



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

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This trip was most enjoyable and we will return often for seasonal photography. This was the best Visitor Center I can recall seeing in a very long time. Informative, visual, and totally keeping to the subject at hand.—Survey comment from visitor to Wichita Mountains Wildlife Refuge.



Wichita Mountains Wildlife Refuge. Photo credit: U.S. Fish and Wildlife Service.

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Introduction

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

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

Organization of Results

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

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

Methods

Selecting Participating Refuges

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

Developing the Survey Instrument

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

Contacting Visitors

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

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

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

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

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

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

Interpreting the Results

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

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

Established in 1901, Wichita Mountains Wildlife Refuge comprises 59,020 acres that embrace a major portion of the Wichita Mountains in southwestern Oklahoma. Wichita Mountains Wildlife Refuge serves as a symbol of the old west standing at the threshold of modernity while preserving the southwestern history for future generations. The refuge was created to:

- protect the mixed grass prairie habitat,
- protect populations of American bison and Rocky Mountain elk,
- protect habitat for species, and
- provide outdoor recreation and environmental education to the public.

The refuge provides habitat for large native grazing animals such as American bison (which were nearly extinct until they were reintroduced in 1907), Rocky Mountain elk (a result of successful transplants from Jackson Hole, Wyoming), and white-tailed deer. Texas longhorn cattle also share the refuge rangelands as both a cultural and historical legacy species. Over 50 mammal, 240 bird, 64 reptile and amphibian, 36 fish, and 806 plant species thrive on this vital refuge.

With close to 1.3 million visitors each year (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.), Wichita Mountains hosts a variety of activities including big game hunting, fishing, walking, hiking, auto tour routes, boating, wildlife observation, photography, camping, environmental education, and interpretation. Figure 1 displays a map of the refuge. For more information, please visit: <http://www.fws.gov/southwest/refuges/oklahoma/wichitamountains/>.

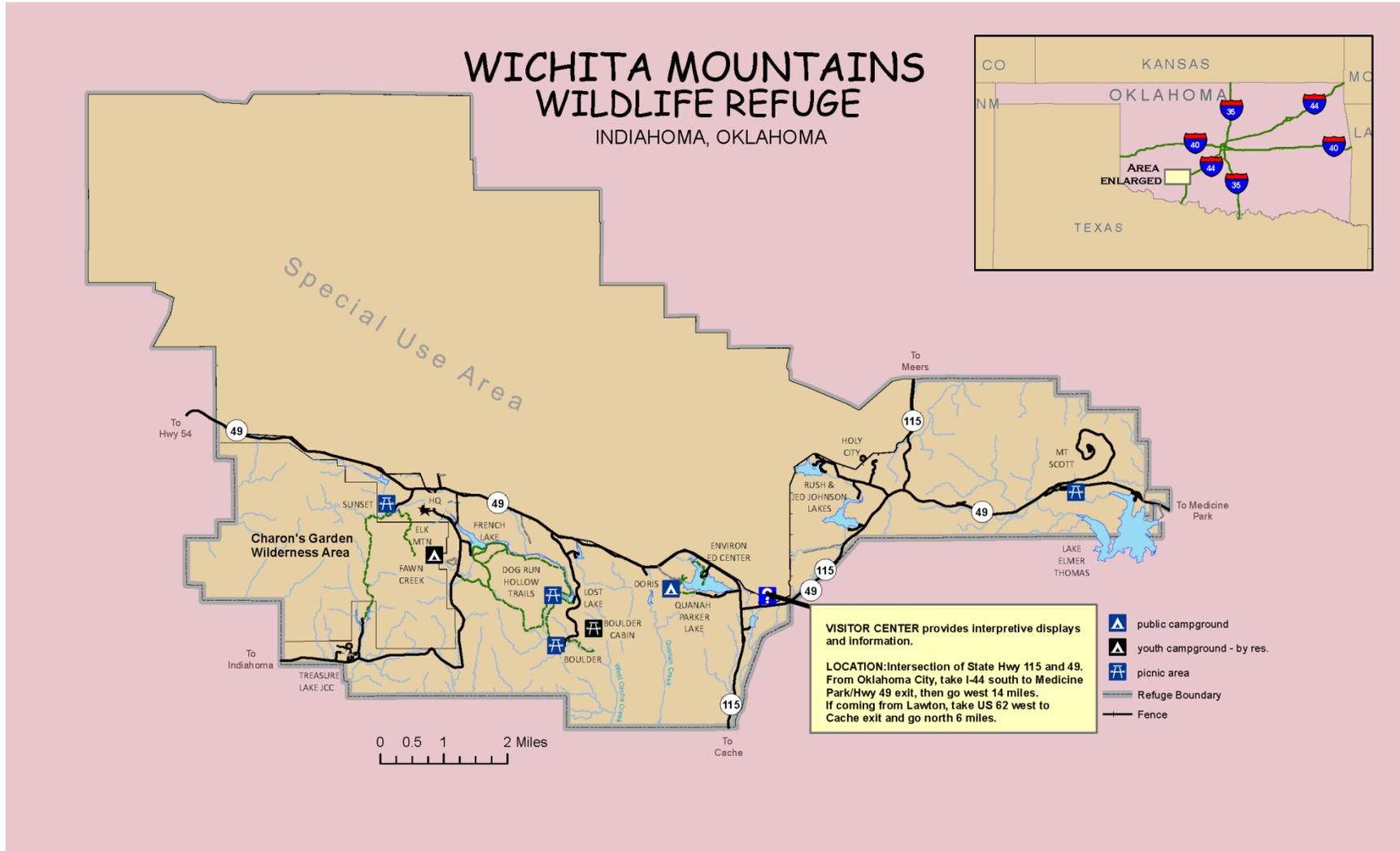


Figure 1. Map of Wichita Mountains Wildlife Refuge, courtesy of U.S. Fish and Wildlife Service.

Sampling at Wichita Mountains Wildlife Refuge

A total of 319 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Wichita Mountains Wildlife Refuge (table 2). In all, 187 visitors completed the survey for a 62% response rate and $\pm 6\%$ margin of error at the 95% confidence level.¹

Table 2. Sampling and response rate summary for Wichita Mountains Wildlife Refuge.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	8/28/2010 to 9/11/2010	Lake Elmer Thomas Boat Launch/Fishing Pier Mount Scott Visitor Center Doris Campground Boulder Cabin Group Picnic Site/Picnic Area Lost Lake Picnic Area/Kite Trailhead French Lake/Dog Run Hollow Trailhead Sunset Picnic/Wilderness Trailheads	160	13	96	65%
2	5/7/2011 to 5/21/2011	Lake Elmer Thomas Boat Launch/Fishing Pier Mount Scott Visitor Center Doris Campground Boulder Cabin Group Picnic Site/Picnic Area Lost Lake Picnic Area/Kite Trailhead French Lake/Dog Run Hollow Trailhead Sunset Picnic/Wilderness Trailheads	159	4	91	59%
Total			319	17	187	62%

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.

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

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 Wichita Mountains Wildlife Refuge 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 (82%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (88%). 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 (89%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. Some visitors to Wichita Mountains Wildlife Refuge had been to at least one other National Wildlife Refuge in the past year (45%), with an average of 3 visits to other refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (33%) had only been to Wichita Mountains Wildlife Refuge once in the past 12 months, while most had been multiple times (67%). These repeat visitors went to the refuge an average of 8 times during that same 12-month period. Visitors used the refuge during only one season (41%), during multiple seasons (34%), and year-round (25%).

Most visitors first learned about the refuge from friends/relatives (67%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (57%), or signs on highways (43%; fig. 3).

Some visitors (34%) lived in the local area (within 50 miles of the refuge), whereas 66% were nonlocal visitors. For most local visitors, Wichita Mountains Wildlife Refuge was the primary purpose or sole destination of their trip (78%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of their trip (68%). Local visitors reported that they traveled an average of 29 miles to get to the refuge, while nonlocal visitors traveled an average of 248 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 65% of visitors to the refuge were from Oklahoma.

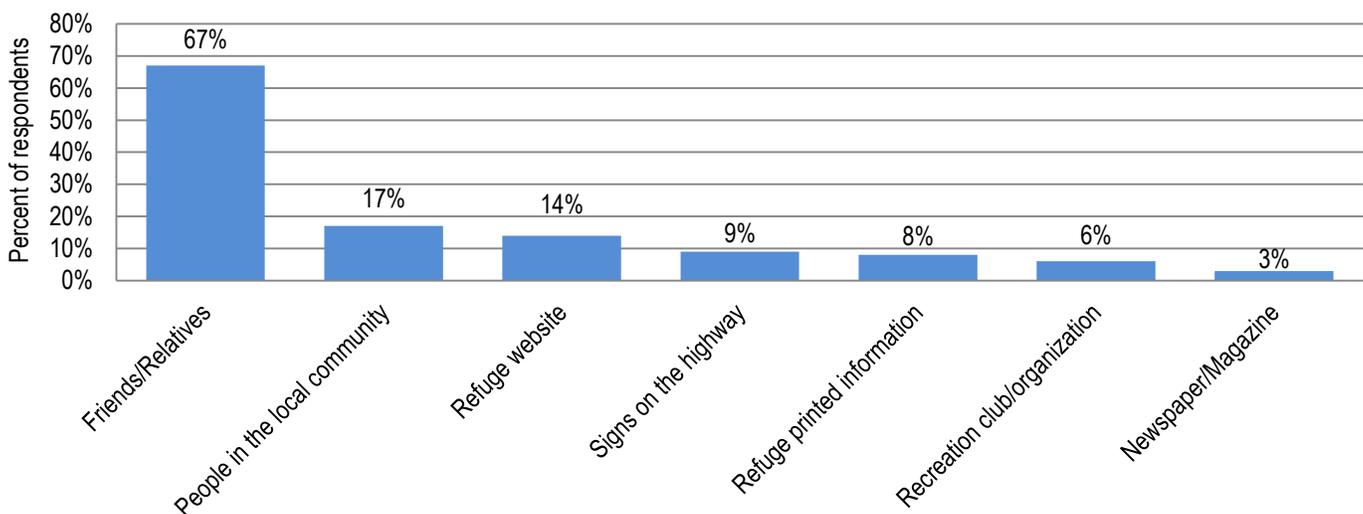


Figure 2. How visitors first learned or heard about Wichita Mountains Wildlife Refuge (n = 181).

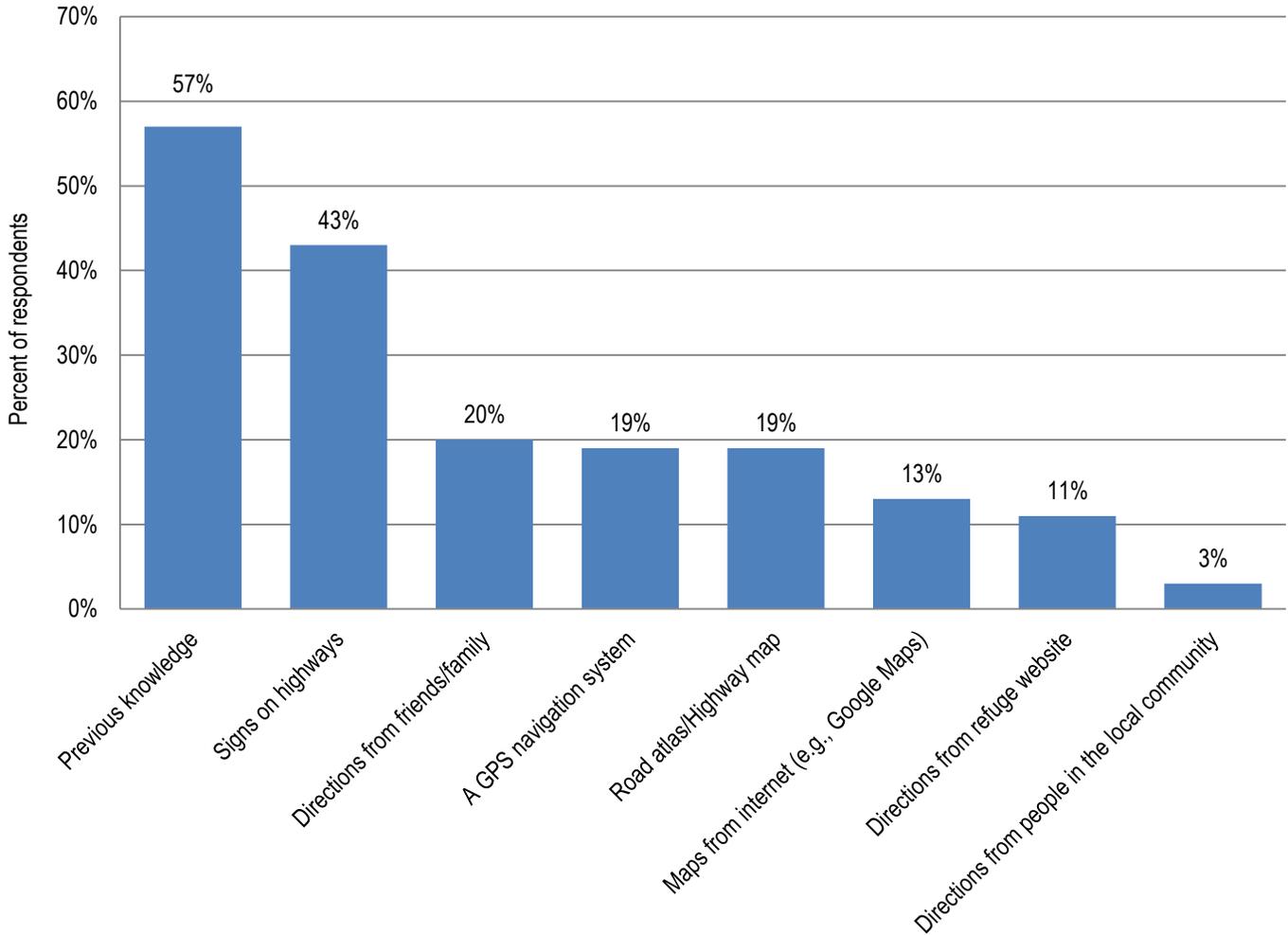


Figure 3. Resources used by visitors to find their way to Wichita Mountains Wildlife Refuge during *this* visit (n = 183).

