



National Wildlife Refuge Visitor Survey 2012: Individual Refuge Results for Balcones Canyonlands National Wildlife Refuge

By Alia M. Dietsch, Natalie R. Sexton, Lynne Koontz, and Shannon J. Conk

Because refuges have a wildlife conservation mission, they provide a wonderful opportunity to observe wildlife in their native habitat. Opportunities are provided for the public to connect with nature in a manner that is compatible with the mission of the National Wildlife Refuge System. These areas are also important for fostering an understanding and appreciation of the environment through environmental education activities for children.

— *Survey comment from a visitor to Balcones Canyonlands National Wildlife Refuge*



Balcones Canyonlands National Wildlife Refuge. Photo credit: U.S. Fish and Wildlife Service.

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Introduction

The National Wildlife Refuge System (Refuge System), established in 1903 and managed by the U.S. Fish and Wildlife Service (Service), is the leading network of protected lands and waters in the world specifically dedicated to the conservation of fish, wildlife, and their habitats. There are 560 national wildlife refuges (refuges) and 38 wetland management districts nationwide, including possessions and territories in the Pacific and Caribbean, encompassing more than 150 million acres (U.S. Fish and Wildlife Service, 2013). As stated in the National Wildlife Refuge Improvement Act of 1997, 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 the diversity and interconnectedness of fish, wildlife, and plants, and their habitats” and the goal “to provide and enhance opportunities to participate in compatible wildlife-dependent recreation” (U.S. Fish and Wildlife Service, 2006, p. 2). The Refuge System attracts nearly 45 million visitors annually, including 34.8 million people who observe and photograph wildlife, 9.6 million who hunt and fish, and nearly 675,000 teachers and students who use refuges as “outdoor classrooms” (U.S. Fish and Wildlife Service, 2012). Understanding visitor perceptions of refuges and characterizing their experiences on 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 refuges. The purpose of the survey was to better understand visitor experiences and trip characteristics, to gauge visitors’ levels of satisfaction with existing recreational opportunities, and to garner feedback to inform the design of programs and facilities. The survey results will inform performance, planning, budget, and communications goals. Results will also inform Comprehensive Conservation Plans (CCPs), visitor services, and transportation planning processes.

Organization of Results

These results are specific to visitors who were contacted at Balcones Canyonlands National Wildlife Refuge (NWR) (this refuge) during the specified sampling periods and are part of USGS Data Series 754. All refuges participating in the 2012 survey 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 survey effort.
- **Methods:** The procedures for the national survey 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 Refuge System topics
- **Conclusion**
- **References Cited**
- **Survey Frequencies (Appendix A):** The survey instrument with frequency results for this refuge.
- **Visitor Comments (Appendix B):** The verbatim responses to open-ended survey questions for this refuge.

Methods

Selecting Participating Refuges

The national visitor survey was conducted from January–December 2012 on 25 refuges across the Refuge System (table 1). Each refuge was selected for participation by the Refuge Transportation Program National Coordinator in conjunction with regional office Visitor Services Chiefs. Selection was based on the need to inform transportation planning processes at the national level and to address refuge planning and transportation needs at the individual refuge level.

Developing the Survey Instrument

Researchers at the USGS 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 (one 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 at which to sample, 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 the 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 3–5 hour (hr) time bands, stratified across AM and PM as well as weekend and weekdays. In coordination with refuge staff, any necessary customizations were made to the standardized schedule to accommodate the identified sampling locations and to address specific spatial and temporal patterns of visitation.

Twenty visitors (18 years of age or older) per sampling shift were systematically selected, for a total of 320 willing participants per refuge (or 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. Refuges participating in the 2012 national wildlife refuge visitor survey.

Pacific Region (R1)
Ridgefield National Wildlife Refuge (WA)
Southwest Region (R2)
Balcones Canyonlands National Wildlife Refuge (TX)
Hagerman National Wildlife Refuge (TX)
Kofa National Wildlife Refuge (AZ)
Santa Ana National Wildlife Refuge (TX)
Tishomingo National Wildlife Refuge (OK)
Great Lakes-Big Rivers Region (R3)
La Crosse District, Upper Mississippi River National Wildlife and Fish Refuge (WI)
Minnesota Valley National Wildlife Refuge (MN)
Southeast Region (R4)
Crystal River National Wildlife Refuge (FL)
Eufaula National Wildlife Refuge (AL)
Felsenthal National Wildlife Refuge (AR)
Lacassine National Wildlife Refuge (LA)
National Key Deer Refuge (FL)
Savannah National Wildlife Refuge (GA/SC)
Northeast Region (R5)
Assabet River National Wildlife Refuge (MA)
Back Bay National Wildlife Refuge (VA)
Chincoteague National Wildlife Refuge (VA)
Edwin B. Forsythe National Wildlife Refuge (NJ)
Rachel Carson National Wildlife Refuge (ME)
Mountain-Prairie Region (R6)
Bear River Migratory Bird Refuge (UT)
Lee Metcalf National Wildlife Refuge (MT)
Rocky Mountain Arsenal National Wildlife Refuge (CO)
National Bison Range (MT)
California and Nevada Region (R8)
Don Edwards San Francisco Bay National Wildlife Refuge (CA)
San Luis National Wildlife Refuge (CA)

Refuge staff and/or volunteers (survey recruiters) contacted visitors onsite following a protocol provided by the USGS that was designed to obtain a representative 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 contacting only one person per group. Visitors were informed of the survey effort, given a token incentive (for example, a small magnet or 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 were also instructed to record any refusals and then proceed with the sampling protocol.

All visitors that agreed onsite to fill out a survey received the same sequence of correspondence regardless of their preference for survey mode. This approach allowed for an assessment of visitors' likelihood of completing the survey by their preferred survey mode (see Sexton and others, 2011). Researchers at the USGS sent the following materials to all visitors agreeing to participate who had not yet completed a survey at the time of each mailing (Dillman, 2007):

- A postcard mailed within 10 days of the initial onsite contact thanking visitors for agreeing to participate in the survey and inviting them to complete the survey online.
- A packet mailed 9 days later consisting of a cover letter, survey, and postage paid envelope for returning a completed paper survey.
- A reminder postcard mailed 7 days later.
- A second packet mailed 14 days later consisting of another cover letter, survey, and postage paid envelope for returning a completed paper survey.

Each mailing included instructions for completing the survey online, so visitors had an opportunity to complete an online survey with each mailing. 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 packet to determine any differences between respondents and nonrespondents at the aggregate level. Online survey data were exported and paper survey data were entered into Microsoft Excel using a standardized survey codebook and data entry procedure. All survey data were analyzed using *Statistical Package for the Social Sciences* (SPSS, v.20) software¹.

Interpreting the Results

The extent to which these results accurately represent the total population of visitors to this refuge is dependent on the number of visitors who completed the survey (sample size) and the ability of the variation

¹ Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

resulting from that sample to reflect the beliefs and interests of different visitor user groups (Scheaffer and others, 1996). 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 unique to each refuge. Spatially, the geographical layout and public-use infrastructure varies widely across refuges. Some refuges can be accessed only 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 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, which may result in certain survey measures such as visitors' self-reported "primary activity during their visit" reflecting a seasonality bias. Results contained within this report may not apply to visitors during all times of the year or to visitors who did not visit the survey locations.

In this report, visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for Balcones Canyonlands NWR, any potential spatial and temporal sampling limitation specific to this refuge needs 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 (mi) 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). 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) is too low ($n < 30$), a warning is included in the text. Finally, the term "this visit" is used to reference the visit during which people were contacted to participate in the survey.

Refuge Description for Balcones Canyonlands National Wildlife Refuge

Balcones Canyonlands NWR is located in Texas Hill Country, a one-hour drive northwest of Austin, TX. The refuge protects land that resembles a mosaic of habitat that once dominated the landscape before logging and ranching activities became popular in the early 1900s. Cultural remnants from these communities, and from even earlier aboriginal communities, are evident throughout the refuge, including old homesteads and artifacts such as arrowheads. Refuge lands straddle the Colorado and Brazos watersheds and include a wide range of habitat such as forest, open prairie, and karst topography, or soft limestone that erodes into a system of caves, sinkholes, and rivers.

The refuge was created in 1992 specifically to provide habitat for the Black-Capped Vireo and Golden-Cheeked Warbler – both endangered songbirds. Habitat in the refuge is critical for those and many other bird species, and consequently, Balcones Canyonlands NWR has been designated as an official "Globally Important Bird Area." Juniper-oak woodlands intersperse with open prairie, providing a home to a wide range of plant and animal species. The refuge is located on the Edwards Plateau, on which one third of Texas's threatened or endangered species exist.

Each year, just over 20,000 visitors spend time at Balcones Canyonlands NWR (2011 Refuge Annual Performance Plan measures; Rob Miller, U.S. Fish and Wildlife Service, 2012, written commun.). Available activities and opportunities include wildlife observation and birdwatching, photography, hiking trails, and hunting, as well as educational and interpretation activities at the Refuge Headquarters. Figure 1 displays a map of the refuge. For more information, please visit http://www.fws.gov/refuge/Balcones_Canyonlands/.

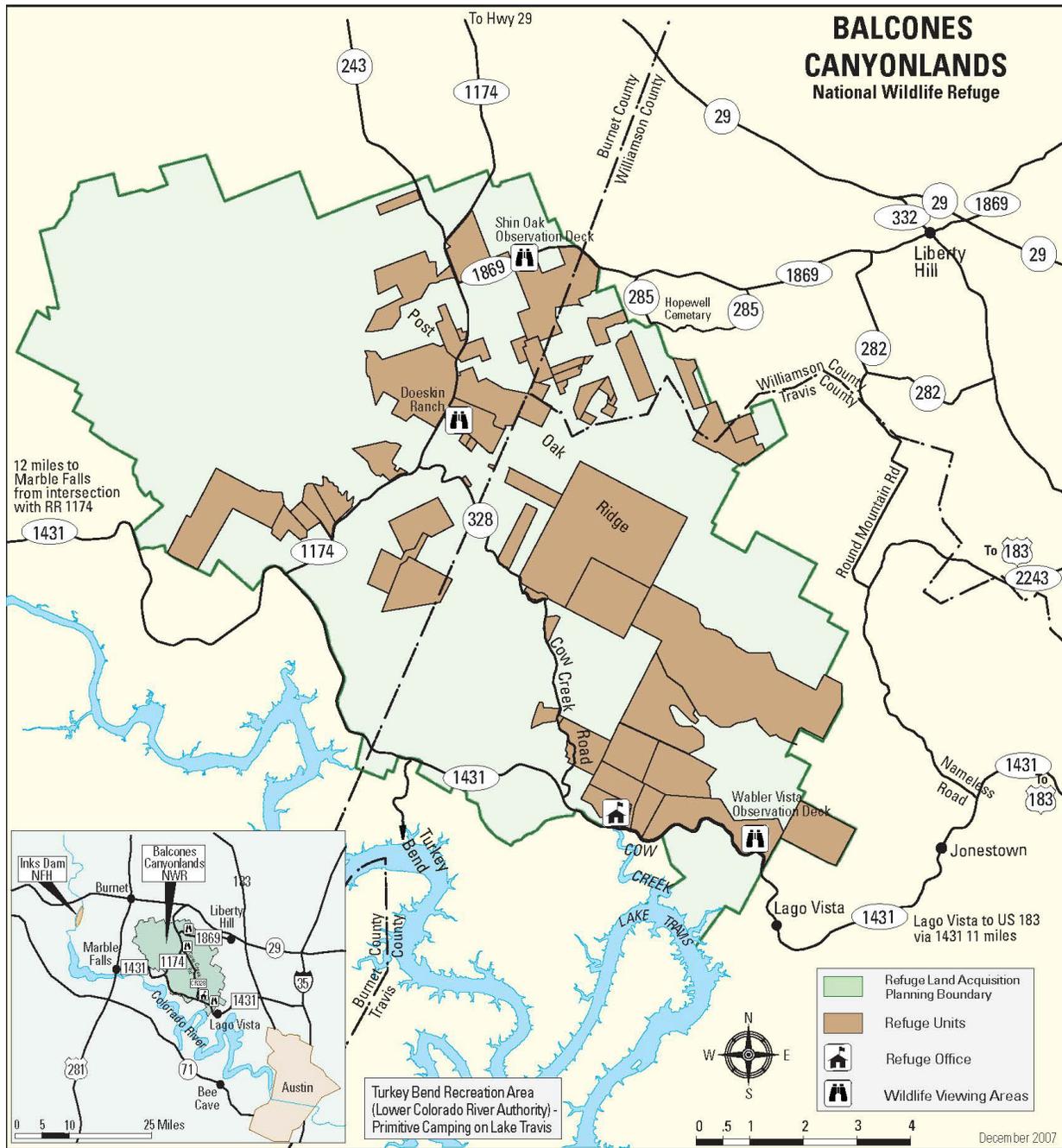


Figure 1. Map of Balcones Canyonlands NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at Balcones Canyonlands National Wildlife Refuge

A total of 329 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Balcones Canyonlands NWR (table 2). In all, 225 visitors completed the survey for a 73% response rate, and $\pm 5.2\%$ margin of error at the 95% confidence level.²

Table 2. Sampling and response rate summary for Balcones Canyonlands NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	4/21/2012 to 5/5/2012	Warbler Vista				
		Doeskin Ranch				
		Refuge HQ				
		Shin Oak Observation Deck				
SP1 Totals			148	9	105	76%
2	11/3/2012 to 11/17/2012	Warbler Vista				
		Doeskin Ranch				
		Refuge HQ				
		Shin Oak Observation Deck				
SP2 Totals			181	9	120	70%
Combined Totals			329	18	225	73%

² A margin of error of $\pm 5\%$ at a 95% confidence level, for example, means that, if a reported percentage is 55%, then 95 out of 100 times, that sample estimate would fall between 50% and 60% if the same question was asked in the same way. The margin of error is calculated with an 80/20 response distribution, assuming that for a given dichotomous choice question, approximately 80% of respondents would select one choice and 20% would select the other choice (Salant and Dillman, 1994).

