



# National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for Bosque del Apache National Wildlife Refuge

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*Providing a flyway for the migrating birds, and managing the food resources is absolutely essential in this day of overpopulation and diminishing natural habitats for our nonhuman planetary occupants. I appreciate what you all are doing so very much.*—Survey comment from visitor to Bosque del Apache National Wildlife Refuge.



Sandhill cranes at Bosque del Apache National Wildlife Refuge. Photo credit: Gary M. Stolz/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 Bosque del Apache NWR (this refuge) and are part of USGS Data Series 643 (Sexton and others, 2011). All refuges participating in the 2010/2011 surveying effort will receive individual refuge results specific to the visitors to that refuge. Each set of results is organized by the following categories:

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

## **Methods**

### **Selecting Participating Refuges**

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

### **Developing the Survey Instrument**

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

### **Contacting Visitors**

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

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

**Table 1.** Participating refuges in the 2010/2011 National Wildlife Refuge Visitor Survey.

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

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 Bosque del Apache 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 Bosque del Apache National Wildlife Refuge

Bosque del Apache NWR, or "woods of the Apache," was named for the Native Americans who often camped in the riverside forest. Today it is known as one of the most spectacular refuges in North America. Established in 1939, this 57,331-acre refuge straddles the Rio Grande Valley in Socorro County, New Mexico. Between 4,500 and 6,500 feet in elevation, it receives approximately 8 inches of precipitation each year. The heart of the refuge is 7,000 acres of flood-plain where the waters of the Rio Grande have been diverted to create extensive wetlands and farmlands. An additional 30,850 acres of wilderness consists of foothills and mesas.

Bosque del Apache NWR was established to provide habitat and protection to endangered species and migratory birds during the winter. This refuge also aims to provide the public with an opportunity to see and understand wildlife and provide a high-quality wildlife and educational experience. A unique feature at Bosque del Apache NWR is the migration of tens of thousands of birds, such as sandhill cranes, bald eagles, warblers, flycatchers, shorebirds, songbirds, waders, ducks and snow geese, who flock to the refuge each year to spend their autumns and winters in the warm climate. Throngs of bird lovers and wildlife photographers attend the annual Festival of the Cranes in mid-November to experience as many as 32,000 snow geese and 14,000 sandhill cranes.

With close to 160,000 visitors each year (based on 2008 RAPP data; U.S. Fish and Wildlife Service, 2011, written comm.), the Refuge also offers other activities including fishing, migratory bird hunting, waterfowl hunting, upland game hunting, big game hunting, wildlife observation, auto tour routes, biking, hiking, environmental education, and interpretation. Peak visitation at this refuge occurs during the winter, when cranes, bald eagles, and snow geese are present. Throughout the year, the very active Friends of the Bosque del Apache Refuge offer in-depth educational workshops on a variety of topics from wildlife photography to night sky activities. Figure 1 displays a map of Bosque del Apache NWR. For more information, go to <http://www.fws.gov/southwest/refuges/newmex/bosque/about.html>.

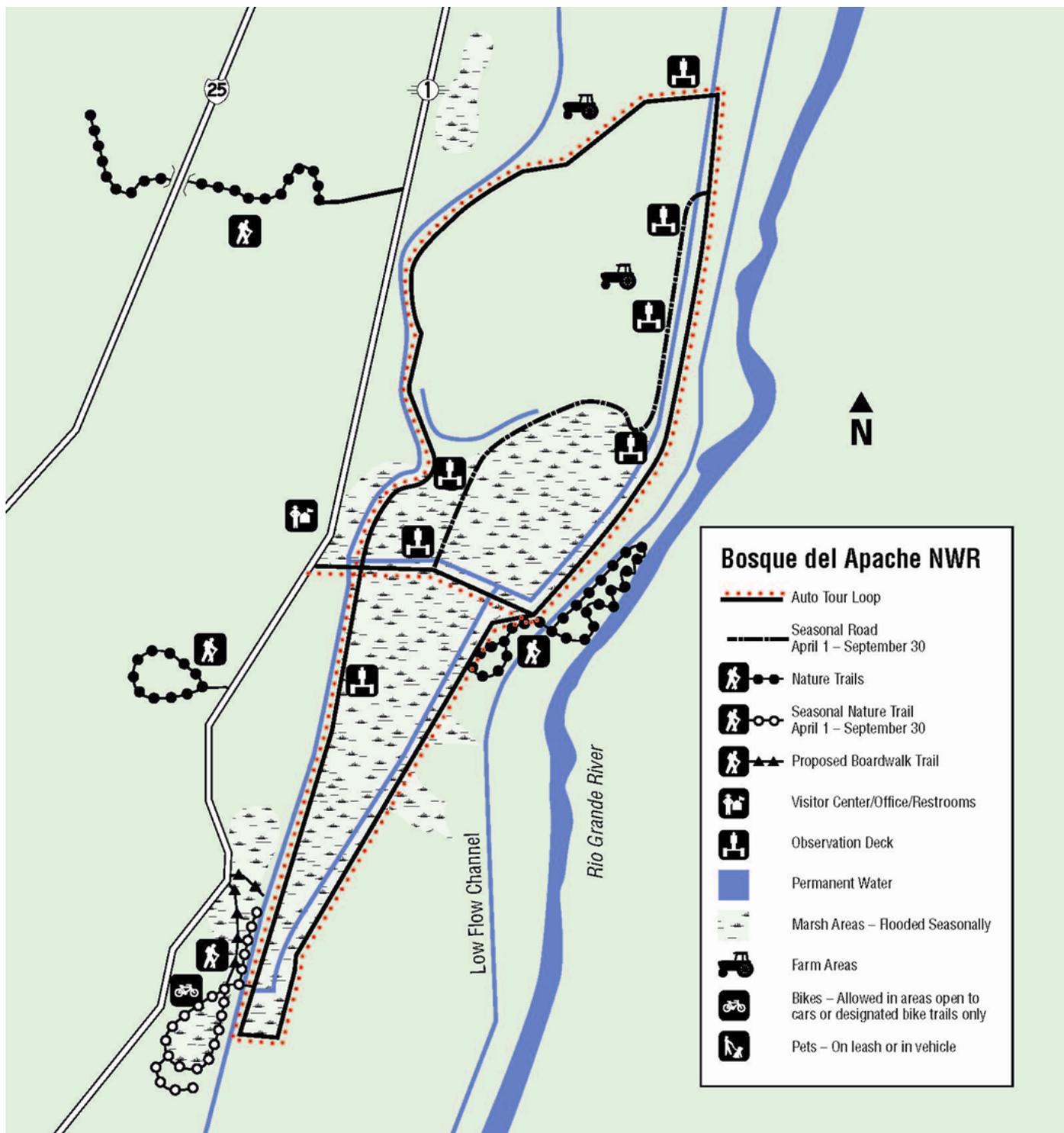


Figure 1. Map of Bosque del Apache NWR, courtesy of U.S. Fish and Wildlife Service.

## Sampling at Bosque del Apache National Wildlife Refuge

A total of 300 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Bosque del Apache NWR (table 2). In all, 229 visitors completed the survey for a 78% response rate and  $\pm 5\%$  margin of error at the 95% confidence level.<sup>1</sup>

**Table 2.** Sampling and response rate summary for Bosque del Apache NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	8/16/10 to 8/30/10	Visitor Center Boardwalk	100	3	77	79%
2	11/16/10 to 11/30/10	Visitor Center/Festival Area Boardwalk/Auto Tour Route/Refuge Patrol	200	3	152	77%
<b>Total</b>			<b>300</b>	<b>6</b>	<b>229</b>	<b>78%</b>

## 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 Bosque del Apache NWR reported that before participating in the survey, they were aware of the role of the U.S. Fish and Wildlife Service in managing national wildlife refuges (88%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (92%). 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 (94%; 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

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

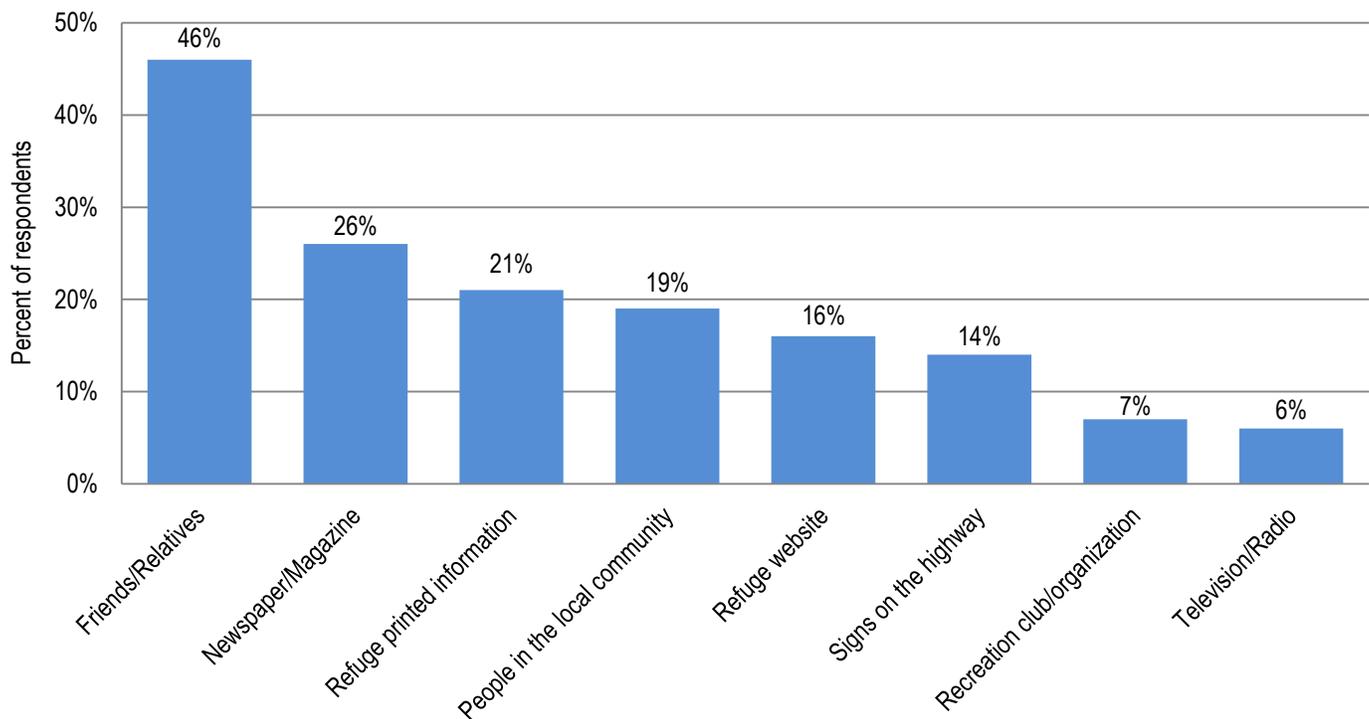
correspond to their understanding of the mission of the Refuge System. Most visitors to Bosque del Apache NWR had been to at least one other National Wildlife Refuge in the past year (68%), with an average of 5 visits to other refuges during the past 12 months.

### Visiting This Refuge

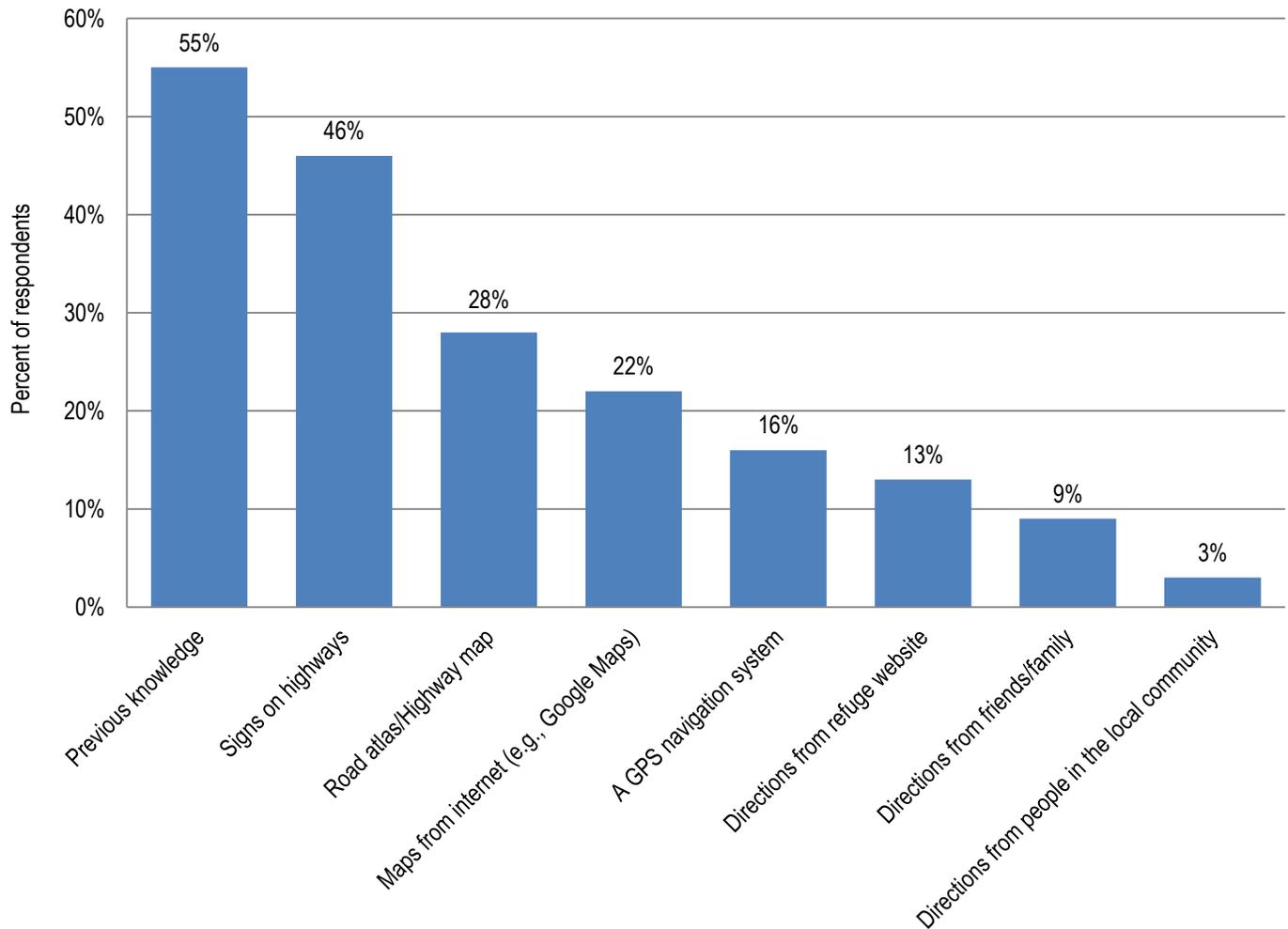
Half of visitors (50%) had only been to Bosque del Apache NWR once in the past 12 months, while the other half had been multiple times (50%). These repeat visitors went to the refuge an average of 5 times during that same 12-month period. Visitors used the refuge during only one season (59%), during multiple seasons (26%), and year-round (15%).