Table 3. Influence of Wichita Mountains Wildlife Refuge 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	68%	17%	15%
Local	78%	15%	7%
Total	72%	16%	12%

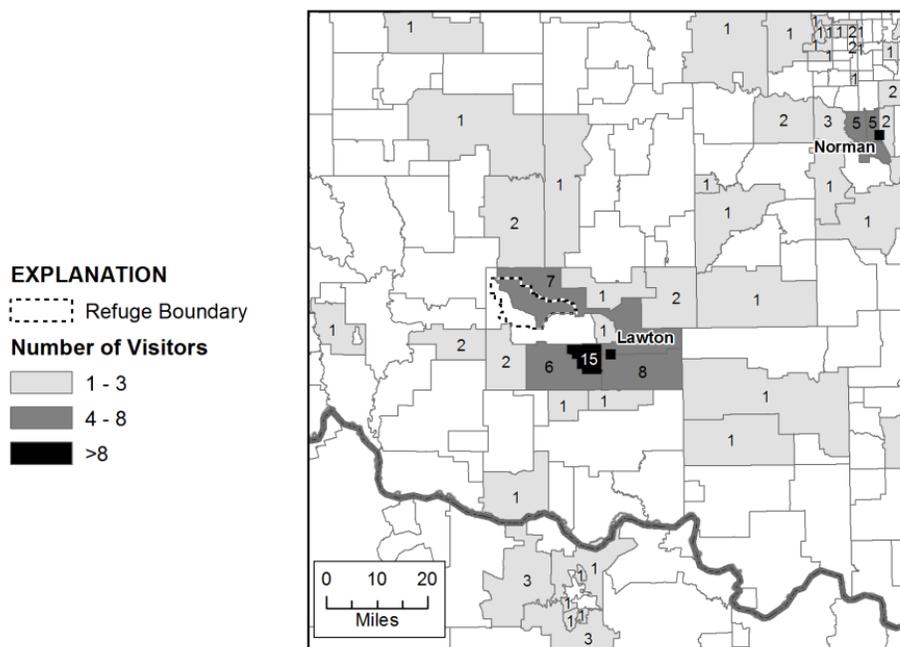
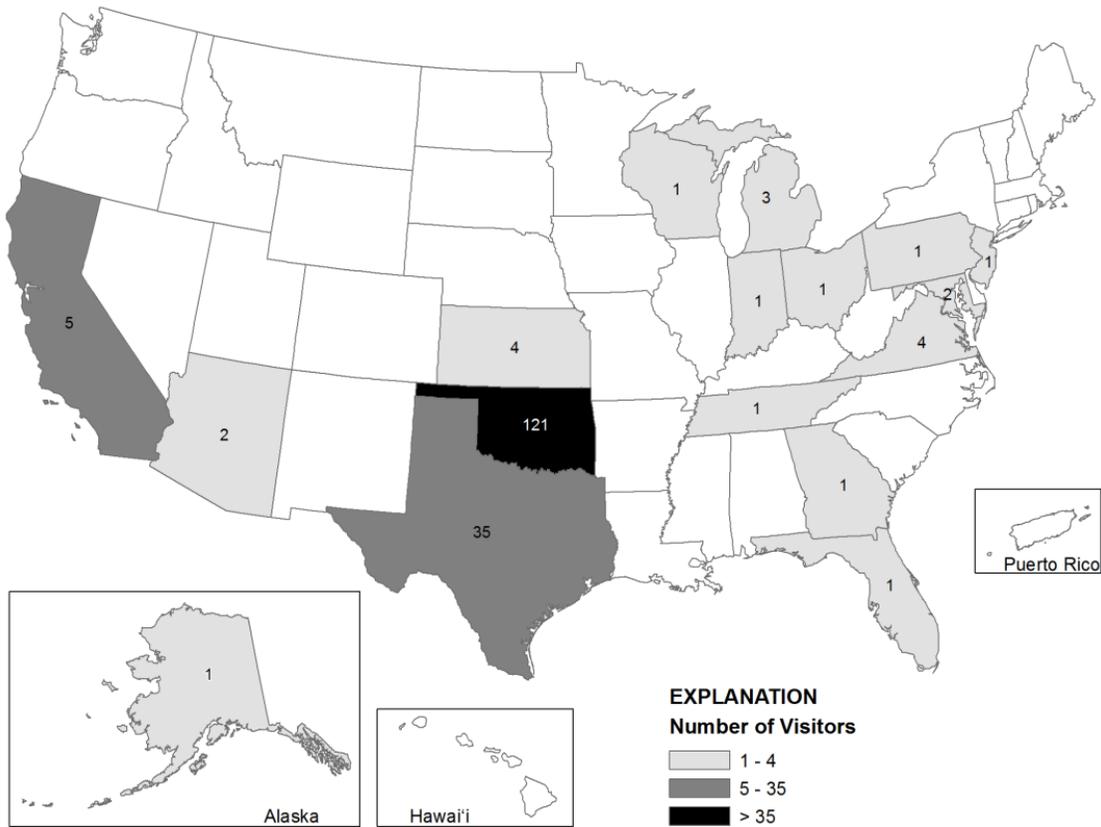


Figure 4. Number of visitors travelling to Wichita Mountains Wildlife Refuge by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 186).

Surveyed visitors reported that they spent an average of 5 hours at Wichita Mountains Wildlife Refuge 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 (44%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (89%) and walking/hiking (34%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (70%), travelling primarily with family and friends (table 4).

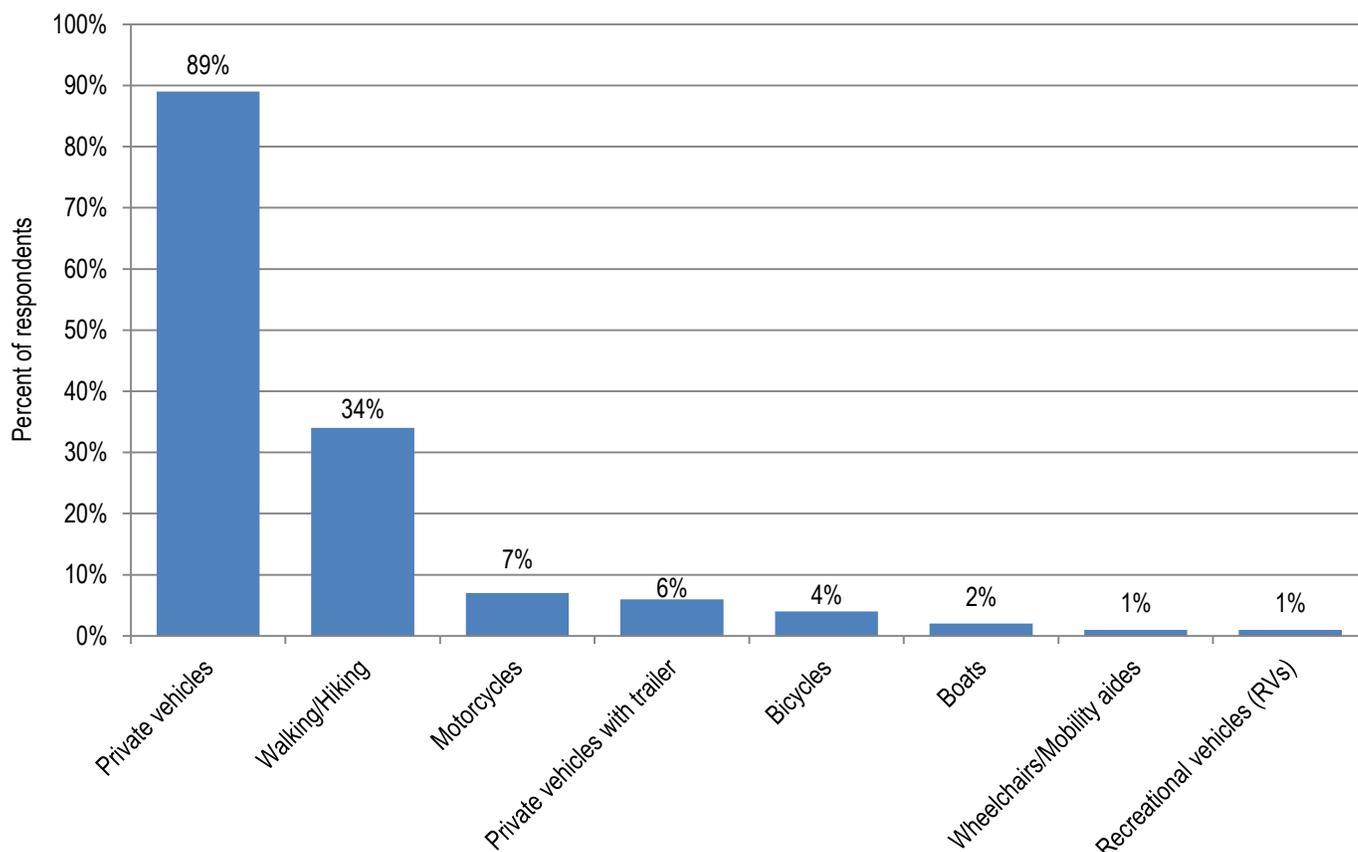


Figure 5. Modes of transportation used by visitors to Wichita Mountains Wildlife Refuge during *this* visit (n = 185).

Table 4. Type and size of groups visiting Wichita Mountains Wildlife Refuge (for those who indicated they were part of a group, n = 128).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	91%	3	1	4
Commercial tour group	0%	0	0	0
Organized club/School group	7%	14	11	25
Other group type	2%	13	18	31

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were wildlife observation (69%), hiking (65%), photography (56%), and auto tour route/driving (54%). The primary reasons for their most recent visit included hiking (33%), wildlife observation (25%), and auto tour route/driving (15%; fig. 7). The visitor center was used by 83% of visitors, mostly to view the exhibits (89%), stop to use the facilities (for example, get water, use restroom; 70%), and visit the gift shop/bookstore (66%; fig. 8).

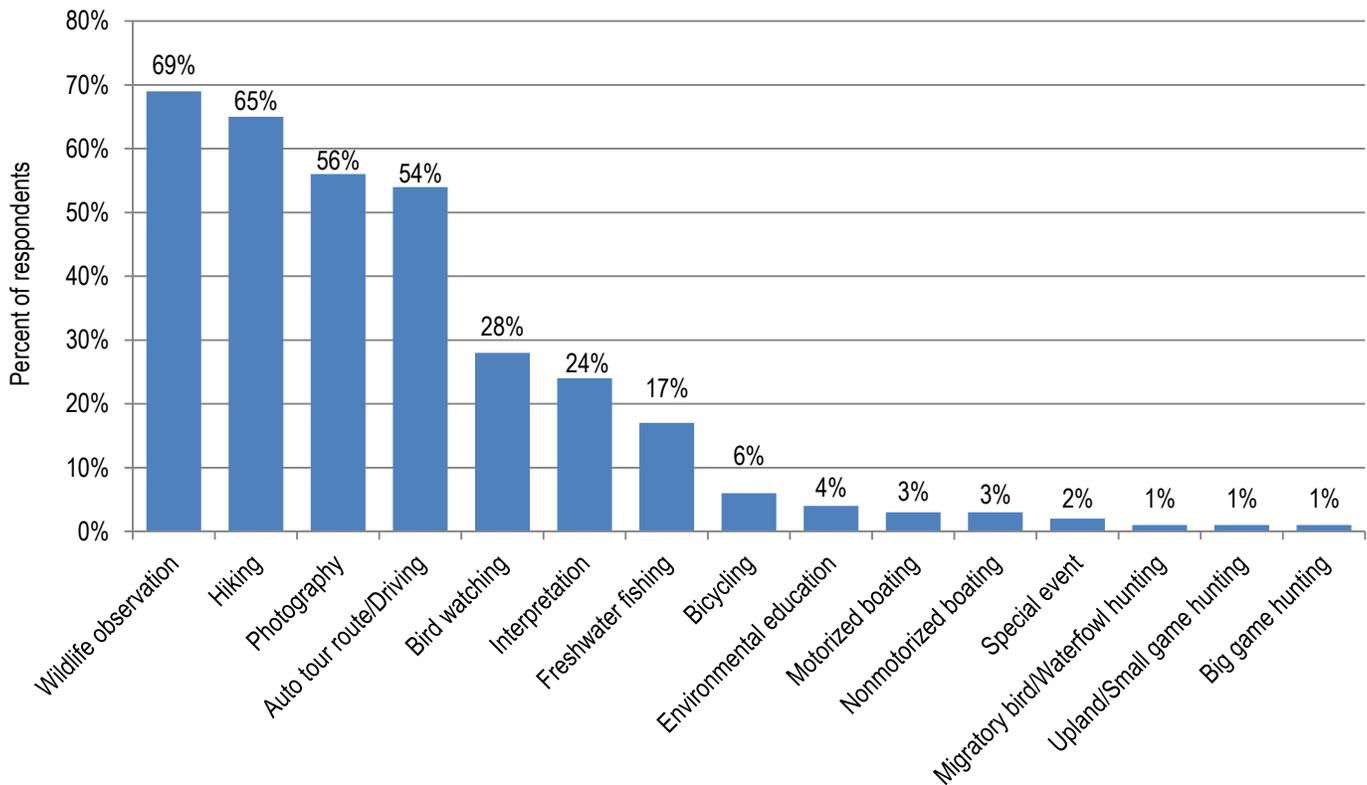


Figure 6. Activities in which visitors participated during the past 12 months at Wichita Mountains Wildlife Refuge (n = 182). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (99%) surveyed visitors to Wichita Mountains Wildlife Refuge 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 50 years and 52% female with an average age of 48 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$50,000–\$74,999. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

