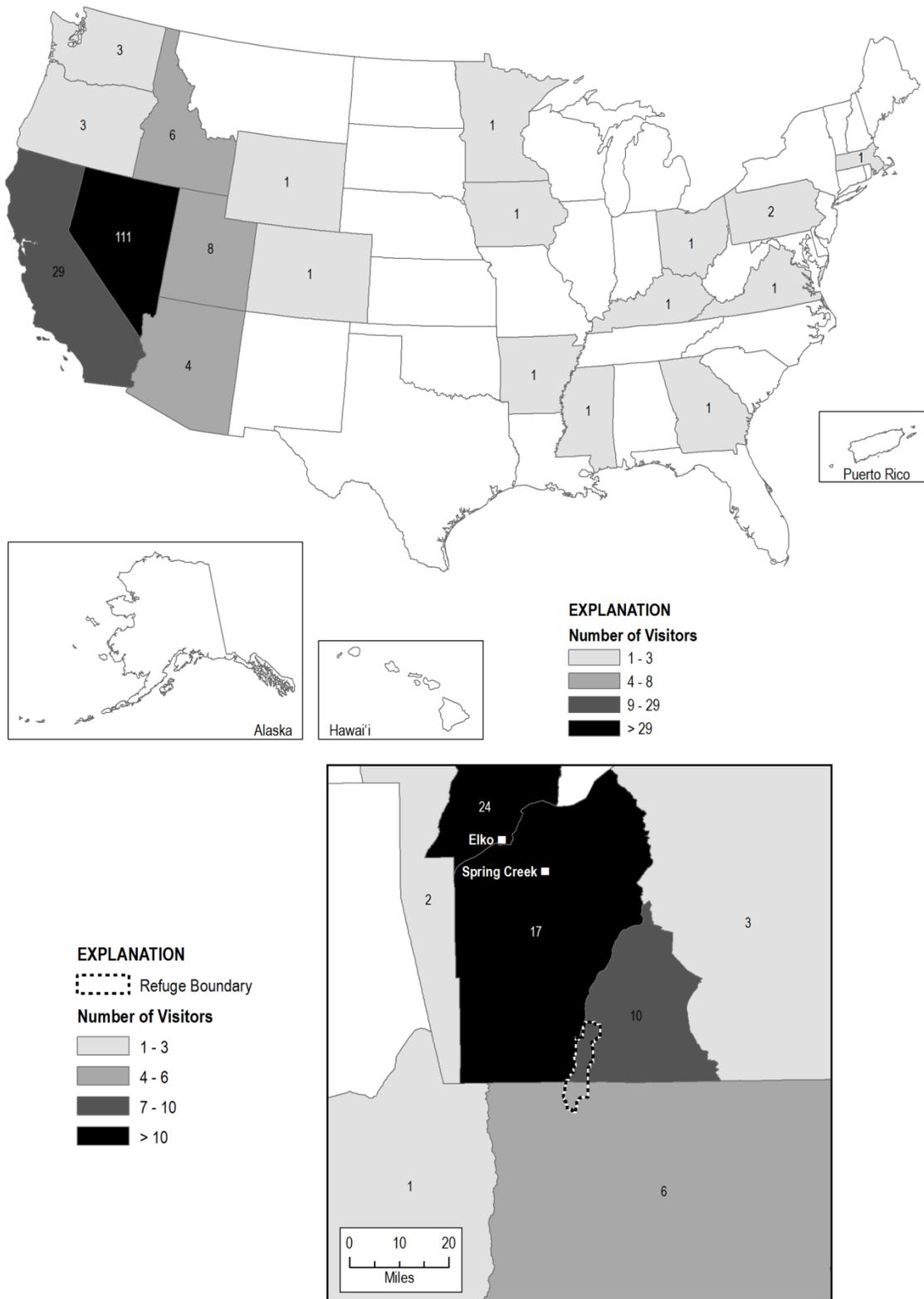


Figure 4. Number of visitors travelling to Ruby Lake NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 177).

Surveyed visitors reported that they spent an average of 6 hours at Ruby Lake 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 8 hours (65%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (73%), private vehicle with trailer (33%), and boat (20%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (67%), travelling primarily with family and friends (table 4).

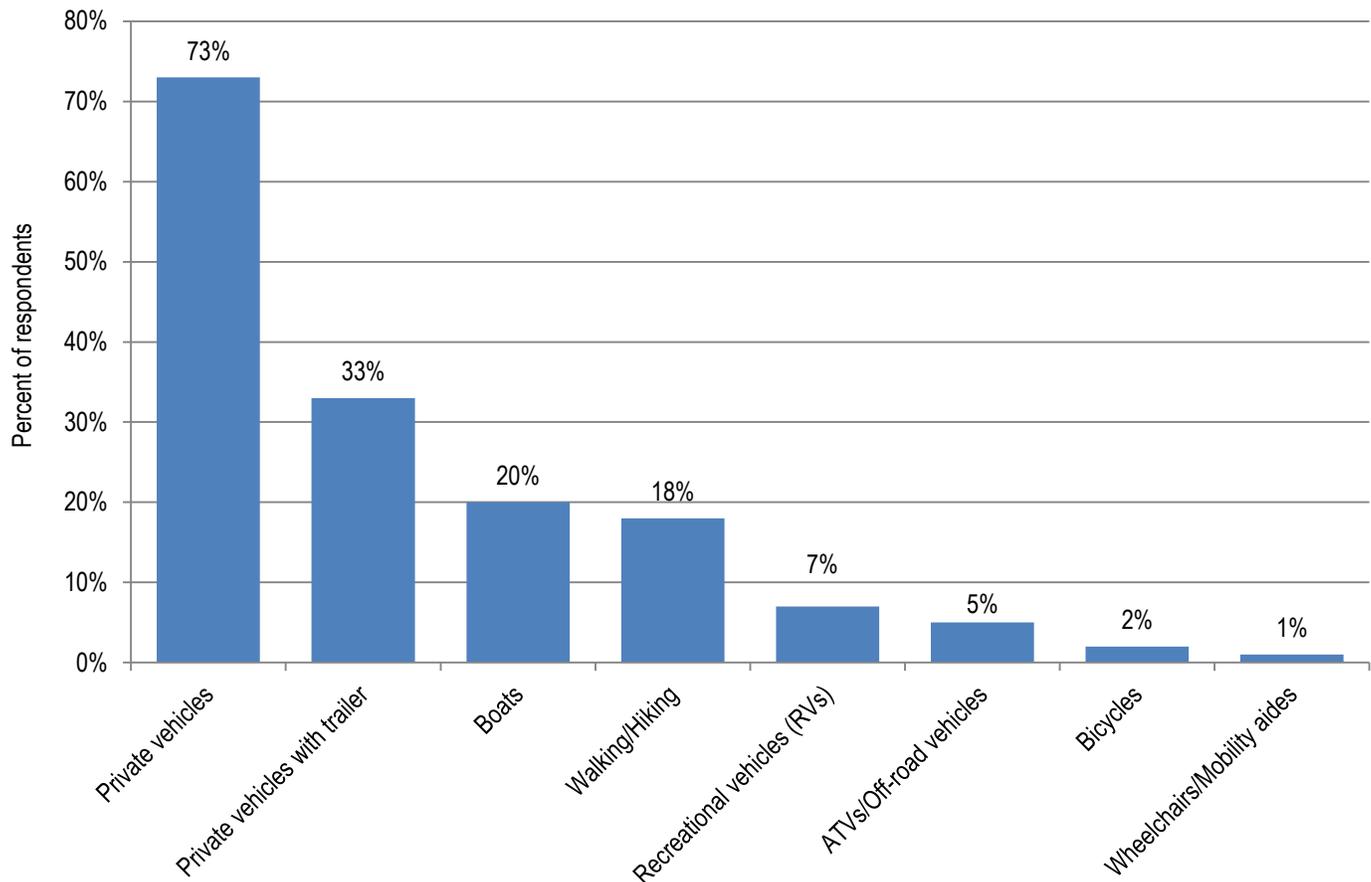


Figure 5. Modes of transportation used by visitors to Ruby Lake NWR during *this* visit (n = 176).

Table 4. Type and size of groups visiting Ruby Lake NWR (for those who indicated they were part of a group, n = 116).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	96%	4	1	5
Commercial tour group	0%	0	0	0
Organized club/School group	2%	18	8	26
Other group type	2%	4	0	4

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were freshwater fishing (63%), wildlife observation (53%), and bird watching (46%). The primary reasons for their most recent visit included fishing (55%), bird watching (13%), and wildlife observation (10%; fig. 7). The visitor center was used by 60% of visitors, mostly to ask information of staff/volunteers (90%), visit the gift shop/bookstore (58%), and view the exhibits (51%; fig. 8).

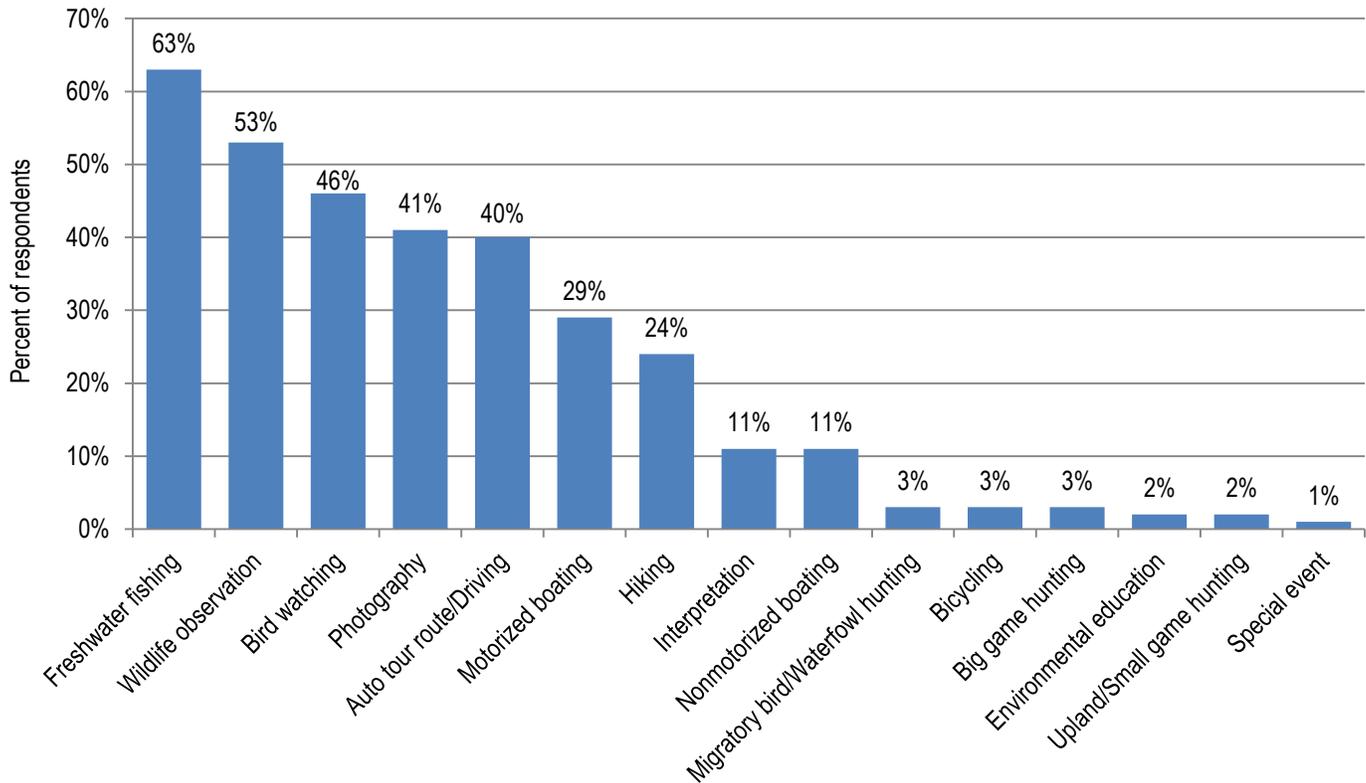


Figure 6. Activities in which visitors participated during the past 12 months at Ruby Lake NWR (n = 175). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (99%) surveyed visitors to Ruby Lake 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 74% male with an average age of 57 years and 26% female with an average age of 52 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$75,000–\$99,000. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