Most surveyed visitors first learned about the refuge from friends/relatives (46%), newspapers/magazines (26%), or refuge printed information (21%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (55%), signs on highways (46%), or a road atlas/highway map (28%; fig. 3).

Few visitors (7%) lived in the local area (within 50 miles of the refuge), whereas 93% were nonlocal visitors. For most local visitors, Bosque del Apache NWR was the primary purpose or sole destination of trip (93%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of trip (73%). Local visitors (n = 16) reported that they traveled an average of 40 miles to get to the refuge, while nonlocal visitors (n = 213) traveled an average of 294 miles. ***It is important to note that summary statistics based on a small sample size (n < 30) may not provide a reliable representation of the population.*** Figure 4 shows the residence of visitors travelling to the refuge. About 60% of visitors travelling to Bosque del Apache NWR were from New Mexico.



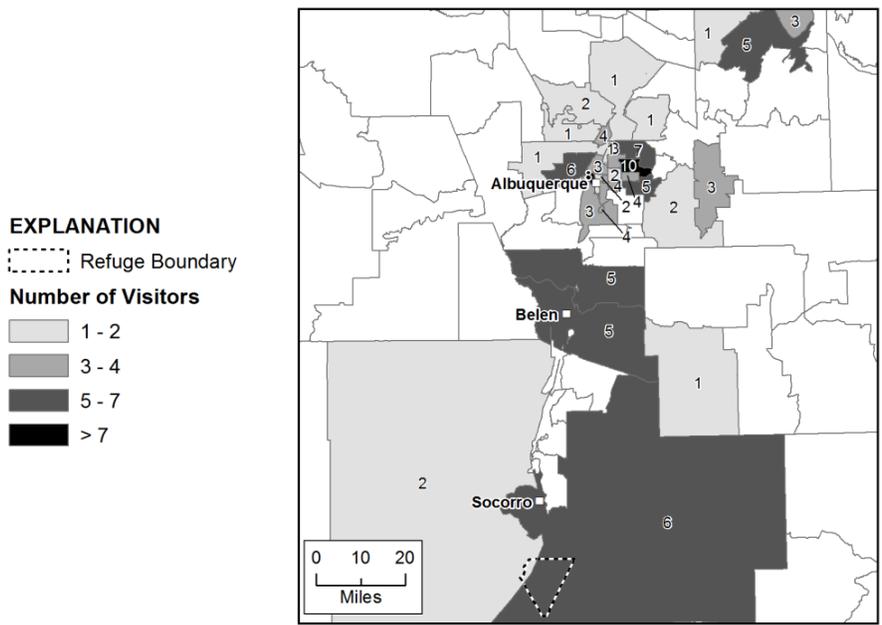
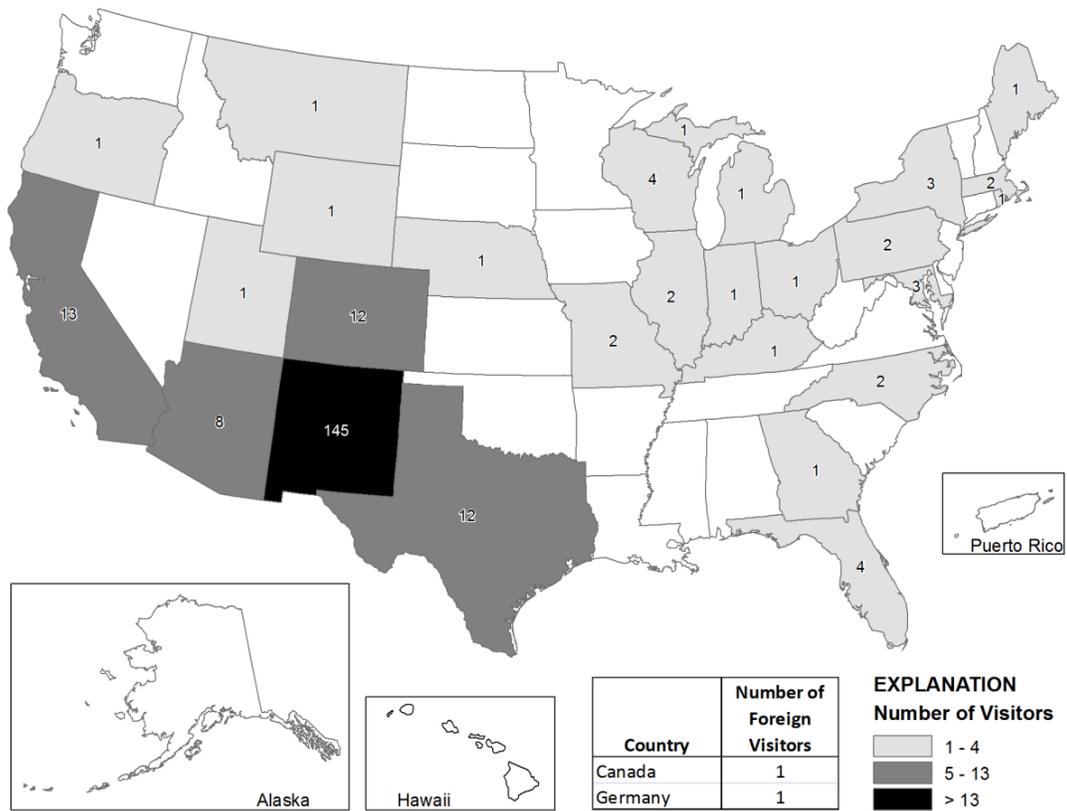
**Figure 2.** How visitors first learned or heard about Bosque del Apache NWR (n = 226).



**Figure 3.** Resources used by visitors to find their way to Bosque del Apache NWR during *this* visit (n = 229).

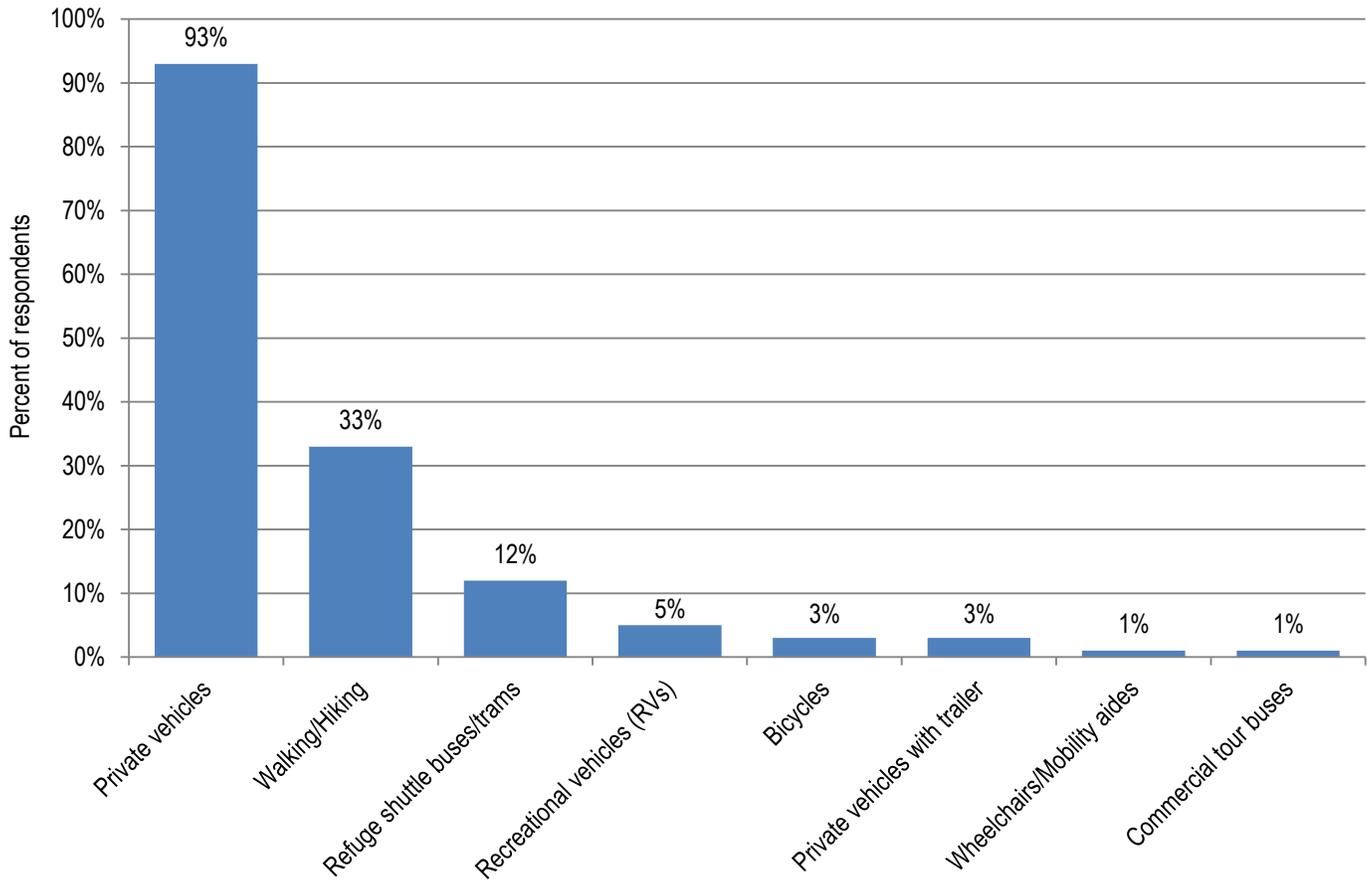
**Table 3.** Influence of Bosque del Apache NWR on visitors' decision to take *this* trip.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	73%	19%	8%
Local	93%	0%	7%
Total	74%	18%	8%



**Figure 4.** Number of visitors travelling to Bosque del Apache NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 229).

Surveyed visitors reported that they spent an average of 6 hours at Bosque del Apache 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 (47%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (93%), walking/hiking (33%), and refuge shuttle bus or tram (12%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (61%), travelling primarily with family and friends (table 4).

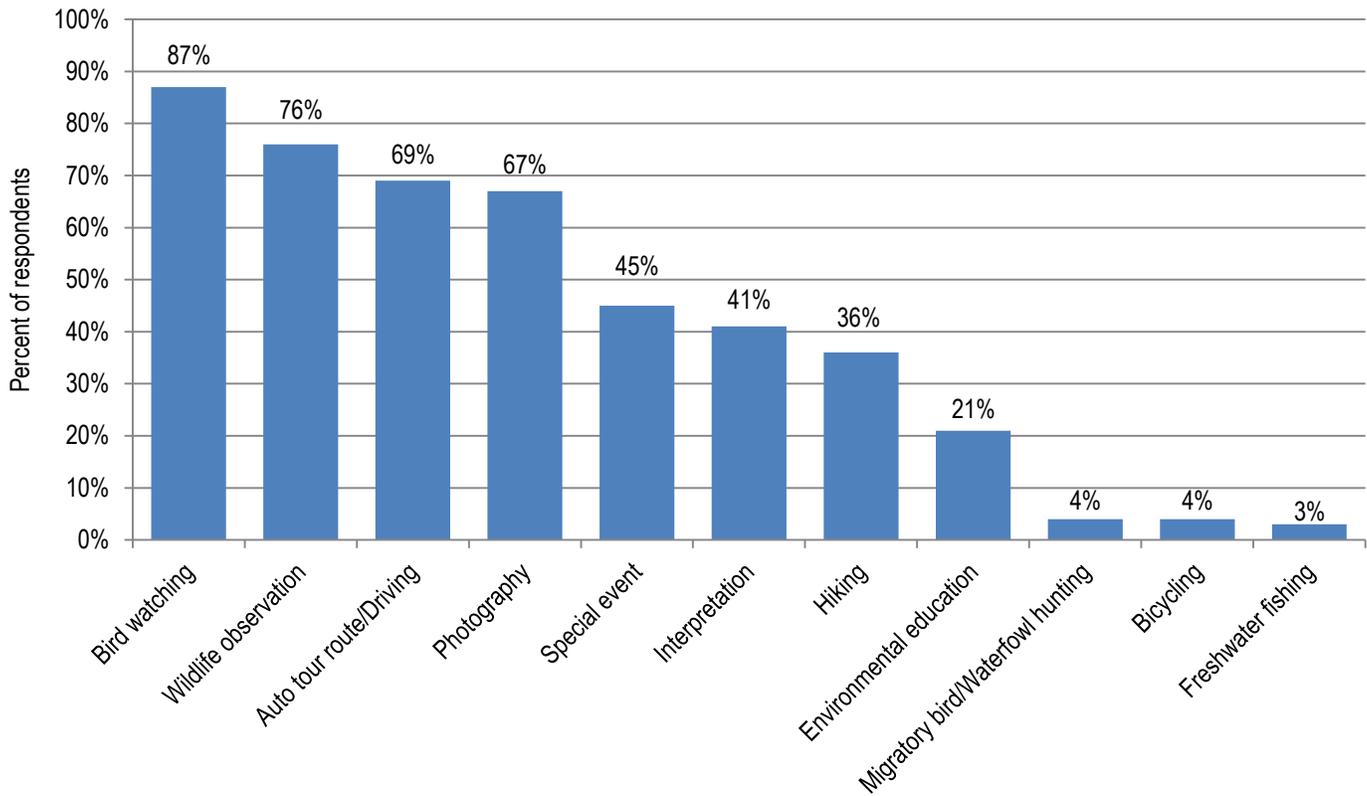


**Figure 5.** Modes of transportation used by visitors to Bosque del Apache NWR during *this* visit (n = 229).

**Table 4.** Type and size of groups visiting Bosque del Apache NWR (for those who indicated they were part of a group, n = 140).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	86%	3	0	3
Commercial tour group	0%	0	0	0
Organized club/School group	8%	12	0	12
Other group type	6%	4	0	4

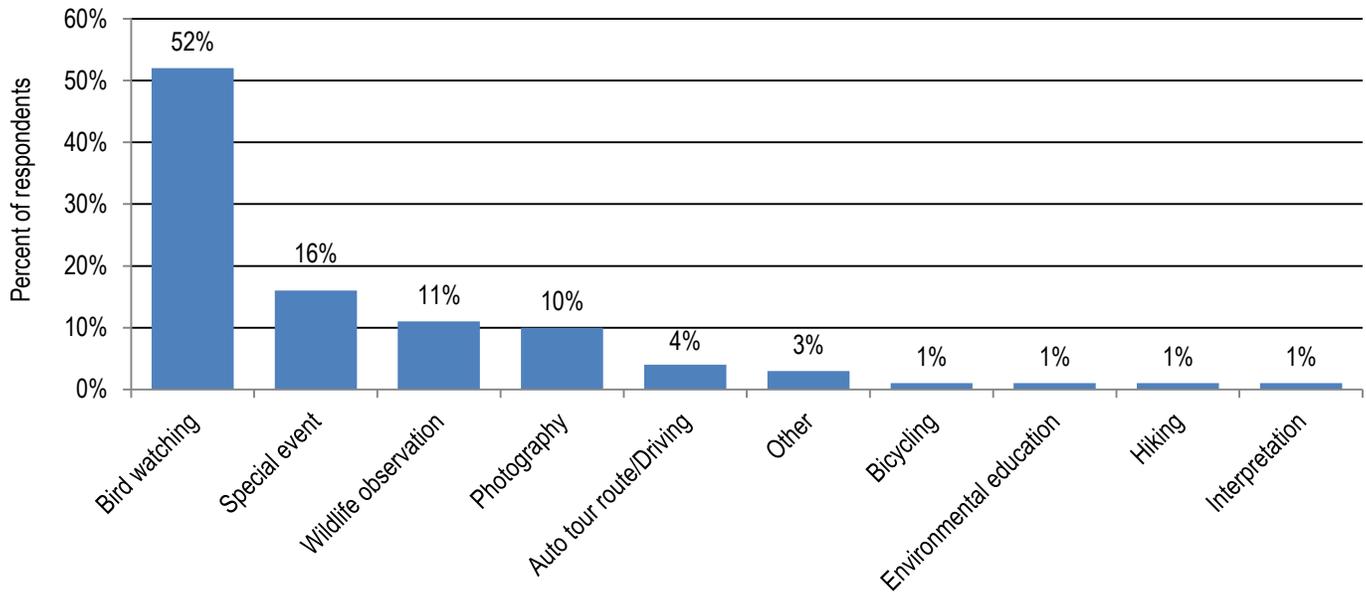
Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top activities reported were bird watching (87%), wildlife observation (76%), auto tour route/driving (69%), and photography (67%). The primary reasons for their most recent visit included bird watching (52%), special event (16%), and wildlife observation (11%; fig. 7). The visitor center was used by 97% of visitors, mostly to visit the gift shop/bookstore (86%), view the exhibits (84%), stop to use the facilities (80%) and ask information of staff/volunteers (78%; fig. 8).