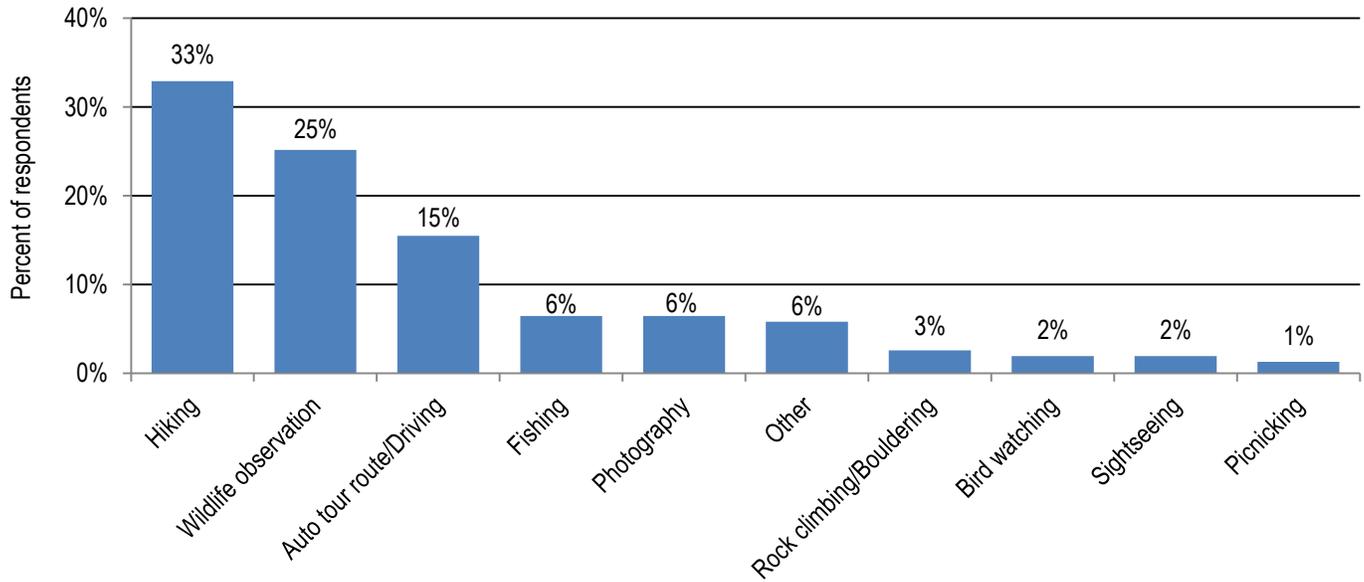


Figure 7. The primary activity in which visitors participated during *this* visit to Wichita Mountains Wildlife Refuge (n = 168). See Appendix B for a listing of “other” activities.

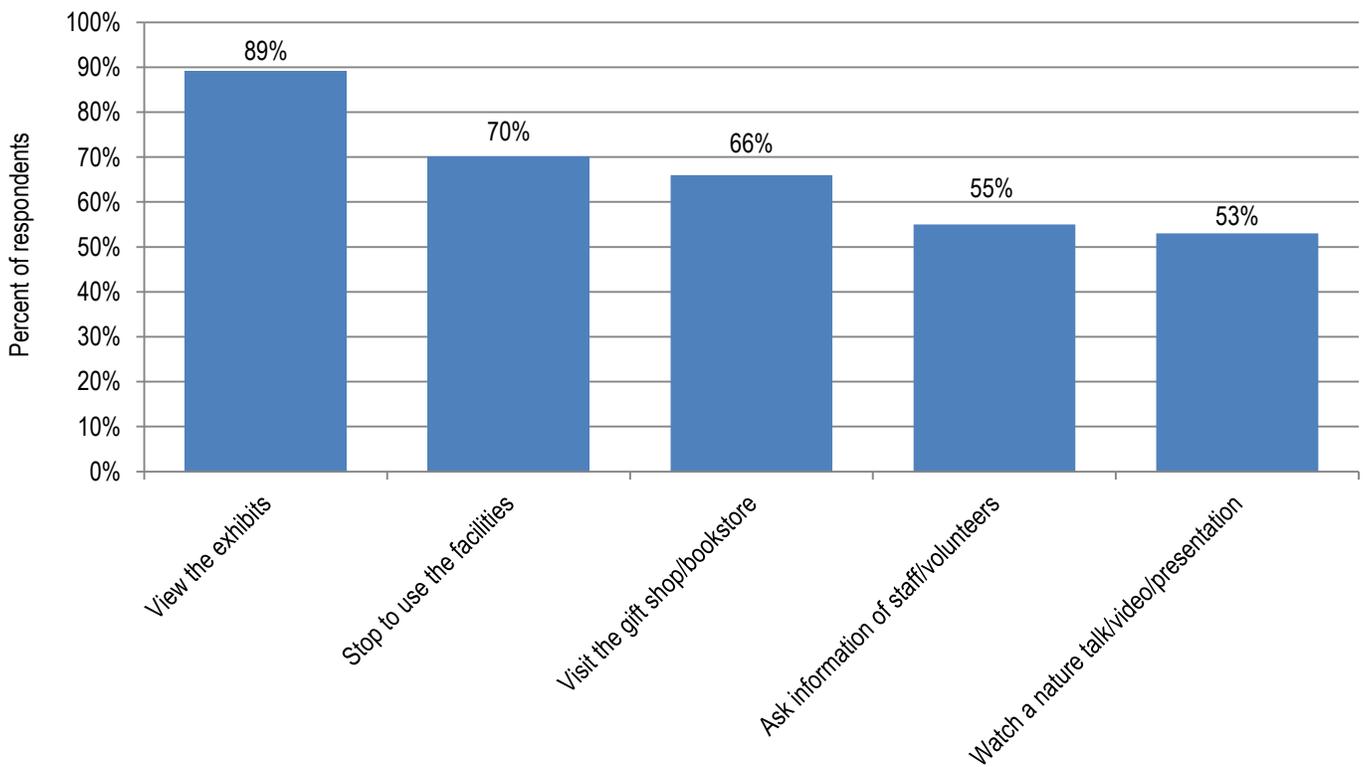


Figure 8. Use of the visitor center at Wichita Mountains Wildlife Refuge (for those visitors who indicated they used the visitor center, n = 152).

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, 34% of surveyed visitors to Wichita Mountains Wildlife Refuge indicated that they live within the local area. Nonlocal visitors (66%) stayed in the local area, on average, for 2 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$50 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 local communities and at Wichita Mountains Wildlife Refuge expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	104	\$26	\$50	\$82	\$0	\$735
Local	49	\$35	\$45	\$47	\$0	\$280

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

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

Visitor Opinions about This Refuge

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

Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at Wichita Mountains Wildlife Refuge were as follows (fig. 9):

- 91% were satisfied with the recreational activities and opportunities,
- 91% were satisfied with the information and education about the refuge and its resources,
- 93% were satisfied with the services provided by employees or volunteers, and
- 93% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 18% of visitors (n = 32) indicated they paid a fee to enter Wichita Mountains Wildlife Refuge, the refuge does not have an entrance fee. The refuge does have a camping fee and the interpretive bus tours charge a fee. It may be that some visitors were referencing these fees when answering this question.

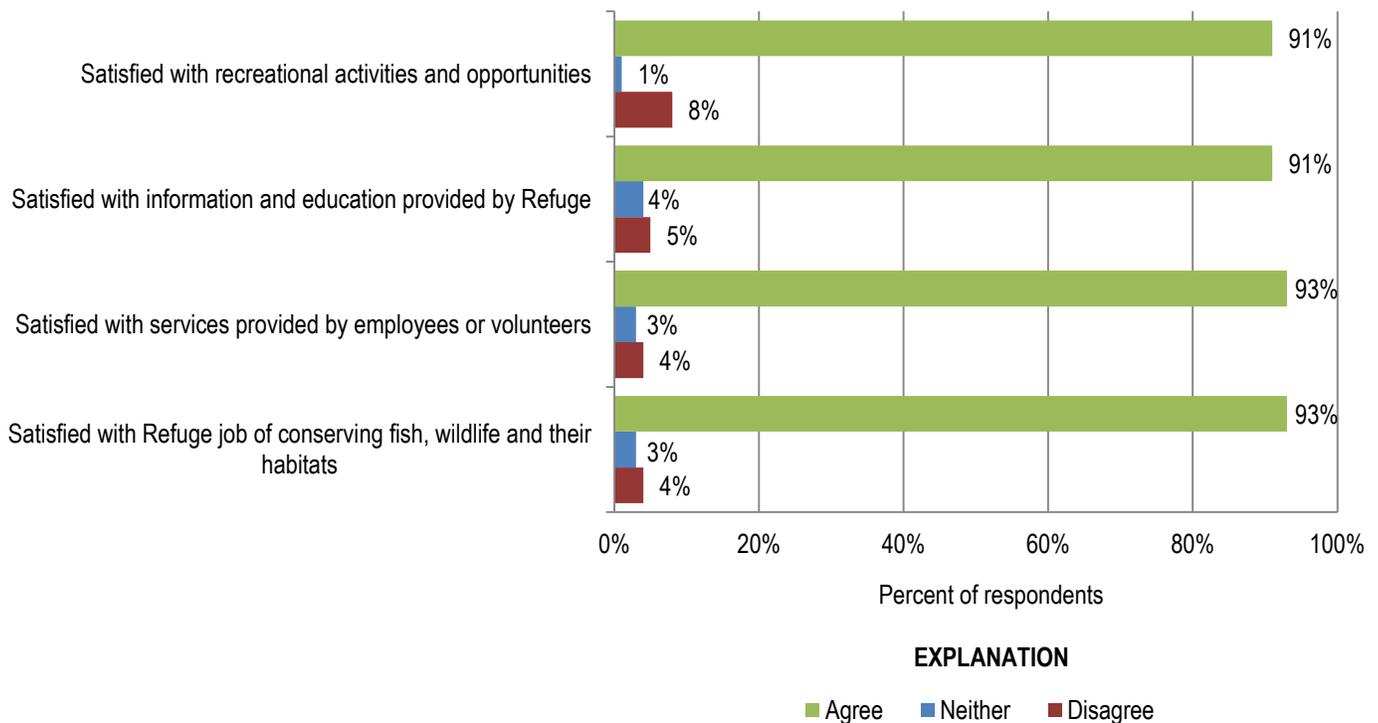


Figure 9. Overall satisfaction with Wichita Mountains Wildlife Refuge during *this* visit (n ≥ 179).

Importance/Satisfaction Ratings

Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in relation to their satisfaction with that attribute. Drawn from marketing research, this tool has been applied to outdoor recreation and visitation settings (Martilla and James, 1977; Tarrant and Smith, 2002). Results for the attributes of interest are segmented into one of four quadrants (modified for this national study):

- Keep Up the Good Work = high importance/high satisfaction;
- Concentrate Here = high importance/low satisfaction;
- Low Priority = low importance/low satisfaction; and
- Look Closer = low importance/high satisfaction.

Graphically plotting visitors' importance and satisfaction ratings for different services, facilities, and recreational opportunities provides a simple and intuitive visualization of these survey measures. However, this tool is not without its drawbacks. One is the potential for variation among visitors regarding their expectations and levels of importance (Vaske et al., 1996; Bruyere et al., 2002; Wade and Eagles, 2003), and certain services or recreational opportunities may be more or less important for different segments of the visitor population. For example, hunters may place more importance on hunting opportunities and amenities such as blinds, while school group leaders may place more importance on educational/informational displays than would other visitors. This potential for highly varied importance ratings needs to be considered when viewing the average results of this analysis of visitors to Wichita Mountains Wildlife Refuge. This consideration is especially important when reviewing the attributes that fall into the "Look Closer" quadrant. In some cases, these attributes may represent specialized recreational activities in which a small subset of visitors participate (for example, hunting, kayaking) or facilities and services that only some visitors experience (for example, exhibits about the refuge). For these visitors, the average importance of (and potentially the satisfaction with) the attribute may be much higher than it would be for the overall population of visitors.