Selected Survey Results

Visitor and Trip Characteristics

A solid understanding of visitor characteristics and details about their trips to refuges can inform communication and outreach efforts, inform managers about desired types of visitor services and modes of transportation used on refuges, and help forecast use and gauge demand for services and facilities.

Familiarity with the Refuge System

Many visitors to Balcones Canyonlands NWR reported that before participating in the survey, they were aware of the role of the Service in managing refuges (81%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants, and their habitats (90%). It is important to note that we did not ask visitors to identify the mission of the Refuge System or the Service, and positive responses to these questions concerning the management and mission of the Refuge System do not necessarily indicate that these visitors fully 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.

A majority of visitors (77%) feel that refuges, compared to other public lands, provide a unique recreation experience (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.

Almost half of visitors to Balcones Canyonlands NWR had been to at least one *other* national wildlife refuge in the past year (49%), with an average of 5 visits to *other* refuges during the past 12 months.

Visiting This Refuge

A majority of surveyed visitors (56%) had only been to Balcones Canyonlands NWR once in the past 12 months, while less than half had been multiple times (44%). These repeat visitors went to the refuge an average of 10 times during that same 12-month period. Visitors used the refuge during only one season (68%), during multiple seasons (19%), and year-round (13%).

Visitors first learned about the refuge from the refuge website (28%), friends/relatives (27%), or signs on the highway (21%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (40%), maps from the internet such as Google Maps (34%), or a GPS navigation system (31%; fig. 3).

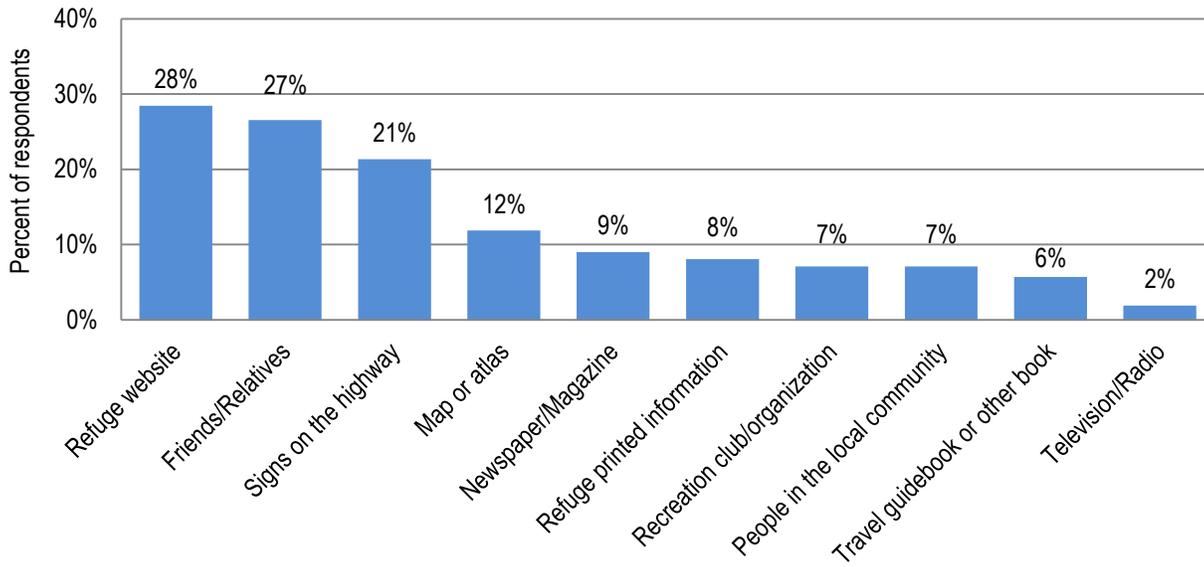


Figure 2. How visitors first learned or heard about Balcones Canyonlands NWR (n = 211).

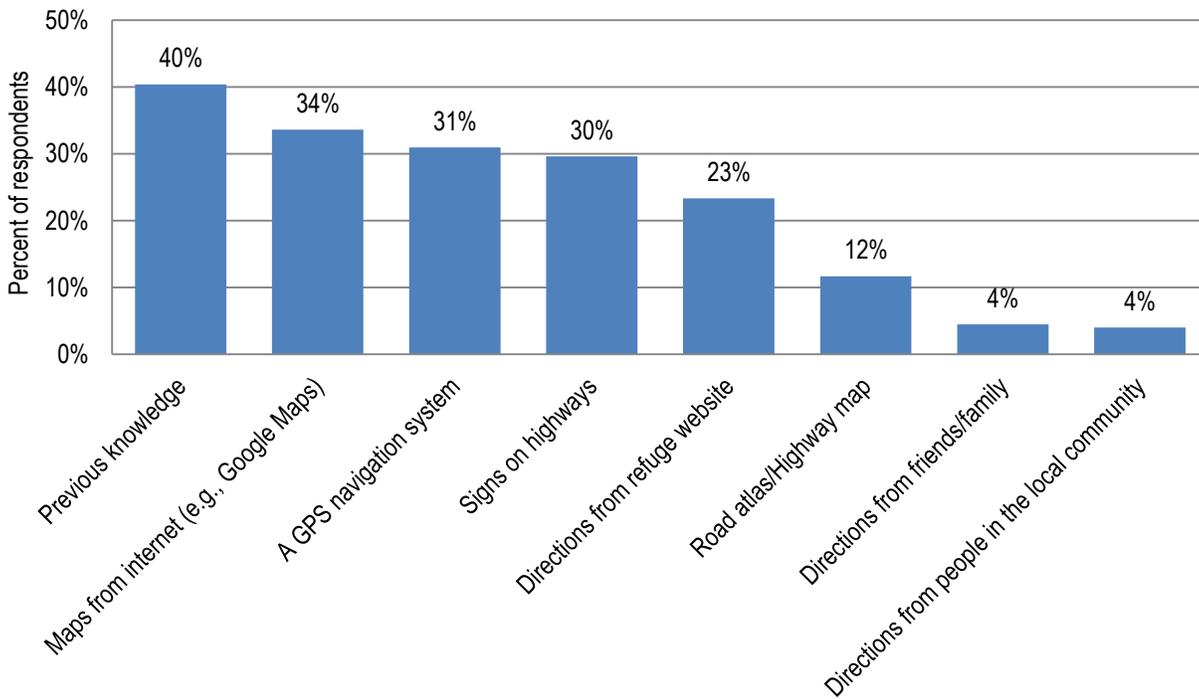


Figure 3. Resources used by visitors to find their way to Balcones Canyonlands NWR during this visit (n = 223).

Most visitors (67%) lived in the local area (within 50 mi of the refuge), whereas 33% were nonlocal visitors. For most local visitors, Balcones Canyonlands NWR was the primary purpose or sole destination of their trips (84%; table 3). For most nonlocal visitors, the refuge was the primary purpose or sole destination of their trips (51%).

Local visitors reported that they traveled an average of 29 mi to get to the refuge, while nonlocal visitors traveled an average of 426 mi. The average distance traveled for all visitors to this refuge was 152 mi, while the median was 40 mi. Figure 4 shows the residences of visitors traveling to this refuge. About 86% of visitors traveling to Balcones Canyonlands NWR were from Texas.

Table 3. Influence of Balcones Canyonlands NWR on visitors' decisions to take their trips.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	51%	33%	16%
Local	84%	11%	5%
All visitors	73%	18%	9%

Surveyed visitors reported that they spent an average of 5 hr at the refuge during one day there, while the most frequently reported length of a day visit (the modal response) was 8 hr (37%). Most visitors indicated they were part of a group on their visit to this refuge (76%). Of those people who indicated they traveled with a group, visitors primarily traveled with family/friends (table 4).

Table 4. Type and size of groups visiting Balcones Canyonlands NWR (for those who indicated they were part of a group, n = 170).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	88%	2	0	2
Commercial tour group	1%	3	0	3
Organized club/School group	4%	16	0	16
Other group type	7%	10	4	14

The key mode of transportation used by visitors to travel around the refuge was private vehicles (93%), and to a lesser degree, walking/hiking (20%; fig. 5).

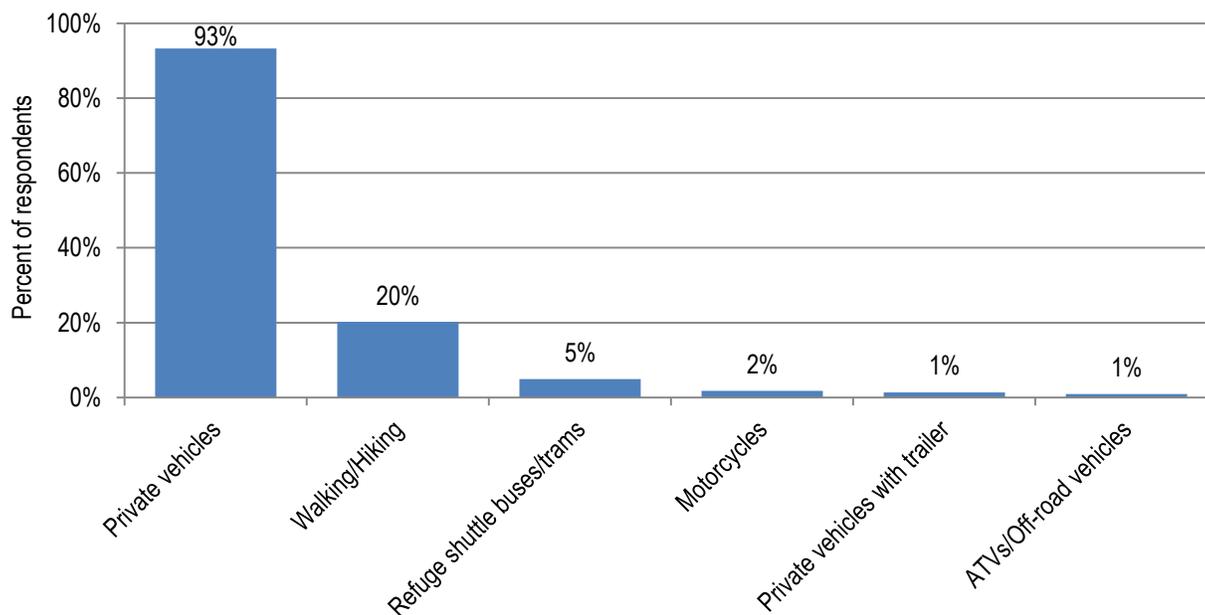


Figure 5. Modes of transportation used by visitors to Balcones Canyonlands NWR during this visit (n = 223).

Surveyed visitors participated in a variety of refuge activities during the 12 months prior to completing the survey (fig. 6); the top three activities in which people reported participating were hiking (60%), bird watching (46%), and wildlife observation (40%). The primary reasons for visitors' most recent visits included hiking (28%), hunting (25%), and bird watching (24%; fig. 7).