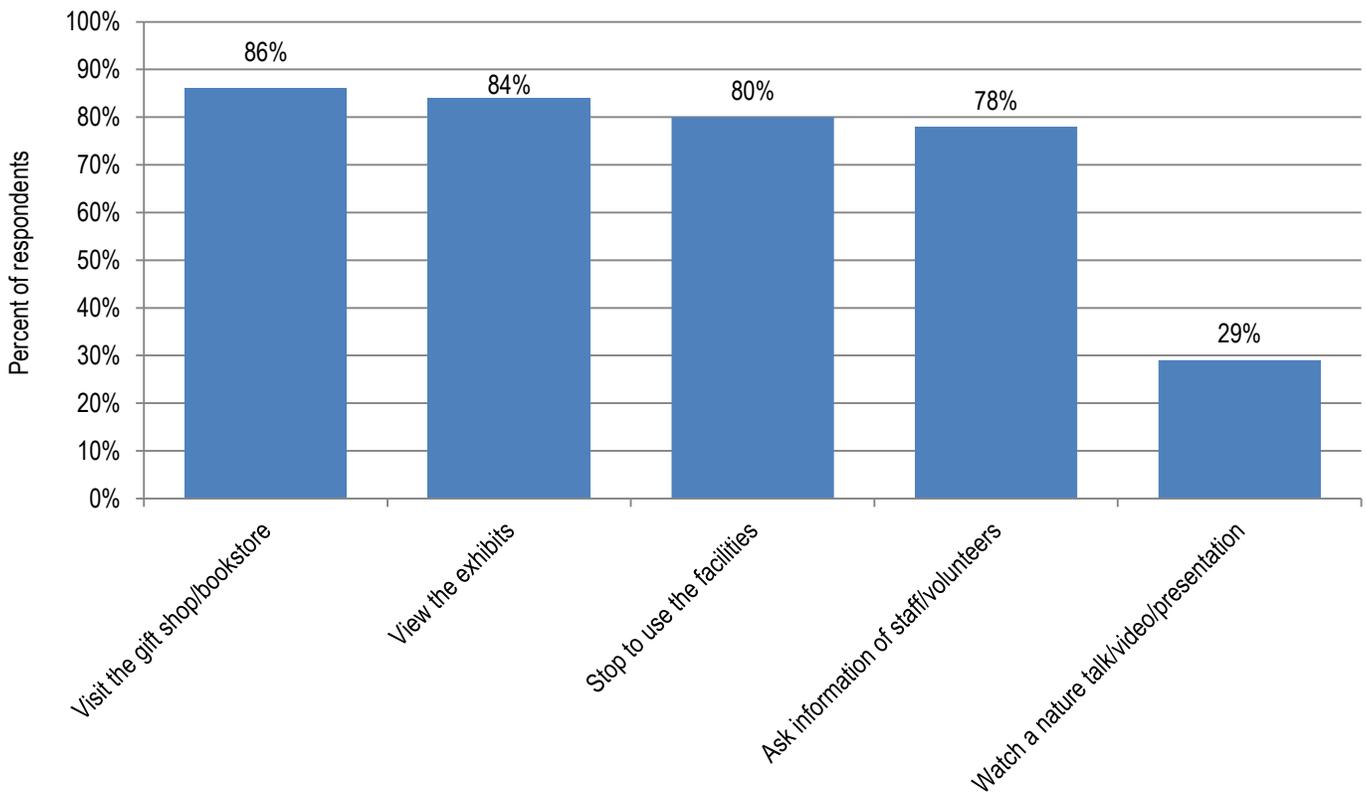
**Figure 6.** Activities in which visitors participated during the past 12 months at Bosque del Apache NWR (n = 225). See Appendix B for a listing of “other” activities.

### Visitor Characteristics

Nearly all (98%) surveyed visitors to Bosque del Apache 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 48% male with an average age of 60 years and 52% female with an average age of 57 years. Visitors, on average, reported they had 17 years of formal education (graduate or professional 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 Bosque del Apache NWR (n = 216). See Appendix B for a listing of “other” activities.



**Figure 8.** Use of the visitor center at Bosque del Apache NWR (for those visitors who indicated they used the visitor center, n = 222).

## 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, 7% of surveyed visitors to Bosque del Apache NWR indicated that they live within the local area. During the two sampling periods, nonlocal visitors (93%) stayed in the local area, on average, for 2 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. ***It is important to note that summary statistics based on a small sample size (n < 30) may not provide a reliable representation of that population.*** Nonlocal visitors spent an average of \$82 per person per day and local visitors spent an average of \$45 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 the local communities and at Bosque del Apache NWR expressed in dollars per person per day.

Visitors	n <sup>1</sup>	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	196	\$56	\$82	\$84	\$0	\$483
Local	11	\$40	\$45	\$33	\$3	\$105

<sup>1</sup>n = number of visitors who answered both locality *and* expenditure questions.

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

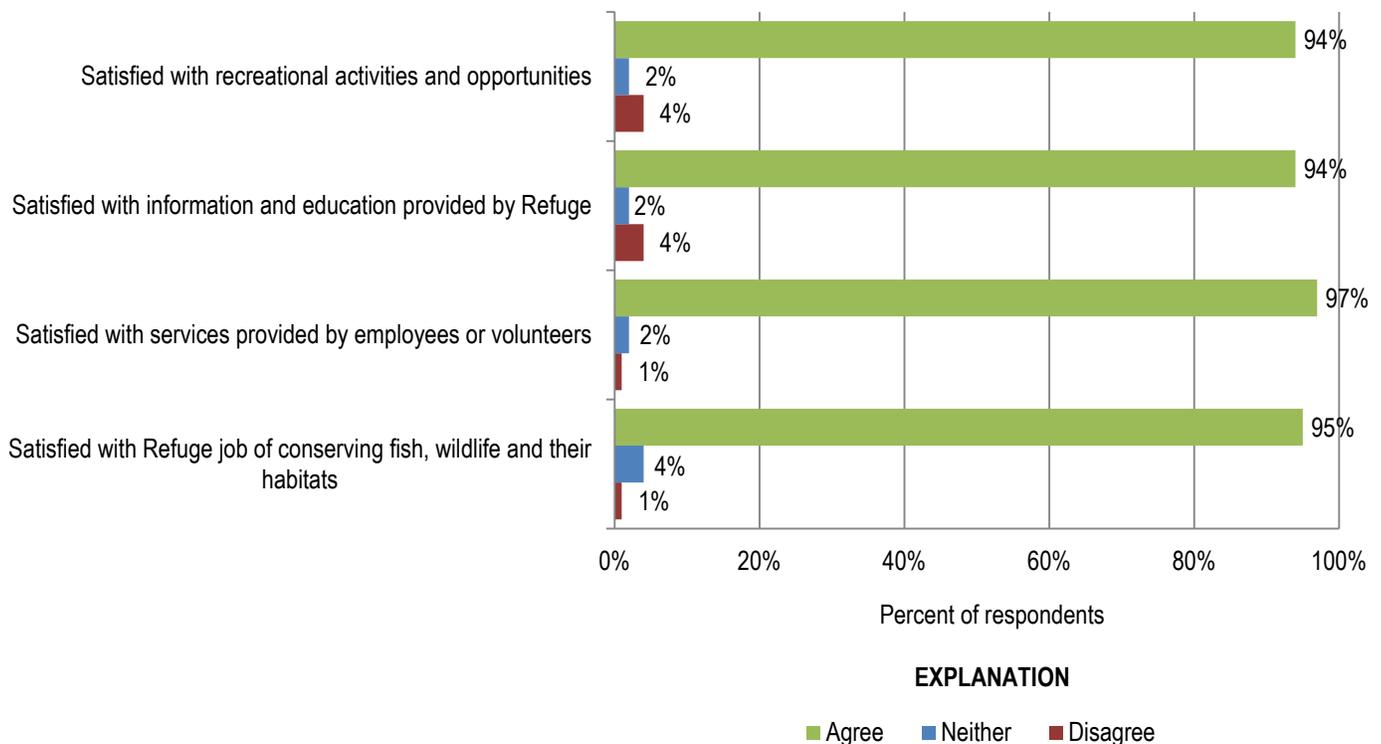
## Visitor Opinions about This Refuge

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

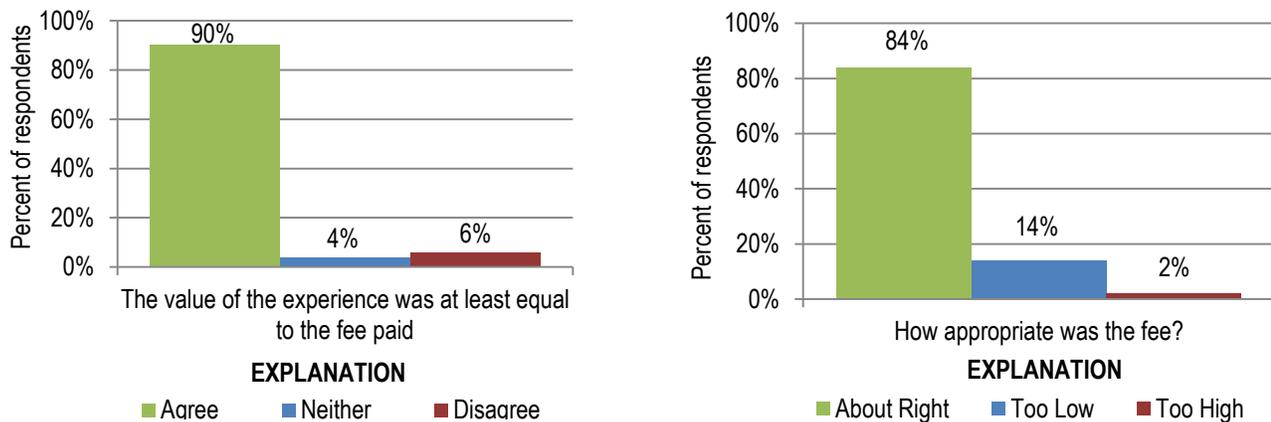
Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at Bosque del Apache NWR were as follows (fig. 9):

- 94% were satisfied with the recreational activities and opportunities,
- 94% were satisfied with the information and education about the refuge and its resources,
- 97% were satisfied with the services provided by employees or volunteers, and
- 95% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Of the 69% of visitors who indicated that they paid a fee to enter the refuge, 90% agreed that the opportunities and services were at least equal to the fee they paid; 84% felt the fee was about right, whereas 16% felt that the fee was too low or too high (fig. 10).



**Figure 9.** Overall satisfaction with Bosque del Apache NWR during this visit (n ≥ 224).



**Figure 10.** Opinions about fees at Bosque del Apache NWR (for those visitors who indicated they paid a fee, n = 157).

### Importance/Satisfaction Ratings

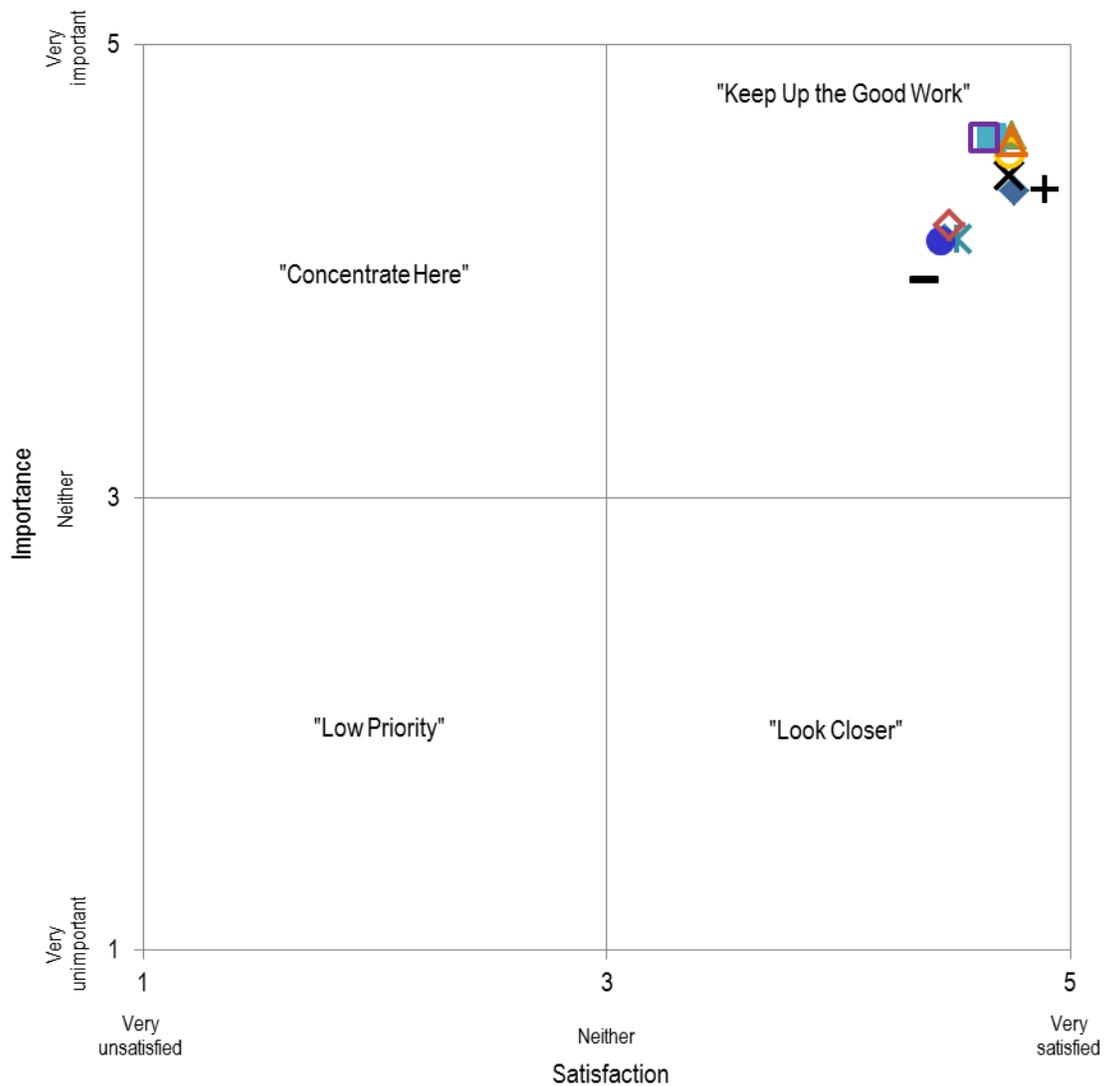
*Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in 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 Bosque del Apache NWR. This consideration is especially important when reviewing the attributes that fall into the "Look Closer" quadrant. In some cases, these attributes may represent specialized recreational activities in which a small subset of visitors participate (for example, hunting, kayaking) or facilities and services that only some visitors experience (for example, exhibits about the refuge). For these visitors, the average importance of (and potentially the satisfaction with) the attribute may be much higher than it would be for the overall population of visitors.*

Figures 11-13 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Bosque del Apache NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 11).