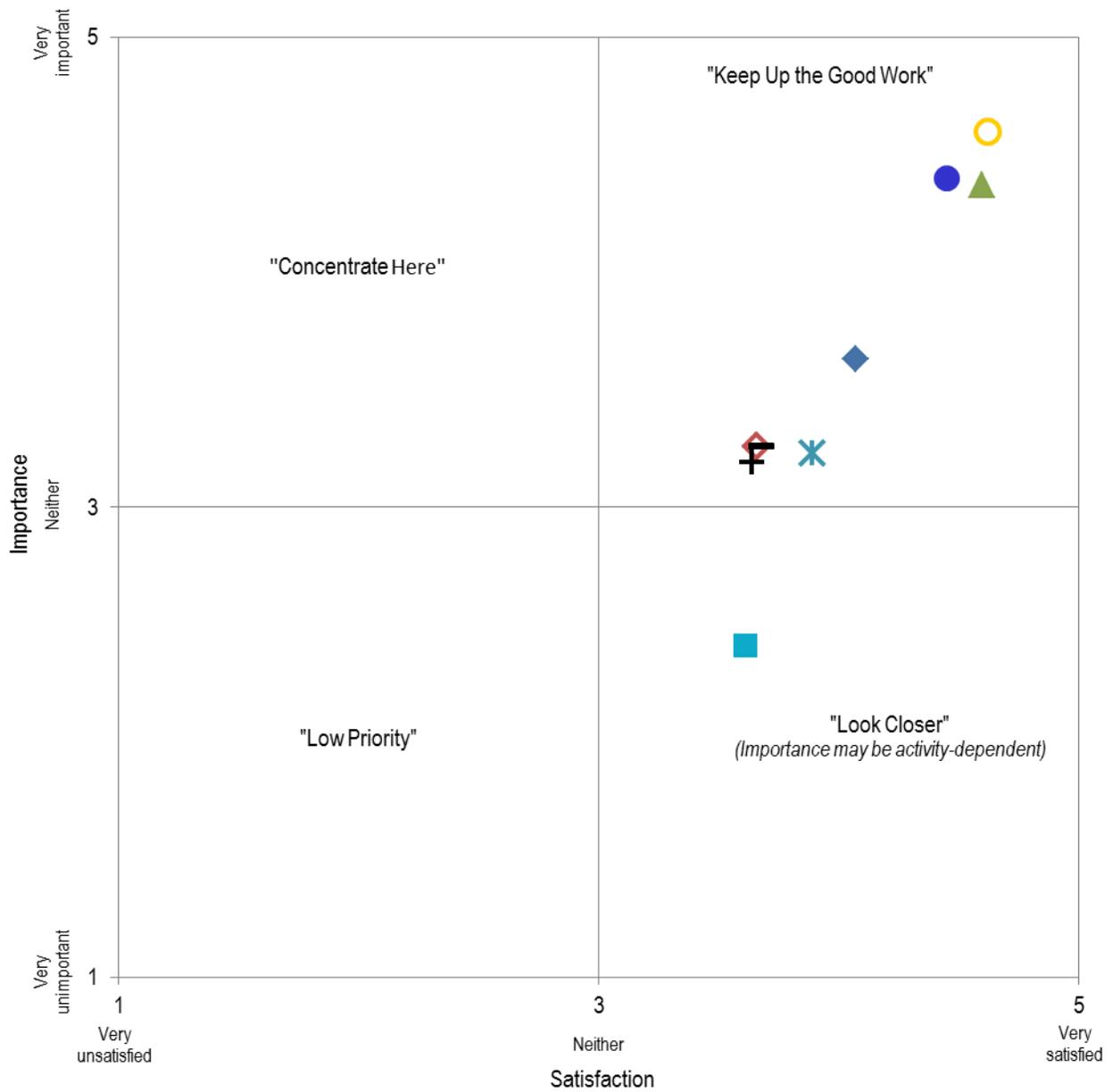
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Wichita Mountains Wildlife Refuge, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" (fig.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



EXPLANATION

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

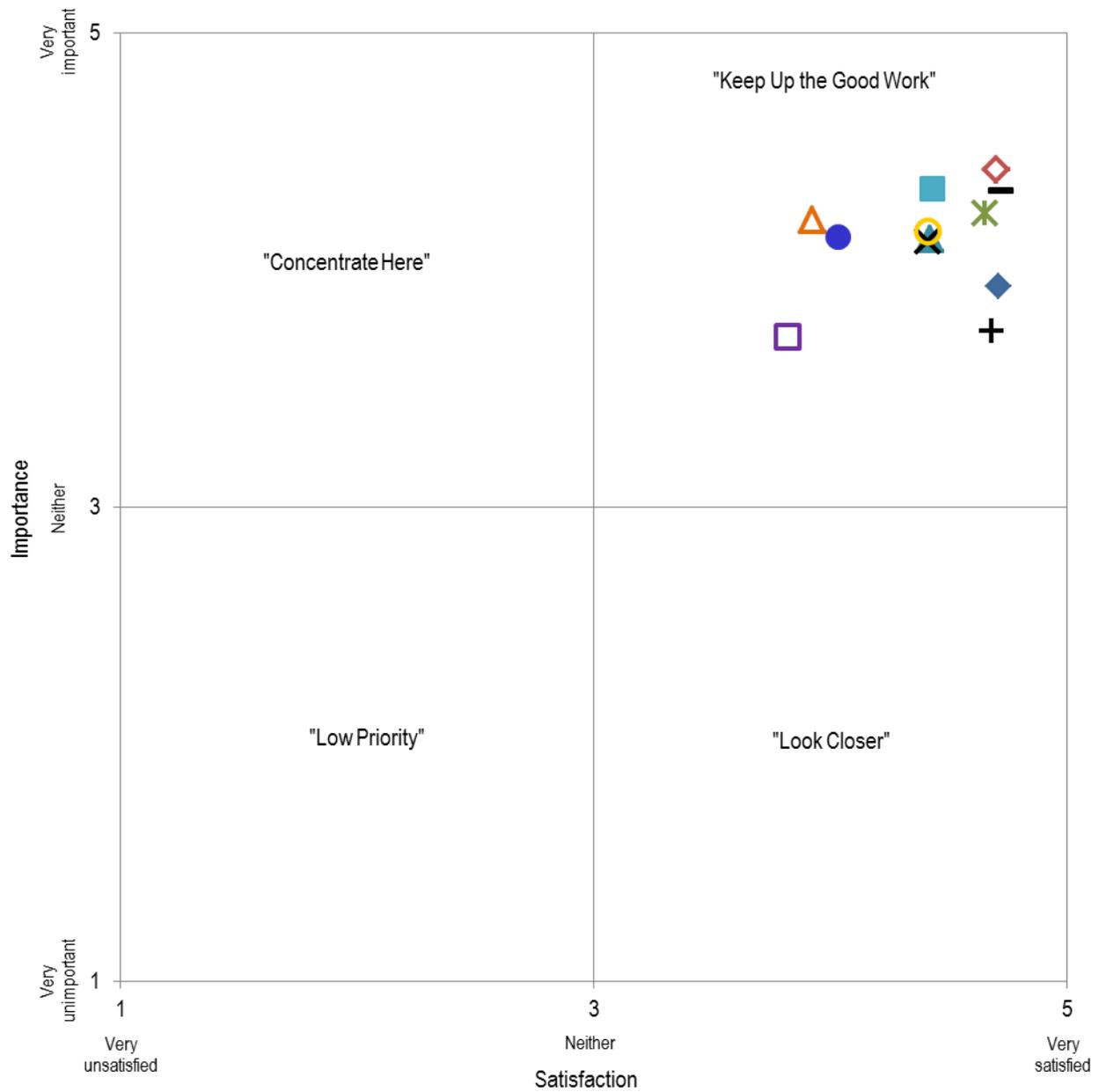
Figure 10. Importance-satisfaction ratings of services and facilities provided at Wichita Mountains Wildlife Refuge.



EXPLANATION

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

Figure 11. Importance-satisfaction ratings of recreational opportunities provided at Wichita Mountains Wildlife Refuge.



EXPLANATION

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

Figure 12. Importance-satisfaction ratings of transportation-related features at Wichita Mountains Wildlife Refuge.

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 Wichita Mountains Wildlife Refuge 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 Wichita Mountains Wildlife Refuge visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 13):

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

The majority of visitors were *not* likely to use a bike share program at national wildlife refuges in the future (fig. 13).

When asked about using alternative transportation at Wichita Mountains Wildlife Refuge specifically, 42% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (33%) and others thought it would not (25%).

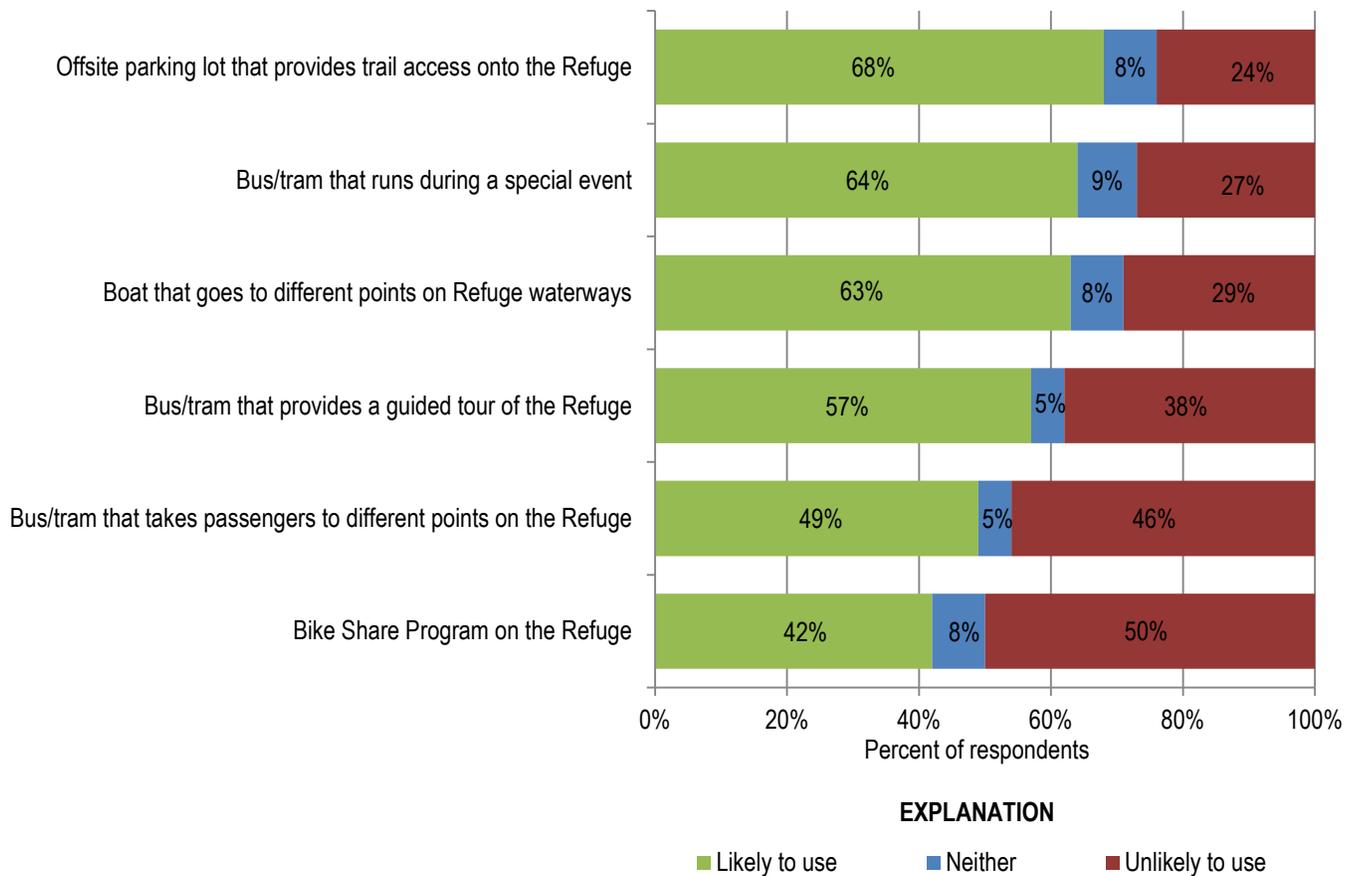


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 180).