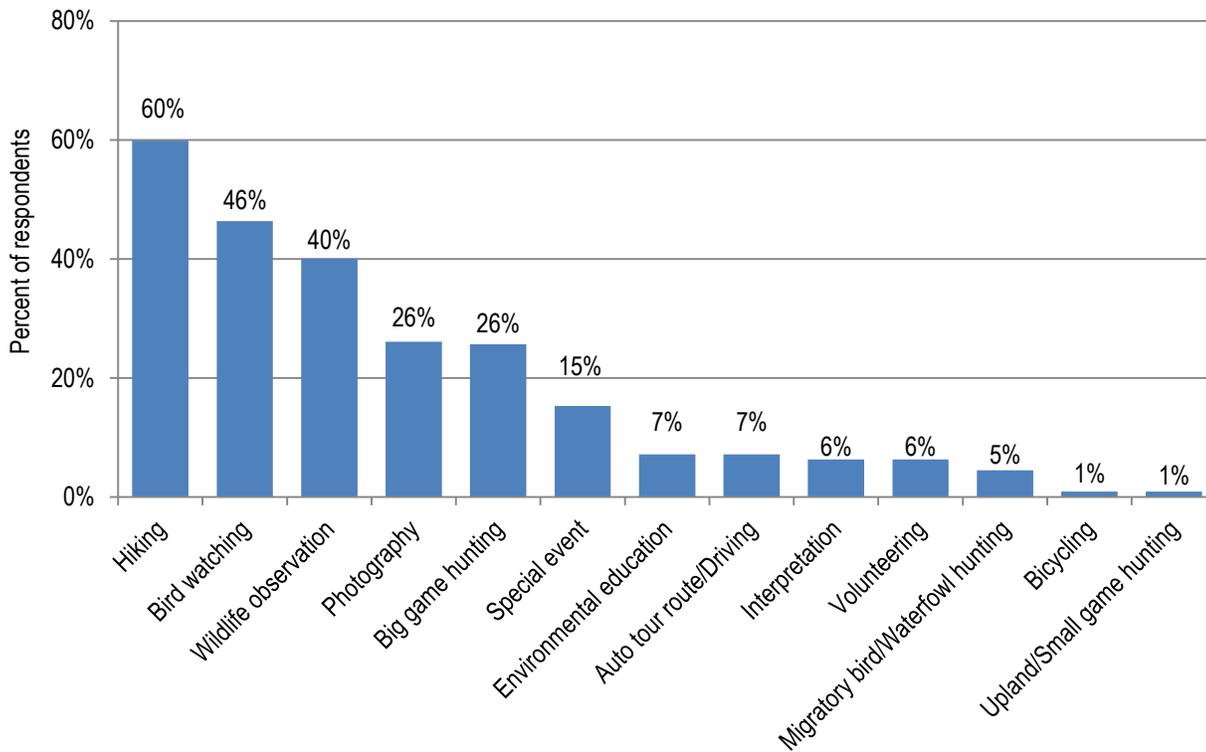


Figure 6. Activities in which visitors participated during the past 12 months at Balcones Canyonlands NWR (n = 222). See Appendix B for a listing of “other” activities.

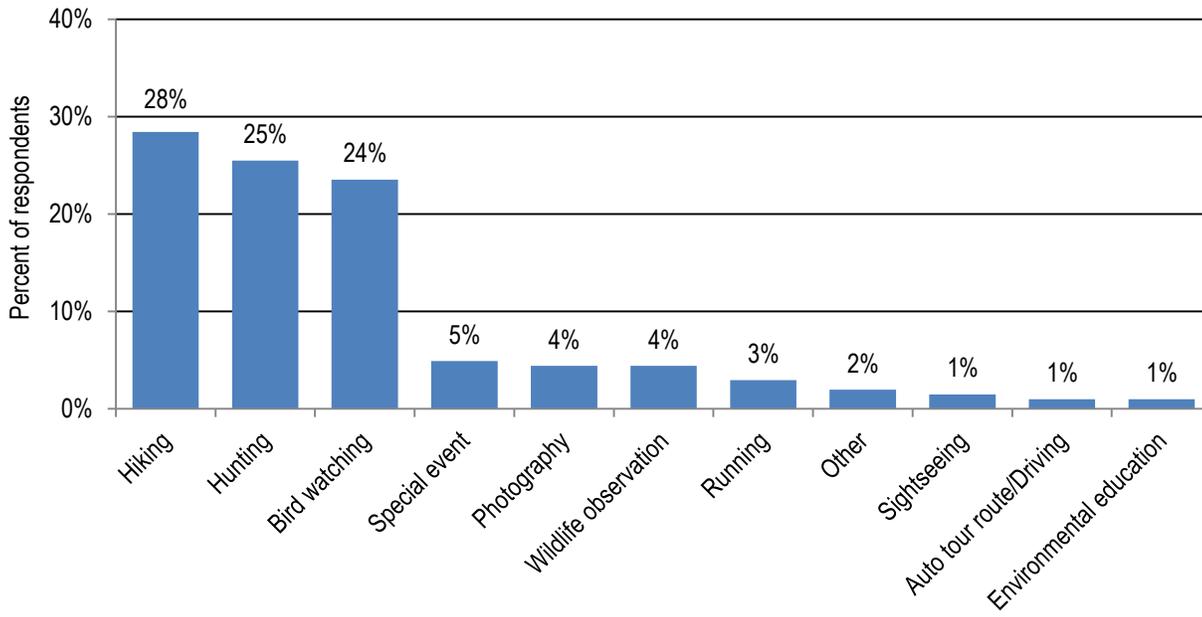


Figure 7. The **primary** activity in which visitors participated during this visit to Balcones Canyonlands NWR (n = 204). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (99%) visitors who participated in the survey at Balcones Canyonlands NWR indicated that they were citizens or permanent residents of the United States. These visitors were a mix of 66% male (with an average age of 51 years) and 34% female (with an average age of 51 years). Visitors, on average, reported they had 16 years of formal education (equivalent to four years of college or technical school). The median level of income was \$75,000-\$99,999. See Appendix A for more demographic information.

In comparison to these results, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (U.S. Fish and Wildlife Service, 2007) found that participants in wildlife watching and hunting on public lands were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (equivalent to an associate degree or two years of college), and a median income of \$50,000–74,999 (Anna Harris, U.S. Fish and Wildlife Service, 2011, written commun.). Compared to the U.S. population, participants in wildlife-related recreation are more likely to be male, and tend to be older with higher education and income levels (U.S. Fish and Wildlife Service and U.S. Census Bureau, 2007).

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 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 to local communities of visitor activities on refuges. Visitor expenditure information also can be used to analyze the economic impact of proposed refuge management alternatives.

Visitors that live within the local 50-mi area of a refuge typically have different spending patterns than those that travel from longer distances. During the two sampling periods, 67% of surveyed visitors to Balcones Canyonlands NWR indicated that they live within the local 50-mi area while nonlocal visitors (33%) stayed in the local area, on average, for 3 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$92 per person per day and local visitors spent an average of \$35 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 factors include the amount of time spent at the refuge, influence of the refuge on the visitors' 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.

Table 5. Total visitor expenditures in local communities and at Balcones Canyonlands NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	68	\$71	\$92	\$83	\$0	\$398
Local	120	\$23	\$35	\$43	\$0	\$255

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 number 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 in the local community, 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 in which people participated), and may not be representative of the total population of visitors to this refuge.

Visitor Opinions about this Refuge

Refuges provide visitors with a variety of services, facilities, and wildlife-dependent recreational opportunities. Understanding visitors' perceptions of refuge offerings is a key component of the Refuge System's mission. In particular, a baseline understanding of visitor experiences provides a framework from which the Refuge System can monitor trends in visitor experiences overtime, which is increasingly useful in the face of changing demographics and wildlife-related interests. Some studies on wildlife-related recreation trends have indicated declines in participation over the latter part of the 20th century in traditional activities such as hunting (for example, U.S. Department of the Interior and others, 2007), while others highlight a need to connect the next generation of people to nature and wildlife (for example, Charles and Louv, 2009). These types of factors highlight a need to better understand visitors' opinions of their refuge experiences and to monitor trends in these opinions over time.

Surveyed visitors' overall satisfaction ratings with the services, facilities, and recreational opportunities provided at Balcones Canyonlands NWR were as follows (fig. 8):

- 85% of visitors were satisfied with the recreational activities and opportunities,
- 87% of visitors were satisfied with the information and education about the refuge and its resources,
- 89% of visitors were satisfied with the services provided by employees or volunteers, and
- 91% of visitors were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

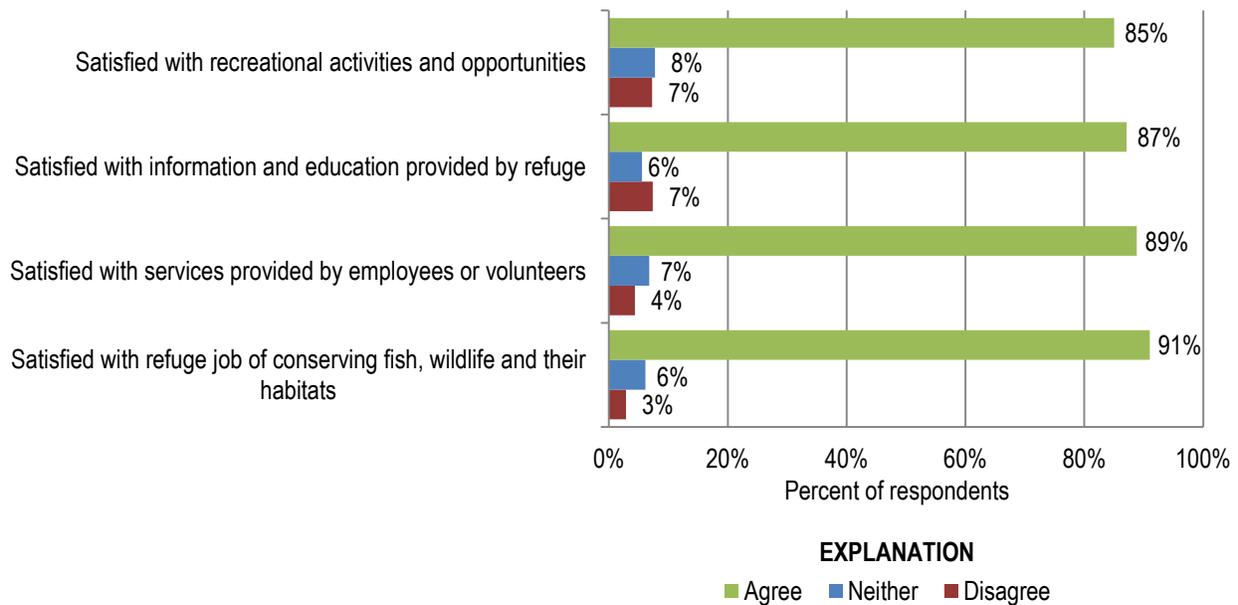


Figure 8. Overall satisfaction with Balcones Canyonlands NWR during this visit (n ≥ 206).

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 examines the importance of an attribute to visitors in relation to their satisfaction with that attribute (Martilla and James, 1977). Drawn from marketing research, this tool has been applied to outdoor recreation and visitation settings (for example, Tarrant and Smith, 2002). Results for the attributes of interest are segmented into one of four quadrants (modified slightly for this 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 different visitor groups regarding their expectations and levels of importance (Vaske and others, 1996; Bruyere and others, 2002; Wade and Eagles, 2003); 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. This consideration is especially important when reviewing any attribute that falls 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 or 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 their satisfaction with) the attribute may be much higher than the overall importance (and satisfaction) would be for the sample of visitors summarized in this report.

Figures 9–11 depict surveyed visitors' importance-satisfaction ratings for refuge services and facilities, recreational opportunities, and transportation-related features at Balcones Canyonlands NWR. Results are summarized as follows:

- All refuge *services and facilities* fell in the "Keep Up the Good Work" quadrant (fig. 9).
- All refuge *recreational opportunities* fell in the "Keep Up the Good Work" quadrant except hunting, fishing, and biking opportunities, which fell into the "Look Closer" quadrant (fig. 10). The average importance of these activities is likely higher among visitors to Balcones Canyonlands NWR who actually participated in the activities during the 12 months prior to taking the survey than the score reported here. For example, hunters, as part of the 2010–2011 national visitor survey, had an average

importance score of 4.6 for this recreational opportunity, while the average importance score of hunting activities across all visitors was lower.

- All *transportation-related features* fell in the “Keep Up the Good Work” quadrant (fig. 11).