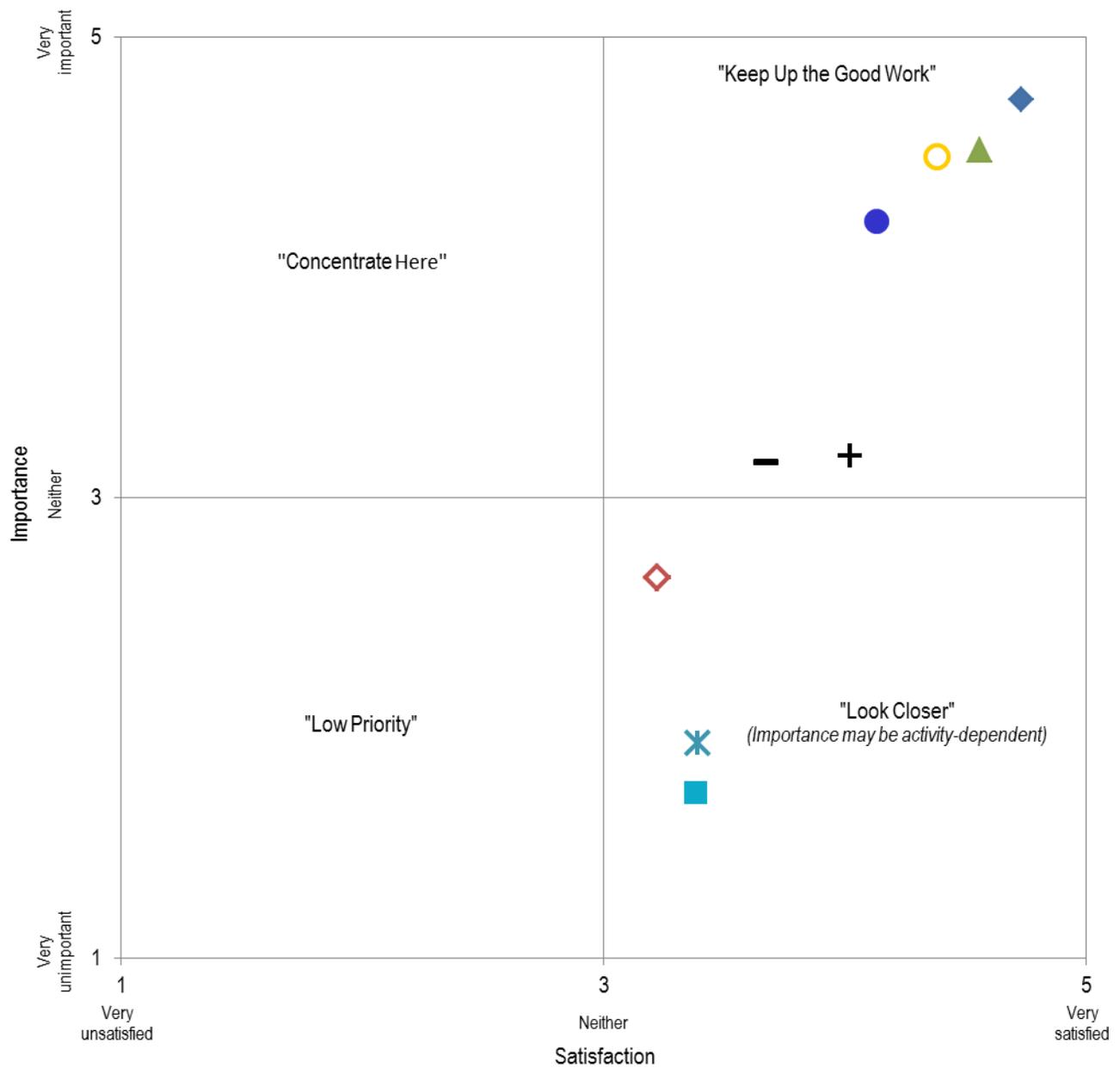
Nearly all refuge recreational opportunities fell in the “Keep Up the Good Work” quadrant except kayak/canoe opportunities, fishing opportunities, and hunting opportunities, which fell into the “Look Closer” quadrant (fig. 12). The average importance of activities in the “Look Closer” quadrant may be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



**EXPLANATION**

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

**Figure 11.** Importance-satisfaction ratings of services and facilities provided at Bosque del Apache NWR.



**EXPLANATION**

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

**Figure 12.** Importance-satisfaction ratings of recreational opportunities provided at Bosque del Apache NWR.



**EXPLANATION**

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

**Figure 13.** Importance-satisfaction ratings of transportation-related features at Bosque del Apache 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 Bosque del Apache NWR are reported here.*

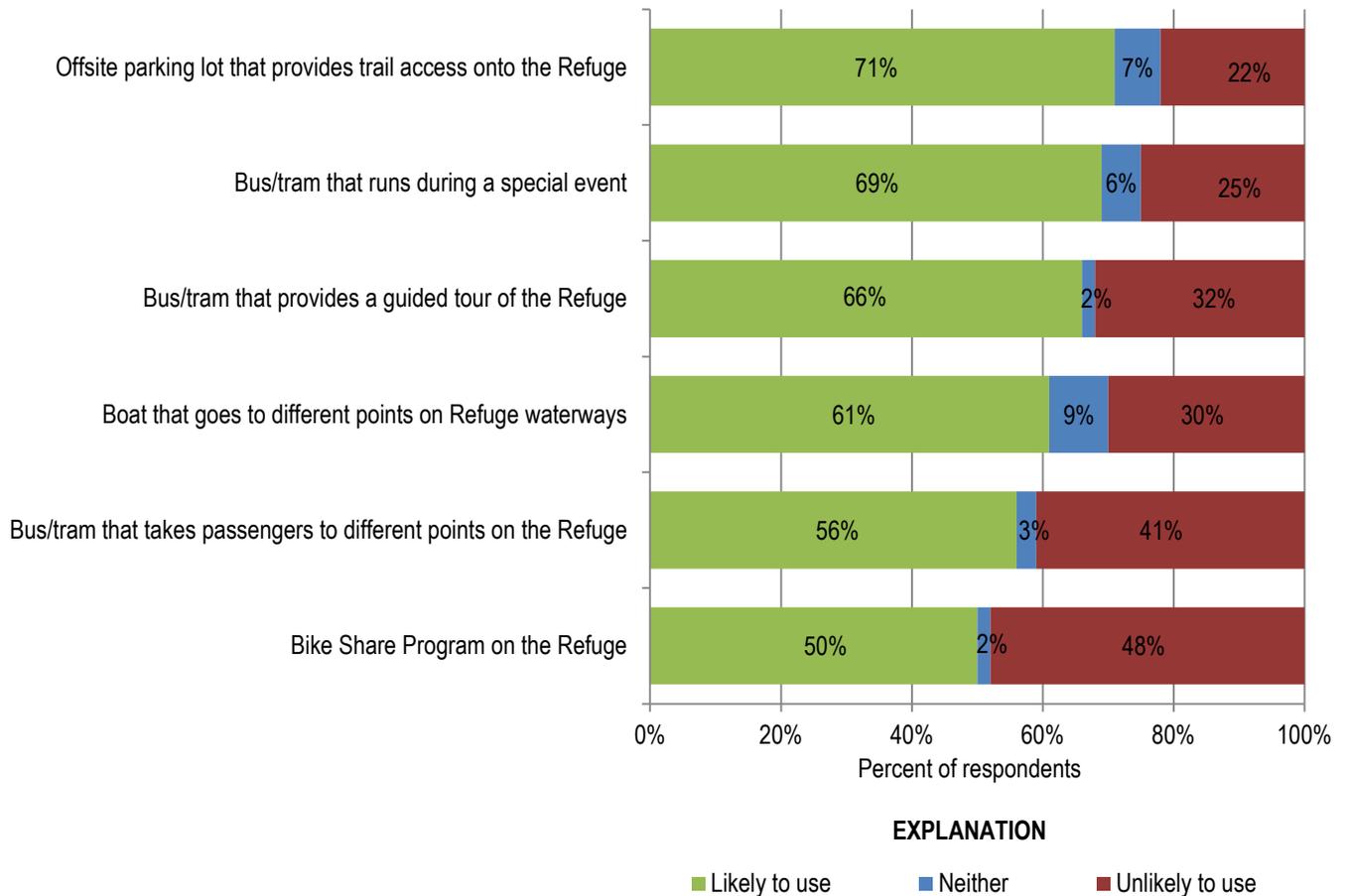
### Alternative Transportation and the National Wildlife Refuge System

*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 Bosque del Apache NWR visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 14):

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

When asked about using alternative transportation at Bosque del Apache NWR specifically, 50% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (27%) and others thought it would not (23%).



**Figure 14.** Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 218).

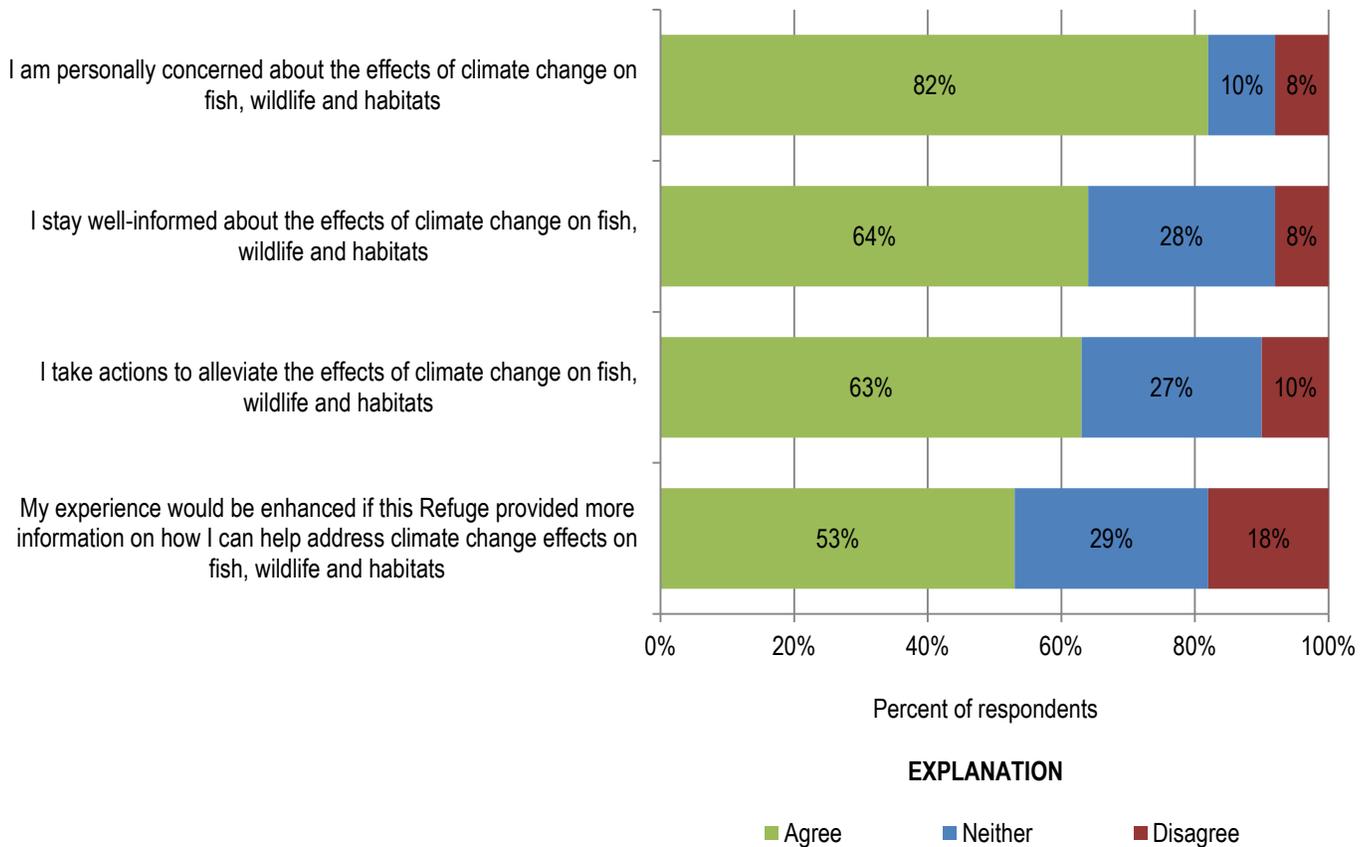
### Climate Change and the National Wildlife Refuge System

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

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

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

- “I am personally concerned about the effects of climate change on fish, wildlife and habitats;”
- “I stay well-informed about the effects of climate change;”
- “I take actions to alleviate the effects of climate change;” and
- “My experience would be enhanced if the Refuge provides information about how I can help address climate change effects.”



**Figure 15.** Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 219).

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).