Climate Change and the National Wildlife Refuge System

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

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

wildlife and their habitats. The majority of surveyed visitors to Wichita Mountains Wildlife Refuge agreed with the following statements (fig. 14):

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

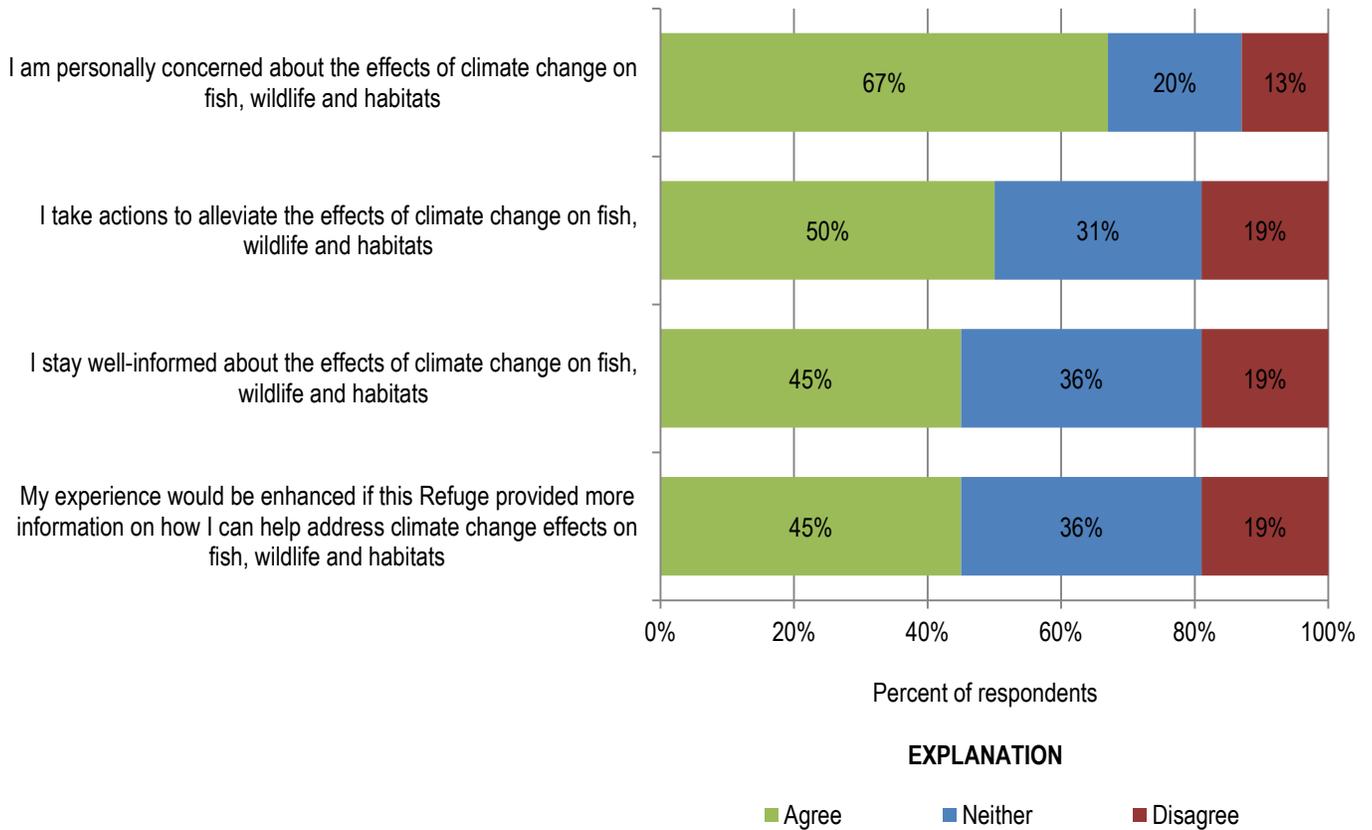


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 171).

These results are most useful when coupled with responses to belief statements about the effects of climate change on fish, wildlife and their habitats, because such beliefs may be used to develop message frames (or ways to communicate) about climate change with a broad coalition of visitors. Framing science-based findings will not alter the overall message, but rather place the issue in a context in which different audience groupings can relate. The need to mitigate impacts of climate change on Refuges could be framed as a quality-of-life issue (for example, preserving the ability to enjoy fish, wildlife, plants, and their habitat) or an economic issue (for example, maintaining tourist revenues, supporting economic growth through new jobs/technology).

For Wichita Mountains Wildlife Refuge, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 15):

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

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because some visitors (45%) indicated that their experience would be enhanced if Wichita Mountains Wildlife Refuge provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 14), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.

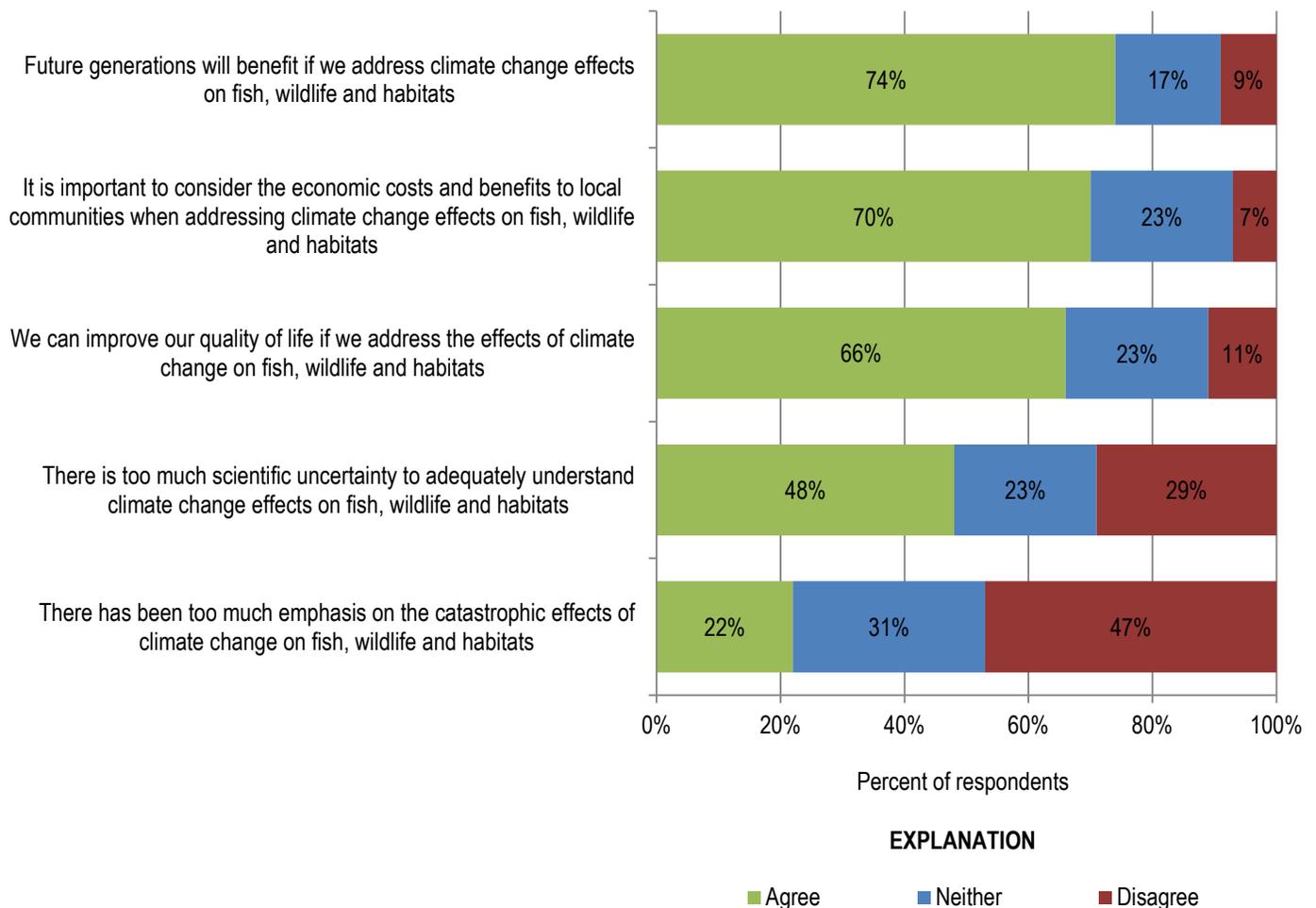


Figure 15. Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 170).

Conclusion

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

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

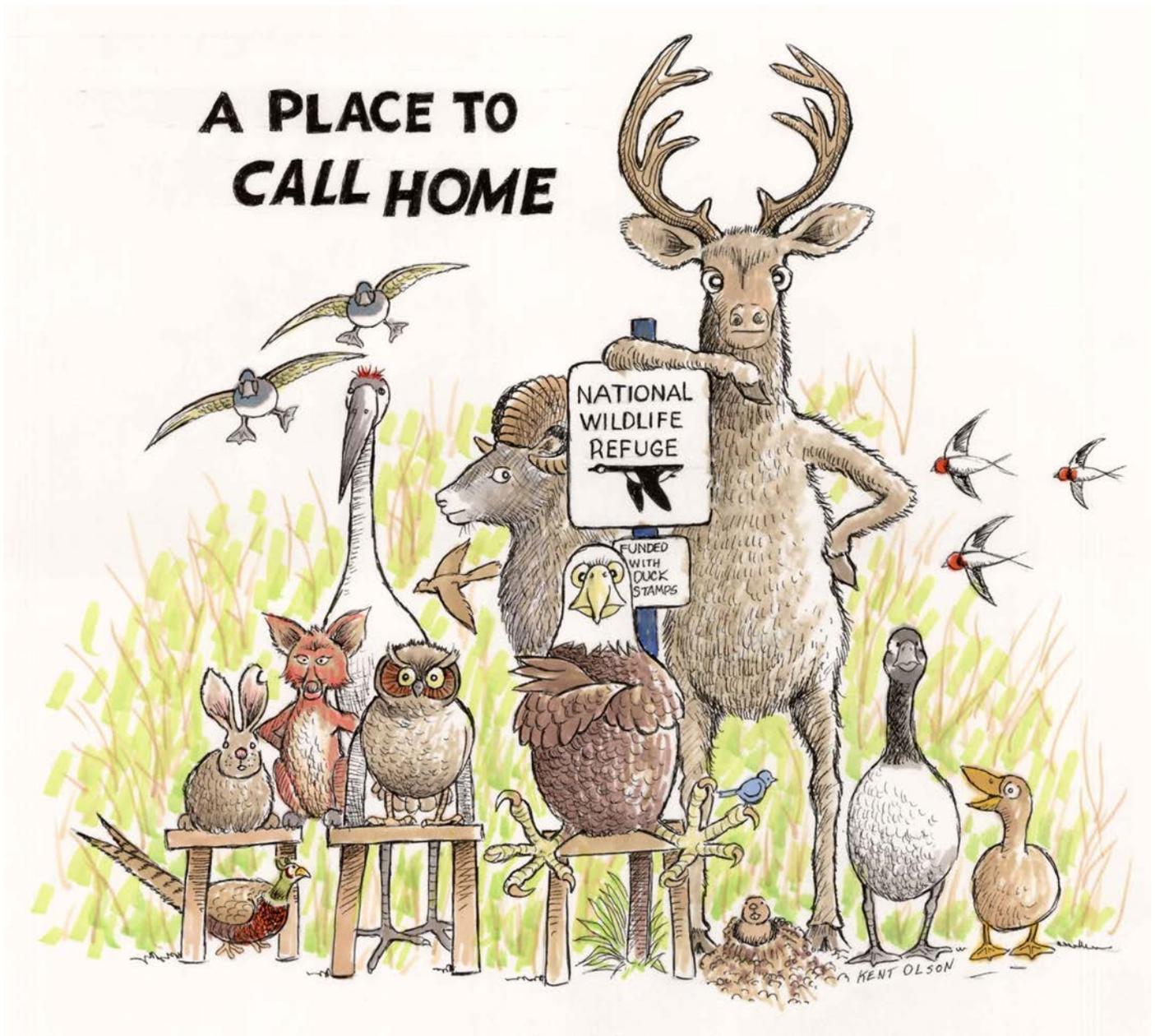
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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

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

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

SECTION 1. Your visit to this Refuge

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

- | | | |
|--|---|--|
| <input type="checkbox"/> 1% Big game hunting | <input type="checkbox"/> 65% Hiking | <input type="checkbox"/> 4% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 1% Upland/Small-game hunting | <input type="checkbox"/> 6% Bicycling | |
| <input type="checkbox"/> 1% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 54% Auto tour route/Driving | <input type="checkbox"/> 2% Special event (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 69% Wildlife observation | <input type="checkbox"/> 3% Motorized boating | |
| <input type="checkbox"/> 28% Bird watching | <input type="checkbox"/> 3% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 12% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 17% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 24% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 3% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 56% 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?

- 17% No
- 83% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 66% Visit the gift shop or bookstore | <input type="checkbox"/> 53% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 89% View the exhibits | <input type="checkbox"/> 70% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 55% Ask information of staff/volunteers | <input type="checkbox"/> 4% Other (<i>please specify</i>) <u>See Appendix B</u> |

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

Nonlocal	Local	Total	
<input type="checkbox"/> 68%	<input type="checkbox"/> 78%	<input type="checkbox"/> 72%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> 17%	<input type="checkbox"/> 15%	<input type="checkbox"/> 16%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> 15%	<input type="checkbox"/> 7%	<input type="checkbox"/> 12%	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 248 number of miles

Local 29 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?

30% No (skip to question #9)

70% Yes → What **type of group** were you with on your visit? (Please mark **only one**.)