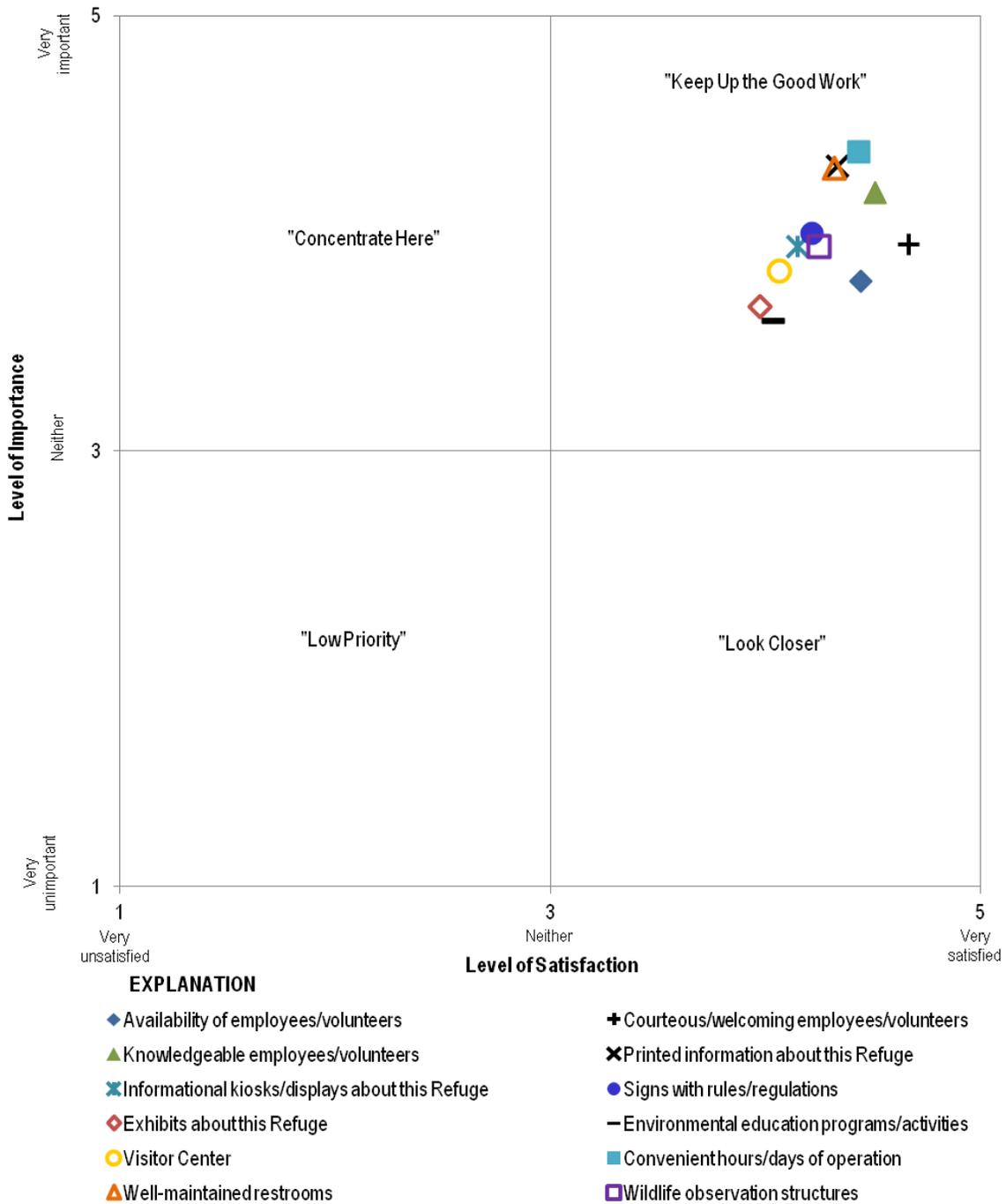
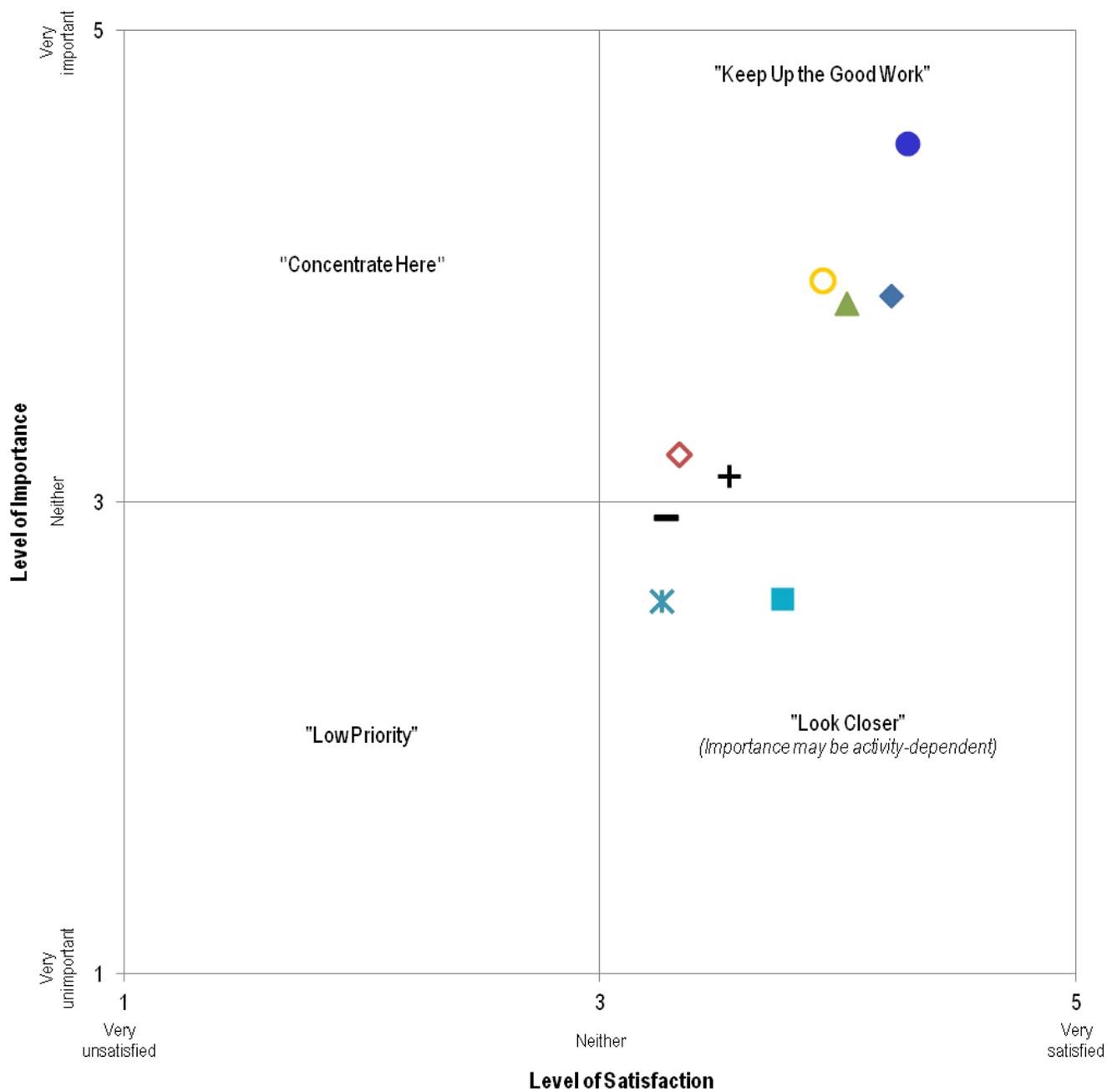


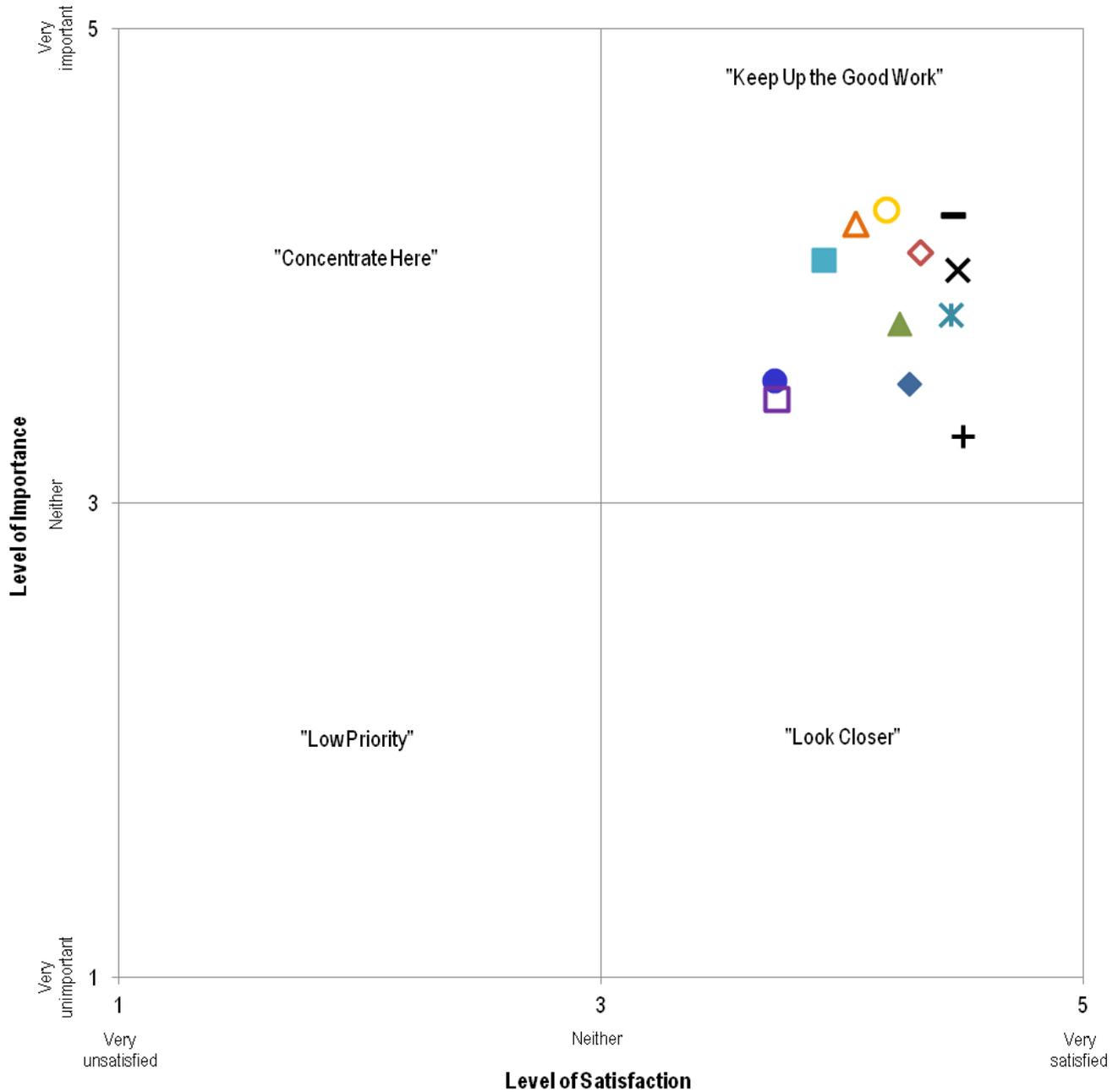
Figure 9. Importance-satisfaction ratings of services and facilities provided at Balcones Canyonlands NWR.



EXPLANATION

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

Figure 10. Importance-satisfaction ratings of recreational opportunities provided at Balcones Canyonlands NWR.



EXPLANATION

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

Figure 11. Importance-satisfaction ratings of transportation-related features at Balcones Canyonlands NWR.

Visitor Opinions about National Wildlife Refuge System Topics

One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results of these questions will be evaluated in aggregate form (data from all participating refuges together) to better address national-level goals. Basic results for Balcones Canyonlands NWR are reported here.

Alternative Transportation and the Refuge System

Visitors use various types of transportation to access and enjoy refuges. While many visitors arrive at the refuge in private vehicles, 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 and others, 2001), and recent efforts are beginning to characterize the use of transit and non-motorized transportation modes for visitor access to refuges (Volpe Center, 2010). However, less is known about how visitors perceive 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 refuges in the future.

Of six alternative transportation options listed on the survey, a majority of Balcones Canyonlands NWR visitors were likely to use the following at refuges in the future (fig. 12):

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

A majority of visitors indicated they were *not* likely to use a bus/tram that takes passengers to different points on the refuge or a bike share program.

When asked specifically about using alternative transportation at Balcones Canyonlands NWR, some visitors thought alternative transportation would enhance their experience (18%) while others thought it would not (44%). An additional 38% of surveyed visitors indicated they were unsure whether alternative transportation would enhance their experiences.