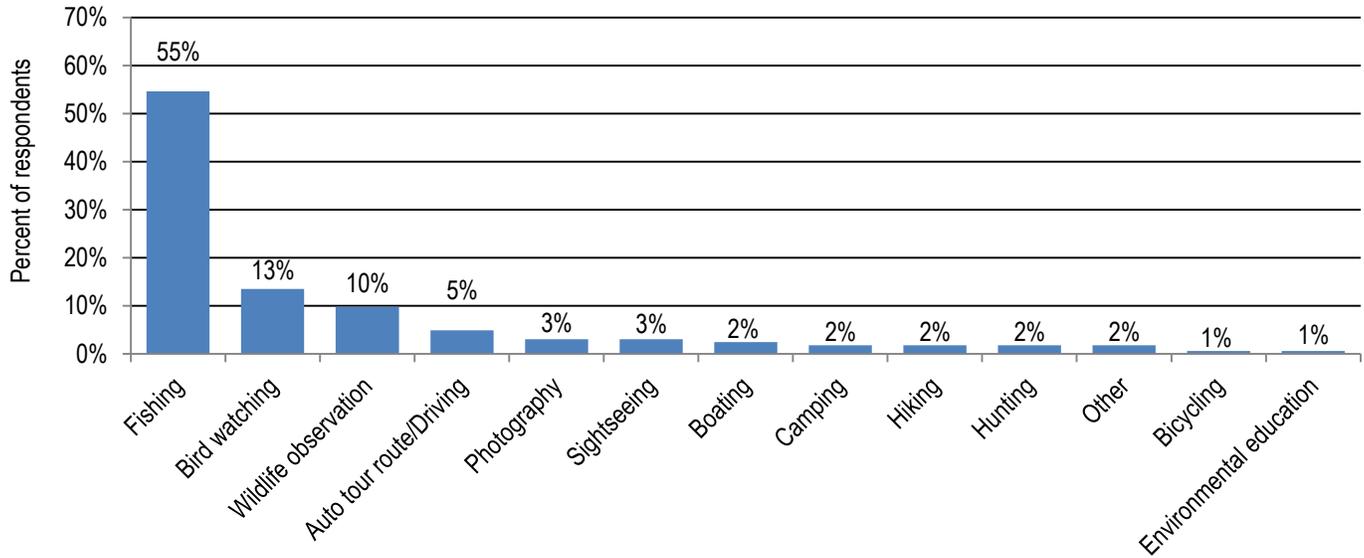


Figure 7. The primary activity in which visitors participated during *this* visit to Ruby Lake NWR (n = 163). See Appendix B for a listing of “other” activities.

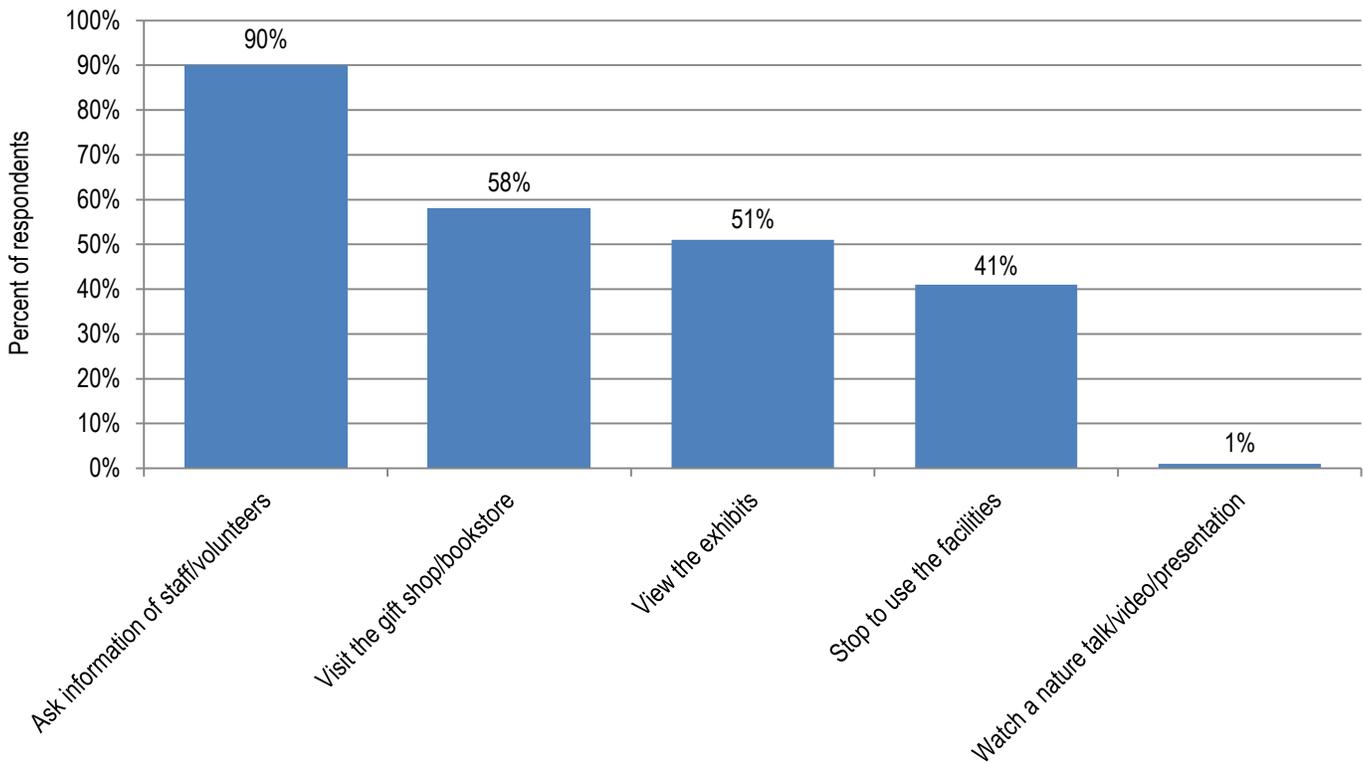


Figure 8. Use of the visitor center at Ruby Lake NWR (for those visitors who indicated they used the visitor center, n = 105).

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, 30% of surveyed visitors to Ruby Lake NWR indicated that they live within the local area. Nonlocal visitors (70%) stayed in the local area, on average, for 3 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$53 per person per day and local visitors spent an average of \$43 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 Ruby Lake NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	111	\$39	\$53	\$54	\$0	\$317
Local	45	\$33	\$43	\$48	\$0	\$213

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

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

Visitor Opinions about This Refuge

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

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

- 86% were satisfied with the recreational activities and opportunities,
- 87% were satisfied with the information and education about the refuge and its resources,
- 86% were satisfied with the services provided by employees or volunteers, and
- 77% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 15% (n = 26) of visitors indicated they paid a fee to enter Ruby Lake NWR, the refuge does not have an entrance fee. It may be that some of these visitors were referencing a fishing license or trout stamp purchased from the Nevada Department of Wildlife when answering this question.

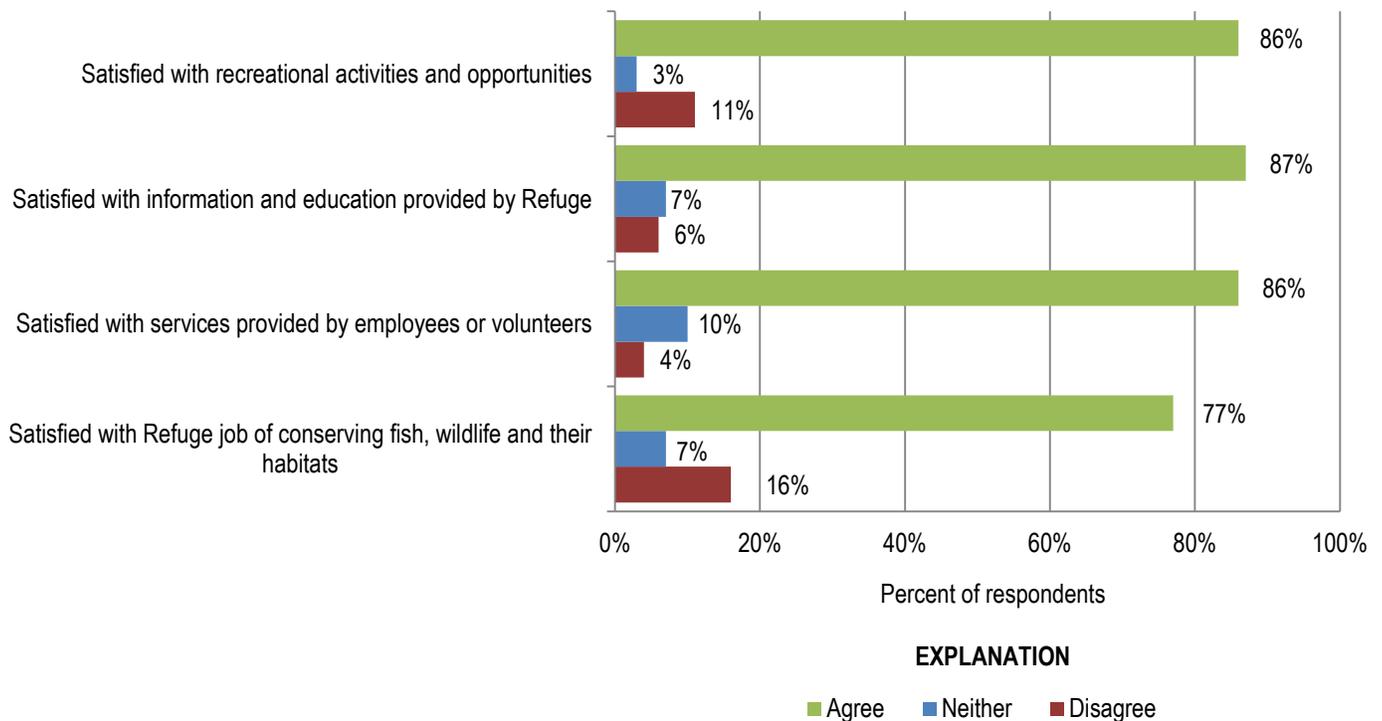


Figure 9. Overall satisfaction with Ruby Lake NWR during this visit (n ≥ 169).