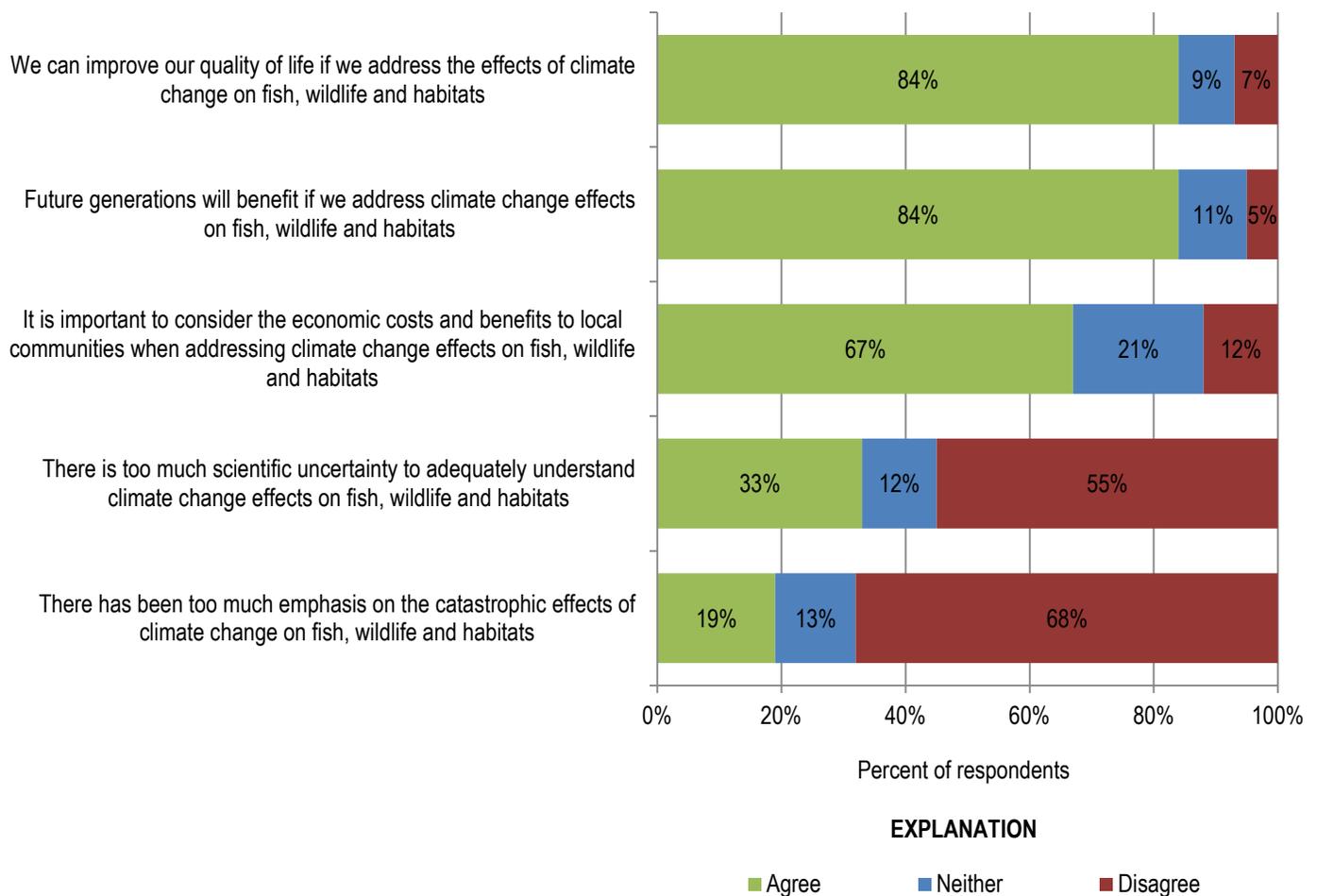
For Bosque del Apache NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 16):

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

The majority of visitors did *not* believe:

- “There has been too much emphasis on the catastrophic effects of climate change;” 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 the majority of visitors (53%) indicated that their experience would be enhanced if Bosque del Apache NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 15), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.



**Figure 16.** Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 218).

## Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Bosque del Apache 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](mailto:national_visitor_survey@usgs.gov) or 970.226.9205.

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# National Wildlife Refuge Visitor Survey



**PLEASE READ THIS FIRST:**

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

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

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

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

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> 0% Big game hunting                 | <input type="checkbox"/> 36% Hiking   | <input type="checkbox"/> 21% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 0% Upland/Small-game hunting        | <input type="checkbox"/> 4% Bicycling   |   |
| <input type="checkbox"/> 4% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 69% Auto tour route/Driving                                | <input type="checkbox"/> 45% Special event ( <i>please specify</i> )<br><u>See Appendix B</u> |
| <input type="checkbox"/> 76% Wildlife observation            | <input type="checkbox"/> 0% Motorized boating                                       |   |
| <input type="checkbox"/> 87% Bird watching                   | <input type="checkbox"/> 0% Nonmotorized boating (including canoes/kayaks)          | <input type="checkbox"/> 7% Other ( <i>please specify</i> )<br><u>See Appendix B</u>          |
| <input type="checkbox"/> 3% Freshwater fishing               |   |   |
| <input type="checkbox"/> 0% Saltwater fishing                | <input type="checkbox"/> 41% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 0% Other ( <i>please specify</i> )<br><u>See Appendix B</u>          |
| <input type="checkbox"/> 67% 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?

- 3% No
- 97% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- |  |   |
|--|---|
| <input type="checkbox"/> 86% Visit the gift shop or bookstore    | <input type="checkbox"/> 29% Watch a nature talk/video/presentation                               |
| <input type="checkbox"/> 84% View the exhibits                   | <input type="checkbox"/> 80% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 78% Ask information of staff/volunteers | <input type="checkbox"/> 19% 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	
73%	93%	74%	It was the primary purpose or sole destination of my trip.
19%	0%	18%	It was one of many equally important reasons or destinations for my trip.
8%	7%	8%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many **miles** did you travel to get to this Refuge?

**Nonlocal** 294 number of miles

**Local** 40 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?

39% No (*skip to question #9*)

61% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

86% Family and/or friends

8% Organized club or school group

0% Commercial tour group

6% Other (*please specify*) See Appendix B

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

3 number 18 years and over

0 number 17 years and under

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

46% Friends or relatives

16% Refuge website

14% Signs on highway

6% Other website (*please specify*) See Appendix B

7% Recreation club or organization

6% Television or radio

19% People in the local community

26% Newspaper or magazine

21% 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.***)

29% Spring  
(March-May)

35% Summer  
(June-August)

81% Fall  
(September-November)

33% Winter  
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 3 number of visits

...other National Wildlife Refuges in the last 12 months? 3 number of visits

**SECTION 2. Transportation and access at this Refuge**

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

- |                              |   |                              |                                  |                              |                                       |
|------------------------------|---|------------------------------|----------------------------------|------------------------------|---------------------------------------|
| <input type="checkbox"/> 93% | Private vehicle without a trailer                             | <input type="checkbox"/> 12% | Refuge shuttle bus or tram       | <input type="checkbox"/> 3%  | Bicycle                               |
| <input type="checkbox"/> 3%  | Private vehicle with a trailer<br>(for boat, camper or other) | <input type="checkbox"/> 0%  | Motorcycle                       | <input type="checkbox"/> 33% | Walk/Hike                             |
| <input type="checkbox"/> 1%  | Commercial tour bus   | <input type="checkbox"/> 0%  | ATV or off-road vehicle          | <input type="checkbox"/> 1%  | Other ( <i>please specify below</i> ) |
| <input type="checkbox"/> 5%  | Recreational vehicle (RV)                                     | <input type="checkbox"/> 0%  | 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"/> 46% | Signs on highways  | <input type="checkbox"/> 13% | Directions from Refuge website                        |
| <input type="checkbox"/> 16% | A GPS navigation system  | <input type="checkbox"/> 3%  | Directions from people in community near this Refuge  |
| <input type="checkbox"/> 28% | A road atlas or highway map                                      | <input type="checkbox"/> 9%  | Directions from friends or family                     |
| <input type="checkbox"/> 22% | Maps from the Internet (for example,<br>MapQuest or Google Maps) | <input type="checkbox"/> 55% | Previous knowledge/I have been to this Refuge before  |
|                              |  | <input type="checkbox"/> 2%  | Other ( <i>please specify</i> ) <u>See Appendix B</u> |

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

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 27%	<input type="checkbox"/> 13%	<input type="checkbox"/> 3%	<input type="checkbox"/> 35%	<input type="checkbox"/> 22%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 32%	<input type="checkbox"/> 15%	<input type="checkbox"/> 2%	<input type="checkbox"/> 27%	<input type="checkbox"/> 23%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 18%	<input type="checkbox"/> 13%	<input type="checkbox"/> 2%	<input type="checkbox"/> 36%	<input type="checkbox"/> 30%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 18%	<input type="checkbox"/> 11%	<input type="checkbox"/> 9%	<input type="checkbox"/> 33%	<input type="checkbox"/> 28%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 14%	<input type="checkbox"/> 11%	<input type="checkbox"/> 6%	<input type="checkbox"/> 35%	<input type="checkbox"/> 33%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 15%	<input type="checkbox"/> 8%	<input type="checkbox"/> 7%	<input type="checkbox"/> 33%	<input type="checkbox"/> 38%
...some other alternative transportation option? ( <i>please specify</i> ) <u>See Appendix B</u>	<input type="checkbox"/> 10%	<input type="checkbox"/> 5%	<input type="checkbox"/> 0%	<input type="checkbox"/> 45%	<input type="checkbox"/> 40%

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

- 27% Yes       23% No       50% 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
7%	13%	8%	51%	21%	Surface conditions of roads	4%	1%	2%	17%	76%	NA
8%	16%	14%	45%	17%	Surface conditions of parking areas	3%	2%	5%	19%	70%	NA
6%	5%	16%	38%	36%	Condition of bridges	1%	1%	10%	14%	74%	NA
3%	5%	3%	45%	45%	Condition of trails and boardwalks	3%	3%	2%	22%	71%	NA
2%	8%	6%	51%	33%	Number of places for parking	2%	5%	5%	25%	63%	NA
2%	4%	3%	37%	54%	Number of places to pull over along Refuge roads	1%	5%	4%	27%	64%	NA
2%	4%	5%	38%	52%	Safety of driving conditions on Refuge roads	1%	2%	2%	16%	79%	NA
2%	4%	6%	37%	50%	Safety of Refuge road entrances/exits	1%	1%	2%	18%	77%	NA
2%	7%	7%	42%	42%	Signs on highways directing you to the Refuge	0%	3%	6%	25%	65%	NA
2%	4%	5%	44%	45%	Signs directing you around the Refuge roads	1%	6%	8%	29%	56%	NA
2%	3%	10%	38%	47%	Signs directing you on trails	1%	6%	14%	30%	49%	NA
6%	11%	23%	27%	32%	Access for people with physical disabilities or who have difficulty walking	1%	5%	29%	23%	42%	NA

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

See Appendix B

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

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

7% Yes

93% No → How much time did you spend **in local communities** on this trip?  
                     3   number of hours      OR        4   number of days

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

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

See Report for Results

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

  2   number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
2%	9%	17%	9%	14%	4%	20%	2%	7%	7%	9%

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.***)

2%	Far too low	12%	Too low	84%	About right	1%	Too high	1%	Far too high	31%	Did not pay a fee
<i>(skip to Section 4)</i>											

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

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

3%	Strongly disagree	3%	Disagree	4%	Neither agree or disagree	24%	Agree	66%	Strongly agree
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#### SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	1%	3%	2%	22%	71%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	2%	2%	2%	28%	66%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	0%	1%	2%	20%	77%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	0%	4%	21%	75%	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
0%	5%	4%	43%	49%	Availability of employees or volunteers	1%	0%	2%	15%	82%	NA
1%	5%	4%	39%	52%	Courteous and welcoming employees or volunteers	0%	0%	1%	6%	92%	NA
0%	2%	2%	29%	67%	Knowledgeable employees or volunteers	1%	2%	1%	13%	82%	NA
0%	2%	5%	39%	53%	Printed information about this Refuge and its resources (for example, maps and brochures)	0%	0%	2%	20%	78%	NA
1%	4%	8%	54%	33%	Informational kiosks/displays about this Refuge and its resources	0%	2%	9%	25%	64%	NA
1%	5%	12%	45%	37%	Signs with rules/regulations for this Refuge	0%	2%	10%	31%	58%	NA
0%	4%	10%	47%	38%	Exhibits about this Refuge and its resources	1%	3%	8%	24%	64%	NA
2%	7%	17%	40%	34%	Environmental education programs or activities	2%	3%	14%	20%	62%	NA
0%	1%	4%	34%	60%	Visitor Center	2%	0%	1%	14%	82%	NA
0%	0%	4%	32%	64%	Convenient hours and days of operation	0%	2%	4%	17%	76%	NA
0%	1%	4%	29%	65%	Well-maintained restrooms	0%	1%	3%	15%	81%	NA
0%	0%	4%	31%	65%	Wildlife observation structures (decks, blinds)	1%	1%	4%	20%	74%	NA
1%	2%	1%	16%	81%	Bird-watching opportunities	0%	2%	2%	15%	80%	NA
0%	1%	5%	37%	57%	Opportunities to observe wildlife other than birds	0%	4%	9%	30%	56%	NA
0%	4%	6%	24%	66%	Opportunities to photograph wildlife and scenery	0%	1%	7%	24%	67%	NA
70%	4%	16%	6%	5%	Hunting opportunities	3%	4%	68%	5%	21%	NA
59%	7%	19%	10%	4%	Fishing opportunities	4%	1%	65%	11%	19%	NA
3%	2%	10%	42%	42%	Trail hiking opportunities	1%	8%	15%	31%	45%	NA
33%	9%	28%	20%	10%	Water trail opportunities for canoeing or kayaking	5%	5%	67%	9%	14%	NA
20%	9%	23%	35%	14%	Bicycling opportunities	0%	3%	48%	27%	22%	NA
21%	5%	30%	23%	21%	Volunteer opportunities	0%	0%	40%	18%	42%	NA

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

See Appendix B

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

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

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

88% Yes

12% No

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

92% Yes

8% No

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

94% Yes

6% No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	4%	4%	10%	30%	52%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	3%	4%	9%	33%	50%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	24%	31%	12%	20%	12%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	1%	8%	28%	44%	20%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	2%	10%	21%	53%	15%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	4%	6%	27%	42%	20%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	36%	31%	13%	10%	9%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	2%	3%	11%	28%	56%
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.	5%	13%	30%	37%	16%

## SECTION 6. A Little about You

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

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

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

2. Are you?  48% Male  52% Female

3. In what year were you born? 1953 (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%					4%				38%				57%						

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

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

- 2% American Indian or Alaska Native   
  1% Black or African American   
  94% White  
 3% Asian   
  0% Native Hawaiian or Pacific Islander

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

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

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> 1% Less than \$10,000  | <input type="checkbox"/> 10% \$35,000 - \$49,999 | <input type="checkbox"/> 22% \$100,000 - \$149,999 |
| <input type="checkbox"/> 4% \$10,000 - \$24,999 | <input type="checkbox"/> 27% \$50,000 - \$74,999 | <input type="checkbox"/> 6% \$150,000 - \$199,999  |
| <input type="checkbox"/> 8% \$25,000 - \$34,999 | <input type="checkbox"/> 13% \$75,000 - \$99,999 | <input type="checkbox"/> 8% \$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.)?