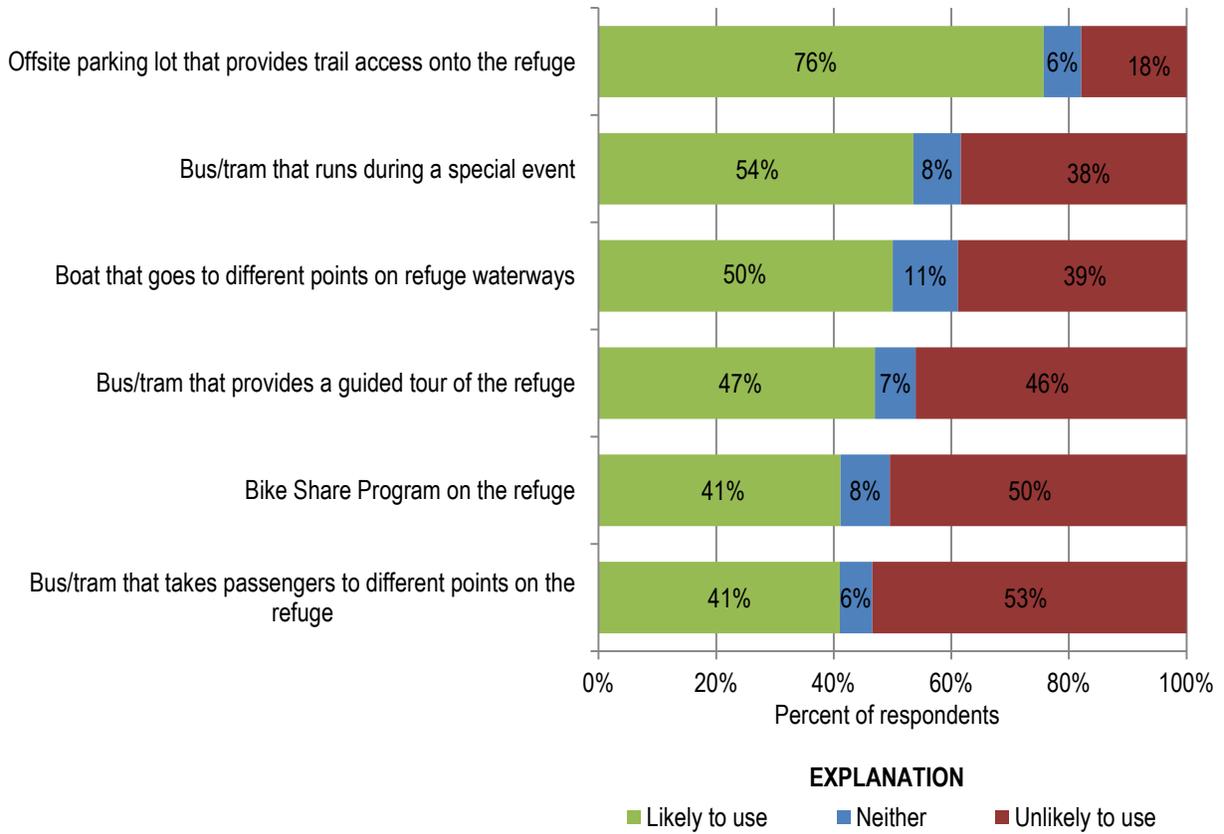


Figure 12. Visitors' likelihood of using alternative transportation options at refuges in the future (n ≥ 211).

Climate Change and the National Wildlife Refuge System

Climate change represents a growing concern for refuge management. The Service's climate-change strategy, titled "Rising to the Urgent Challenge," establishes a basic context for the agency to work within a larger conservation community to 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 the topic of climate change. Previous research suggests that human thought about climate change is influenced by individuals' levels of concern, levels of involvement, preferences for policies, and associated behaviors (Maibach and others, 2009). The results presented below provide baseline information on these factors in relation to the effects of climate change on fish, wildlife, and their habitats.

These results are most useful when coupled with responses to belief statements, 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 does not alter the overall message, but rather places the issue in a context in which different audience groupings can relate (Nisbet, 2009). 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 or supporting economic growth through new jobs/technology). Framing information in ways that resonate with visitors' beliefs may result in more engaged audiences who support strategies aimed at alleviating climate-change pressures. Data will be analyzed further at the national level to inform the development of a comprehensive climate change communication and engagement strategy.

The majority of visitors to Balcones Canyonlands NWR agreed with the following statements related to their own *personal involvement* with the topic of climate change as it relates to fish, wildlife, and habitats (fig. 13):

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

The majority of visitors also agreed with the following belief statements regarding climate change effects on fish, wildlife and their habitats (fig. 14):

- 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.

Results regarding such beliefs are important to consider when communicating with visitors about this topic, since some visitors (43%) indicated their experiences would be enhanced if Balcones Canyonlands NWR provided information about how visitors can help to address climate change impacts on fish, wildlife, and their habitats (fig. 13).

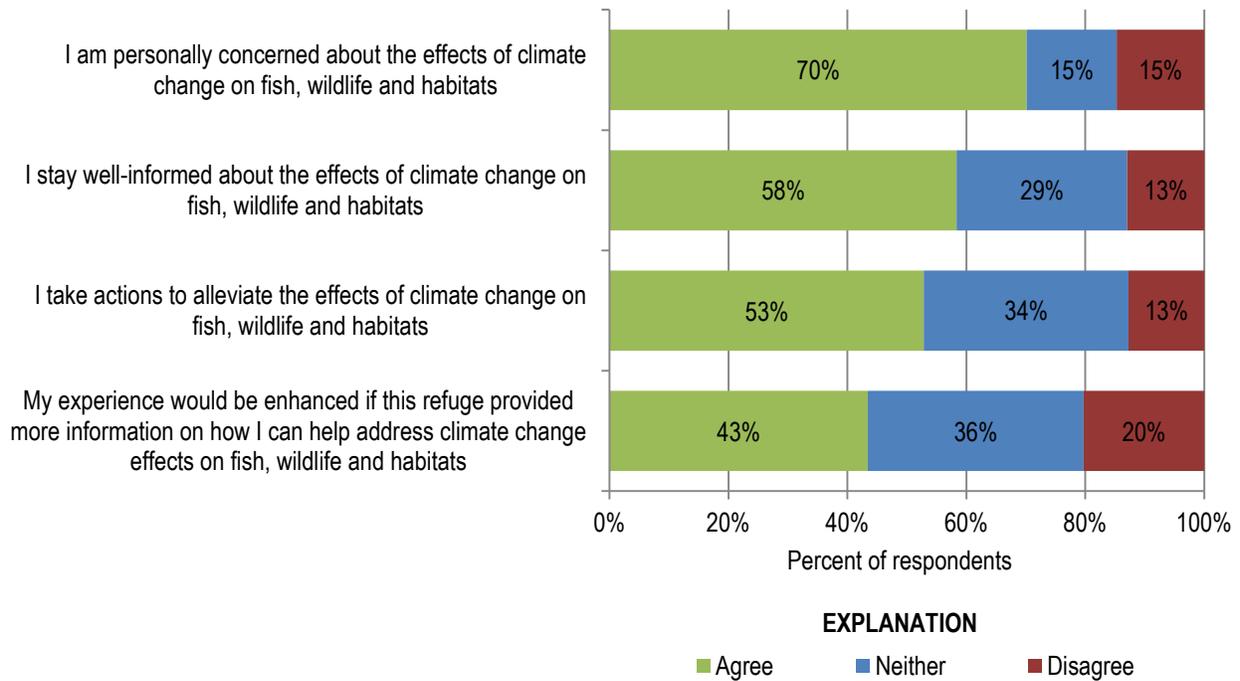


Figure 13. Visitors' personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 209).

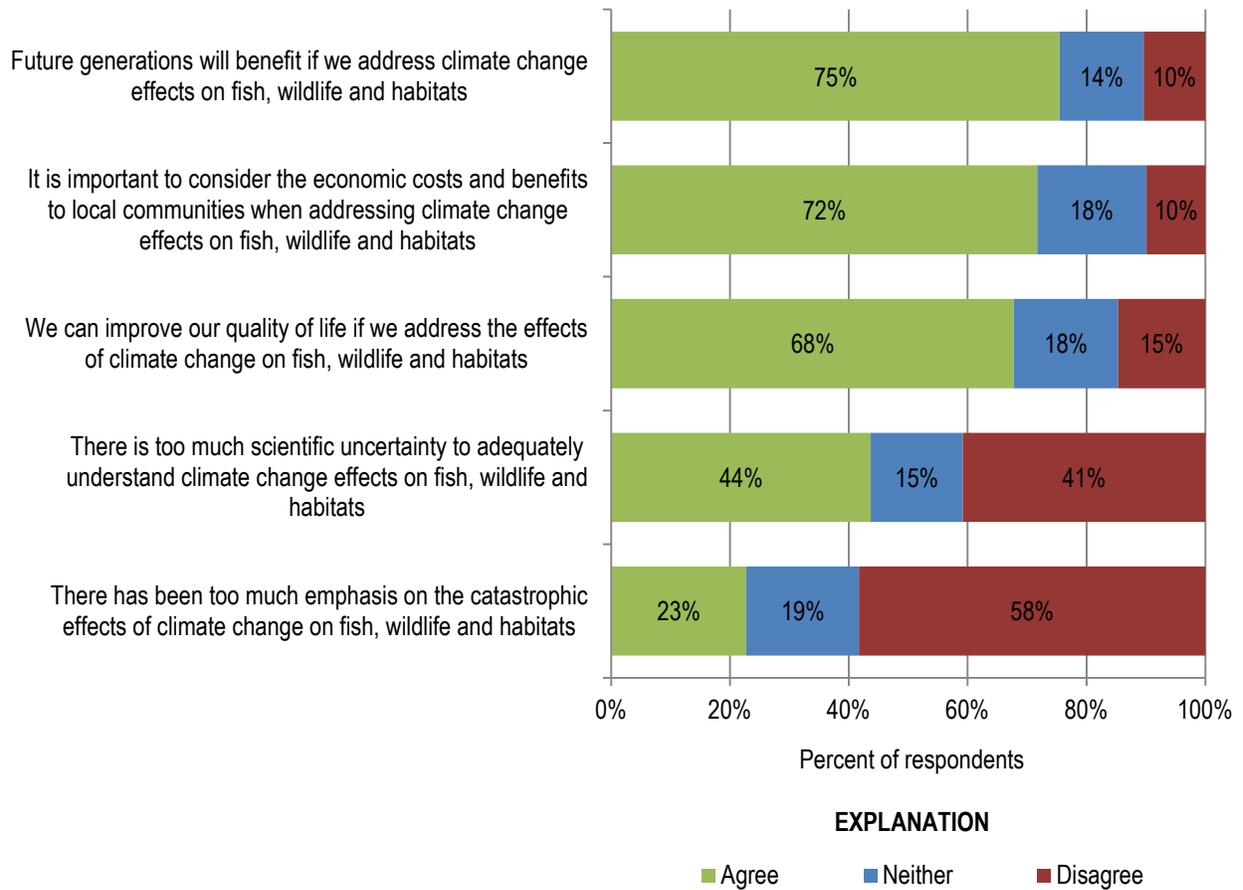


Figure 14. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 211).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Balcones Canyonlands NWR during 2012 and are intended to inform decision-making efforts related to visitor services and transportation at the refuge. Additionally, the results from this survey can be used to inform planning efforts, such as a refuge's Comprehensive Conservation Plan. With an understanding of visitors' trip and activity characteristics and visitor-satisfaction ratings with existing offerings, refuge managers are able to make informed decisions about possible modifications (whether reducing or enhancing) to visitor facilities, services, or recreational opportunities. This information can help managers 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 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 and its resources, 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/754/>. 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.

Even 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 for any question that uses the phrase “this Refuge.” Please reference the cover letter included with this survey if you are unsure of which refuge you visited.

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"/> 26% Big game hunting | <input type="checkbox"/> 60% Hiking | <input type="checkbox"/> 7% Environmental education (for example, classrooms or labs) |
| <input type="checkbox"/> 1% Upland/Small game hunting | <input type="checkbox"/> 1% Bicycling | |
| <input type="checkbox"/> 5% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 7% Auto tour route/Driving | <input type="checkbox"/> 6% Interpretation (for example, exhibits, kiosks, videos) |
| <input type="checkbox"/> 40% Wildlife observation | <input type="checkbox"/> 0% Motorized boating | |
| <input type="checkbox"/> 46% Bird watching | <input type="checkbox"/> 0% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 15% Refuge special event (<i>please specify</i>)
See Appendix B |
| <input type="checkbox"/> 12% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 6% Volunteering | <input type="checkbox"/> 9% Other (<i>please specify</i>)
See Appendix B |
| <input type="checkbox"/> 26% 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? **This refuge does not have a Visitor Center.*

- 100% No
- * Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|---|--|
| <input type="checkbox"/> * Visit the gift shop or bookstore | <input type="checkbox"/> * Pick up/purchase a license, permit, or pass |
| <input type="checkbox"/> * View the exhibits | <input type="checkbox"/> * Stop to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> * Ask information of staff/volunteers | |
| <input type="checkbox"/> * Watch a nature talk/video/presentation | <input type="checkbox"/> * Other (<i>please specify</i>) See Appendix B |

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

Nonlocal	Local	All visitors	
<input type="checkbox"/> 51%	<input type="checkbox"/> 84%	<input type="checkbox"/> 73%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> 33%	<input type="checkbox"/> 11%	<input type="checkbox"/> 18%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> 16%	<input type="checkbox"/> 5%	<input type="checkbox"/> 8%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many **hours/minutes and miles** (one-way) did you travel from your home to this Refuge?