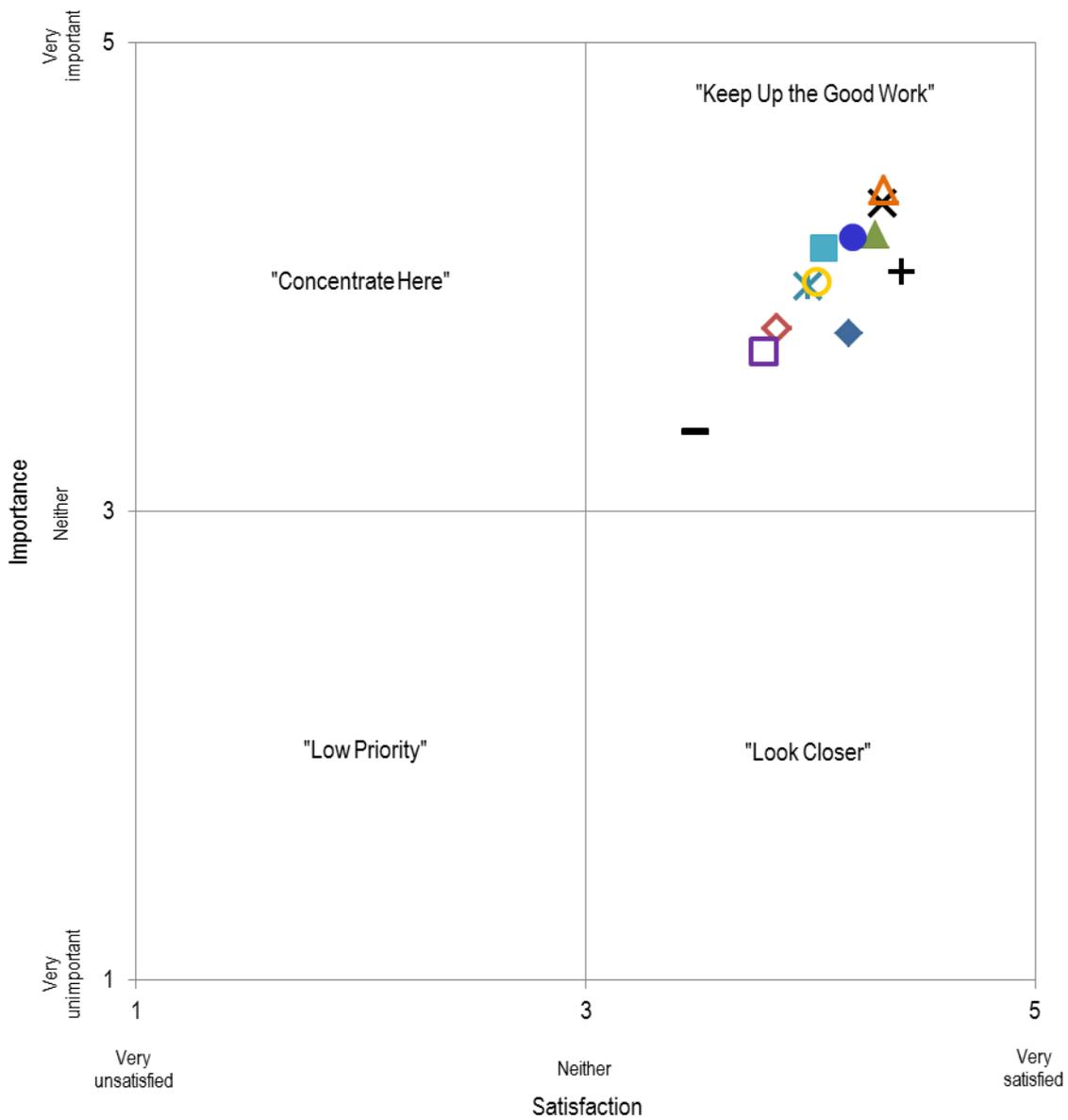
Importance/Satisfaction Ratings

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 Ruby Lake 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.

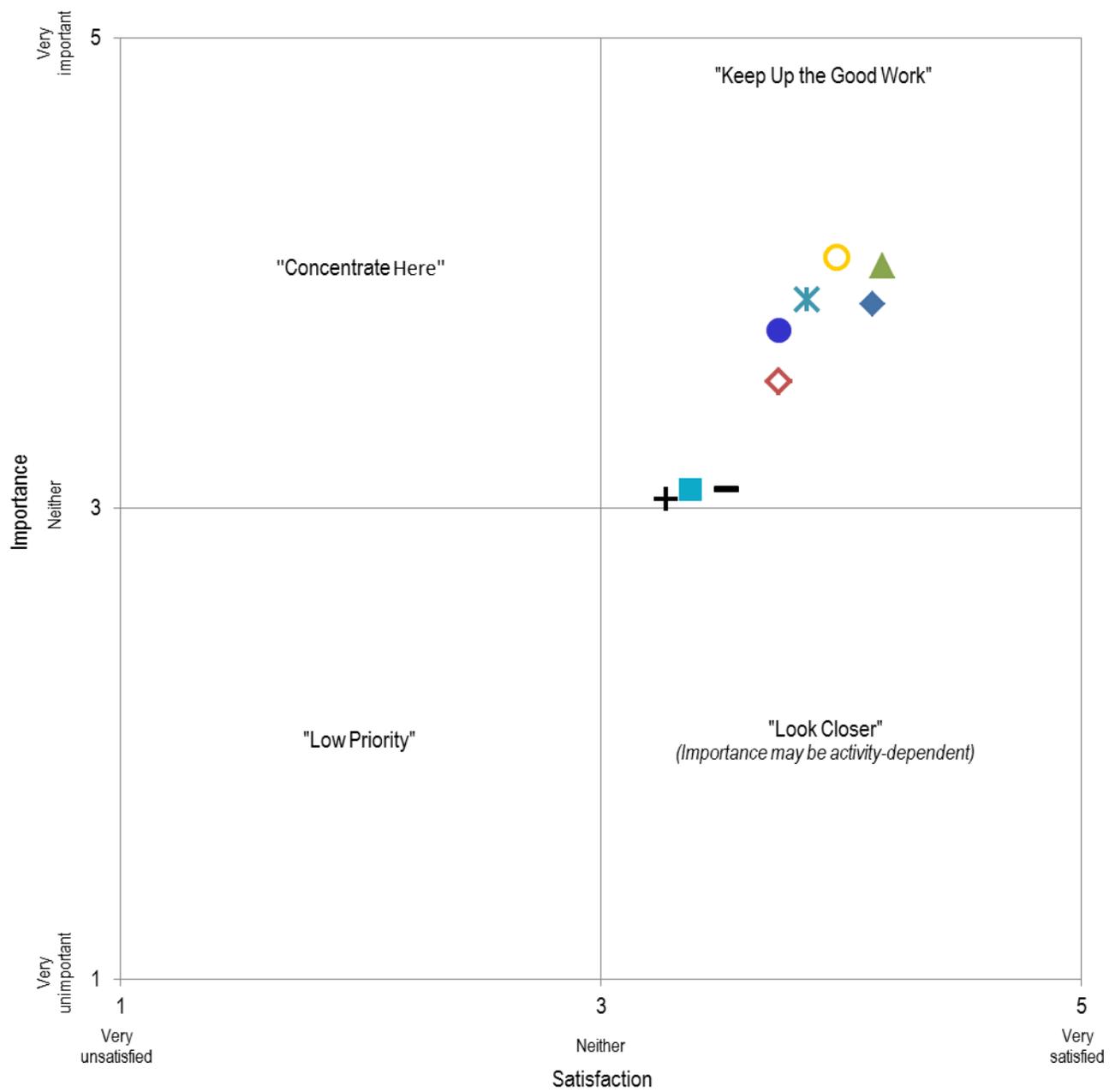
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Ruby Lake NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). All refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant (fig. 11). The average importance ratings of hunting, bicycling, and volunteer opportunities, while still in the "Keep Up the Good Work" quadrant, are very near to the "Look Closer" quadrant. The average importance of these opportunities 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 or it was not known how many visitors participated in these activities. 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
- ✕ Printed information about this Refuge
- Signs with rules/regulations
- Environmental education programs/activities
- Convenient hours/days of operation
- Wildlife observation structures

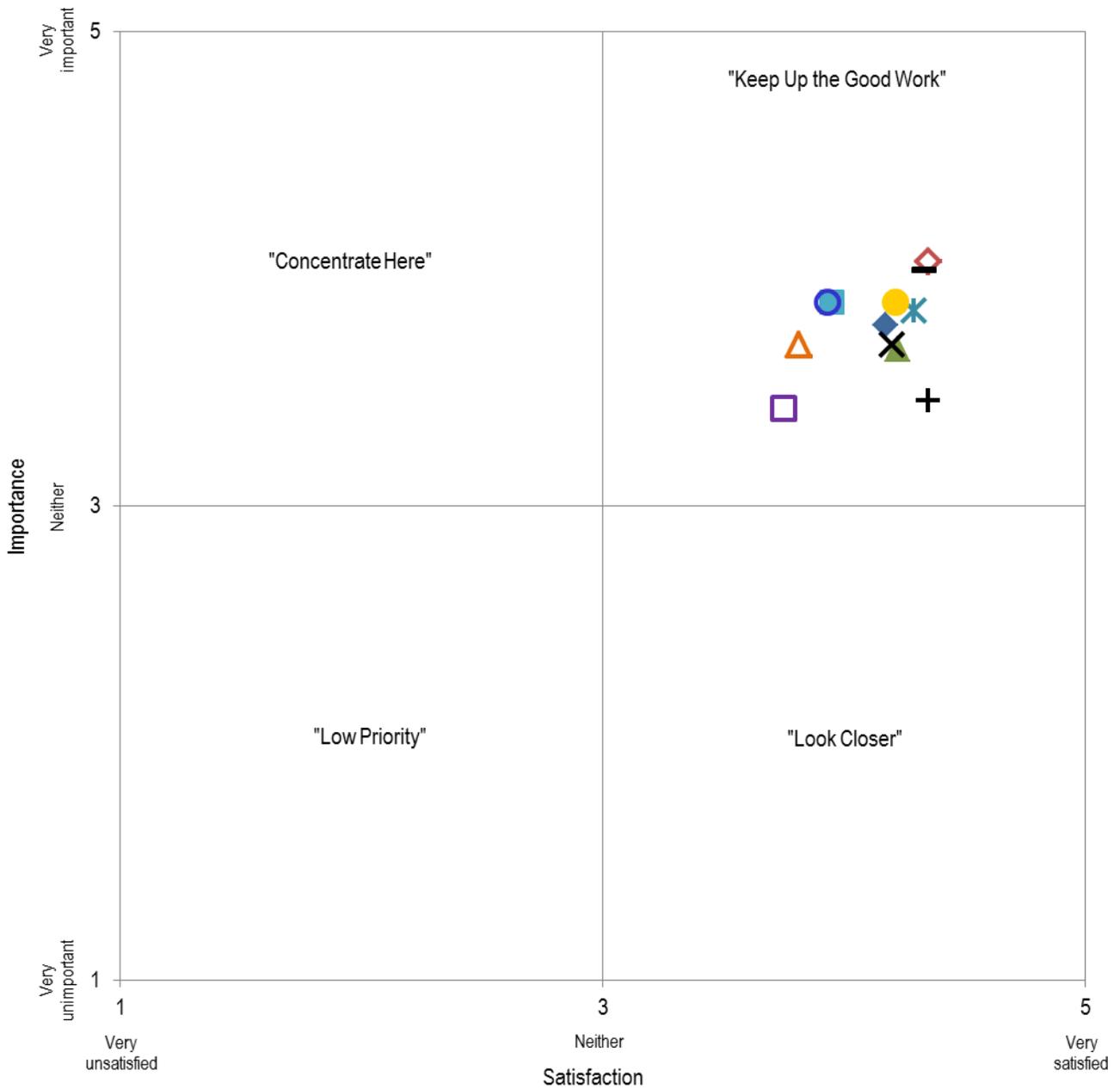
Figure 10. Importance-satisfaction ratings of services and facilities provided at Ruby Lake NWR.



EXPLANATION

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

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



EXPLANATION

- | | | | |
|------------------------------|---------------------------------|-------------------------------|----------------------------------|
| ◆ Condition of roads | + Condition of parking areas | ▲ Condition of bridges | ✕ Condition of trails/boardwalks |
| ✕ Number of parking places | ■ Directional signs on Refuge | ○ Number of pullovers | ◇ Safety of driving conditions |
| – Safety of Refuge entrances | ● Directional signs on highways | ▲ Directional signs on trails | □ Disabled access |

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

- a boat that goes to different points on Refuge waterways; and
- an offsite parking lot that provides trail access.