91% Family and/or friends

7% Organized club or school group

0% Commercial tour group

2% Other (please specify) See Appendix B

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

4 number 18 years and over

2 number 17 years and under

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

67% Friends or relatives

14% Refuge website

9% Signs on highway

3% Other website (please specify) See Appendix B

6% Recreation club or organization

0% Television or radio

17% People in the local community

3% Newspaper or magazine

8% Refuge printed information (brochure, map)

8% 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**.)

78% Spring
(March-May)

58% Summer
(June-August)

57% Fall
(September-November)

29% Winter
(December-February)

11. How many times have you visited...

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

...other National Wildlife Refuges in the last 12 months? 1 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"/> 89% | Private vehicle without a trailer | <input type="checkbox"/> 2% | Refuge shuttle bus or tram | <input type="checkbox"/> 4% | Bicycle |
| <input type="checkbox"/> 6% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 7% | Motorcycle | <input type="checkbox"/> 34% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 2% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 1% | Recreational vehicle (RV) | <input type="checkbox"/> 2% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 1% | Wheelchair or other mobility aid | | |

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

- | | | | |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 43% | Signs on highways | <input type="checkbox"/> 11% | Directions from Refuge website |
| <input type="checkbox"/> 19% | A GPS navigation system | <input type="checkbox"/> 3% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 19% | A road atlas or highway map | <input type="checkbox"/> 20% | Directions from friends or family |
| <input type="checkbox"/> 13% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 57% | Previous knowledge/I have been to this Refuge before |
| | | <input type="checkbox"/> 1% | 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"/> 33%	<input type="checkbox"/> 13%	<input type="checkbox"/> 5%	<input type="checkbox"/> 36%	<input type="checkbox"/> 13%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 34%	<input type="checkbox"/> 16%	<input type="checkbox"/> 8%	<input type="checkbox"/> 25%	<input type="checkbox"/> 17%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 28%	<input type="checkbox"/> 11%	<input type="checkbox"/> 5%	<input type="checkbox"/> 34%	<input type="checkbox"/> 23%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 22%	<input type="checkbox"/> 7%	<input type="checkbox"/> 8%	<input type="checkbox"/> 32%	<input type="checkbox"/> 30%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 20%	<input type="checkbox"/> 7%	<input type="checkbox"/> 9%	<input type="checkbox"/> 41%	<input type="checkbox"/> 23%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 18%	<input type="checkbox"/> 6%	<input type="checkbox"/> 7%	<input type="checkbox"/> 34%	<input type="checkbox"/> 34%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 5%	<input type="checkbox"/> 15%	<input type="checkbox"/> 5%	<input type="checkbox"/> 40%	<input type="checkbox"/> 35%

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

- 33% Yes 25% No 42% Not Sure

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

Importance					Satisfaction						
Circle one for each item.					Circle one for each item.						
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important	Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable	
4%	13%	3%	42%	37%	Surface conditions of roads	3%	1%	2%	13%	82%	NA
5%	15%	8%	44%	28%	Surface conditions of parking areas	3%	1%	4%	11%	82%	NA
6%	5%	6%	25%	58%	Condition of bridges	3%	1%	3%	16%	78%	NA
4%	6%	9%	34%	46%	Condition of trails and boardwalks	1%	6%	6%	22%	64%	NA
5%	3%	8%	42%	42%	Number of places for parking	1%	5%	6%	25%	62%	NA
4%	5%	5%	43%	42%	Number of places to pull over along Refuge roads	2%	13%	9%	31%	45%	NA
5%	2%	2%	27%	64%	Safety of driving conditions on Refuge roads	1%	1%	2%	18%	78%	NA
4%	2%	4%	35%	55%	Safety of Refuge road entrances/exits	1%	2%	2%	17%	79%	NA
6%	2%	9%	37%	46%	Signs on highways directing you to the Refuge	2%	3%	8%	25%	62%	NA
4%	2%	4%	37%	54%	Signs directing you around the Refuge roads	2%	2%	5%	32%	59%	NA
6%	3%	7%	31%	52%	Signs directing you on trails	3%	14%	10%	37%	37%	NA
9%	7%	24%	24%	36%	Access for people with physical disabilities or who have difficulty walking	3%	4%	34%	23%	35%	NA

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

See Appendix B

SECTION 3. Your expenses related to your Refuge visit

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

34% Yes

66% 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?

 3 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
6%	7%	25%	11%	18%	3%	20%	1%	2%	2%	5%

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**.)*

3%	Far too low	0%	Too low	97%	About right	0%	Too high	0%	Far too high	82%	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.

6%	Strongly disagree	0%	Disagree	6%	Neither agree or disagree	44%	Agree	44%	Strongly agree
----	-------------------	----	----------	----	---------------------------	-----	-------	-----	----------------

SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	4%	3%	2%	26%	64%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	3%	2%	4%	22%	69%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	4%	1%	3%	24%	69%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	4%	0%	3%	20%	74%	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
3%	9%	10%	48%	31%	Availability of employees or volunteers	1%	2%	5%	19%	72%	NA
3%	6%	10%	31%	50%	Courteous and welcoming employees or volunteers	1%	2%	4%	16%	78%	NA
2%	4%	4%	29%	61%	Knowledgeable employees or volunteers	1%	3%	4%	15%	77%	NA
1%	3%	2%	34%	60%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	5%	5%	22%	67%	NA
2%	7%	9%	42%	40%	Informational kiosks/displays about this Refuge and its resources	2%	2%	11%	20%	65%	NA
1%	4%	7%	34%	53%	Signs with rules/regulations for this Refuge	1%	2%	8%	23%	66%	NA
2%	4%	10%	39%	46%	Exhibits about this Refuge and its resources	2%	2%	6%	19%	71%	NA
4%	6%	14%	37%	38%	Environmental education programs or activities	2%	1%	18%	24%	55%	NA
2%	2%	6%	25%	65%	Visitor Center	1%	1%	4%	10%	85%	NA
2%	2%	4%	25%	68%	Convenient hours and days of operation	1%	2%	3%	15%	79%	NA
2%	1%	4%	17%	76%	Well-maintained restrooms	2%	5%	3%	19%	71%	NA
5%	7%	12%	37%	40%	Wildlife observation structures (decks, blinds)	1%	7%	20%	25%	47%	NA
5%	12%	22%	36%	25%	Bird-watching opportunities	0%	2%	32%	24%	42%	NA
2%	1%	1%	29%	68%	Opportunities to observe wildlife other than birds	0%	0%	5%	27%	67%	NA
4%	4%	5%	26%	61%	Opportunities to photograph wildlife and scenery	1%	1%	8%	19%	71%	NA
44%	6%	28%	8%	13%	Hunting opportunities	4%	3%	51%	11%	31%	NA
21%	9%	20%	26%	24%	Fishing opportunities	6%	6%	26%	19%	44%	NA
5%	0%	10%	22%	64%	Trail hiking opportunities	2%	4%	8%	19%	67%	NA
15%	10%	25%	33%	17%	Water trail opportunities for canoeing or kayaking	4%	9%	39%	15%	33%	NA
18%	8%	25%	29%	20%	Bicycling opportunities	7%	6%	36%	14%	37%	NA
16%	9%	35%	19%	21%	Volunteer opportunities	4%	2%	53%	11%	31%	NA

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

See Appendix B

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

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

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

82%

Yes

18%

No

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

88%

Yes

12%

No

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

89%

Yes

11%

No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	5%	7%	21%	32%	34%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	5%	6%	23%	36%	30%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	10%	19%	23%	32%	16%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	6%	13%	36%	34%	11%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	2%	5%	23%	53%	17%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	5%	14%	31%	35%	14%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	21%	26%	31%	14%	8%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	3%	6%	16%	38%	36%
My experience at this Refuge would be enhanced if this Refuge provided more information about how I can help address the effects of climate change on fish, wildlife and their habitats.	8%	11%	35%	34%	11%

SECTION 6. A Little about You

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

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

99% Yes 1% 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? 1962 (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)			
					2%			19%				54%				25%			

5. What ethnicity do you consider yourself? 5% Hispanic or Latino 95% Not Hispanic or Latino

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

- 11% American Indian or Alaska Native 2% Black or African American 94% White
- 2% Asian 2% Native Hawaiian or Pacific Islander

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

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

- 2% Less than \$10,000 11% \$35,000 - \$49,999 15% \$100,000 - \$149,999
- 9% \$10,000 - \$24,999 25% \$50,000 - \$74,999 4% \$150,000 - \$199,999
- 8% \$25,000 - \$34,999 22% \$75,000 - \$99,999 4% \$200,000 or more

9. How many outdoor recreation trips did you take in the last 12 months (for activities such as hunting, fishing, wildlife viewing, etc.)?

13 number of trips

Thank you for completing the survey.

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

See Appendix B for Comments

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Appendix B: Visitor Comments to Open-Ended Survey Questions for Wichita Mountains 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
Elk tour	1
I went on a tour in late 50's with a SCS group. My husband worked for SCS until retirement.	1
Lawton Ft Sill Discovery Trail.	1
Motorcycle weekend	1
Total	4

Other Activity	Frequency
Bouldering	1
Camping	17
Camping with group	1
Cookout	1
Elk tours	1
Exercise, family fun.	1
Lunch	1
Motorcycle tour	1
Motorcycling	1
Picnic	2
Picnicking, cookouts	1
Relax and enjoy	1

Rock climbing	3
Sightseeing	1
Swimming	1
Trying to go rock climbing	1
Vacation	1
Ver los buffalos (To see the buffalos)	1
Visiting hometown	1
Volunteer work	1
Wildflower observation	1
Total	40

2 nd Other Activity	Frequency
Eagle tours	1
Motorcycling	1
Picnic	1
Scuba Diving	1
Ver los lagos (to see the lakes)	1
Watching elk and bison	1
Total	6

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
Church gathering	1
Cookout	1
Family outing	1
Fun weekend of riding.	1
Lawton Ft Sill Discovery Trail	1
Mt. Scott itself	1
Scuba Diving	1
The beautiful refuge	1
Wildflowers	1
Total	9

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

Other Visitor Center Activity	Frequency
Elk bugling tour	1
Introduce my 3-year old to new animals	1
Map	1
Picked up maps/brochures	1
Took pictures.	1
Watch buffalo	1
Total	6

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

Other Group Type	Frequency
Church family	1
I take my cross country team.	1
Shamanic education class/group	1
Total	3

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

Other Website	Frequency
ebird.com	1
Government web for WMAs	1
Lawton city info	1
Oklahoma tourism web search	1
Tulsa Audubon's online Oklahoma birding guide	1
Total	5

Other Ways Heard about This Refuge	Frequency
Coworkers	1
Fishing/tackle shop	1
Fort Sill Advertising	1
Fort Sill MWR	1
Geology tour in 1967	1
Lawton	1
Microsoft Streets and Trips	1

Oklahoma gazetteer	1
Oklahoma Travel Destinations	1
Published book on the area.	1
Several bird books	1
This was a field trip for a college class, so I learned of the refuge from my teacher.	1
U.S. Army	1
Visited during military service in 1959-61.	1
Total	14

Survey Section 2

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

Other Forms of Transportation	Frequency
4W SUV	1
Child's stroller	1
School bus	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
Brochure	1
Group leader had visited before.	1
Total	2

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
Air	1
ATV tour	1
Bike path would be so SUPER COOL!!!!!!!	1
Bike trails	1
Boat rental	1
Canoe rentals	1
Electric street legal golf cart - no pollution and doesn't scare wildlife.	1
Equestrian	1
Fishing boat rentals	1
Free helicopter tours	1
Golf cart to get to bathroom	1
Gondolas, canoes, horses	1
Horse	1
Horseback riding	2
I always want control of my situation...my transport nearby.	1
Private vehicle	1
Private vehicles	1
Train	1
Walking tour that allows photographers to sit in one spot until the shot they want is done.	1

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 = 26)

A weekend festival sounds like a great idea!

Appreciated the scenic trail improvements.

Could make the refuge more accessible to people with disabilities.

Gravel road/parking lots are not an issue for me. I would prefer the money be spent on habitat improvement or perhaps addition of land. More/better signs on hiking trails would be helpful.

Hiking Trails, particularly in Charon's Garden, are not clearly marked, especially when climber's trails diverge.

I am so proud to see how well the refuge has been kept up. I lived in Lawton in the 50's and 60's and the mountains are even more beautiful now. The place looks so nice and Mt. Scott has been well kept.

I do not want public transportation at the refuge.

I don't mind handicapped accessible parking, etc.; however, Pont du Hoc in France was ruined by the way it was made accessible. You can't ruin things if you want my support. Whether US property in other countries come under you or not, I don't want anything ruined. I don't want things interpreted to death either. Maintain Mount Scott and the refuge as it is.

I had a very enjoyable experience. This refuge is not only an asset to the state of Oklahoma, but a national asset as well.

I have a prosthetic leg and I am very happy with this refuge.

I have heard from others that they were ticketed for parking on the side of the road near a full parking lot. I agree with this policy, BUT it should be posted (many have parked similarly in the past and were not warned or ticketed).

I think it is easy to drive through the refuge.

If we were "new comers" and had never visited this refuge and decided to take a quick detour based on your signs on the highway, we would feel confident and reassured with the directions and site maps provided.