Nonlocal	<u> 5 </u> Hours	<u> 15 </u> Minutes	<i>and</i>	<u> 426 </u> Miles
Local	<u> 0 </u> Hours	<u> 41 </u> Minutes	<i>and</i>	<u> 29 </u> Miles
All visitors	<u> 2 </u> Hours	<u> 6 </u> Minutes	<i>and</i>	<u> 152 </u> Miles

6. What type of group were you with on your visit to this Refuge?

24% None, I visited this Refuge alone

(of those visiting with a group)

88% Family and/or friends

4% Organized club or school group (for example, Boy/Girl Scouts, hiking club, bird watching group)

1% Commerical tour group

7% Other (*please specify*) See Appendix B

7. Including yourself, how many people were in your group? (*Please answer each category.*)

 3 number 18 years and over

 1 number 17 years and under

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

27% Family and/or friends

28% Refuge website

21% Signs on highway

14% Other website (*please specify*) See Appendix B

7% Recreation club or organization

2% Television or radio

7% People in the local community

9% Newspaper or magazine

8% Refuge printed information (brochure, map)

6% Travel guidebook or other book

12% Map or atlas

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

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

58% Spring
(March-May)

21% Summer
(June-August)

56% Fall
(September-November)

30% Winter
(December-February)

10. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 5 number of visits

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

SECTION 2. Transportation and access at this Refuge

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

- | | | | | | |
|------------------------------|---|-----------------------------|----------------------------------|------------------------------|---------------------------------------|
| <input type="checkbox"/> 93% | Private vehicle without a trailer | <input type="checkbox"/> 5% | Refuge shuttle bus or tram | <input type="checkbox"/> 0% | Bicycle |
| <input type="checkbox"/> 1% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 2% | Motorcycle | <input type="checkbox"/> 20% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 1% | ATV or off-road vehicle | <input type="checkbox"/> 1% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 0% | Recreational vehicle (RV) | <input type="checkbox"/> 0% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 0% | Wheelchair or other mobility aid | | |

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

- | | | | |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 40% | Previous knowledge/I have been to this Refuge before | <input type="checkbox"/> 34% | Maps from the Internet (for example, MapQuest or Google Maps) |
| <input type="checkbox"/> 30% | Signs on highways | <input type="checkbox"/> 23% | Directions from Refuge website |
| <input type="checkbox"/> 31% | A GPS navigation system | <input type="checkbox"/> 4% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 12% | A road atlas or highway map | <input type="checkbox"/> 4% | Directions from friends or family |
| | | <input type="checkbox"/> 1% | Other (<i>please specify</i>) <u>See Appendix B</u> |

2. 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"/> 41%	<input type="checkbox"/> 12%	<input type="checkbox"/> 6%	<input type="checkbox"/> 25%	<input type="checkbox"/> 16%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 42%	<input type="checkbox"/> 9%	<input type="checkbox"/> 8%	<input type="checkbox"/> 24%	<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"/> 38%	<input type="checkbox"/> 8%	<input type="checkbox"/> 7%	<input type="checkbox"/> 31%	<input type="checkbox"/> 16%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 30%	<input type="checkbox"/> 9%	<input type="checkbox"/> 11%	<input type="checkbox"/> 28%	<input type="checkbox"/> 22%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 29%	<input type="checkbox"/> 9%	<input type="checkbox"/> 8%	<input type="checkbox"/> 32%	<input type="checkbox"/> 22%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 13%	<input type="checkbox"/> 5%	<input type="checkbox"/> 6%	<input type="checkbox"/> 32%	<input type="checkbox"/> 44%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 8%	<input type="checkbox"/> 0%	<input type="checkbox"/> 8%	<input type="checkbox"/> 46%	<input type="checkbox"/> 38%

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

- 18% Yes 44% No 38% Not Sure

4. 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
9%	15%	11%	47%	18%	Surface conditions of roads	5%	6%	5%	25%	60%	NA
8%	22%	16%	43%	11%	Surface conditions of parking areas	3%	1%	6%	20%	69%	NA
7%	8%	21%	32%	32%	Condition of bridges	1%	1%	29%	11%	58%	NA
7%	8%	7%	38%	40%	Condition of trails and boardwalks	1%	3%	9%	22%	65%	NA
6%	10%	11%	45%	28%	Number of places for parking	1%	3%	11%	22%	64%	NA
8%	10%	21%	43%	18%	Number of places to pull over along Refuge roads	1%	10%	31%	32%	26%	NA
6%	5%	10%	36%	43%	Safety of driving conditions on Refuge roads	3%	3%	12%	24%	58%	NA
3%	3%	8%	40%	46%	Safety of Refuge road entrances/exits	3%	3%	6%	25%	65%	NA
2%	4%	8%	38%	47%	Signs on highways directing you to the Refuge	3%	7%	10%	28%	51%	NA
5%	4%	11%	44%	37%	Signs directing you around the Refuge roads	4%	8%	18%	32%	38%	NA
5%	3%	8%	36%	47%	Signs directing you on trails	2%	11%	11%	31%	45%	NA
10%	9%	31%	26%	24%	Access for people with physical disabilities or who have difficulty walking	3%	6%	41%	15%	35%	NA

5. 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)?

67% Yes

33% No → How much time did you spend **in the local area** on this trip?

Nonlocals If you spent one day or more in the local area, enter the number of days: 3 day(s)

only If you spent less than one day in the local area, enter the number of hours: 6 hour(s)

2. How much time did you spend **at this Refuge** during your most recent visit?

If you spent one day or more at this Refuge, enter the number of days: 2 day(s)

If you spent less than one day at this Refuge, enter the number of hours: 3 hour(s)

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

See Report for Results

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

2 number of people sharing expenses

5. 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
13%	16%	17%	6%	20%	6%	11%	0%	0%	4%	6%

6. 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**.)

Did not pay a fee (skip to Section 4)

Balcones Canyonlands NWR does not charge an entrance fee. This question does not apply.

7. 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.

Balcones Canyonlands NWR does not charge an entrance fee. This question does not apply.

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.	<input type="checkbox"/> 2%	<input type="checkbox"/> 5%	<input type="checkbox"/> 8%	<input type="checkbox"/> 33%	<input type="checkbox"/> 52%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 2%	<input type="checkbox"/> 6%	<input type="checkbox"/> 6%	<input type="checkbox"/> 39%	<input type="checkbox"/> 48%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 2%	<input type="checkbox"/> 2%	<input type="checkbox"/> 7%	<input type="checkbox"/> 29%	<input type="checkbox"/> 60%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 2%	<input type="checkbox"/> 1%	<input type="checkbox"/> 6%	<input type="checkbox"/> 27%	<input type="checkbox"/> 64%	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
8%	8%	14%	39%	31%	Availability of employees or volunteers	2%	3%	11%	18%	66%	NA
8%	6%	12%	35%	40%	Courteous and welcoming employees or volunteers	1%	1%	7%	12%	79%	NA
7%	4%	8%	28%	54%	Knowledgeable employees or volunteers	2%	3%	10%	11%	74%	NA
2%	6%	5%	36%	52%	Printed information about this Refuge and its resources (for example, maps and brochures)	3%	5%	7%	26%	59%	NA
3%	7%	15%	42%	32%	Informational kiosks/displays about this Refuge and its resources	2%	4%	16%	31%	46%	NA
3%	9%	11%	39%	38%	Signs with rules/regulations for this Refuge	2%	4%	17%	27%	51%	NA
5%	9%	24%	40%	22%	Exhibits about this Refuge and its resources	1%	6%	26%	28%	39%	NA
8%	7%	26%	33%	25%	Environmental education programs or activities	1%	4%	31%	19%	46%	NA
*	*	*	*	*	Visitor Center <i>(not offered at this refuge)</i>	*	*	*	*	*	100%
3%	2%	5%	35%	55%	Convenient hours and days of operation	2%	4%	7%	25%	63%	NA
3%	3%	9%	34%	52%	Well-maintained restrooms	3%	4%	12%	19%	62%	NA
5%	7%	15%	37%	37%	Wildlife observation structures (decks, blinds)	2%	5%	18%	17%	58%	NA
9%	5%	16%	29%	41%	Bird-watching opportunities	2%	2%	19%	25%	52%	NA
6%	4%	10%	49%	30%	Opportunities to observe wildlife other than birds	3%	7%	22%	29%	39%	NA
9%	6%	12%	39%	35%	Opportunities to photograph wildlife and scenery	3%	6%	22%	19%	49%	NA
49%	3%	15%	6%	27%	Hunting opportunities	6%	5%	34%	15%	40%	NA
39%	6%	27%	15%	14%	Fishing opportunities	4%	5%	68%	3%	19%	NA
2%	1%	7%	24%	66%	Trail hiking opportunities	2%	5%	10%	28%	55%	NA
19%	4%	33%	28%	16%	Water trail opportunities for canoeing or kayaking	1%	9%	65%	4%	21%	NA
24%	6%	32%	27%	10%	Bicycling opportunities	3%	7%	65%	9%	16%	NA
16%	7%	40%	23%	14%	Volunteer opportunities	2%	3%	61%	7%	27%	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?

81% Yes

19% No

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

90% Yes

10% No

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

77% Yes

23% No

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

See Appendix B

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.	7%	8%	15%	29%	41%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	8%	7%	18%	31%	36%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	21%	20%	15%	28%	16%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	2%	11%	29%	42%	16%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	3%	7%	18%	50%	22%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	5%	8%	34%	36%	17%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	29%	29%	19%	9%	13%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	7%	4%	14%	35%	41%
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.	9%	11%	36%	36%	7%

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 2 in Report

2. Are you? 66% Male 34% Female

3. In what year were you born? 1960 (YYYY)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					0%			5%				50%				46%			

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.**)

<input type="checkbox"/> 2% American Indian or Alaska Native	<input type="checkbox"/> 1% Black or African American	<input type="checkbox"/> 98% White
<input type="checkbox"/> 2% Asian	<input type="checkbox"/> 0% Native Hawaiian or Pacific Islander	

7. How many members are in your household? 2 persons

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

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

<input type="checkbox"/> 1% Less than \$10,000	<input type="checkbox"/> 13% \$35,000 - \$49,999	<input type="checkbox"/> 23% \$100,000 - \$149,999
<input type="checkbox"/> 4% \$10,000 - \$24,999	<input type="checkbox"/> 20% \$50,000 - \$74,999	<input type="checkbox"/> 9% \$150,000 - \$199,999
<input type="checkbox"/> 3% \$25,000 - \$34,999	<input type="checkbox"/> 16% \$75,000 - \$99,999	<input type="checkbox"/> 11% \$200,000 or more

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

16 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.

Comments?

See Appendix B for Comments

PAPERWORK REDUCTION ACT STATEMENT: The Paperwork Reduction Act requires us to tell you why we are collecting this information, how we will use it, and whether or not you have to respond. The information that we collect in this survey will help us understand visitor satisfaction with and use of National Wildlife Refuges and to make sound management and policy decisions. Your response is voluntary. An agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a valid OMB Control Number. We estimate it will take an average of 25 minutes to complete this survey. You may send comments concerning the burden estimate or any aspect of the survey to the Information Collection Clearance Officer, Fish and Wildlife Service, 4401 North Fairfax Drive, MS 222-ARLSQ, Arlington, VA 22203. OMB CONTROL #1018-0145 EXPIRATION DATE 6/30/2013

Appendix B: Visitor Comments to Open-Ended Survey Questions for Balcones Canyonlands National Wildlife Refuge

Survey Section 1

Question 1: "Including your most recent visit, which activities have you participated in during the past 12 months at this Refuge?"

Special Event	Frequency
Balcones Canyonlands Birding Festival	4
Balcones Songbird Festival, Refuge Weekend, Christmas Bird Count	1
Board retreat, board meetings, Refuge Week	1
Edible plant walk	1
Hunting orientation	1
Refuge special event (annual)	1
Songbird Festival	23
Songbird Festival, Sparrow Festival	1
Study butterflies, birds, and blossoms at refuge - fundraiser.	1

Other Activity	Frequency
Botanizing	1
Botany, wildflowers.	1
Lunch	1
Maintenance, trail work	1
Nesting golden cheek warblers	1
Picnic	1
Rock collecting	1
Sand collecting. Sandstone observation.	1
See flora/habitat	1
Sightseeing	1
Trail running	5
Travis Audubon field trip	1
Used the very clean restroom	1
Water quality monitoring	1
Wildflowers	1

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

Other Miscellaneous Primary Activities	Frequency
Geology field trip	1
Information	1
Sand collecting	1
See butterflies and native plants they use.	1

Question 6: “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
Balcones Songbird Festival field trip	1
Festival group	1
Hunting group	4
Native plant walk	1
On the board of directors - monthly meetings.	1
People who signed up for special event – mostly Native Plant Society/Audubon members.	1
Registered participant of event seminars and walks	1
Travis Audubon	1
Volunteer	1

Question 8: "How did you first learn or hear about this Refuge?"