The majority of visitors were *not* likely to use:

- a bus/tram that takes passengers to different points,
- a bike share program,
- a bus/tram that provides a guided tour, and
- a bus/tram that runs during a special event on national wildlife refuges in the future (fig. 13).

When asked about using alternative transportation at Ruby Lake NWR specifically, 27% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (12%) and others thought it would not (61%).

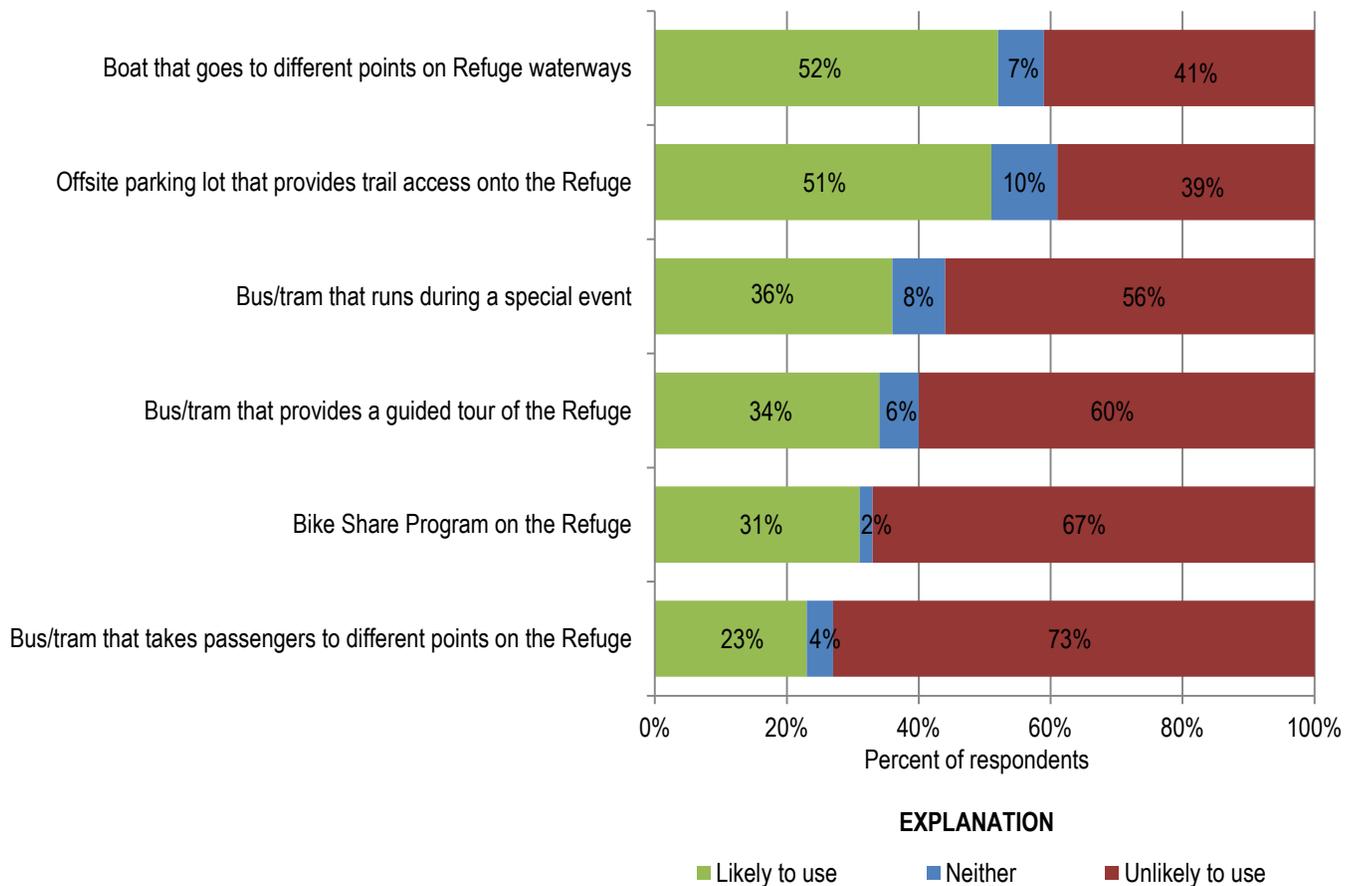


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 170).

Climate Change and the National Wildlife Refuge System

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

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

wildlife and their habitats. The majority of surveyed visitors to Ruby Lake NWR agreed with the following statements (fig. 14):

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

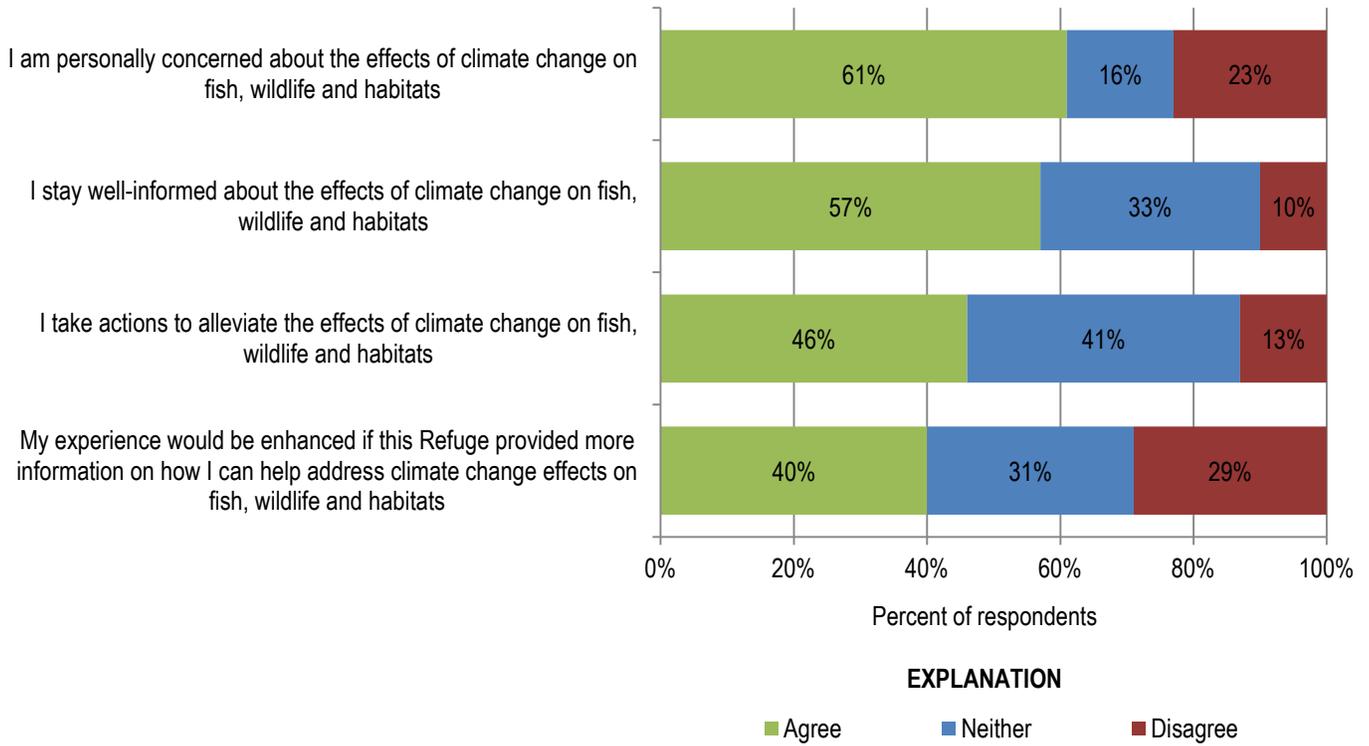


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 171).

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

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

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 Ruby Lake 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.

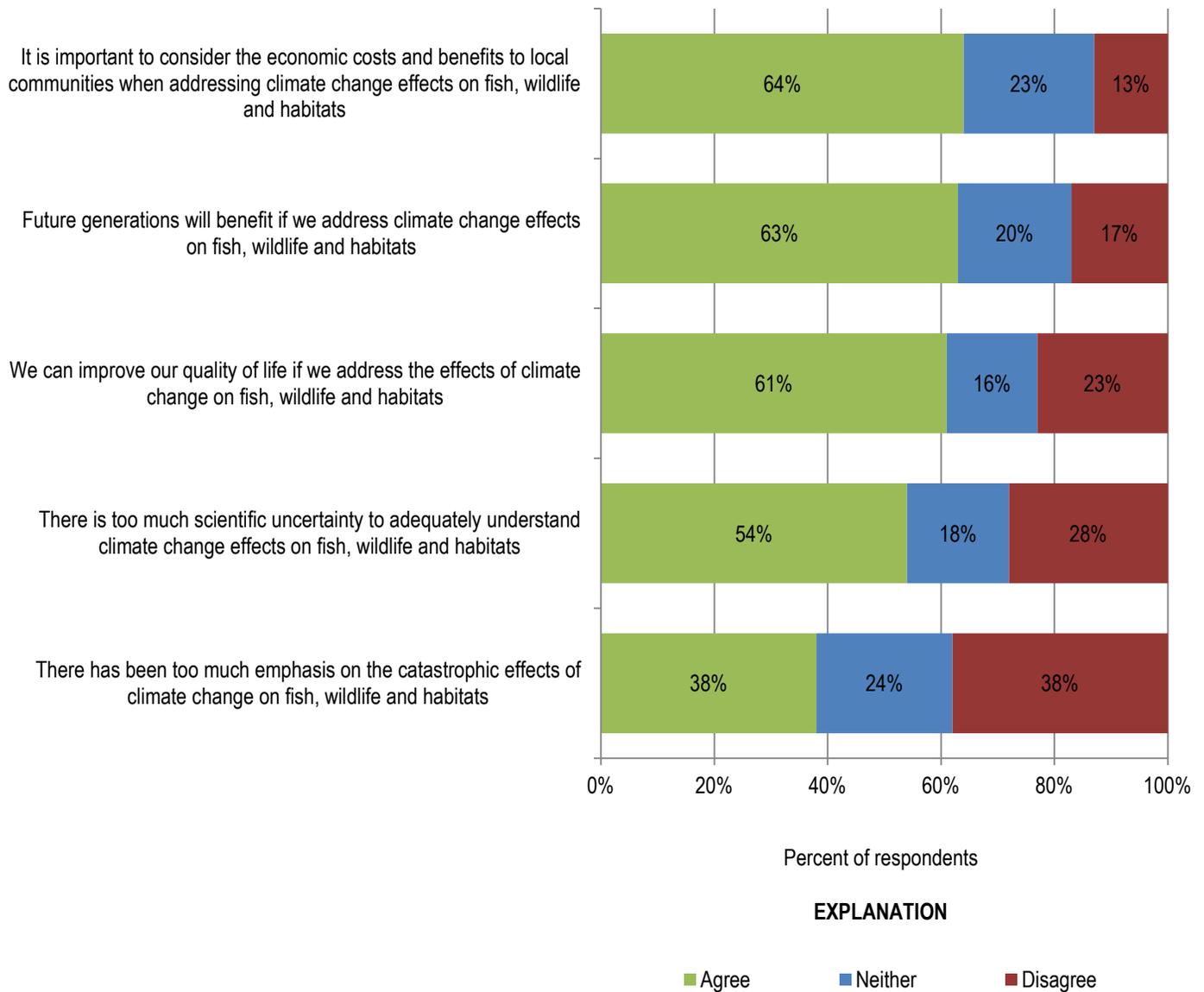


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 171).