  15   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 Bosque del Apache 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
2010 Crane Festival	1
23rd Annual Festival of the Cranes	1
Also went to the Visitor center/movie and gift shop	1
Art Show, Live Birds of Prey Exhibits	1
Bosque de la Apache festival	1
Bosque del Apache Festival of the Cranes	2
Bosque del Apache summer seminar	1
Bosque del Apache Wildlife Refuge	1
Contest of duck stamp with my students	1
Crane attraction Fair	1
Crane Festival	12
Crane watching	1
Festival of the Cranes	63
Festival of the Cranes at Bosque del Apache NWR	1
Friends of the Bosque Photography Class	1
Grand Canyon tour	1
Hiking group	1
Led tour, manned observation deck, gave talks at Festival of the Cranes	1
Sandhill Crane Festival	4
The Crane Festival at Bosque del Apache	3
The November bird migration observance	1
Total	100

Other Activity	Frequency
Attendance at Audubon New Mexico Council meetings	1
Concurso de dibujo de los patos (Duck stamp drawing competition)	1
Construction for the Refuge	1
Drove route Dec. 2009	1
Friends of the Bosque meetings	1
Gift shop	1
I teach natural history workshops @ the refuge	1
International Migratory Bird Day	1
Meetings by outside groups held at Bosque HQ	1
Pick up injured animal for transport to the Wildlife Center.	1
Shopping	1
Shopping at gift shop	1
Spent time at the desert plant exhibition area	1
University of New Mexico research	1
Volunteered with Friends Group	1
Total	15

2 <sup>nd</sup> Other Activity	Frequency
Purchases at Nature Store	1

Question 2: "Which of the activities above was the primary purpose of your visit to this Refuge?"  
*Primary activities are categorized in the main report; the table below lists the "other" miscellaneous primary activities listed by survey respondents.*

Other Miscellaneous Primary Activities	Frequency
Construction	1
Enjoyable outing with my sisters	1
Pick up injured animal for transport to the Wildlife Center.	1
Show our kids nature	1
Volunteer for friends	1
Volunteered with Friends Group	1
Volunteering from Oct 1 2009- Mar 1 2010	1
Total	7

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

Other Visitor Center Activity	Frequency
Ate lunch from vendor.	1
Attend sunset tour.	1
Attended Festival of the Cranes.	1
Attended workshops at Festival of Cranes	1
Biking in courtyard	1
Bird watch; lunch at pavilion	1
Bought Xmas presents.	1
Check list of recent wildlife sightings	1
Discussed possible entries in next year's Nature Art Show.	1
Festival	1
Festival of the Cranes, Photography Class	1
Gave a Lecture, led a tour.	1
Get info on annual goose hunt drawing.	1
Got a permit	1

I have engaged the biologist and staff in conversations about 1) Changes in physical management of the refuge, especially crop failures 2) Unusual sightings I or they have made.	1
I see what new changes have occurred and to visit with staff.	1
Led tour, worked deck.	1
Look through observation window.	1
Looked at each exhibit's booth	1
Meeting	1
Met and coordinated with other volunteers.	1
Observation window and sightings list.	1
Pick up injured animal for transport to the Wildlife Center.	1
Purchased the self guided tour CD.	1
Search for unique gift items which support the refuge.	1
Sign up for guided tours.	1
Take change on the spotting scope and renew membership	1
Talked to USGS about this survey	1
Talked to vendors	1
Taught classes at the Visitors Center.	1
Took a nature drawing class.	1
Took classes on photography.	1
Tried binoculars at various vendors	1
View art exhibit	1
Visited arboretum	1
Visited Crane Festival booths/exhibits.	1
Walked outdoor garden	1
Was stopped at the door; I was carrying my dog, was not able to get any information on my first visit to refuge.	1
Watch hummingbird feed	1
Watched hummingbirds at feeder.	1
Wildlife viewing windows research program being described	1
Total	41

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
Bird watchers	1
Crane behavior class	1
Crane Festival	1
Festival of the Cranes	3
I traveled alone, but I was part of a team of volunteers.	1
Photography Class	1
Sandhill Crane Festival	1
Total	9

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

Other Website	Frequency
Audubon Society	1
Facebook	1
Festival of the Cranes	1
Friends of Bosque	1
Friends of Bosque Apache	1
Friends of Bosque-sandhill cranes festival	1
Google	1
<a href="http://www.friendsofthebosque.org/">http://www.friendsofthebosque.org/</a>	1
Naturephotographers.net	1
Naturescapes.net	1
New Mexico Audubon	1
Outdoor Photography	1
Travel Advisor	1
Total	13

Other Ways Heard about This Refuge	Frequency
A visitor to the refuge (Patuxent) where I volunteer	1
Belong to Friends of the Bosque	1
Birding book	1
Birding guides, magazines	1
Birding literature	1
Birding magazines	1
Book describing birding locations in New Mexico	1
Charles Kuralt - his favorite place	1
Festival of Cranes	1
Hired as a volunteer in 2007	1
Hunting	1
I learned about this Refuge when I was told it would be my next job.	1
I read about in RV and birding articles.	1
Jones- Where the Birds Are	1
Linda Brown, Fite Ranch	1
Reference Book- Where the Birds Are	1
Retired FWS	1
Roads of New Mexico atlas	1
Staff at New Mexico Tech	1
Tourist guides of New Mexico, and also at Crane Festival in Colorado	1
University of New Mexico research	1
UNM tour in 2007 or 2008	1
While in CA saw refuge on NM map prior to moving here.	1
Worked for FWS for 22 yrs	1
Your volunteer, Erv Nichols and Sandra Noll	1
Total	25

## Survey Section 2

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

Other Forms of Transportation	Frequency
Flew from Seattle, Washington	1
Flew into Albuquerque and rented a car	1
My Mother uses a wheelchair	1
Total	3

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

Other Ways Found This Refuge	Frequency
Cub Scout Leader	1
Hiking tour guide	1
Information from Festival of the Cranes.	1
Map from volunteers	1
Newspaper Article	1
Total	5

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

Other Transportation Option Likely to Use	Frequency
A silent rail option that takes us in and out without disturbing.	1
Bike	1
Car tours	1
Carpooling with other visitors.	1
Electric Car to keep the noise down.	1
Electric motorized bicycles	1
Hiking	1
Horseback	1
Horseback or mule	1

I would like a bus that was accessible for people that can't navigate high steps.	1
My own mountain bicycle.	1
My own two feet.	1
Not sure, maybe a scooter??	1
Own Car	1
Own vehicle	2
RV	1
Tours in vans, about 6-8 people.	1
Tours to closed parts of the refuge.	1
Whatever possible	1
Total	20

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 = 35)

"Windows" through trees to marsh provide vistas. At this refuge additional "windows" would be useful along sections of the roads.

All the rangers, workers, and staff seem to love and devote themselves to this place!

During my visit to Bosque Del Apache people who were visiting weren't being rude but they were driving too fast.

During the Crane Festival there were too many cars and not enough parking or passing space. I know this is not indicative of normal day-to-day traffic.

Having a shuttle bus from the Birdwatcher's RV park just outside of the refuge would be a big help and save a lot of parking problems at the visitors center.

High traffic causes high dust - means closed windows and decreased viewing- a dust mat finish for driving route is needed, not just during Festival of the Cranes. Also, cut viewing windows in vegetation.

I am not disabled, but I work with people who are disabled. I believe access could be improved on the trails - though it is generally not bad.

I do think it's fine for people with different abilities to be able to participate fully in the refuge. I didn't notice what accommodations are available.

I particularly like the idea of bikes to borrow.

I traveled with a family member in a wheelchair.

I would love to see bicycles/ tricycle lanes available but would not like to see paved roads owing to run-off issues. I hope refuge resists pressure to pave roads, paving = oil run off into water.

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I would make this refuge more commercially convenient, for example tour bus and restaurant without sacrificing the environment for wild life including birds.

I would not like it if the \*only\* transportation around the refuge was by bus. I might be okay, except during winter, if the \*only\* transportation around the refuge was by bike, as long as baskets were available for carrying birding equipment.

I'm hopeful that some of this info in being gathered for academic purposes. I don't think that this survey or others like it should be used as a reason to pave roads, etc.. Any development should be analyzed and dictated by the needs of wildlife, which in my mind is paramount at a refuge like this. My visit was absolutely fantastic. Don't change a thing!

Map directions are vague about distances on loops. Parking along roadways during high visit volume can be limited.

Much improvement has been made recently on roads, parking, meeting places, and physical disability access.

Not enough roadway in some places for buses to pull over. Sometimes when they slow down to view, there's no room to go around.

People at entrance were extremely friendly and helpful.

Photographers need to be able to access viewing areas. They also need "windows" to see and photograph wildlife without disturbing the wildlife.

Regarding trails, on this visit most walking trails were temporarily closed due to the proximity of a mountain lion so our opportunities were severely curtailed on this trip.

Some of the trails were not identified from the road and even if the "gatekeepers" said they were open some were still marked 'no admittance.' It was very confusing.

The construction being done limited handicap accessibility, wheelchair on gravel.

The loop road is dirt and sometimes during busy times in the winter dust is kicked up but a water truck waters down the road. Thank you for that!

The map we received of the refuge vs. what we drove on was a bit confusing. The beauty of the place was awesome!

The parking area and roads were being renovated while I was there so nothing was applicable. I also did not drive through the refuge.

The roads got confusing at one point,.. maybe there should be more signs put up along the road...

The roads we were allowed on were very well maintained.

They sprayed the roads (water) several times a day. That kept down the dust. We say that because they were not paved and we had mud caked like cement in wheel wells, etc.. Paved roads would be nice and convenient. But access to birds/animals lovely. Visitor Center far outweighs paving.

This place is in a surprisingly perfect condition, as far as I could see.

We had a problem decided if we were on one-way street or if we were going the right direction.

We had no cash and your drive through entry point did not take credit cards or check cards. Since this is the primary function I find it odd that you have apparatus to take credit cards in the gift shop but not for the entry to what we came to see.

We rode our bicycles around the refuge. This was a quiet way to view birds and wildlife. We could stop, view and listen to nature. Many aren't physically fit enough to ride the roads and trail, but would

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enjoy this opportunity. Bicycles with electric motors would provide this quiet way to experience nature. They are becoming common and affordable.

We've been very pleased with all of our visits to the Bosque--we always drive a rental car.

When we were at the refuge, the wind was strong and water was being sprayed on the roads to keep sand from blowing. However, too much water was put on the roads and they became muddy. The mud stuck to the cars and became very hard (like concrete) and difficult to remove. We did not get it off of our car until we arrived at home - 550 miles later.

Wonderful place! Thanks for doing a great job!

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## Survey Section 4

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

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### Comments on Services, Facilities, and Activities at This Refuge (n = 63)

A suggestion box should be available - what is suggested should be forwarded to the National Office. I propose an electronic station for this. This facility has high visiting educational/research groups. Services are geared to them which is fine, but biologists/managers should interact with public too.

A+! Bravo! Everyone puts their whole heart into this each year, and we go every year!

Again, because you did not accept cash cards or credit cards we were unable to enter the refuge... the sole purpose of our trip.

All has improved or continued on a higher level.

Completely satisfied with our visit to Bosque Del Apache. Thank you.

Does not seem very well maintained. Don't seem to understand real stewardship.

Dogs not allowed on hiking trails - very disappointed. Asked for bird list at visitor center, but they didn't have one.

Enjoyed hummingbird training and show of how birds are banded and weighed.

Everyone was thoughtful, friendly, and helpful.

Excellent, knowledgeable staff and the guy who started the cactus garden-awesome volunteers!

Great staff and volunteers!

I am a member of the Friends volunteer group of the refuge and am very pleased with the programs provided at the refuge and for educational purposes in the nearby schools.

I am opposed hunting on this refuge. This is a unique world class birding site. It should be a refuge in the true sense of the word. In the recent publication from the refuge there was a long article detailing plans to gear up hunting on the refuge. I am completely opposed to this plan and if it is implemented I will likely stop visiting the refuge so frequently.

I appreciate information regarding the sighting of wildlife.

I don't think this refuge was adequately prepared for the number of people who showed up for the Crane

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Festival; roads were crowded, viewing areas were crowded, and all of the educational programs or lectures were full and had no room for us -- I was disappointed in that. Otherwise, it was very enjoyable!

I found it frustrating with the tour bus folks taking too long on the docks and not allowing time for other folks to look out.

I had an excellent experience at the refuge. The employees and volunteers were very knowledgeable and helpful.

I have been volunteering for NPS, BLM and State agencies since 1995. My two winter seasons here have been the very top of my experiences.

I just wish the visitor center was open a little later. When we came for the fly-outs we get there too late.

I love the refuge. My father started taking me there many years ago. We would go at least twice a year, sometimes more. He passed away and I miss our trips. Now I am taking my grandkids. It's 5 to me to get them interested in all aspects of outdoors.

I really enjoyed the day there and I recommended it to family and friends. I hope to return again soon.

I was disappointed by the closure of so many trails due to the presence of mountain lions - although I don't advocate harming the wildlife in any way. It's just unfortunate, I guess.

I was surprised that exhibits for the festival were not operating on Friday upon our arrival. If we had known we would have planned our time differently. We did make the assumption they were open Friday, Saturday and Sunday. Otherwise, wonderful two days on the refuge....

I was unhappy when the refuge limited an opportunity to see a rare bird (sungrebe) for no apparent reason.

I was very frustrated during my first visit to the refuge; I brought my dog along, we drove 80 miles, she does not do well in the car, so I took her with me to the information center. I carried her into the visitor center to get information and was immediately stopped and told I couldn't bring her in with me (the person never asked if she could help me); needless to say I was not happy because I drove all this way and didn't know where trails were nor what to do while I was at the refuge. I think you really need to have people outside (there were many other people there with dogs) to help visitors and provide information. I, by accident, saw the sign for the loop tour; the couple manning the gate were excellent, they gave me information on the tour, etc. Other than that I was not helped at all. Again, you really need to consider placing an outdoor information booth to help your visitors. Parking was also at a premium; I wasn't sure what the "private" parking area was.

I would definitely like to see more timely information about why the refuge is managed the way it is - right now. The refuge I visited is the most intensively managed refuge of any that I'm aware of in the entire country. There is almost always dirt work of some nature happening but very often, as a visitor, one has absolutely no idea why it is being done. Furthermore much of the dirt work would seem to be antithetical to the mission of the refuge (i.e. they seem to be tearing up habitat) but no explanation is given. After visiting over the years, I've come to see that most of the work is very appropriate but \*at the time\* it seems at odds with what a refuge should be doing. I would like to see more temporary signage about what this refuge is doing and why.

I would like to have occasional opportunities to walk and photograph the trails that are generally closed to the public.