Other Website	Frequency
Balcones Canyon Birding Festival website	3
Balcones Canyonlands Conservation Plan	1
FWS	1
Google	6
Google earth map	1
Google search and map for large parks near Austin	1
Google trails	1
http://friendsofbalcones.org/	4
Just looked on a map on the internet	1
Lago vista	1
Multiple birding websites	1
National Park	1
NOR website	1
Texas hiking	1
Things to do around Marble Falls	1
travisaudubon.org	3
yelp.com	1

Other Ways Heard about This Refuge	Frequency
Environmental professional contact	1
Master Naturalist Program	2
Sporting goods store	1
Texas Parks and Wildlife	1
Texas State University	1

Survey Section 2

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

Other Forms of Transportation	Frequency
Refuge van for Balcones Songbird Festival	2

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

Other Ways Found This Refuge	Frequency
Directions in my hiking book.	1
Refuge printed directions.	1
Smartphone	1

Question 3: "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
ATV	1
Bicycle	3
Dedicated cycling path that takes me all the way from Austin to refuge.	1
Golf cart to carry photography equipment on trail.	1
Horse	1
Kayak	1
Motorcycle	1
Personal vehicle	1
Rail	1
Train	2

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 = 31)

A couple of road signs between distance points from the office to the trailhead would be nice. More than a few miles with no signage.

A hog hunt in February or March to hunt day and night would be nice.

Area four was a very good road through the compartment.

Balcones Canyonlands needs to open a lot more trails in the refuge. Open the existing ranch roads to hikers.

Balcones is very natural and also an endangered species protection habitat. I hope it is never spoiled with high-traffic roads or trails where people can ride skateboards, bikes, etc.

Better cleared trails due to snakes being a danger for kids. Better signs to find refuge.

Excellent bus schedules!

I believe this didn't impact my visit due to the BCCP, and most of the tracts that are required are for habitat preservation with little human traffic allowed.

I'm sure there are budget constraints, but if the roads, which are almost all gravel, could be improved and then maintained that would be great. It's pretty much four-wheel drive with good tires or forget it. I wouldn't take a decent car in there.

Just like it is.

Litter disposal is very important as well as maintaining a litter free environment.

Most areas of this refuge are not open to the public, but access/condition is important during special events (e.g., festivals, CBCs).

Not sure about the access question. I think that we can only access refuges within our physical capabilities. I cannot climb a cliff but I would not expect the refuge to accommodate my lack of physical ability to do so. Lookout points would be sufficient.

On draw hunts there should be recommendations written on areas that require 4-wheel drive.

Overall, the hiking trail was very nice. Enjoyed the scenery. I have noticed the refuge around the Austin area does not have very detailed maps and also the trails are not the best labeled either. One thing that I did notice is that the walking trail widths were limited by brush growing over the trails themselves, if dead vegetation and plants could be trimmed back a couple of inches on each side of the trails it would open up the trails quite a bit. Just a couple of suggestions to improve the experience, but overall the refuges around the Austin area for the most part are well-kept and enjoyable.

Should have supported hunters with ATV vehicles.

Small paved section was nice for transporting a baby in a stroller.

Talked with multiple locals in community less than 15 miles away who had never heard of the refuge. Seems like a missed opportunity. Consider some outreach events that target the local community.

The primitive condition of the area is the attraction. Signs and additional metropolitan type objects would take away from the experience.

The trail maps handed out, did not seem to match the actual trails at all. Names of trails were completely different than what signs posted on the trail.

The trails on the refuge off 1174 need to be cleared. There are many spiny plants that hit as you walk by.

The Warbler Vista map online showed parking at the trailhead for the Vistknoll trail. Out there was no lot or indication that we could park on the side of the narrow road.

There are none available.

This refuge is near Marble Falls, TX. Yet, on the refuge site, there is no mileage listed from Marble Falls to the refuge headquarters. This information would be helpful for out of state people who do not know the area.

Trail difficulty could be better articulated.

Trails to geological features and guides.

Very eroded roads, some steep.

We are regular visitors and contribute supporting funds due to the access of wheelchair accessible trails.

We were just walking around in one area.

Would like a driving route; no roads through the refuge.

Survey Section 4

Question 3: "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 = 65)

1. Weekly or monthly exhibitions for locals/out of towners 2. Advertising/signage 3. Spark an interest to others besides bikers.

A 2-3 acre primitive camping area would have been a huge benefit. I had to drive 10 miles extra to a camping area. You have 20,000 acres...why not cut two or three out and allow hunters or visitors to camp?

All visitor staff were very helpful and friendly.

As a disabled veteran, I would like to be able to bring down a buck, but it is impossible for I don't see a hog. The does are at a distance that it is not safe to shoot. Bucks walk by as if they know we can't shoot them. Our positioning wasn't the greatest for the road was traveled by occupants of the house being the stand.

Blind on Unit 13 needs to be rotated 130 degrees clockwise to face the SW corner of unit to avoid current orientation towards main roads and give better view of main hunting area on the unit.

Disappointing to spend \$200 for permit fees and never see a deer. We were chosen second of 3 hunts. Perhaps you should allow baiting for a slim chance of killing a deer or lower your permit fees!

During times of hunting, signs letting others know that there is a hunt going on may be good. We had a jogger run through our area while we were hunting.

Excellent birding.

Excellent facilities, great staff.

Facilities and staff are good in my book.

Good secluded trail but car motor noise is heard too close.

Great paved walk and restrooms. Love the natural trails! Could keep trails better trimmed. Grasses always high.

Great place. Will return.

Great staff. A second big game check-in on north side would save money and miles for transportation.

I enjoyed the butterflies. Would have liked to see brochures about them.

I enjoyed the platform for Vireos. I enjoyed the trails and trail heads, especially for Golden-cheeked warbler. I would like more small parking areas.

I hate porta potties with a passion. Big buildings at that refuge - could we not get public toilets somewhere in there?

I live close by and use several trails for hiking. This refuge seems well cared for, and I very much enjoy and appreciate my experience here.

I would like more varied hiking and wildlife observation opportunities without vehicle access. Also the refuge would benefit from more aggressive feral hog hunting and trapping - not necessarily by refuge personnel - it could be accomplished by additional hunting opportunities.

I would like to bring my leashed dog on the hike with the understanding I was to pick up after her.

I would like to see more, longer hikes. Balcones is a big refuge, but most is inaccessible year-round, when most could be opened outside the bird breeding season.

It would be great to have more access to this land.

It would be nice to have a hog hunt for February or March or both to hunt day and night to take some hogs.

It would be very helpful to have more signage along trails and more seating for older walkers.

Links to hunting activities were hard to find online. Training was excellent and appropriate.

More events for the local schools.

My family enjoyed our experience!

My purpose for visiting was to harvest white-tailed deer. From the orientation we went to, the intent was to harvest female deer. Baiting with corn is legal in Texas. If the intent of the hunt was to harvest deer, baiting with corn would of provided me with opportunity to harvest a deer. Baiting should be allowed on this hunt.

My recent visit was for the purpose of hiking. The trail maps supplied at the parking lot area were for a different park, Doeskin Ranch. Since I had never been to this refuge I didn't realize I was trying to find a trailhead that didn't exist. I walked about a mile up a gravel road until someone in a car stopped and helped me out. I would say it's pretty important, even in a small refuge like this one, to supply the proper trail maps.

No Visitor Center and not open on the weekends.

Not enough public trails for the 25,000 acres.

Not given enough information about numbers of deer being so low or we would not have applied for this hunt.

Open more areas for hikers. Allow dogs on the trails in Balcones.

Performing very valuable work in preserving endangered bird species. Excellent refuge.

Please address the efficacy of the administrative support at Balcones Canyonlands as I had a hard time getting pertinent information out of personnel when I called. Area game wardens and hunt personnel were great while dealing in person. Thanks for the opportunity.

Restrooms have no wash or sanitizer.

Service and facilities were good, but the refuge was unnecessary.

The Birds of Prey exhibit was fabulous! The two men were very passionate and informative about the birds.

The field person I met (refuge employee) was really knowledgeable about where to bird. He was extremely helpful and made our day.

The people running the refuge are its greatest asset.

The Post Oak Creek area next to the refuge headquarters has some of the best birdwatching on the refuge, but is accessible to the public on special occasions only (e.g. Songbird Festival). I recommend making that area available to the public including a small parking area with a safe entrance/exit (the area is at the bottom of a hill around a bend in the road). Other than that, the refuge is great.

The ranger was very nice. He was very knowledgeable about the birds in the area. We had something in common, he is from southern Missouri.

The refuge isn't open on weekends, which makes it difficult for my family to attend.

The staff at the refuge was extremely knowledgeable and courteous throughout my entire experience.

The volunteer onsite was quite helpful. Rangers were helpful only if you stepped in front of them and demanded their attention. Quite different than I have historically experienced in the NE and SE USA. Normally my experience with park rangers is good. These were simply indifferent to people.

The volunteer we met was very nice and helpful.

The volunteer who greeted me when I visited the refuge was very knowledgeable and very courteous. It was a great experience.

The volunteers and employees were very helpful and friendly. The bathroom was very clean, especially for a non-plumbing facility. The refuge is a hidden gem I previously did not know about. I would like to go back and explore the parts I did not see this time around.

The wildlife blind at Refuge Headquarters is beautiful, but not very useful for photography. Addition of a photography-friendly blind would be very welcome.

There were no facilities/services that I could tell, except for porta-potties.

There's not a lot going on at this refuge. Mostly just a quick hike this time of year. I'm not sure if different wildlife and/or flora inhabit it other times in the year.

This is a very quiet place with only minimal facilities and should stay that way. A few more informational materials for example explaining the wildlife and burn policy benefits would be nice.

Thoroughly enjoyed the Songbird Festival and the knowledgeable guides. Wish we had more time (and cooler afternoons!) to explore more areas of the refuge.

Visited this refuge from out of state. Printed information, kiosks, interpretive signs, information from staff and volunteers very helpful!

We attended a birding festival at the refuge. The volunteers and staff were friendly, hard working, and very helpful. The event provided a wonderful opportunity to view birds on the refuge with volunteers that were familiar with the refuge. This also provided access to areas of the refuge that are normally closed because we were with a guide. They shared information about endangered species on the refuge and the efforts to provide habitat for these birds. They provided great birding opportunities while sharing a conservation message.

We come to this refuge for hiking and also for plant identification and enjoyment of the huge variety of wildflowers and native plants present throughout the year. We also enjoy walking along the creek, with or without water in it. But mostly we like to hike in places where there is a water feature of some kind.

We did not spend that much time at this refuge. Mostly it was to see what it was about and maybe plan a future hike here. So I cannot rate the facilities.

We had a fantastic day. Our guide and volunteer were great.

We visited during off season; no birds, which was disappointing, but this was a spur of the moment visit because we were in the area. The volunteers we met were cleaning a restroom and were very helpful.

We were on a youth deer hunt and another group was using a full size buck decoy and the father/son were hidden nearby in a camo pop-up blind. The camo blind negated the hunter orange requirement. They should be required to have orange flagging nearby to identify their presence.

Well maintained facilities.

When visiting an area unfamiliar to us, we'd like information about the botany, animals, geology, and ecology of the area. This makes the trip so much more interesting.

Whenever possible regular restroom facilities are preferred over pit toilets.

Wish staff were more available on weekends to give guided bird/plant walks. Wish there were some mountain biking trails available. Trail signage in areas not usually open to the public (but used by volunteers during festivals and CBCs) is practically non-existent and needs improvement.

Would like hunting to be expanded and add another day to each hunt.

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 = 143)

A chance to get out into nature. A chance to hunt deer and other game. To conserve nature as it was when our fore fathers came through this land.

A place in the country where you can see it in its natural (or near natural) state. However this is a large refuge with very small access.

Ability to manage big game through hunting and fishing.

Ability to see wildlife!

Able to go somewhere reasonably priced.

Access to hunting activities at extremely affordable rates.

Accessibility, auto tours, and protection for threatened species.

An opportunity to see what the area is like in its natural state.

Areas dedicated to preservation of species and habitat. People educated to share their knowledge about habitats and endangered species.

Balcones Canyonlands is the only public land close to me, where I can hunt deer (at a reasonable cost). Just wish we could hunt a whole week instead of just 2 and a half days.

Beautiful natural areas.

Because refuges have a wildlife conservation mission, they provide a wonderful opportunity to observe wildlife in their native habitat. Opportunities are provided for the public to connect with nature in a manner that is compatible with the mission of the NWRs. These areas are also important for fostering an understanding and appreciation of the environment through environmental education activities for children.

Better opportunity to see wildlife in its natural habitat.

Bird blinds at Llano Park were excellent.

Birding, educational sessions on falcons, fire fighting techniques for kids, forest crafts for kids.

Chance to be in the wild with nature.

Compared to state parks and the like, NWRs tend to have less commercialism and traffic.

Conservation and still having access to view wildlife and see their habitat.

Conservation.

Educating and informing, regarding the importance of and emphasis on conservation; including the observation, study and preservation of habitat of endangered and other important species. Explaining and preserving the history of the land constituting and neighboring the refuges.

Employees/volunteers are not as pushy, stay out of the way, and allow an individual to explore on his own.