My first visit was without any incident and I enjoyed it very much.

Need more main road pull overs.

Needs more pull offs for people to look at animals. Mostly on open ranges; tree lined not so much.

Some of the refuge signs had faded and were difficult to read (need to be replaced).

Some trails are hard to follow because it is unclear which way to go.

There are no signs directing you on the trails at the Refuge in Oklahoma. My family got lost several times and so did other fellow hikers on the trails. I would highly suggest that they put up signs and markers!

They are currently building a bicycle trail and that is very important.

Try fixing the stairs for physical disabilities or difficulty walking.

Walking trails are not adequately blazed. On my last two visits, I lost the trail in rough areas, where it was somewhat dangerous to climb off-trail.

We come here with kids to experience nature first hand. All these buses or transportation seem like it would turn into Disney/commercial nightmare.

We found navigating this refuge quite easy and enjoyable.

We have basically always enjoyed our visits to the refuge and haven't found any problems with transportation. There have been times we missed our road or didn't see the sign, but we've found our ways in and out.

We would rent a boat if there was that sort of thing available.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 64)

Always found everything clean and well kept areas all around. Everyone was very friendly.

Bathrooms are terrible... but that was expected. Trails are wonderful. Would love the chance to rent a bike or rent canoe/kayak.

Beautiful!

Change all the rules back to the 40's and 50's. Let people camp out as they used to. Also let the people get in the water.

Disappointed there are no swimming areas in refuge.

Drinking water facilities would be nice.

From an article in the paper, we went to see the elk bugling. We only saw 2 elk with binoculars. Ranger said weather should be cooler. Be more specific about article in paper. If possible maybe a few signs where you would be more likely to find elk, deer, etc.

Great place to ride your bicycle.

Great staff, helpful, knowledgeable, and went out of their way to help.

Great visitors center!

Had a great time!

Hunting and fishing should only be allowed if a balance of a species needs to be maintained. Example: beavers do not need to be hunted. Possible relocation is preferred. Large animals should not be controlled by public hunting permits. This should be only allowed to Rangers that

have specific information on the ecology of the protected refuge.

I am concerned about the prairie dogs.

I don't know about anything until it is too late. Would like to know on time or before anything goes on out there.

I enjoyed it very much. Everyone was very nice.

I enjoyed my visit and the employees were very helpful.

I go at least 2 times a year- love it!

I had a lot of fun and I was wondering if you'd have to fill out anything to be a photographer there. Because I love taking pictures.

I like driving through this facility because it is a pleasant drive and my family likes to see the mountains, animals, and beauty of the drive. It is very pleasant to go through on the way to and from the big city.

I love the visitors center. I love the refuge and am glad it is available to visit and hike at.

I particularly enjoyed the opportunity to observe Black-capped Vireos on the refuge.

I think patrolman Nick could be a little nicer and not such a "smart ass".

I want to see a better gift shop.

I was very impressed with the excellent visitors' center. It was well-designed and enjoyable. I especially enjoyed visiting the theatre to view a film about the refuge. The wildlife refuge definitely lived up to my expectations and I look forward to returning for many more visits. I was disappointed not to be able to view the elk, but maybe next time I will get a chance to see them.

I was very pleased to get to see a small herd of deer, several bison, and multiple prairie dogs. I love the serenity of strolling through the refuge. I go for the raw nature, all the amenities are a distant second to being there and seeing the wildlife.

I wish there was more printed information about climbs in the Park.

I wish there were information available about the geologic history of the Wichita Mountains - which happens to be one of the most interesting geologic structures in the U.S. Unfortunately, this information was nowhere to be found, nor could I find an employee who knew anything about it.

I would like to see at least one bike path other than the service road trail behind Mt. Scott.

I would like to see the refuge hours change due to we photographers that enjoy shooting the animals after the sun goes down. The refuge closes right after dark and that is when a large number of animals and even predatory birds come out.

I'd like to see mile markers on the trails. Maybe signs identifying trees, landscape features, etc.

Instruction for application for hunting opportunities need to be more specific, standardized, and easily found.

Leave it as it is.

More fishing access for those without water craft would be appreciated. There are not many options for those without the resources to buy expensive recreational vehicles for fishing opportunities.

My wife and I have been going here for 12 years. We go sometimes two or more times a month. It is our favorite place to go and unwind. We love it!

Need a direct phone line to park police at prairie dog stop. Kid are running all over the prairie dog town. Wanted to report them so they could be stopped.

Need more and better trash can / waste disposal areas to prevent littering problem.

Need to clean up the tree limbs and trees from the ice storm.

Not sure if recent fire had effect, but did not get to see hardly any bison, no elk. Viewing wildlife was very limited this trip. We were hiking on trail, then it was gone; not sure which way to go to get back on it.

People at visitors desk are not knowledgeable of places to see in the refuge. No one could tell me how to get to the falls near Post Oaks Lake.

Picnic and restrooms need a little bit more attention on cleaning and picking up trash.

Regarding employees: I had one very knowledgeable and friendly employee (asked us to take this survey) who helped us greatly in our hiking experience. Unfortunately the person at the desk in the visitor center was the opposite and created a very negative feeling.

Restroom at rest/picnic area was clean, but smelled horrible. The tank really needed to be pumped. There were no doors on the building or the stalls in the women's area, but rather a walk around. I would assume the men's also was the same. This is a personal safety issue as well as a liability issue as longhorns had obviously just visited the area outside the stalls. A cornered animal that wandered in could be very dangerous.

The best photographic opportunities are at sunrise and sunset. The park hours need to be extended to earlier or later.

The compost toilets got really stinky with lots of people...especially the large groups...like scouting.

The day was perfect, the prairie dogs and bison were the highlight of the day.

The employees and facilities were wonderful!

The lakes appear to not have fish in them. Seems very odd to the point that something is wrong with the habitat. My most recent trip to the refuge was a major turn off.

The signs were great, very informative and clearly posted.

The timer for the women's bathroom needs to be longer. There is no way a girl can undress, shower, dry off, get dressed, and get back before the timer runs out. Leaving her in scary pitch darkness. Yikes.

The visitor center was very clean, informative and the staff was very courteous. We always take visiting friends and relatives to the refuge when they are here for a visit. Everyone has enjoyed seeing the buffalo and prairie dogs in the natural habitat.

The visitors center is so nice and clean and neat.

The visitors center is very nice.

This refuge has great opportunities for viewing wild longhorn cattle and buffalo. However the opportunities to view elk are very limited. There need to be more opportunities to go on the elk bugling tour during the rut (September). The present tours are always full. Need more elk tours!

This refuge has far more visitor facilities than most wildlife refuges. Although we didn't camp, the campground looked wonderful and there were lots of birds there. It was a great place to just wander.

This was our first trip, but not our last!

Very knowledgeable, friendly forest ranger on hand to answer our many questions.

Volunteers very helpful and informative. Restroom facilities very clean.

We love the refuge, but are disappointed in a lot of the restrictions that have been placed on camping sites. It is a shame that people have become so disrespectful and destructive.

We need more people at sunset section of hiking trail to acquaint new visitors with the ups and downs of the area.

We very much enjoy the Wichita Wildlife Refuge and camp there several times a year. Our main and only issue is the public showers provided in camp Doris. There is little water pressure in all shower heads. Example, in the men's shower facility, of the three, only one has adequate water pressure and lasts approximately 1-minute 30-seconds before the water activation button needs to be pressed again. While all others in the men's shower facility have lower water pressure and less time between pressing the activation button! The women's showers are extremely inadequate! The length of time water lasts, approximately 6 seconds, before having to press the button again! As if that isn't difficult enough to keep up with, the water pressure is extremely inadequate! Please keep in mind that these showers, both men's and women's, are in the same building and separated by a wall. I'm sure you know they are getting water from the same location. It would be very nice if the water pressure and the length of the time the water ran was equal in ALL showers, meaning good pressure to wash hair (especially longer hair) and the length of time was increased to at least two minutes, give or take a few seconds! At least have ample water pressure!!!

We were there in the most recent visit to trail hike. All the trails were well maintained and marked and had a great experience.

Well maintained facilities.

Would like a swimming hole available. Also would be nice if education center events could be posted at campgrounds and not just the visitors center. Need cell phone service.

You need more than one bike trail. Maybe some for amateurs like us. And not blocked by a GIANT BUFFALO that gave us a death stare and made us turn around and go back the way we came. But it made for a good story.

Survey Section 5

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

Comments on What Makes Refuges Unique? (n = 127)

A wonderful place to observe wildlife in their native habitat and take photos, take and educate children on the wonders of God's world, as well as to get away for several days in a tent.

Actually seeing animals on the roadside and in roads.

Allows people to experience the different animals in their surroundings and teaches children and adults about nature.

Animals can be observed in their natural habitats.

Because there is a lot of information.

Being close to the animals in their own habitat. Needs to be more space to park and watch so other drivers don't run you off the road. I love this place - it is nice that it's somewhat of a free activity to do with the family. Course it cost to get there (gas snacks etc)..... So real nice you don't have to pay anything to get in. Bike lane or trails would be huge.

Bison and hiking.

Bison and other animals seem so free. And they are treated well. It is a clean, quiet place.

Buffalo wandering through your campsite. Your prairie dog fields. Driving over cattle guards. Mt Scott (where I got engaged 7 years earlier) And your rangers actually enforce quiet hours, which is awesome! No rap/techno at 2am here!

Chance to see animals in their natural habitats and the land how it naturally occurs.

Clean, rustic, amazing views/scenery. Can't believe I had never heard of this refuge until recently and I live so close! Amazing!

Designed as a refuge first / recreation area second.

Different species of wildlife to see. You see how they change from season to season as in their coats and migrations.

Don't allow people to walk up the highest mountain on the narrow, curvy road. It's dangerous to them and vehicles.

Driving within feet of the bison and arms reach from the prairie dog town. Plus, really educating us at the visitors center about the plights of many of the natural species made us want to help in the fight to preserve nature, which we didn't feel when we went to National Parks or State Parks.

Every time I visit the refuge I see and meet people from foreign countries and they are amazed.

Everything spread out, more room to explore.

Free access to rock climbing and the quality of wildlife and fauna.

Free-range wildlife.

Giant Buffaloes, more land area, and better hiking/sight seeing.

Great view, had a blast.

Hiking is much better here than at some other refuges I've visited.

How serious they are about conserving the land. We stayed in our camper and the area is always fun to camp in and the deer were constantly around us.

I am a wildlife photographer and NAMPA member. I wish future generations to be able to witness what I have had the opportunity to view and enjoy, and I feel that Refuges are likely the last chance for this to continue long-term.

I am most interested in the geologic history of the Wichitas and the nearby Slick Hills (a part of the Arbuckle Foldbelt). It's not every day you get to visit a fossil mountain range. I wish that information about this unique feature were more widely available to the public.

I enjoy the wildlife, the fowl, the bison, and the long horns.

I had an opportunity to show buffalo to my kids; it was great.

I have visited natural parks and greatly appreciated the refuge.

I home school my son and it gives me the opportunity to educate him about nature and conserving nature.

I prefer FWS approach to land management over that of National Parks' don't touch attitude.

In the "plains" of Oklahoma, the refuge is a nice escape.

It has maintained its natural habitat and feeling. It's very well maintained to keep it that way. We love the refuge. As a child my mother would bring me and my siblings and so today I bring my family and grandchild.

It is as close to natural as possible, with not many people (especially staff) bothering one enjoying the experience. And it is beautiful. I didn't like the volunteer being there to ask me to do the survey (which is now too long and I don't see what it can accomplish except to use as a way to put a fee on the place) even if she was a nice lady.

It is beautiful.

It is the only place where I can step out of my car and in 30 minutes feel like I am in the wilderness. With no hunting, the opportunity to see animals is greatly increased.

It provides an abundance of information on the history, geography, and wildlife in the refuge that other places do not have available to visitors.

It seems they are run differently. Fees are usually not as much as state or national parks and provide areas close by for recreation.

It's an enjoyable place to visit any time of the year.

It's clean, serene, and the nature opportunities are unique. The camping and picnicking areas are well taken care of.

It's the only place that I know of that you can see the land in its natural state that the whole family can enjoy.

It's wildlife as wildlife country is supposed to be. Truly wildlife nature as God's creation, not man.

Location-area. Types of animals, terrain, and wildflowers.

Love seeing animals in their natural habitat.

Mainly because you can observe wildlife in its natural habitat and enjoy God's beautiful creations.

More educational opportunities.

More friendly to hunting.

Mostly natural habitat.

Mt. Scott Forest parallel. Seeing wildlife from my vehicle.

Mt. Scott.

Observation of wildlife in a natural setting.

Observation of wildlife in their natural habitat.

Open range!

Opportunities to see and feel nature.

Opportunities to see wildlife that are available in natural areas.

Opportunities to view wildlife in their natural habitat, although some National Parks also offer this, example Yellowstone.

Opportunity to observe and appreciate wildlife in their natural habitat. Visitors Center offered wonderful educational opportunities for adults and children. Great exhibits and very knowledgeable and helpful staff.

Photographic opportunities.

Preservation of wildlife that is almost non-existing and very important.

Proximity to Lawton. Rangers have great attitude.