Conclusion

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

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

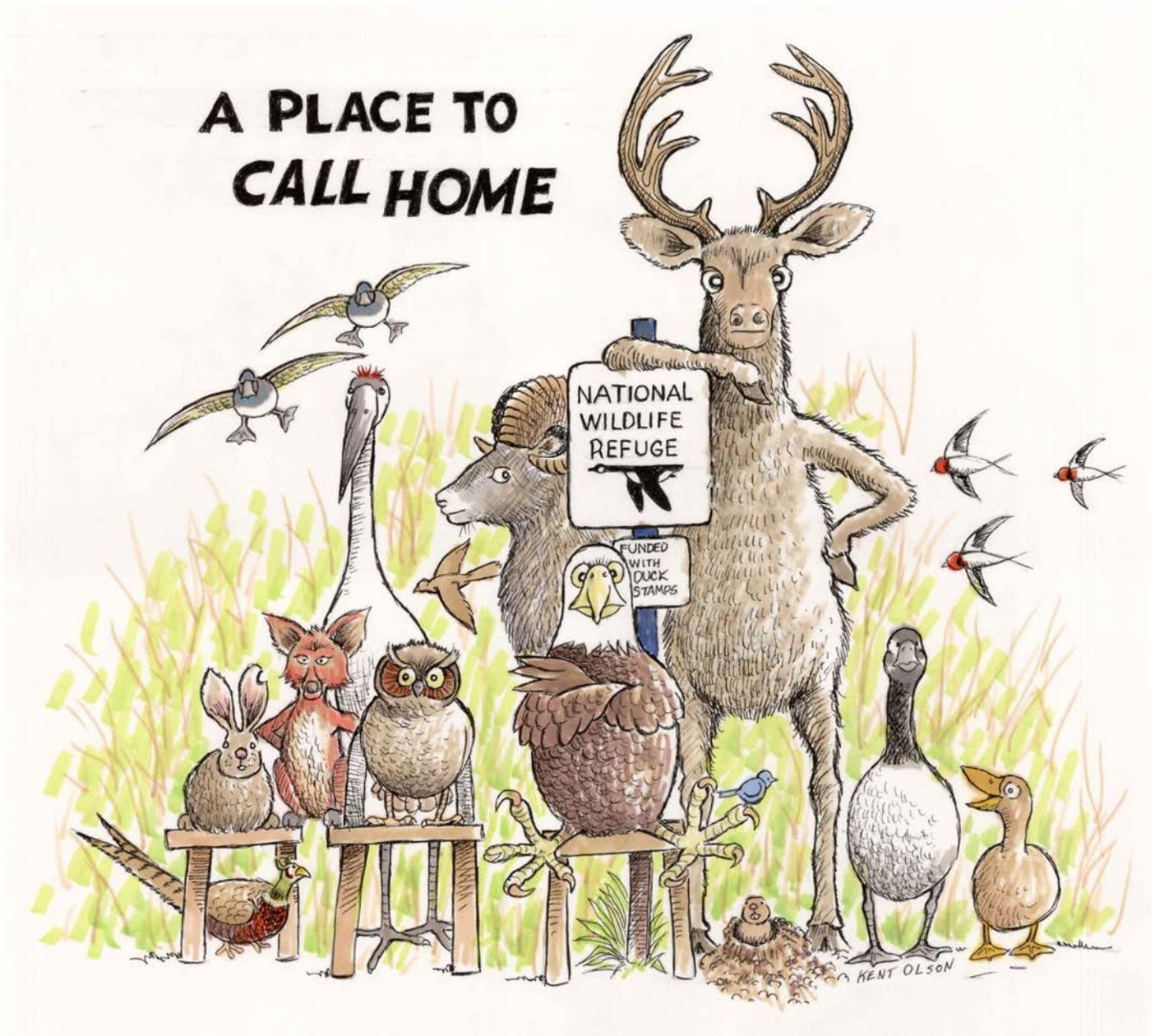
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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

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

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

SECTION 1. Your visit to this Refuge

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

- | | | |
|--|---|--|
| <input type="checkbox"/> 3% Big game hunting | <input type="checkbox"/> 24% Hiking | <input type="checkbox"/> 2% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 2% Upland/Small-game hunting | <input type="checkbox"/> 3% Bicycling | |
| <input type="checkbox"/> 3% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 40% Auto tour route/Driving | <input type="checkbox"/> 1% Special event (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 53% Wildlife observation | <input type="checkbox"/> 29% Motorized boating | |
| <input type="checkbox"/> 46% Bird watching | <input type="checkbox"/> 11% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 9% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 63% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 11% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 0% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 41% 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?

- 40% No
- 60% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 58% Visit the gift shop or bookstore | <input type="checkbox"/> 1% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 51% View the exhibits | <input type="checkbox"/> 41% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 90% Ask information of staff/volunteers | <input type="checkbox"/> 6% 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	
52%	72%	58%	It was the primary purpose or sole destination of my trip.
42%	18%	35%	It was one of many equally important reasons or destinations for my trip.
6%	10%	7%	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 363 number of miles

Local 37 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?

33% No (*skip to question #9*)

67% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

96% Family and/or friends

2% Organized club or school group

0% Commercial tour group

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

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

 4 number 18 years and over

 1 number 17 years and under

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

65% Friends or relatives

8% Refuge website

4% Signs on highway

0% Other website (*please specify*) See Appendix B

1% Recreation club or organization

0% Television or radio

18% People in the local community

7% Newspaper or magazine

8% Refuge printed information (brochure, map)

11% 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.***)

22% Spring
(March-May)

98% Summer
(June-August)

22% Fall
(September-November)

8% Winter
(December-February)

11. How many times have you visited...

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

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

SECTION 2. Transportation and access at this Refuge

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

- | | | | | | |
|------------------------------|---|------------------------------|----------------------------------|------------------------------|---------------------------------------|
| <input type="checkbox"/> 73% | Private vehicle without a trailer | <input type="checkbox"/> 0% | Refuge shuttle bus or tram | <input type="checkbox"/> 2% | Bicycle |
| <input type="checkbox"/> 33% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 0% | Motorcycle | <input type="checkbox"/> 18% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 5% | ATV or off-road vehicle | <input type="checkbox"/> 1% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 7% | Recreational vehicle (RV) | <input type="checkbox"/> 20% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 1% | Wheelchair or other mobility aid | | |

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

- | | | | |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 34% | Signs on highways | <input type="checkbox"/> 6% | Directions from Refuge website |
| <input type="checkbox"/> 9% | A GPS navigation system | <input type="checkbox"/> 6% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 35% | A road atlas or highway map | <input type="checkbox"/> 12% | Directions from friends or family |
| <input type="checkbox"/> 6% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 53% | Previous knowledge/I have been to this Refuge before |
| | | <input type="checkbox"/> 3% | 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"/> 57%	<input type="checkbox"/> 16%	<input type="checkbox"/> 4%	<input type="checkbox"/> 14%	<input type="checkbox"/> 8%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 49%	<input type="checkbox"/> 17%	<input type="checkbox"/> 3%	<input type="checkbox"/> 17%	<input type="checkbox"/> 13%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 47%	<input type="checkbox"/> 13%	<input type="checkbox"/> 6%	<input type="checkbox"/> 26%	<input type="checkbox"/> 8%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 32%	<input type="checkbox"/> 9%	<input type="checkbox"/> 7%	<input type="checkbox"/> 32%	<input type="checkbox"/> 20%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 44%	<input type="checkbox"/> 12%	<input type="checkbox"/> 9%	<input type="checkbox"/> 24%	<input type="checkbox"/> 11%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 31%	<input type="checkbox"/> 8%	<input type="checkbox"/> 10%	<input type="checkbox"/> 28%	<input type="checkbox"/> 24%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 25%	<input type="checkbox"/> 0%	<input type="checkbox"/> 10%	<input type="checkbox"/> 35%	<input type="checkbox"/> 30%

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

- 12% Yes 61% No 27% 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
6%	14%	9%	37%	33%	Surface conditions of roads	7%	6%	5%	28%	54%	NA
8%	15%	18%	43%	16%	Surface conditions of parking areas	4%	4%	6%	25%	61%	NA
8%	6%	26%	32%	28%	Condition of bridges	3%	1%	20%	25%	52%	NA
7%	7%	23%	36%	27%	Condition of trails and boardwalks	2%	3%	20%	25%	51%	NA
2%	11%	14%	49%	24%	Number of places for parking	1%	3%	12%	31%	52%	NA
4%	8%	17%	43%	29%	Number of places to pull over along Refuge roads	1%	14%	13%	34%	38%	NA
5%	8%	7%	39%	41%	Safety of driving conditions on Refuge roads	3%	4%	8%	26%	59%	NA
4%	7%	9%	45%	35%	Safety of Refuge road entrances/exits	3%	4%	8%	29%	57%	NA
6%	9%	14%	36%	35%	Signs on highways directing you to the Refuge	3%	4%	13%	29%	51%	NA
6%	6%	14%	44%	30%	Signs directing you around the Refuge roads	5%	7%	14%	39%	36%	NA
7%	8%	24%	31%	30%	Signs directing you on trails	3%	8%	25%	32%	31%	NA
11%	11%	28%	27%	24%	Access for people with physical disabilities or who have difficulty walking	4%	6%	35%	20%	34%	NA

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

See Appendix B

SECTION 3. Your expenses related to your Refuge visit

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

30% Yes

70% No → How much time did you spend **in local communities** on this trip?
2 number of hours OR 5 number of days

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

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

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
8%	2%	14%	2%	10%	6%	26%	2%	6%	6%	18%

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

4%	Far too low	8%	Too low	85%	About right	0%	Too high	4%	Far too high	85%	Did not pay a fee <i>(skip to Section 4)</i>
----	-------------	----	---------	-----	-------------	----	----------	----	--------------	-----	---

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

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

0%	Strongly disagree	8%	Disagree	4%	Neither agree or disagree	48%	Agree	40%	Strongly agree
----	-------------------	----	----------	----	---------------------------	-----	-------	-----	----------------

SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	2%	8%	4%	32%	54%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	2%	4%	7%	38%	49%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	2%	2%	9%	32%	54%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	11%	5%	7%	23%	55%	NA

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

Importance					Refuge Services, Facilities, and Activities	Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
4%	5%	22%	50%	20%	Availability of employees or volunteers	3%	6%	15%	21%	55%	NA
2%	7%	16%	37%	38%	Courteous and welcoming employees or volunteers	3%	3%	14%	10%	70%	NA
4%	2%	13%	36%	46%	Knowledgeable employees or volunteers	3%	4%	14%	19%	60%	NA
2%	2%	7%	42%	47%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	6%	8%	28%	56%	NA
4%	4%	13%	52%	28%	Informational kiosks/displays about this Refuge and its resources	3%	7%	20%	31%	40%	NA
2%	5%	11%	40%	43%	Signs with rules/regulations for this Refuge	1%	7%	14%	28%	50%	NA
2%	7%	23%	46%	22%	Exhibits about this Refuge and its resources	3%	7%	25%	33%	32%	NA
6%	9%	41%	31%	12%	Environmental education programs or activities	3%	7%	53%	14%	23%	NA
2%	4%	20%	40%	33%	Visitor Center	5%	3%	23%	24%	46%	NA
3%	4%	14%	34%	44%	Convenient hours and days of operation	4%	8%	15%	21%	51%	NA
3%	2%	6%	32%	57%	Well-maintained restrooms	3%	5%	10%	21%	61%	NA
7%	5%	25%	39%	25%	Wildlife observation structures (decks, blinds)	3%	6%	31%	28%	31%	NA
7%	6%	18%	29%	40%	Bird-watching opportunities	1%	4%	24%	23%	48%	NA
3%	6%	13%	37%	41%	Opportunities to observe wildlife other than birds	3%	7%	19%	31%	40%	NA
4%	5%	17%	33%	41%	Opportunities to photograph wildlife and scenery	1%	3%	19%	31%	46%	NA
24%	7%	27%	19%	22%	Hunting opportunities	6%	10%	40%	27%	17%	NA
17%	5%	8%	13%	58%	Fishing opportunities	9%	6%	16%	26%	42%	NA
8%	6%	21%	31%	34%	Trail hiking opportunities	2%	8%	33%	29%	29%	NA
10%	7%	29%	28%	26%	Water trail opportunities for canoeing or kayaking	1%	7%	37%	28%	27%	NA
16%	11%	36%	24%	13%	Bicycling opportunities	1%	4%	57%	19%	19%	NA
15%	11%	40%	23%	11%	Volunteer opportunities	4%	5%	64%	13%	14%	NA

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

See Appendix B

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

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

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

94% Yes

6% No

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

95% Yes

5% No

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

86% Yes

14% No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	16%	6%	17%	28%	32%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	16%	6%	16%	30%	31%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	14%	13%	19%	27%	27%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	4%	6%	33%	41%	16%
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.	8%	5%	23%	42%	22%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	9%	4%	41%	31%	15%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	19%	19%	24%	15%	23%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	10%	8%	20%	27%	36%
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.	19%	10%	32%	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?