I've attended the "Festival of the Cranes" for many years and love it. The displays of professional photography this year (Nov.2010) was extraordinary, and contributed to the experience immensely. I have a lifetime pass for here and other parks, thank goodness, because I'm on a limited retirement income. THANK YOU ALL!!

Just to clarify - I have a USPS Access Pass which granted me access to the refuge, so while I paid for the pass, I didn't pay extra for entrance to this park.

Many trails were closed due to mountain lion activity, which I understand, but I was still somewhat

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disappointed as I was looking forward to a long hike. We did hike a short 2 mile hike around the marsh area, which was great, but more options would be nice.

Missed the hummingbirds - very few compared to past.

More "pull offs" needed around water areas.

Not all bicycles will work well on the smooth gravel roads of this refuge. Off-road mountain bikes might do well. The roads are nice and level and don't have any wash boarding.

Once we got into the movie I was just amazed about the entire refuge. I want to learn more about it, like a more in-depth history of how it came about. I can barely wait to go back again in late November to see it all in action, especially the cranes! The people working in the Visitor Center were so helpful. The people are really nice and very knowledgeable.

One area I'd like to see improved is the video viewing area at Bosque Del Apache. There are too many distractions where it is located out in the open. Could a better barrier be put up to enclose the area more?

Outstanding!

Seasonal attractions vary- we knew we would visit at an "off" season.

Signs with more info along driving routes would be helpful - info about wildlife in particular areas.

The bus providing transportation early in the morning during the crane festival was a great idea.

The crowd this time was many times the size of the one we attended closer to 10 years ago, and the refuge was perfectly geared up to accommodate them with no evident problem.

The Festival of Cranes at Bosque del Apache was incredible, amazing; a marvelous week!

The Fine Arts Exhibit at the Sandhill Crane Event at Bosque del Apache in November 2010 was beautiful although... very high priced except for notecards. Suggest range of low to mid to high so all can afford.

The Friends of the Bosque help to make this an extremely well run refuge.

The grounds around the visitor center are well kept and the cactus garden is terrific. Bird feeders, especially for the hummingbirds are wonderful.

The last couple of years it did not seem like management provided the cranes with enough food. Also a much better job needs to be done to cut open areas where viewing and photography can happen.

The Refuge has come a long way in 30 years.

The restrooms at the visitor center now close when the visitor center closes. I would appreciate having the restrooms open until at least 1 hour beyond sunset.

The staff was very helpful and courteous.

This is a very special place. On my first day I observed a bald eagle eating a duck on a snag. Moments later a northern harrier flew by. Then a merlin perched at the top of the same snag!

This is a wonderful spot for bird watching! Would like to have more short hikes - without disturbing the wildlife of course!

This survey is cumbersome- too long.

Trim along the roads, plants need to be cut lower.

Very nice- loved it- most impressive how you manage the refuge!

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Very well run- we all enjoyed it very much- would have been nice to have places to sit down by the exhibits (to eat and rest).

Very well run, well staffed, well kept. Lots going on at the annual crane Festival but everyone was noble and it went so smoothly. Extreme information workshops- staff and volunteers answered all our questions very informatively. Bathrooms were clean everywhere I went in. We have been there before when the S.H. cranes weren't there and found some attention to detail. Well run place- great credit to refuge system.

Was not there long enough to assess.

We all were registered for the Crane Festival and still had to pay an admission fee. Seems odd.

We are impressed with the site in general and the festival but we also come to watch birds other times in the year. It is quite unique- we always love it. I especially love the mountains- the color of sunrise as we wait for the fly out. The fall colors of the grasses makes wonderful photography opportunities.

We had very simple goals. To have a picnic and walk in nature with our young children. We were basically told not to get out of the car.... and despite numerous questions were unable to ascertain what might be the best interpretive options for us. Very unsatisfying trip. Everyone was grumpy and we ended up leaving shortly.

We have found some of the volunteers at Fall festival not always informed or directions to pick up info for registered programs not always obvious.

We like it without signs all over the place inside the refuge. We like it as natural as possible.

We loved the arboretum. It needs updating (signs).

When we came through in August some of the roadside flora was so high you could not see the water or birds, in other words, it needed to be mowed.

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## Survey Section 5

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

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### Comments on What Makes Refuges Unique? (n = 179)

A refuge is a 'lower key' national park to me...fewer visitors and more opportunities for me to engage in a supporting way with nature on a day trip.

A good place to relate to nature in a "protected" environment. Often opportunities to view nature are not available in other settings.

A good place to see multiple animals native to the area in a natural place.

A major problem with most refuges is the very large distances between observation points and wildlife.

A refuge is a small spot on this earth where birds and wildlife can exist with their well being as the main focus. We humans are expected to respect this place set aside for them resulting in a very harmonious experience for all when the respect is applied.

A very visible wildlife preservation program.

Ability to observe wildlife and nature without competition from jet skis, speedboats, dirt bikes, etc.

Accessibility, wildlife viewing opportunities, sense of conservation.

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Again, the natural, relatively un-groomed appearance.

All natural and educational.

Apache is an exceptional example for a refuge because of a large and very talented volunteer group. (PS I am not a regular volunteer but I help with the crane festival and I lead few trips on Audubon.)

As a refuge for wildfowl from surrounding hunting areas.

At a time when habitat for wildlife is decreasing, refuges become more and more important in the preservation of wildlife. Because increasing percentages of the states become city dwellers, refuges become more and more important as an educational resource for children and recreational resource to make people more aware of the outdoors and wildlife needs.

Attracting birds.

Beautiful foliage. The refuge is also laid out with view areas and fields in great locations to facilitate great photography. Unfortunately some of the paid personnel have made it very clear that they do not like photographers and have made the area less than desirable for photographers. This refuge draws many photo tours (or at least it used to until current management took over), however fewer are coming because of what has happened with current management.

Because of the efforts to preserve and restore.

Because of their mission, there is more abundance of birds and other wildlife which results in greater opportunity for experiencing the joy of seeing these creatures.

Because they are managed more for the wildlife and the environment than for the people- on the other hand- if wildlife is not more accessible visitors will not come and funding will diminish. A catch 22, eh?

Because they are managed with wildlife in mind first, the recreation opportunities are more limited in some ways (e.g. area closures) and more open in other ways (e.g. hunting).

Being out in nature in a supervised, cultivated, cared-for area with facilities for all to gather and enjoy the surroundings.

Best opportunities to view wildlife habitats and do so without off-road vehicle annoyance in wild areas. Good place to find environmental information in the form of printed or recorded media.

Bird watching and photography opportunities.

Bird watching enhanced by the feeding/resting nature of the refuge.

Bird watching is much greater and more accessible.

Birding opportunities; multiple species unique to wide US areas.

Birds.

Close proximity to wildlife and habitats, availability of knowledgeable professionals and amateurs in lecture, demonstration, and instruction.

Commitment to wildlife.

Concentration of wildlife, i.e., birds, in the area.

Conservation, preservation and management of the environment and wildlife.

Contribution to stewardship of refuges for birds and animals. If the US government doesn't perform this function, who will? Great use of tax payer dollars to perform a public function for public good! P.S. Good for

birds too!

Educational information, exhibits, etc. are excellent resources. The Festival of the Cranes at the Bosque del Apache offers very unique opportunities to understand and observe migration patterns, etc.

Emphasis on protecting wildlife.

Emphasis on wildlife rather than hiking, biking, etc.

Everything.

Fabulous bird watching opportunity, opportunity to see the Sandhill cranes, Festival of the Cranes was a great learning opportunity for our children.

Festival of cranes.

For a photographer, the morning and evening light at Bosque is amazing.

For me the attraction is to view and photograph wildlife in their natural habitat. The refuges do a great job of providing that habitat, protecting the species within it, and allowing access for people to observe and enjoy the wildlife.

For the most part no killing of the animals.

Forest service lands and BLM lands are governed by FLPMA of 1976- a multiple use mandate. National parks frequently have higher visitation. Refuges often have unique opportunities to view birds and other wildlife.

FWS is about protecting wildlife. Other public land agencies don't always do this.

Gathering space for the like minded and curious naturalist of all levels- it's a community of people with the same interests.

Generally they are some of the best wetland resources in the region. Others tend to house unique landscapes or conservation areas. In some states, where private land predominates refuges are some of the few areas that folks have for birding opportunities.

Good upkeep.

Great natural opportunity to observe animal behaviors in the wild- and an educational opportunity! When we travel we plan our route around these facilities to observe birds in different areas. We think junior biologist programs would increase educational goals. Use of "viewing ports" along car routes increase animal privacy - ought to be planned and maintained. Mixing cars and bikes is not wonderful for safety reasons.

Great opportunity to observe migratory birds.

Great outdoor experience without commercialization. Opportunities for wildlife watching and exploring.

Great place to photograph snow geese and sandhill cranes.

Great variety of experiences available. Thanks to exceptional activities and volunteer Friends group.

Habitat protection and resource management.

Has more information than most national parks.

Have not visited enough refuges to form an opinion.

Having traveled from Wisconsin, we have International Crane Foundation in Baraboo but there are limited numbers. At the refuge, the almost infinite number of cranes is so unique and exciting. The staff on both my

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visits took time to explain opportunities available, answered questions, described areas where wildlife could best be observed. Thank you.

Heritage and accuracy to the natural form versus terraced and managed unnaturally. The breadth and variety of locations of refuges affords wide varieties of experiences, most of them far different than that we see growing up today.

How well you manage the land to keep it as near to original and the ability to attend lands. I'm dying to see the cranes! The programs sound super!

I can't speak for other refuges but this refuge is unique because it is the center of bird watching for the state.

I have never been so close to so many animals; birds of kinds, mountain lions, rattle snakes, skunks, deer, elk, etc. It was wonderful.

I like the self guided tours and I like that the roads are dirt. Anytime of the year I go I get to see something different. Every day at Bosque Del Apache is a wonderful day and wonderful adventure.

I prefer the focus on the birds, animals, and plants which the refuges provide. Some public sites don't have that emphasis.

I've been visiting this refuge for over 50 years! Unique because of its location, the birds, turtles, wild pigs, scenery, beauty- in short WE LOVE IT!

In our urban lifestyle the chances to see uncaged wildlife are extremely limited.

Increased habitat and viewing opportunities compared to National Parks/parks.

Incredible number of waterfowl ... highly managed to provide food that is farmed and maintain water levels for all kinds of birds necessities.

It is a unique opportunity to see birds up close, especially cranes, snow geese, hummers, egrets, etc. Saw deer.

It is about as close to true "wilderness" as we could ask for.

It is an important area for birds due to availability of water resource, especially in the arid climate of the southwest. Also this refuge and others allow the opportunity to learn from wildlife and importance of natural habitats.

It is not very far from home. It is nicely laid out, accessible by car or walking. They're good places set aside for viewing without blocking traffic. The sites provide a viewing not found in many other places. A job well done.

It is simply a grand place!

It is the only major federal land management agency which is buried in the bureaucracy.

It is well maintained, always close to nature, and the workers are the best.

It was unique because you can't find all that wildlife in most places. It was a good experience and it's also good to see that there are still organizations that preserve the natural habitat of this world of ours...

It's vastness and many options for viewing birds and landscapes!

It's very large with a lot of open area to observe wildlife. There are many trails and very beautiful views of the true New Mexico land.

Its location and ease in being involved in it.

Keeping wildlife habitat natural.

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Knowing that the animals are protected.

Lovely sanctuary for the birds.

Many of our favorite places - Bosque Del Apache in particular. Probably 50-60 visits in all. Never had a bad day on a Refuge!

Many of the recreation areas we've been to also focus on activities such as off-roading and hunting. I appreciated being around other visitors who had a focus on seeing wildlife, primarily, and not in making a lot of noise and littering (i.e. National Forest and BLM).

Many of them are maintained in their natural state.

Many of them provide excellent bird watching opportunities and are important stops along bird migration routes.

Many opportunities provided to view migratory birds in different settings.

Migratory Birds.

More of an opportunity to see wildlife, learn new things about the wildlife.

More opportunities to view wildlife and more detailed wildlife information is available than in non-Refuge locations (Forest Service, National Parks).

More opportunity to see wildlife.

More species of wildlife.

Most refuges are designed with birding in mind. Roads and trails lead one close to the birds. Other places such as parks are not; birding is more difficult.

Natural habitat along with the managed ponds with so many migratory birds up close.

Natural wetlands on the Rio Grande are rare. This refuge offers an excellent view onto the "past" of what the Rio Grande was probably like before it was "tamed."

Never seen so many birds in one place.

Not only do they offer a place to observe wildlife but they provide important information on the wildlife and the ecosystems they inhabit. This allows for a better public understanding of the natural world and what must be done to preserve it.

Observation and conservation.

Often a natural or "managed" natural situation is best on NWR's. Emphasis on habitat is key.

Opportunities to observe birds and wildlife.

Opportunity to see large flocks of migratory birds.

Optimizing resources for species, wilderness is vital also, but with habitat fragmentation areas designed for optimality especially for migratory species are vital as well.

Other refuges I have visited were better prepared to help visitors with information, etc.

Outstanding opportunities for bird/wildlife viewing, hiking, nature education.

Photo ops of water fowl and Sandhill Cranes.

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Promotion of wildlife species; specifically developing resources of food and shelter for birds and animals. Parks typically provide "natural setting" without promoting wildlife, and forests while often providing habitat often do not take steps to promote wildlife populations.

Providing a fly-way for the migrating birds, and managing the food resources is absolutely essential in this day of overpopulation and diminishing natural habitats for our nonhuman planetary occupants. I appreciate what you-all are doing so very much. Now if we could only get global warming under control....

Providing safe space for wildlife and opportunities to observe/photograph them in their natural environment.

Public education about wildlife/plants on the refuge and how it is managed.

Quality of the area and conserving wildlife habitats.

Rare opportunities to see wildlife up close. Refuges provide critical habitat for wildlife that is safe for them, and this is increasingly necessary as flyways and wildlife trails are compromised worldwide.

Refuges are less tourist oriented than many parks, yet provide a tremendous opportunity to hike and observe wildlife. There is more emphasis on preservation of the wildlife.

Refuges are some of the last places to view that land as it was. They offer wildlife corridors and resting places for migrating birds in a concentrated area. So you can observe this wildlife first hand and have unique experience with nature. Refuges are accessible and affordable for all types of people to visit.

Refuges are, in a way, a cross between the wild and a zoo. I like to visit because I feel pretty certain I will see birds and/or wildlife of some sort, but in their world rather than caged. Also, more importantly, we have a responsibility to the earth and the animals that share it with us. Refuges are one way, and a good one, of finding transitional spaces between the wild and human worlds where animals and people can be together in peace. Okay, that's petty schmaltzy, but it's true for me.

Refuges give great and easy access to wildlife without the congestion that plagues the national parks. I love the national parks but most of the time they are too many people to be able to observe wildlife naturally.

Refuges have the unique opportunity to provide conservation awareness and participation in conservation without people having to be "tree huggers". Conservation is not just for the politically correct and refuges can take an active role in making everyone a conservationist.