Range animal herds, beautiful mountains, streams, lakes. Hiking is great, very cool.

Really enjoyed the Doris Campgrounds. It was clean and well taken care of. The hiking trail on Elk Mountain was excellent. My daughter took a lot of pictures.

Refuges are managed for wildlife and habitats and not so maintained or structured as public recreational areas. Refuges are wild and allow for a more natural experience.

Refuges give us the opportunity to see wildlife up close, to experience the beauty nature has to offer, and to see wildlife in a natural habitat.

Seeing such a pristine environment was an extraordinary experience for me. Not only the wildlife, but the prairie grasses and multiple lakes added to a memorable visit. Seeing wildlife in this special environment, especially the buffalo and long-horn steer, was a real treat!

Si he visitado otros refugios que ofrecen sin numero de actividades pero este en particular es ver lo que puedas y lo que encuentres bajo tu propio riesgo no hay nada de actividades o un plan que se pueda seguir durante las temporadas ej rappelling, mountain bike, y otras actividades y deportes que se pueden desarrollar en las instalaciones del refugio. Tambien se deberian desarrollar actividades que promuevan a la educacion hacia la preservacion de recursos naturales y flora y fauna... (Translation: I have visited other refuges that offer few activities, but at this one in particular, it is only see what you can and what you find to do, do at your own risk. There are no activities or a plan that you can follow during your time at the refuge ie: rappelling, mountain biking, and other activities and sports that they could develop at the refuge facilities. They should also develop activities that promote education about the preservation of natural resources and flora and fauna.)

Size, access, wildlife viewing opportunities.

Taken as an entire package in all the 50 states, it is possible to see most all of the 800 or so species of birds that regularly occur in the USA. But aside from this, the other plant and animal life and - experience is one of the best travel bargains going!

The ability to be in an area that is dedicated and managed for the public to enjoy the wildlife, not just recreate but to observe the true nature of wildlife habitat.

The ability to camp within the refuge allows one the opportunity to observe (sight & sound) the wildlife 24/7. Morning birds, night coyotes, stars without light pollution; all of these things allow us to experience the refuge system in a heart & soul manner. Hunting and fishing is an important management tool that I feel is being properly utilized on the refuge to maintain a healthy ecosystem.

The ability to get close to wildlife in their natural environment. It offers great fun and educational opportunities you can't get anywhere else.

The access to the wildlife, including buffalo, longhorn, deer, etc. is wonderful - we camped during our last visit and had to watch out for the herd of longhorn in the campsite. My kids loved it!

The animals are care free and it is an experience to watch them in their environment.

The animals are protected and regulated, hunts that are needed are controlled. The animals are healthy.

The animals. My 5 and 6 year old great-grandsons had a great time fishing and seeing the animals. My husband and I are taking the elk tour next week.

The area is very unique and we have great pride in it being an Oklahoma jewel.

The beautiful landscapes and the free-roaming animals. The sense of freedom the Wichita Mountains displays is breathtaking.

The bison.

The cleanliness of the areas; the friendly, helpful, and knowledgeable staff.

The free-range long horns and bison.

The freedom the animals are given.

The Holy City was interesting.

The landscape.

The mission of conservation of our natural flora and fauna.

The opportunity to observe buffalo and long horn herds.

The opportunity to see land in its untouched state and observe wildlife in their natural habitat.

The prairie dog city is very unique. Also, being able to see buffalo and long horns up close is amazing.

The primitiveness and restricting number of backcountry permits keep the backcountry a joy to hike through and backpack in.

The raw wilderness is the rare glimpse of the territory before all of man's intrusions. The refuge is necessary to the species they maintain.

The refuge is a calming, enjoyable place for all to go with a lot of things to do for all ranges of ages and interests. Plus with this economy, it is nice to have a place for families to go and enjoy the beauty and each other without "breaking the bank." It's a great place for families to spend time together and enjoy nature.

The story of preserving the bison has always interested me. And I enjoy seeing and showing them to others (family from other states).

The varied amount of special and local wildlife.

The variety of wildlife that is available to observe. A great place. [signed]

The Wildlife have the right of way, humans are second. Greater attempts to minimize human impact to the area rather than Parks and other places.

The wildlife in their habitat. Amazing!

The wildlife.

There are more protected animals that my child can see in their natural environment. We can teach him about the plants, animals, and land simultaneously.

There is no other place like this refuge in the region. It not only allows for recreation, but functions to preserve wildlife.

There is nothing else available for hikes like this in my driving range.

Their openness to the wildlife.

They are areas where one can experience nature that has been preserved.

They are not unique. National Parks are similar, but both provide essential access to and preservation of natural resources.

They are open to the public for hiking and camping, which gives a good environment for a family and for education.

They have a different feel...not as traversed.

They provide a safe and family friendly environment to appreciate our lands and all the wildlife that inhabit it.

They provide opportunities, maybe the only opportunities, to view wildlife in parts of the country. They provide limited/controlled but good hunting opportunities that may not be allowed outside the refuge.

They tend to be more natural and untouched than other public lands.

This facility is the only one I have visited and I don't travel much.

This refuge is unique to Oklahoma. I like the openness and freedom to roam around and enjoy the outdoors.

This refuge lets us see what this part of the country was like centuries ago. It is a peaceful place to go and it makes you feel closer to God.

This refuge provides an area in my state that allows me to fish and hike while buffalo roam next to me. I know this is available in other areas of the country, but not near my home town of Oklahoma City. It is a beautiful getaway that is far enough away to remove me from the city, but not so far that I need to spend the night.

To be able to see everything (plants, animals, nature) up close and in its natural state.

To stress the importance of balance and care of our natural wildlife and lands. This information and the chance to experience it is slowly being lost in our peoples, children, generations. We need required grade school and high school classes to ensure the futures of habitats that are vital to the correct balance of nature. These refuges will provide VITAL information on so many differing levels.

Topography

Unique is seeing the animals thriving in their natural environment. Buffalo, deer, elk, rabbit, raccoons and other life forms are safely protected and managed to co-exist. Otherwise these animals stand the chance of becoming extinct and future generations will be the losers! One can

also be very educated with the habitat and the geological significance of this part of the United States.

Unique opportunity to view buffalo and beautiful rock formations.

Variety of wildlife, visitor access to view/photo wildlife.

Very much appreciate a place that is safe to visit and see the nature of the world. I like having the modern conveniences of a camper with electric and water and being able to watch the wildlife living here.

Viewing the wildlife.

We enjoy observing the wildlife, and the "untouched" or "unseen" feeling of the trails and outdoors. We enjoy the emphasis on leaving nature as we found it, so that we and others can enjoy it and not feel like we are just in with the crowds.

We were here 50 years ago - you have improved a lot of things... We were pleased with what you are doing... the movie was good information...

Wildlife and habitat.

Wildlife management, elk, bison, long horns, are very important for my family and me to view. We enjoy our hikes and a place to see nature.

Wildlife roaming freely. The visitors that respect wildlife.

Wildlife viewing, well maintained, Mt Scott.

Yes, because it lets the Boy Scouts come here to complete some of their requirements.

You can see all kinds of wildlife from the roads.

Additional Comments (n = 39)

As a youth, I was fortunate to become an Eagle Scout in the Boy Scouts of America. As an adult, I have become involved in scouting for Cub Scouts to work as an Assistant Scoutmaster. My interests and concerns are true with experience. If I may be of further assistance, feel free to contact me. [email, phone #, address, signed]

Awesome experience! Thank God we preserved this area! Keep up the good work!

Change all the rules to what they were in the 40's and 50's. Let us camp and get in the water when we like.

Climate change is phony. Use common sense.

Had a great time - we always enjoy our trips to see nature.

I am a lover of nature and this wildlife refuge has it all. Thanks.

I am not sure on the number of trips, as we hunt, fish, camp, hike etc. - so it may be more than 20.

I believe the refuge is a great learning tool for our young, to help them learn to appreciate the outdoors and the beauty it provides for all of us.

I came back to the refuge for my 27th wedding anniversary. I miss the mountains and wildlife that I used to experience in my younger years. I wish I could live no less than an hour's drive from the refuge, but I can't.

I came to this refuge to see a specific bird species, the Black-capped Vireo. I found 5 or 6 of them, in part due to advice from refuge personnel and my own skill. I discovered in the process, a very nice, under-rated place set amid great scenery and history. Oh, and we saw 81 other species of birds besides the one we had come to find. We will return.

I enjoyed visiting the refuge. I was able to see wildlife and enjoy the scenery which I otherwise did not know was in OK. I'm from out of the state and until this visit, had only been to the big cities. Thanks.

I go pretty much every day. I do photography and enjoy making friends with the Prairie dogs. I also sit and watch the birds at Dog Hollow or Dog Run Park and sit there until they slowly trust me as a non-predator so I can get close up shots of them. I also enjoy getting close to the bison to get close ups as well. I want to shoot the predatory birds but have only shot a Mississippi Kite and some turkeys. The other birds I want to shoot only come out after park hours are over or right before the park opens up.

I have a Golden Age Pass that I have used at the RV Camping sites. Some great camping sites.

I have been coming to this refuge since I was 10 years old. It has great camping and is just a wonderful place to come and think things through when the world comes closing in on you.

I lived on a farm in far western Oklahoma until I graduated high school. I went to work as a nurses aid until I met my husband. He worked for SCS for 35 years until he was sent to Lawton in 1955. We lived there 7 years and spent a lot of our free time visiting the refuge. My oldest son was 6 when we brought a sandwich picnic one evening for supper. He saw his first deer on that trip. We made more trips, some going up Mt. Scott and a lot of drive through to see the animals. As we both grew up on farms, we wanted our children to have the pleasure of seeing animals and growing up to appreciate the beauty of our land and to care for the land "as God intended people to do." When my husband became ill after retirement we would have appointments in Oklahoma City, the visitors center would be a nice break from the car. He was in a wheel chair and the facilities were easy to get to. Thank you for the Wildlife Refuge. [signed]

I love it!

I really enjoyed my visit and plan to bring other family members and friends to see it in the near future.

I think that most of the back trails should be widened without hurting the natural flora and fauna. Poisonous plant pictures should be posted throughout the park.

I was wondering what would people have to do to be a photographer at the refuge? And how old would you have to be? I love taking pictures especially at this refuge. It's one of the prettiest places I have ever been.

I watch wildlife in our cities and at every chance I can. I feel there are not enough refuges available to our ecology and we have not learned enough to determine what is truly needed to provide adequate environments for our wildlife, insects, microbes, and plant life.

I'm very glad the Wichita Mountains Wildlife Refuge exists, and that the public thus far has access to this interesting geologic feature. It's too bad there's a military firing range just to the south of it.

Increase elk tours. Limiting any plans to release wolves on this or any other NWR or NP, it has gotten out of hand. This NWR is a great one. Needs more pull offs on main roads through refuge.

Lately on our rides, I have noticed a lot more families using picnic areas. Fishing areas need some changes. I noticed it was hard for kids to get past the messy areas. Maybe a path would help with that in some of the smaller lakes. It's a great place and I have enjoyed all of it for 50+ years. I've seen a lot of good changes and improvements. Keep up the good work.

My answers for section 3 question 2 are all zeros because I live in the local area and spend most of my money here. I cannot give a good estimate for things like restaurants, groceries, gas, etc.. Also my answers for Section 4 Question 2 may not be the most accurate. I am not familiar with all the services, facilities, and activities that are available.

Our family really enjoyed the weekend stay at the refuge. We will definitely be coming back.

Several groups of people were seen feeding deer in the campsites with deer food they had brought.

Sorry for the delay on responding to this survey. I can be of further assistance if needs, please let me know. Thank you.

Thank you for taking care of the Wichita Mountains. Thank you for caring about the wildlife there. I loved growing up there. My parents are buried in Lawton. Thank you for caring for the prairie dog town and letting people enjoy seeing them.

Thank you for taking care of this beautiful and sacred space.

This is someplace we can come with family and not have to spend a lot of money. With 4 kids that is not easy. We also try to educate them on effects people have on environment and wildlife. We have to change the younger generation's way of thinking and acting to make a difference.

This was most enjoyable and we will return often for seasonal photography. This was the best Visitor Center I can recall seeing in a very long time. Informative, visual, and totally keeping to the subject at hand, even the gift shop, without being commercial/touristy.

We are very pleased to see the new bike paths along the main road from Cache, OK to Medicine Park.

We enjoyed the Refuge very much... We especially like the Prairie dogs!!! My wife's very favorite...

We had a wonderful time. The camping area was so clean, bathrooms/showers gratefully used, and the rocks perfect to climb for the children.

We mainly use the Wichita Mountains wildlife refuge for cookouts and hiking.

We mostly go to the refuge for picnicking, hiking, family outings, and our personal school outings and activities. We enjoy the park, and for years I've enjoyed the Great Scott overlook, hiking up and spending a day with family and friends. We enjoy the visitors center with the younger children. [signed]

While the need for alternative energy is at the fore front of us all, the "windmills" at the Wichita Mountain Wildlife Refuge are an unwelcome "eye sore" in the midst of this beautiful refuge!

You want too much information that is none of your business. The only thing I fear more than creeping socialism is Green (environmental) Nazis. I pay so much in taxes now, I don't want to spend another damn cent on any hidden taxes or fees.