99% Yes 1% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 74% Male 26% Female

3. In what year were you born? 1956 (YYYY)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					0%			16%				54%				30%			

5. What ethnicity do you consider yourself? 1% Hispanic or Latino 99% Not Hispanic or Latino

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

- 3% American Indian or Alaska Native 1% Black or African American 98% White
 2% Asian 1% Native Hawaiian or Pacific Islander

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

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

- | | | |
|---|--|--|
| <input type="checkbox"/> 2% Less than \$10,000 | <input type="checkbox"/> 10% \$35,000 - \$49,999 | <input type="checkbox"/> 24% \$100,000 - \$149,999 |
| <input type="checkbox"/> 6% \$10,000 - \$24,999 | <input type="checkbox"/> 19% \$50,000 - \$74,999 | <input type="checkbox"/> 9% \$150,000 - \$199,999 |
| <input type="checkbox"/> 6% \$25,000 - \$34,999 | <input type="checkbox"/> 16% \$75,000 - \$99,999 | <input type="checkbox"/> 9% \$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.)?

13 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 Ruby Lake 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
Exploring/learning regional geology	1
OCTA	1
Total	2

Other Activity	Frequency
ATV ride, visit the refuge	1
Camping	6
Camping, hot springs	1
Curiosity	1
Haying	1
Tourism	2
Visited fish hatchery	1
Visiting family	1
Wildflower identification	1
Total	15

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
Haying	1
Hot springs	1
Part time residence	1
Sightseeing	1
To see the refuge	1
Tourism	2
Visiting 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
Ate lunch on the grounds.	1
Few exhibits, the staff was at lunch. We stopped in, then left.	1
Got gas.	1
Purchased map	1
Shared photos with employees.	1
Walked through the fish hatchery.	1
Total	6

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
Co-worker	1
Field research team	1
Job	1
Total	3

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

Other Website	Frequency
NA	

Other Ways Heard about This Refuge	Frequency
As a part of my work with the BLM.	1
Book on wildlife refuges	1
Books on bird watching	1
Hunting reservations	1
Map	8
Maps, road atlases	1
Proximity to Ruby Mountains	1
Scientific literature, geology professor	1
State map	2
TMCC Class in 2006	1
Visual over-flight, during years as pro pilot	1
Total	19

Survey Section 2

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

Other Forms of Transportation	Frequency
Airplane	1
Utility vehicle	1
Total	2

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

Other Ways Found This Refuge	Frequency
I was driven by the refuge.	1
It was along the route I had planned to take.	1
Map provided by refuge help center	1
Microsoft Streets & Trips software	1
Nevada topography map book	1
Refuge brochure	1
Total	6

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
Aerial - plane, hot air balloon, etc.	1
ATV	3
Bicycle	1
Camping area without noise	1

Fan boat rides	1
Jeep tours	1
Kayak rentals	1
Private off-road vehicle	2
Private vehicle	7
Rent ATVs	1
Self-guided only	1
Transportation from the nearest bus stop to the refuge	1
Unicycle	1
Total	22

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

Comments on Transportation-related Items at This Refuge (n = 32)

A boat for a fee would be awesome to get birding into the waterways.

Access for disabled people is obscene. A complete disregard for people with disabilities. Fire every federal worker at this facility and give to the state of Nevada.

All in all, it is very good.

Cave Creek Trail needs work.

Could use more camping areas for RVs.

Extremely limited handicap parking and parking at the fishing location on the Dikes. I have a blind and physically limited mother who loves to fish and it is almost impossible for her to enjoy the Marshes. There are only 2 parking spots at the main boat dock and they do not accommodate vehicles with trailers. There is no means to assist a handicapped person into a boat.

From my experience, the signage in and around the refuge is minimal.

Good road maintenance.

I didn't see any trails to walk/hike at the refuge. It would have improved our experience if there had been. I don't remember quality of disabled access at this refuge.

I dislike huge (hot) roads and parking areas. I think this refuge has this feature. I like small, rustic, more natural features when possible. I had trouble finding Ruby Hot Springs, which was supposed to be on or part of the CCC Road, but there was also a CCC Dam which confused and frustrated us.

I enjoyed being able to poke around on my own. More foot paths would be nice.

I liked the rural nature of this area. Primitive is good.

I was pleased with the trail to the mouth of Cave Creek; it was not there the last time I visited it (many years ago).

Keep it a refuge and curtail any additional road building.

More boat storage parking would be nice; not on trailers, but at the water's edge.

No comments. Save its beauty and remoteness; it's in a beautiful natural state.

One of the least visited refuges anywhere. Roads around the refuge are more than adequate.

The county needs to blade Harrison Pass more often than they do now. That is the worst part of the drive.

The last 8 miles could be better paved.

The roads to the parking area were very bumpy/wash boarded.

The waterways have markers, but are not numbered. The website numbers the markers on its map. The markers should have a number placard on each of them. Maybe a solar beacon to make traveling the marsh at dusk a little easier.

There was a lot of water on the roads in low spots.

They have ruined the dikes by trying to flood new areas, which took water away from existing areas making them unfishable and ugly. They are also taking water away from the main lake. Gas motors need to be let onto the main lake. Earlier in the year by August, the moss was up so high in a lot of areas of the lake that makes it impossible to access them. I do not think gas motors affect the ducks.

They refused to allow a side-by-side utility vehicle on roads. An ATV does not equal a utility vehicle.

This place, the Ruby Lake Marshes, is somewhat difficult to get to, and I am very glad that it is.

This refuge has a boat launch area. Very few people understand the proper way to launch a boat. I feel a class on this topic would be very helpful.

We visited in our RZR ATV and were disappointed we weren't able to go into the preserve on the roads.

We were not happy with the lack of signage on the N50 mile dirt road off of HWY-50.

We were there for only two hours bird watching.

We would use hiking trails, if they were developed. We fish the Collection Ditch. It is our primary attraction that brings us to the Ruby Lake National Wildlife Refuge.

You need good signage in many places 50-100 miles before you get to the refuge.

You need trash containers and weed control at the boat dock.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 74)

A map of the main road showing the roads on the dikes with viewing info and fishing spots would be very helpful.

After living in the area (within 65 miles) for 9 years, we finally made it to the refuge! Friends and neighbors value it for hunting/fishing, which we don't participate in. It was disappointing not to see trails, as we enjoy walking/light hiking. We had lunch at the campground. It was pleasant.

All services were good, except they should not allow hunting or grazing.

Allow motorized boating starting June 1st of each year.

Better maintenance of center navigation aids would be nice; I could not find any past pole 5 from the south landing. They need to be more visible to provide safety in this marsh. Some are painted black and some are aluminum; all are poor visibly. They need to be a more visible color against the green/brown reeds or blue sky.

Blinds, more brochures and info at the Visitor Center (in case staff are unavailable) would be my top priorities. Put protection of wildlife first. I don't know enough about this refuge to know whether that is the case or not now.

Good refuge, good people.

Hikes with biologists to look at and identify wildlife would be very interesting.

I don't agree with the biologist and what he is doing with the refuge marshes.

I don't like big, fancy, expensive Visitor Centers, although this one is small by some standards. I think its size and modesty better fit the setting - good job!

I don't think they should allow hunting, since it is a wildlife REFUGE.

I enjoyed the stay, except it got very hot. It cooled off well at night though.

I feel that the focus is too heavily weighted toward the birds and not the wonderful fishing opportunities.

I feel the refuge was a better producer of wildlife and fishing when the use of gas motors was not so restrictive.

I have a problem with the way the water at this refuge is moved around to aid in the nesting of ducks with no regard for the fish population.

I like visiting the hatchery. I have not visited the new refuge center. Birds are nice to watch, but I would rather fish for bass. Too bad the water was low this year. I didn't think I would need a boat. I have one that is legal for the marshes. I first visited the Ruby Marshes in 1969. A lot has changed and I am not sure if it has changed for the better. We water skied in the 1970's before the government started spending money like

drunken sailors.

I loved the remoteness and feeling of being alone with it.

I own land at the Ruby Marsh. The water level on the lake and the dikes at the Ruby Marsh must be managed better. The water level at the brown dike is way too low to fish and the moss reaches the surface way too early on the long dike, because the water is spread out over areas where people cannot fish. Then, because they drain water from the lake to have the huge area of water that is only 2 feet deep on the dikes, it leaves no water out on the lake or the dikes that can be effectively fished. It is almost as though they don't want fisherman out there at all, that birds are all that matter. The Ruby Marsh is a very special place and I spend a lot of time and money in Nevada in order to be out there. If the poor water levels continue, then I may be forced to stay in California and buy land on a local lake.

I strongly believe that the fishing opportunities for this refuge should be preserved and enhanced in any way possible.

I understand that the refuge is for the protection of birds and wildlife, but I think the quality, a large amount of largemouth bass and trout, and a large area of the dikes are necessary and healthy for bird and wildlife protection. There were hardly any birds this year (August 2010). The marsh and Brown and Long Dikes were in horrible condition, and there seems to be no respect for the fishermen by refuge management. It is a shame! We are all in this circle of life together, each dependent on the other.

I visited the Visitor Center in 2008 - very nice.

I was disappointed that the area which used to have an old front was closed to the public. I would have liked to walk around with my son to see the history.

I was unaware that hunting was allowed in NWRs. I don't understand this; if it is a refuge, why can you kill the wildlife? This seems inappropriate.

I would have stayed longer, except for the wind.

I would like to see a little bigger motor for boats allowed than 9.9hp.

It is all very nice.

It is very clean and very nice.

It would be fantastic to have guided boating trips. I would have signed up for one.

Keep up the good work.

People were very helpful.

Please increase the bass size limit to 12 inches minimum and decrease the creek limit to 5 per day to give them a chance to increase by allowing them to mature to spawning age.

Please stay the way you are; very clean, pleasant and friendly.

Printed information and maps need to be replaced.

Refuge personnel could not explain the citation process, including judicial action, if any.

Ruby Lake NWR should allow limited antelope hunting on the south end. Boats with motors that go faster than 10MPH should be allowed earlier. Keep water levels as high as possible in the south lake to promote redheads and fishing opportunities.

Service? At least the restrooms are well maintained. I just don't see the need for a federal presence here. It's a waste of taxpayer dollars, and I would pay for a permit, if the refuge belonged to the state of Nevada.

Services and the facilities at the Ruby Lake National Wildlife Refuge are well maintained. My family and friends spend approximately 40 days during the summer at the refuge. I have a place in Shanty Town.

The beauty of this refuge is its remote location and lack of crowded conditions.

The boat launch area has tie-up rings attached to large rocks for securing your boat. Nearly all of the tie-up rings are inaccessible due to the overgrown vegetation. The vegetation needs to be removed to allow access to the tie-up rings.