Refuges provide opportunities to observe threatened and endangered species and also opportunities both learn about threatened and endangered species and volunteer to help them.

Refuges were established because wildlife was already there. We are just visitors there and it is to be hoped that the US Fish and Wildlife do NOT interfere too much.

Relaxed atmosphere, lots to see and do on your own.

Sandhill Cranes and snow geese in winter.

Sandhill Cranes, Snow Geese.

Saw more birds, wildlife, and learned more.

The abundance of birds and habitat for them.

The amount of open space available for wildlife and the availability of areas to observe wildlife in their habitats.

The birds -- migrations path.

The birds and providing refuge for the birds, yet a safe and non-intrusive way for people to see the birds/cranes geese etc. Awesome!!!

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The Bosque del Apache, for instance, almost lets one step back in time to an era when man didn't have such an impact. Here nature as it once was is laid out in front of us in all its splendor. We need that.

The certainty that you will see the cranes when you come. The closeness of the birds from the viewing platforms.

The concentration of wildlife and structures to facilitate observation of the wildlife.

The cranes and geese.

The density of and access to wildlife to watch.

The goal is recreation by preservation, not exploitation. Homo sapiens are guests, not masters.

The guided tours with knowledgeable tour guides; the one and only goal is to promote and preserve wildlife.

The history and everything that goes into making the place work for the birds was so fun to learn about. I'm just amazed at what you do to accommodate the wildlife. I've told many people about it here in Colorado.

The level of expertise of the staff and volunteers.

The level of management of natural resources is unique to these locations...and they need to balance with the educational opportunity....

The number of birds, ability to see them, and maintenance of area.

The opportunity to attend the Crane Festival at Bosque del Apache NWR is wonderful- lectures, tours, etc. are first rate. Friends of Bosque del Apache work are staff to make the festival possible.

The opportunity to observe either more of certain species or a greater variety of species of wildlife than in most other areas.

The opportunity to observe such vast numbers of cranes and snow geese.

The opportunity to observe unique birds up close in a very natural setting. Well designed for easy access to the birds in their natural environment.

The opportunity to see so many cranes, geese, and ducks in one location.

The physical beauty of the Bosque is unique.

The refuge contains an extremely large number and variety of birds and wildlife. The opportunity to listen, observe, and photograph birds and wildlife is increased dramatically from other wilderness experiences. This along with the ability to travel by bicycle through the refuge enhances the enjoyment of the trip.

The refuge has nothing but good memories of my dad. We would rabbit hunt in the surrounding area from Rio Puerco and south. After the hunt he always made time to go through the refuge.

The way the waterways are maintained.

The wild migratory bird habitat.

The wildlife observed.

The word "refuge" says it all.

Their primary mission of conservation.

There are many opportunities to observe birds and other flora and fauna close up. Additionally, people who visit NWRs are real conservationists and environmentalists, not just a tourist intent on seeing as much as

possible in the shortest time.

There is so much wildlife on refuges. It is increasingly difficult to balance a refuge's primary mission with public access and recreation. I hope refuges resist pressure to introduce access to vulnerable nesting area and habitat so that wildlife may continue to thrive or rebound. Bosque seems to be doing a great job. The professionals we met were very dedicated and knowledgeable.

There seems to be less visitation at Refuges, which makes them less crowded, which is great! Also people are there to see wildlife, so the visitors are different than those at National Parks or Forests. It's very evident that Refuges are managed for wildlife, and not really for people, so it's great. Keep it that way!

They are excellent places to observe birds and wildlife in their native habitat.

They are intermediate in the protection of wildlife. Hunting and fishing is allowed (I oppose this) and unfortunately the cruel practice of trapping occurs on many refuges. I would encourage the USFWS to emphasize restoration and conservation over managing (i.e., hunting, etc).

They are unique in that the focus is on wildlife -- and I go there expecting to observe some type of wildlife.

They are well maintained and staffed and they provide an outstanding recreational experience.

They catered to the sand cranes .

They help keep a balance in nature and work to provide the public with great outdoor and educational experiences. I learn more each time I visit.

They provide an opportunity for the general public to view - usually up-close - unique wildlife and birds in a natural setting.

This is a 5 refuge to the re-introduction of these beautiful birds and I appreciate the experience and the dedication to this project very much.

Thousands of birds, glimpses of other wild life.

To experience cranes and other wildlife in the setting where they are protected and feel safe.

To have a place to go that treasures wildlife and natural resources.

Variety of wildlife, cranes and other migrating birds.

Very natural environment - not tourism stuff.

Visitation and access. Other public land agencies (e.g., BLM, USFS) also offer this, but to a less well-developed degree for the most part. Each agency manages in its own unique way, but FWS (refuges) are unique in the QUALITY of the wildlife experience packed into a smaller ecological unit. Refuges concentrate wildlife for a memorable experience, while other public land agencies offer "wide-open" opportunistic opportunities. Bigger bang for the buck at the FWS refuge system.

Vital habitat for wildlife. Birds found nowhere else on a viewable basis congregate at wildlife refuges.

Volunteers, pride, caring.

We come to see the cranes and other birds, waterfowl. We have a refuge near home (Illinois) but it doesn't have the cranes. Our grandchildren and son live in Albuquerque. We have been visiting New Mexico since 1988. The golden pass should cost a lot more!

We have not seen them yet -- the Cranes.

Well managed and very interesting.

Well organized.

Well, I can't address your "refuges" question, but where Bosque del Apache is concerned it is vital to the preservation of the Sandhill Crane which enjoys numbers unlike any other crane on earth.

Where else can you see thousands of migrating birds!

While the refuge is large, the ability to drive around the loops provides ample opportunities to see birds and wildlife inhabitants readily throughout the tour.

Wildlife is usually (not always) protected. As the name suggests, it is a Refuge. The public is then provided with viewing places.

Wonderful opportunity to see each habitat with water and trees in an otherwise desert like setting.

You can go and observe wildlife in their environment.

You can observe wildlife in natural surroundings. They also have a variety of wildlife.

You don't normally see so much diverse wildlife in the numbers you see at a refuge. Also, refuges are managed differently than say, a National Forest.

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#### Additional Comments (n = 55)

1) I really appreciate the opportunity to fill this out! 2) Education of the public goes hand in hand with granting/gaining public funding. Volunteers in schools at young ages would go a long way toward this. Children in cities, low and even high income families, middle incomes -- all scrambling in a time compressed and decreasing financial status for life -- don't see these places. At minimum, better internet sites would greatly increase understanding (using video/audio techniques rather than written --most people read at 5th grade level) about the natural world, would help. Consider retiring people with suitable background preparation (yes, you can train them) traveling in motor homes for this!

A very unique place that I intend to visit during different times of the year to see the difference in climate and wildlife. The senior citizen pass is most welcome. Thank You.

Although it was a bit crowded it was a pleasant and memorable stay. I very probably will come back.

Bosque Del Apache is wonderful. Thank you!

Bosque Del Apache NWR has provided my wife and I many, many, many great experiences each and every time we have made the visit. The birds and the setting are equally grand. I recall after listening to a cassette of Joni Mitchell (Turbulent Indigo) and she sounded really bummed out about the state of mankind. We had just finished a trip to the Bosque and, as usual, it was another 10 on the goose bump scale of enjoyment. I felt compelled to write Joni Mitchell so I did (I'm sure she never received the letter but that's ok). No matter how bad things seem, a trip to the Bosque will rejuvenate your soul if you just let it. I was certain that if Joni Mitchell would have taken the time to explore the Bosque, her life would have been better and perhaps she could have blessed us all with her talent in a more positive way. Late November at the crack of dawn with the sandhill cranes, the snow geese, the sunrise, the sight, the sound, the smell... nothing could be finer! Thank you! (Signed)

Bosque del Apache NWR is a gem. Its Friends group is a model.

Due to the effects of climate change, the refuge needs to consider moving the festival to later in the year when the bird counts are higher.

Good refuge. I was at the refuge to lead tours and give talks. I'm a wildlife biologist who was being paid by my employer to be there so I'm not sure if this survey is applicable to me.

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Great place! It was my first visit. I just moved to this area a month ago. I will definitely return to the Refuge. I also want to visit the other refuges in the area.

I enjoyed my visit. Thank you.

I enjoyed the Crane Festival at the Bosque del Apache. I have also attended the Crane Festival in Monte Vista, CO. However, we were unable to take part in any of the presentations, lectures, or bus tours because when we arrived (traveling from Alamosa, CO to Socorro, NM) they were all already full.

I had a ball. I will come again, stay longer and take some classes.

I love Bosque del Apache.

I love the Bosque del Apache Refuge. The staff is always well informed and very pleasant. The recent improvements to the interpretive center are nice but I would not encourage much more development. There is nothing better than the Bosque in the Fall and Winter!

I think if you brought in tour buses it would ruin it. Keep it the way it is except update the info boards on the boardwalks and overlooks.

I think it is a wonderful refuge especially the Festival of the Cranes. I like how the Festival is now involved the local community. Initially when the festival was new we were told to give merchants a slip of paper telling them we were attending the festival. Now the town welcomes attendees with open arms. With more attending there is a lot of money being brought into the community. It seems the locals are now becoming proud of this refuge and hopefully getting involved with its activities.

I thought the visit was really nice. We took a refuge tour as well as paid for the fly in and fly out. It was worth every penny. I would have liked the managers to provide additional insights, but it was just fine to just experience it quietly as well.

I thought this refuge has done a fantastic job at conserving wintering habitat for ducks, cranes, and geese; I feel they still have a lot of work to do at other times of the year. Bosque del Apache is not only a winter stop-over for birds, it is also one of the most important spring/fall migration stop-overs in the middle of the Rio Grande River Valley, and I feel that the Refuge is managed poorly at these times of the year. I understand that water management is very important during a drought but the refuge needs to provide better shorebird habitat during the months of April/May and Sept/Oct. This will not only benefit shorebirds but also the thousands of neotropical migrants that filter through the Rio Grande Valley in spring and fall. Thank you for the considerations and opportunity to provide my personal opinion.

I was very impressed with how intensively managed the refuge seems to be, and the resulting quality of bird watching. I would like to see more hiking opportunities on the refuge.

I will be back. No other place have I seen such a gathering of wild birds and everyone so helpful and friendly.

I would like to see this refuge managing more areas for shorebirds. It is nice to see waterfowl but shorebirds are equally important in my view. I've heard stories about why this cannot be done, but believe that that is exactly what they are... stories. Surely deeper water resources are not the only thing that this refuge can manage for in the most intensively managed refuge in the nation.

In number of trips, I'm including partial day trips, for example stopping at a state park to check for wildlife on my daily commute. Overnight trips would be about 10.

Love the place. Can't wait to come again.

May we encourage the next generation to continue the work you-all are doing. And may we resolve future water issues so that the wildlife of our planet gets its fair share for survival and continued evolution! We can share resources if we understand, as a people, the importance of natural diversity. Educate our youth about conservation and the evils of overconsumption please. Issues of water are at the top of the education list.

Mi hija y yo fuimos a ver las aves, las garzas y nos divertimos mucho oyendolas y mirando como comen. Me

dio mucha alegria que por 5 dolares pudieramos ver las aves de cerca y escucharlas. Gracias. Todos los empleados fueron muy cordiales y amigables. Gracias. (My daughter and I went to see the birds, herons, and we had lots of fun listening to them and watching as they ate. I was very happy that for 5 dollars we could see the birds up close and listen to them. Thank you. All employees were very cordial and friendly. Thank you.)

More of the areas that have roads/trails need to be open for viewing wildlife and birds. It seemed that a lot of the trails were closed to any form of access.

Most guided tours were a bit expensive for many of our group (seniors on fixed incomes).

My wife and I have visited three times in the last 6 years and completely enjoy the birding and wild life and the many improvements to the refuge in this time frame. Thank you.

Needs to be more dog friendly and be prepared to provide information to all your visitors.

On the section relating to expenses on visiting the refuge, I drive down and back in one day being only 90 miles from the refuge. Thus, other than food during the day and wildlife books at the refuge, all my expenses occur in my hometown.

One of the Crown Jewels in the system, and I am proud to have Bosque del Apache in New Mexico and near my home.

Our (my wife and I) first visit even though I am a native of Albuquerque. I really loved it and look forward to coming again and bringing our mountain bikes if possible to ride the roads and observe the birds without adding more pollution to the area. Thanks.

Please accept cash cards or credit cards at the entrance!!!

Please introduce more animals- We love the birds, of course, but only saw two deer. We went out at dark and saw nothing, finally we saw one skunk. Birds are great but given idyllic surroundings/settings I would also love to see game. (signed)

Sorry took so long to comment, I have been out of town.

Thank you for sending me a paper copy. I have the internet but get too distracted and also feel numbed-good prep on your part!

Thanks to the dedication of the Bosque del Apache staff and volunteers!

The Bosque Del Apache needs to have lots more waterfowl hunting opportunities after the "Festival of the Cranes" has ended. There is no reason why the Refuge can't set up a remote area for duck hunting starting Dec 1 through the end of the season. Every other refuge manages to offer a reasonable opportunity to hunt waterfowl in addition to other recreational activities -- why not Bosque Del Apache? Waterfowl management and hunting of such is the primary reason why the refuge system was created and I think that creation of the refuge system is equally important as the establishment of the National Park System and The National Forests. I visit a lot of Refuges and I am always impressed with the habitat management that is done on the Refuges - and this is coming from a fellow professional land manager with 25 years of experience in the Department of Interior. Keep up the great work!

The Bosque del Apache Wildlife Refuge is by far the best refuge I have visited in the country - the care there for the wildlife (and the visitors) is outstanding. We are so lucky to have such a place. Yea for cranes!

The poster you provided as incentive for taking this survey is wonderful -- beautiful design and high-quality paper. Thanks!

The programs we attended in connection with The festival of the cranes were great educational and recreational opportunities. Having knowledgeable local guides was a huge asset to our experience.

The refuge is amazing and we hope to go back. I think the role of FWS should be to maintain these kind of refuges and continue to expand educational opportunities for families and children.

The staff members at the visitor center were very friendly and helpful. The bird watching was great. We hope to come back for the festival of the cranes.

The visitor's center was being reconstructed while we were there.

The website experience was not a good one. After several attempts I gave up.

There is a serious need for the National Wildlife Refuge System to become the National Wildlife Refuge Service -- a single agency within the Department of the Interior.

This is our first visit to New Mexico. We always visit a few NWR's with any trip. Thanks for good work!

This refuge provides an excellent opportunity for viewing and learning about migrating birds and their behaviors.

This was our first time to the Bosque del Apache. We belong to the Ruidoso NM Trail Snails hiking group and our environmentalist recommended this trip. We had a wonderful time seeing all the birds and wildlife.

We had a blast at the Refuge. We saw a bald eagle, a coyote (close up) and, of course, tons of birds.

We have already recommended Bosque del Apache to several friends and family members and sent literature to others. We were very impressed. I really appreciate the number of places I could access using a walker. Thank you.

Wonderful place, the Bosque del Apache.

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