The camp area was perfectly clean and well cared for.

The distribution of water throughout the refuge is totally unsatisfactory.

The employees were very helpful and courteous.

The FWS needs to work with the State Fish and Wildlife Agency to find a better way to distribute the collection ditch water to allow better access to the marsh in the summer months for fishing; then more people will visit.

The management at this refuge has all but eliminated fishing from the dikes and roads that are on this marsh.

The refuge does well in these areas.

The refuge seems to be managed to push fishermen away.

The restrooms were fantastic! It was nice to have a clean restroom!

The sanitary dump station has been out of service for several years and is very important for people camping in self-contained RVs.

The tall poles to mark the waterway paths were too short and not plentiful. It's very easy to get lost on Ruby Lake. Keep in mind that kayakers cannot see over the tall grass. A map with numbered poles would be very helpful. My visit was shortened because of a fear of getting lost.

The Visitor Center closed early and was not open during the weekend when it's most convenient for us to visit.

The Visitor Center is closed on weekends. We were there on the weekend.

The Visitor Center is very helpful!

The Visitor Center was a great help when we ran out of gas.

The Visitor Center was not open due to the lack of employees.

The volunteer at the refuge was a little too politically opinionated - shared her strong views against immigration and the president with us without taking into consideration that we may not share her views.

The water level is low, so the fishing is really bad and there are very few ducks other than coots.

There are no trails to the photo blinds. Canoe or kayak rental would have improved our experience.

There is great fishing.

There is poor management of water levels in an effort to do away with fish. When they did away with the large boats, the duck population dropped, as there is nothing churning up the food sources.

This is great bass fishing place for kids 17 and under to learn on and great for adults, too.

This refuge is managed for the birds at the expense of fishing. There should be a better balance.

This used to be the best bass fishing in Elko County. It seems you spend more time on trout than bass. We are disappointed.

Two years ago, I filled out a volunteer information card and never received a response. I feel it is very important to teach my kids about conservation and volunteering would be a great opportunity.

We met one of the biologists, who was one of the most helpful, friendly, and knowledgeable federal employees I have ever met. His name was Rod Wittenberg.

We ran into someone who lives in the area, and they said there are hardly any animals out there anymore compared to what it used to be like several years ago.

We were unable to see the reserve and rate the experience properly.

Why is there hunting on a refuge?

With regard to hiking and trails, a large segment of the refuge is closed to foot entry. Also, the water management policies have caused the dike units to fill with weeds, thereby causing dike fishing in these areas, which used to be a great place to recreate, to become very difficult to fish. Different dike units are being drained one year and filled the next. Rather than trying to replicate nature, let nature handle it. The dike units were initially constructed so as to retain water during drought years. Water now is spread out over large areas, causing toxic weeds to grow. It appears that this may be a case of over-management.

You could manage the water better.

You need a better Visitor Center; a larger one with educational stuff. I would love access to a motorized tour of waterways with birding in mind. No airboats unless quiet!

You need more picnic areas and tables.

You need to be able to sell fishing licenses there or closer.

You need to conserve more bird habitat rather than non-native fish!

You need trash cans and weed control at the boat docks.

Survey Section 5

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

Comments on What Makes Refuges Unique? (n = 124)

An opportunity to see wildlife that I may not otherwise have the chance to see.

Areas that are held as sacrosanct, protected from any over-use, environmental abuse, and hunting (all the crap usually associated with human activities). Refuge, as in sanctuary and safety from harm. Wildlife/environment is encouraged to thrive without worry of danger from humans.

Availability and maintenance of the surrounding area.

Bass fishing opportunities at this refuge.

Bass fishing opportunities.

Bass fishing.

Because you keep nature as it's meant to be: beautiful, interesting, and educational.

Bird watching opportunities draw us to refuges. There are usually no crowds and no commercial entities. They are set in beautiful scenery.

BLM management, the largest land management agency in our area, is controversial regarding livestock grazing. This refuge is controversial because people want to fish for bass and this is the lowest priority for the refuge.

Conservation and wildlife.

Easy access, controlled environment.

Environment and wildlife.

Great bass fishing in an area that can be as remote as one desires.

I have a summer home in the area and I travel there almost every weekend.

I have never seen anything like the Ruby Marshes before anywhere, refuge or not.

I know less of refuges than other public lands. Visiting one reminds me of how important marshes, water, fish, birds, and insects are to the environment.

I love birding, wildlife and plant study, and am a fine art photographer, so refuges are wonderful. The more remote, the better. Ruby Lake was certainly remote, but the day we chose on our vacation itinerary was too windy. Nevertheless, we enjoyed it and the 3 staff members I met were friendly. The sighting, and resulting photograph, of 3 Long Billed Curlews were well worth the 240 mile round trip from where we were staying in Ely, NV.

If NWRs have the primary mission of conserving, managing, and restoring fish, wildlife, plants and their habitat, then why are there cattle grazing and hunting on almost all National Wildlife Refuges?

It capitalizes on the propensity of wildlife to naturally be in their areas. It expands educational opportunities for new visitors to these areas.

It gives the opportunity to see first-hand what an outdoor area can truly be when appreciated and, if need be, protected.

It gives time for family and friends to get together.

It is a unique area for Nevada that has much better fishing.

It is a very unique ecosystem that I've never observed before. The aquatic environment for native wildlife is very unique.

It is a wetland surrounded by desert.

It is hidden back off the road and it has unique water sites to view and fish from!

It is remote, and there is great fishing.

It is very remote and uncrowded. It is wonderful!

It is well managed for fishing and hunting.

It is well managed.

It offers the possibility of seeing various wildlife species in one area.

It's a huge preserve for birds and animals; this is very important for them to survive.

It's one of a kind. I am so lucky that I am able to camp and fish there each year, but I have never seen the marshes in such rough shape as this year in the 35 years I have gone to the marshes. Even the drought years didn't look this bad, and I feel that the marshes are definitely being condensed and that the anglers are made to feel unwelcome. Please, tell me it isn't so! Our parents helped us discover the beauty and value of the marshes, and we have done the same for our children. Now we, and our children, are showing our grandchildren this beauty. We would like to feel a little more welcome. We understand that the marsh lands are fragile, but so are we. A statue of Mike Green (NV state game warden) should be made for his dedication in preserving the marshes and bass population.

Its remote location; every refuge is unique!

Its vastness and it is not over managed.

Less crowded.

Less human traffic than at National Parks. Fewer human conveniences than other federal lands.

Less use, more conservation.

Location. Beauty. Not crowded.

Minimal development.

Most have water and complex infrastructures to move, spread, and maintain water levels. It is very unique and valuable in the driest state in the USA.

Natural conditions and primitive environment.

No entrance fees for fishing or boating.

Not as crowded as other public lands. Lots of wildlife.

Opportunity to view birds and wildlife.

Opportunity to visit an area of conservation for wildlife, but having access to trails, boating and hunting/fishing.

Protection and preservation of land and wildlife.

Providing wildlife areas to breed and raise the young in a natural habitat.

Public access.

Refuges are managed for wildlife and thus provide a special opportunity to get closer to wildlife in their natural habitat.

Refuges keep the natural beauty of the area.

Refuges preserve nature for the enjoyment of future generations.

Refuges provide a concentrated opportunity to view and experience wildlife (including hunting and fishing) unmatched by other federal venues.

Refuges tend to be wilder and less populated. I enjoy the quiet and wide openness of refuges.

Regulations for preserving habitat and wildlife that appears to work very well.

Ruby Lake is a unique bass fishing opportunity for families and children. The fishing is great, but the water management policies have thwarted fishing opportunities on the dikes (shore) so only the boaters have the opportunity to catch bass. I enjoy bird watching and belong to many bird organizations both local and national. However, there needs to be more attention given to fishing opportunities on the dikes.

Ruby Lake National Wildlife Refuge has great fishing and waterfowl hunting opportunities.

Ruby Lake, Nevada is an adventure for anyone. I am very happy for the opportunity of visiting the refuge and for the fun I have experienced through the year. Thanks.

The ability to catch a lot of fish in a nice quiet place without having to deal with jet skis.

The abundance of wildlife. Ruby Lake is a unique kayaking experience I'll remember.

The educational programs and displays.

The essence of the Rubies. It's a gorgeous place and a part of this whole amazing basin and range. I was blown away by the trumpeter swan presence, but I didn't see one. The proximity of the hot springs in this valley indicated and enhances how special it is.

The fishing at the Ruby Marsh used to be amazing. It is a great place where children can freely explore nature and catch fish. I wish the water levels on the lake were managed better so that the fishing was returned back to what it was like when I was a young man visiting with my grandparents.

The fishing is exceptional for kids. We did not catch very big fish, but kids love catching. There is plenty of opportunity on these waters to catch a lot of fish with little or no experience. This is the main reason I will travel 320 miles to this area.

The fishing.

They have more restrictions and rules that are not necessary in this extremely rural area. No horseback riding on the refuge. No big game hunting on the refuge. No ATV use on the refuge. Conservation and controlled use is needed to intertwine to promote the refuge!!

The last decades of habitat for numerous species of all sizes.

The limited facilities are adequate.

The marsh appears to have much to offer in the way of wildlife, fishing, and hunting. The ATV restrictions are too strict for those of us who are responsible recreationalists.

The marsh.

The recreation is limited, which makes it easier to enjoy the fishing experience.

The refuge system in Nevada was established to help provide habitat for waterfowl, especially canvasback ducks. Habitat was disappearing due to irrigation. I don't hunt waterfowl, but I do hunt upland game birds. However, I enjoy seeing all the wildlife that the refuge provides habitat for and, in that respect, refuges are unique and serve a very important function.

The scenery, people, and amazing wildlife.

The solitude and pristine condition have caused us to recommend this refuge to our friends.

The variety and husbandry of wildlife.

The water and aquatic life.

The waterways are not destroyed by large motors or boats running across the marsh. It is open a limited time. There are limited facilities, which help keep people out, and there is limited usage there, prolonging the wilderness.

The wildlife, period. Unique wildlife and unique viewing experiences of that wildlife makes for a unique refuge. Emphasis (i.e. funding) should always be used to enhance wildlife habitat and not be used to enhance visitors' experiences.

Their mission to conserve makes them unique.

There are always so many different kinds of protected animals and birds to see.

There are animals, good guys, and it is good for the earth.

There are healthy animals, and it is a very clean place and a nice place to be.

There are less visitors and more wildlife.

There are poles in the marsh so you won't get lost, and there is good fishing.

There are wildlife observation opportunities, magnificent scenery, and it is very quiet.

There is an excellent and controlled fishing experience.

There is limited human access. Refuges may be the last hope for wildlife. The system of refuges needs to be expanded at all costs.

There is lots of water.

There is native wildlife in their habitat. This refuge is an important resting habitat for waterfowl, especially canvasback ducks. There is a lack of the motorized toys that annoy me (motorcycles, 4-wheelers, snowmobiles, etc.).

There is no other place in northern Nevada that is like it. Let's just keep it a secret.

There is no place like the Rubies! It is beautiful, charming, and unique, not only to Nevada, but to any place I've been! There is amazing birding because it is so far out there!

There is wildlife viewing and a high concentration of wildlife.

There was such an abundance of easily seen bird life at the refuge. There is also a feeling that the wildlife is offered greater protective status and thus are more plentiful and healthy.

These are places that give families an opportunity to see wildlife and fish without the worries that they'll find it all built out by some slum lord or property giant. These places are needed to preserve wildlife and the natural order of things.

They are a treasure and are not as well visited as National Parks and Monuments. They are not as crowded, which allows a unique environment to enjoy nature and outdoor serenity.

They are clearly equal multiple uses (e.g., environmental preservation/protection, recreational opportunities, hunting/fishing opportunities, wildlife/bird viewing opportunities).

They are focused on wildlife rather than geological or historical interest.

They are natural, remote areas with minimum improvements and Visitor Centers.

They are not as touristy as National Parks and have more pristine protection of wildlife and nature.

They are places where things are still wild. Don't continually build new roads or install new head gates. There always seems to be a building project and this takes away from the outdoor experience.

They are protected.

They are usually quiet, slow-paced places with no crowds and little noise. Birders get to do their thing with minimal interference. They tend to be in beautiful places. The auto tour route is a unique feature - even in NWRs that are fairly close to urban areas, the auto tour routes are usually not very busy, so a birder can take his time. There are usually lots of cool birds to see!

They better preserve the marsh lands, as there are not many left.

They have primary places to observe diminishing wildlife. They raise public consciousness.

They present an opportunity to observe wildlife without endangering it. They are a way to reconnect with nature and learn more about the relationships among animals. We had the opportunity to see animals in the wild, which otherwise we would not have seen. The scenery is gorgeous and peaceful.

They protect wetlands and the critters that use them and live in them.

This refuge has ruined many areas that used to be good for fishing for everyone and that used to be good for the ducks.

Tons of fish makes it worth the trip.

Unlike most public lands, refuges really are concentrating on the health of the environment rather than focusing so much on human visitation. Making the areas that are available for viewing seem more pristine and special.

Very isolated and unique.

We need them to help protect wildlife for us and future generations.

Well-managed refuges put emphasis on wildlife conservation and educate us about the challenges of conserving their target species. We should be able to see wildlife to the extent that it is possible without harming them. It is exciting to be in a refuge for wildlife, because most other places are not equal in providing refuge.

Wetland habitat.

Wildlife flock to refuges. People won't find a variety of animals together like that in other areas. That is one reason these places are made into refuges.

Wildlife observation.

Wildlife opportunities.

Wonderful opportunity to see wildlife and birds in their natural habitat.

You can see native species of plants and animals in original/restored setting.

You can see the birds in their natural habitat.

You can see wildlife up close.

You have the ability to see a lot of wildlife. There are less visitors and signs of humans than in other public lands.

You have the chance to see wildlife closely and in large numbers.

You have the opportunity to be able to observe wildlife, whether it's a skunk, porcupine, or badger without someone coming along to shoot it just for the fun of it.

You have the opportunity to observe migration in a natural setting.

You need more water for the fish. There is too much evaporation and not as many duck hunters as fishermen.

Additional Comments (n = 44)

Climate change does not mean global warming. I think the use of gas motors earlier in the year would help alleviate the unwanted growth of underwater weeds in the marsh.

Common sense and past experience from local ranchers and residents should be taken into consideration for management, as not all information from textbooks applies to all situations. College and degrees are equal to local lifetime experiences and observations relative to

climate that is and will be ever changing. Biologists seem to think that they are the only people with the answers. Thank you.

Excellent campground facilities for tent camping.

I believe more emphasis should be placed on enhancing and preserving the fishing than the energy and time that is devoted to the migratory bird population. There are more who use the refuge for fishing than for migratory bird hunting.

I enjoyed it very much!

I have been going to the Ruby Lake Marsh area since 1967 when we stopped overnight on the way to Idaho. My father helped put in the campground, so our "vacations" were spent there camping and fishing. It is so nice to have the fish cleaning station now. Back in the day, we cleaned fish on the picnic tables, which brought the flies into camp. It's nice to not be bothered with the flies now. It is sad, however, that so much of the reeds were killed and turned so much of the marsh brown.

I love the Ruby Marshes! I would like to live out there when I retire.

I love visiting NWRs, and Ruby Lake was one of the most fun ones that I visited on this six state trip. The Great Basin is a place I love to visit, and on the visit to Ruby Lake, I saw quite a few species of birds that are very local in that region. The young man in the Visitor Center was very helpful, pointing out some spots where I could search for certain species. The highlight of the visit was a relatively rare Blue-winged Teal drake.

I visited the area to see the Himalayan Snow Cock. I did see 23 of the birds in the Lamoille Valley at Island Lake. What a great experience! The personnel at the Ruby Lake NWR are very knowledgeable and went out of the way to help me and to answer questions. What a remote place!
(signature)

I want to reiterate the issue of number placards on the channel markers. This would be a small addition that could make a huge benefit to all that use the waterways. Also, a small solar light on top of each marker would also be of great help.

I will comment on your climate change questions. Climate change is not about the environment, it is about power and money. The people that promote climate change have millions invested in green technology and the Chicago Carbon Exchange. They plan on becoming the new elite ruling class. The Gore's, the Clinton's, the Soro's, and GE's of the world plan on controlling everything through their new religion: the environment. Cap and trade is a way for these people to get richer on the back of the private sector. If people would study the history of the earth, they would realize we just came out of an ice age, and there is as equal a chance for the planet to cool off as there is for it to warm up. We are presently in a period between ice ages. The climate change agenda is not about saving the planet, it is about control over private enterprise. I get mad as hell when the government buys into poor science to promote a green agenda. I don't want any of my tax dollars going into this climate change BS. Scientists do not agree on climate change. The mainstream news media, politicians and environmentalists only report on what they want you to believe.

I've been thinking about the quality of my visits and refuges in general, and it's hit or miss. I believe it's because the lack of wilderness and often so-so scenery. I'm not sure if long travels to refuges are worth it. Some of the people I bring don't like them, even when I do. I think these features dent the quality of what I'm looking for: lots of big roads and channeled water, overly huge parking areas with trash and development, ranches and farm in view and incorporated into refuges, and inholdings. If there are expensive conservation easements, I would rather that money go to buying them out and removing development. Even some refuge buildings are too big, modern, and poorly sited to where they degrade the scenery. Yup, I'm a purist. I guess refuges should be bigger, wilder, and more natural to ensure happy visits from people like me. I understand that habitat is the priority. I think it saddens me that wildlife has to depend on such super managed, diminished landscapes. Beauty and wilderness matters.

It boggles the mind to think that removal of lakes will provide more and better habitat in a region with extremely high evaporation rates. I always thought that the lakes shaded the water and help retard the evaporation rate. If the goal of the Ruby Marsh refuge is to enhance all wildlife and fish, why is the main focus on ducks that are hunted without restriction in their winter habitats? Management is often mismanagement, because of the lack of knowledge about local geography, weather and climate included. More studies and less eastern U.S. strategies might be better management.

It is a gorgeous property, which requires more staff to fully take advantage of it.

It is a very nicely kept area.

It's important to provide for natural species. We emphasize our own human needs too much, but that probably has to do with getting government funding.

Keep it clean and full of fish! I would be willing to pay a small fee to use this site, if it would help keep it clean, although it was very clean and free of debris.

Loved it!

Need to eliminate motorized boats on Ruby Lake. Stop spraying chemicals on the vegetation in Ruby Lake, as it affects the fish we all eat.

Please don't shut the refuge down! It's isolated, but it provides valuable wildlife habitat and recreational opportunities.

Remember that the managing agency is the Fish and Wildlife Service, with the emphasis on fish. The refuge spends too much effort concentrating on migratory waterfowl and should consider fishing when managing water. Fishing is by far the largest outdoor activity enjoyed at the Ruby Lake National Wildlife Refuge.

Ruby Lake National Wildlife Refuge is a great place.

Ruby Lake was fantastic and we plan to return again. The mountains are beautiful and we'd like to include some backpacking up there next time.

Save the birds and wildlife! The priority at Ruby Lake can't be the non-native fish!

Staff was very informative and helpful.

Stop hunting and cattle grazing!

Thank you for asking for my opinion.

Thank you for the chance to offer input.

The boat launch area has tie-up rings attached to large rocks for securing your boat. Nearly all of the tie-up rings are inaccessible due to the overgrown vegetation. The vegetation needs to be removed to allow access to the tie-up rings.

The fishing at the Ruby Marsh would be helped if there was a notch limit on the size of fish taken off the lake. Too many people take the big fish out of the lake. People need to keep the small 10 inch fish, but leave any fish 16 inches or more on the lake. Catch and release needs to be encouraged more at the Ruby Marsh.

The questions about climate change are pathetic. It is clear that restricting access to the "refuge" is the ultimate goal, if this administration and fiefdoms of all natural resource federal agencies. End the violation of refuge management using motorized boats during periods when taxpayers are restricted by temporal regulations. I fully anticipate the USFWS to destroy yet another activity presently enjoyed by Nevadans which provide revenues to other Nevada businesses.

The Ruby Lake National Wildlife Refuge needs a major staff change. They are killing off the fish and running most of the cranes down to the local ranchers' fields. It is very people unfriendly. In a few years, they will have the main parts dried up. I have lived in the area all my life and I have really seen the decline in management.

The Ruby Marshes were once a world class fishery. The refuge should make some changes in the way they manage the resources to include fish as a priority.

The RV sanitation dump station needs to be repaired and put back in service.

The same scientists who were predicting the impending doom of a certain ice age and global cooling when I was in college in 1970-73 have in the last decade accelerated their opposite religious views of so called "global warming" until the facts did not bear this hoax out. Now the name is changed to climate change. Well, that certainly is nothing new. Climate and weather vary. Cycles have shown to change over thousands of years. Suddenly, we have all the Chicken Littles running frantically around crying doom and gloom, only to change their story every 25 years or so. For what purpose? There is no solid evidence that any climate change is measurable over a hundred year period is either 1) caused by man or 2) harmful. Let's just preserve the habitat, let the wildlife adapt, and keep providing refuges and parks for the people's enjoyment. That is a good use of our tax dollars. By the way, I enjoyed my visit to Ruby Lake National Wildlife Refuge very much.

The water level needs to be kept at a higher level to avoid winter kill of fish. Large boats and motors need to be able to have access from June 1st until December 31st. This keeps the weeds churned up for feed for ducks and birds. When the large boats and motors were allowed for years, there was always a lot more ducks and birds than you see now. People were allowed to water ski and the fishing was better.

This is the third time we have camped and fished here. We meet some of my family members from Salt Lake City here (we live in Reno, NV). The remoteness of this area is part of its charm. It is certainly not very crowded. The facilities and improvements that have been made are very appropriate to the remoteness and wilderness setting of this refuge. We'll be back next year.

This refuge used to be a popular fishing spot for locals and visitors. Since they (management) have turned it into a bird sanctuary, the fishing has declined drastically. Nevada is limited in fishable waters and the US Fish and Wildlife has done a disservice to the locals and visitors who once used the refuge for their family outings. It is located too far away from the Pacific Flyway to qualify for the restrictions they have imposed on this marsh. Your drawing on the cover illustrates your priorities in wildlife; everything but a fish!

We love Ruby Lake and will be back. It would be nice if there was a more reliable, closer place to get gas than Ely, Elko, or Wells. We were there on opening week and the private RV park had not filled their tanks yet. I know this is not a federal problem, but it was sketchy with a RV pulling a Jeep without extra gas along. Thanks for a beautiful experience of paddling, wildflowers, birds, and muskrats.

We should be able to swim on the lake. There really are not enough ducks to call it a duck refuge; we saw only about 50 or so. All boats should be allowed at any time. No one hurts the ducks, and all they've done is bring duck lice to the valley and make it so nobody can swim anywhere, even the only hot-spots around are full of duck lice. Thanks.

Why is hunting allowed in a wildlife refuge? It seems to counter the goals of the refuge.

With future budget cuts coming to the DOI, it is more important than ever for USFWS to keep emphasis on wildlife. When decisions are made on what to cut, it should not prioritize infrastructure over wildlife habitat.

Wonderful place to see birds in all seasons. The refuge seemed to be understaffed. The Visitor Center was often closed. More educational opportunities would have been appreciated. I participated in the archaeological dig of "Fort Ruby." It was a very positive experience.

You're doing a great job with the refuge. Maybe an extra boat ramp would be beneficial.