Endless opportunity to learn and experience wildlife in several. Some people have never seen a deer, coon, or rabbit aside from on television.

Every park is different, therefore unique to me.

Extra emphasis and appreciation on the environment.

Fewer tourist areas. More raw nature. A lot less people.

First time chosen for a deer hunt. Problem was, in 3 days, 4 people never saw 1 deer, hog, or turkey. Didn't even hunt the last day. Waste of our time!

Focus on conservation, management, and restoration of wildlife, plants, and their habitats.

Focused on wildlife/bird observation as opposed to hike/bike, etc. only.

Glad to have a beautiful land saved for nature and wildlife for future generations to enjoy.

Good way to keep the different nature types in good condition and available for the people.

Great opportunities for birding and wildlife watching in a largely non-commercial environment.

Great trails, easy access, shade in areas, diverse terrain, not overly crowded, and no motor vehicles like four-wheelers!

Habitat for wildlife.

I appreciate the conservation effort in my "backyard".

I enjoy the lesser used parks and refuges and have begun searching refuges as I have found them wonderful places to visit and very well run in my experience.

I feel that the wildlife is more revered than in other places (like National Parks) especially now that they have passed a law allowing hunting.

I greatly appreciate the opportunity to be able to hunt on the NWR that is within proximity to my home. I feel it is important that people that may not have the opportunity to hunt on private lands have the chance to hunt on public/federal lands, and NWRs make this possible.

I love the idea of being able to enter anytime between dawn and dusk at anytime except deer season. I go for the peace and solitude and the availability of photogenic subjects.

I was about to hunt deer on the land.

Important for wildlife and people. Safe from development and destruction.

It has been left as is. Very primitive.

It is a great way to have habitats preserved for the wildlife vs. the extinction of species due to loss of areas to building and general invasion. Education for all ages and introducing/stressing the importance of respect for the lands and the things that inhabit it.

It is an escape from the every day. A way to unwind, relax and take in nature.

It is managed and open to the public. So much land now days is privately owned and un-accessible. Other public lands cost money to enter. Many NMR's are free. NWRs have some very wilderness location like ANWR. these need to remain unspoiled. NWRs are conserved and restored, other public lands are not.

It is so close to fairly large human habitation but preserves the hill country perfectly and especially the black capped Vireo and Golden Cheeked Warbler.

It maintains relatively undisturbed wildlife habitat. It's such a great opportunity for us to see endangered species this close.

It tends to keep the area as close to original nature as possible.

It was free. It was quiet and not crowded. It was a little off the beaten path.

It's nice to have public lands available and dedicated to wildlife.

It's vital that we preserve as much land as possible for wild things to continue to have a home.

Its dedication to conserve wildlife, especially endangered species.

Its focus is on wildlife and the environment, not recreation. I've been to other state-run wildlife areas and because they combine wildlife observation/protection and recreation, the recreation aspect often interferes with wildlife protection. It's too noisy. I do understand that this is a difficult balance, trying to make a lot of people happy when they have very different interests.

Keep these precious lands available to all members of the public, keep the maintenance costs low, the educational opportunities high, and preserve by governmental edict from commercial development, land sell-off, and environmental pollution.

Lack of recreational facilities means there are rarely more than a handful of visitors and solitude is virtually guaranteed.

Lands and waters are normally kept in their pristine natural state with minimal development and no commercial activities.

Large tracts focused on sensitive species or sensitive life cycle events.

Left natural.

Less build up. Less of a human "footprint" on the land.

Less developed than parks.

Less travelled.

Limited impact area.

Living in the city, it's a wonderful opportunity to get away to a wildlife refuge and enjoy the natural beauty of nature. Away from phones and to do things. Very relaxing.

Location, lack of development, opportunity for discovery.

Love the serene, untouched, wilderness of the refuge.

Love to see wildlife in natural area.

Made for the public to use.

More restrictive than most National Parks. Staff more professional and knowledgeable.

More structured and regulated than other public land.

More than just the experience of the terrain and scenery.

Much less impact on the environment they are trying to conserve.

Much of land is inaccessible to public unless you are with someone who has permission to enter.

National Wildlife Refuges provide the best chance to see wildlife in every ecosystem and region of America at a reasonable price without the crowds common at the National Parks.

Not over-run by visitors, no camping.

NWRs maintain areas unique to natural habitats without the interruption of manmade buildings or conveniences such as restaurants, homes, roads etc.

Only species of birds in the world that live there.

Opportunity to visit and enjoy our local resources and wildlife habitat.

Peaceful.

Preservation of the environment and all its creatures.

Preserve flora and fauna.

Primary aim centered on wildlife.

Primary focus on conserving wildlife in their natural habitat.

Pristine.

Professional personnel, who are knowledgeable and absolutely care about the refuge. Organized, clean trails, and healthy wildlife and flora.

Protection and conservation opportunities.

Protection of wildlife and habitat over human use, but on the flip side, people need some access if they are learning and care about refuges.

Provides (potentially) an extremely different life experience, for example Bosque del Apache, like going back 200 years in North America.

Refuges are unique because they focus on wildlife and plants first; but strive for a unique balance with providing opportunities for the public and visitor services as well as conserving the land.

Refuges offer something you can't experience anywhere else, a chance to see endangered wildlife in their natural habitat. There are usually more volunteer programs allowing the public to participate in conservation, which educates people on why wildlife becomes endangered in order to restore the wildlife to its natural environment.

Refuges should continue to provide multi-use activities, including public hunting.

Scenery.

Seeing undisturbed natural habitats and wildlife.

Sensitivity to environmental conditions and to threatened species (animal and plant).

The ability to hunt on great property.

The additional effort made to provide specific bird watching locations.

The availability of reasonably priced local hunting opportunities is a huge benefit to living near this refuge. I would like to see this expanded to more weekends throughout the hunting season.

The combination of being able to see rare birds and their habitat and getting some valuable exercise. In March of this year (2013) I will be 69.

The emphasis at refuges is on the wildlife; it's preservation and public education. Parks that are just for hiking and recreation don't have that slant towards nature.

The fact that they restrict vehicles access to the refuge and the restriction of bikes, dogs and trail runners on the trails. They ensure that birders, day hikers and wildlife enthusiast can enjoy the refuge.

The focus on the wildlife and preserving habitat is very important to me as a hiker and sometimes canoer, rather than focusing on recreation activities like power boating and RV camping, which I feel there are ample opportunities for. The natural, natural areas with the chance to see unique and diverse species makes driving out to the wilderness area a real treat. I'm glad not to have competition with motorcyclists and other powered transportation on the trails and byways.

The hill country landscape.

The hunting can be second to none depending upon the refuge.

The increased chance to see wildlife that is being conserved.

The land and the animals to hunt.

The land is very unaltered and not geared towards money making schemes. You are able to observe and appreciate nature in its native state and explore.

The less developed land allows a more natural experience.

The mission is unique. It is specifically dedicated to preserving wildlife.

The NWRs provide a place to observe various species that are not available in many other locations.

The opportunity to experience nature in all its aspects in this geographic area.

The opportunity to hunt in some beautiful country for an affordable fee. Chance to see some rare wildlife.

The primitive conditions in which you can observe natural beauty.

The purpose of our visit was to observe the birds in the area and to see the birds this refuge was providing refuge for, the Black-capped Vireo and the Golden-cheeked Warbler.

The trail we hiked had great markers of information about the native animals and plants, which really enhanced the experience for all four of us.

The wildlife.

There are numerous activities for the entire family to enjoy. Not all of these activities are offered at traditional parks, etc.

They are just part of the natural landscape.

They are less like a traditional recreational area and appear to have much less human impact. The solitude is welcome.

They are mostly open to the public and you can often choose where to go on the refuge within limits.

They are not so "commercialized". I like the more natural relaxed atmosphere.

They are often focused on specific habitat, that is often no longer in abundance outside the refuge.

They are unique because they provide a chance for visitors to view/observe threatened and endangered species, which is a "very important" aspect.

They are very important for the reasons listed in their mission statement. As one who enjoys observing birds it is important that we have such an agency to preserve habitat critical to the survival of many endangered species, yet providing public access on a limited basis.

They carefully work to preserve habitats that could disappear because of private property exploitation and urban sprawl.

They do not advertise their locations, nor attract "loud and noisy tourists". However, for a first time visitor it would be nice to have some information about what to look for on a hike in the area.

They have enough square mileage to give wildlife a natural habitat.

They provide a protected environment that we can observe wildlife we couldn't see/experience anywhere else.

They provide the sense of adventure and escape.

They set aside thousands of acres that will never be commercially developed.

They were established for the protected flora and fauna, not for humans. Their top priority is the protected flora and fauna, not providing access/services to humans. Human access/service at a NWR is a bonus.

This is very convenient for me to hunt, because it's close to my father's house. It's a great public area for hunting.

This provided an economical opportunity to take my son deer hunting.

This refuge was established, I guess, mainly for birdwatching and I go more to hike, but have been lucky to have seen endangered species as well as native animals.

This was an opportunity for children to see a falcon show, make art projects and learn about snakes, etc. The grandchildren enjoyed it very much.

Trails.

Usually the NWRs have trails that are easier to spot as you are hiking and more opportunities to see wildlife.

Very courteous, knowledgeable staff, with lots of various opportunities for the public.

Very natural, not commercial.

Visitor attitudes of conservation are closer to my own. They attract less tourists, and more people who really love the outdoors.

We can walk through it at no cost.

We love to visit natural places without a lot of people around, so the NWR is a great way to do that. Lack of the facilities that bring big groups and families like picnic tables, camping etc. are not things that we miss at all. Would rather have sparse facilities and fewer crowds.

Well maintained and the accessibility.

Well managed programs that enable a variety of uses of this resource.

Wide open land attracting a variety of people.

Wildlife refuges are not as oriented toward "tourist attractions" as many National Parks and consequently focus more on the wildlife and habitats which is what I find more interesting.

Additional Comments (n = 48)

As a retired geologist, more information and geological resources would be pleasing.

Birding festival was well done. I would suggest that the afternoon field trips be 3 hours rather than 4 hours. TX is hot in the afternoon and after a 4-5 hour morning field trip this old man found the afternoon trips hot and a little too long.

During the hunting, when there are multiple people on a unit that do not know one another, it would be nice to talk to the others on the same unit so we will know where one another will be hunting. I believe it would add to the safety of the hunt.

Excellent parks (both Balcones Canyonlands area and Llano State Park near Junction City, Texas). (signed)

Funds need to be available at all times for purchasing additional tracts so that the refuge can act when there are willing sellers in the area. After all of these years since it was established, this refuge is only halfway toward meeting its total acre goal because land purchasing funds are not available when they're needed. All of the staff are top notch and hard working and doing the best with what they have.

Good location if all you're looking for is hiking trails. Out of bird season, so no birds.

Great experience thanks to helpful staff.

Great festival. Good leaders.

Great place to hunt, hike, photograph, etc. But most of the land is off limits except during hunts. Open the land up for hiking and exploration during the rest of the year. Existing roads would suffice for trails and allow access to interior acres. This area of Texas does not have a nearby National Park and this large collection of land goes mostly unused by the general public. I believe this is a waste of valuable resources.

Great refuge. I will go back.

Have schools in area visit the refuge with volunteers. Have simple activities like raptor show and wild flower collection, creek water exploration.

Hiking and occasional camping. We would like to see less emphasis on powerboat and motorcycles, which upset the solitude of my favorite locales.

I am a 100% disabled veteran and would like to have the opportunity to harvest a deer of either sex when afforded the opportunity to hunt on the refuge. I have seen buck deer each time but could not harvest one because of refuge policy that a doe or hog must be harvested first, then a permit/tag is given to harvest a buck. Please change this policy for veterans.

I am very happy with the refuge. My wife who passed away 5 years ago was a bird nut. She has gotten me into seeing how wonderful these little creatures really are, and being 69 years old, I really love to hike through the trees on these very well kept trails. I was a marine in the 1960's, so I am compelled to stay in shape. It's required of marines no matter how old you are. Thank you. (signed)

I believe there should be more advertising regards to the outdoor opportunities at the refuge. Work together with schools and make young people aware of the services.

I enjoyed the hunting experience I had while I was at you facility. Keep up the good work. Thanks!

I had a blast!

I have been recovering from back surgery and have found the hiking trail and the contact with nature to improve my overall health and well being. This place is a treasure.

I like the primitive hiking. If I wanted to walk on pavement I can do that at home. Thanks.

I look forward to bringing my children to Balcones in the near future.

I loved it! I love hiking, nature, and learning.

I support your efforts completely. Best use of my tax dollars. (signed)

I think this spot is under-used and needs promotion in the local area.

I was really impressed by how the refuge was maintained. It was such an experience to see Golden-cheeked Warbler. I would love to go back to see Black-capped Vireo.

I'm glad the refuge is here to protect and recover our Hill Country habitat. The land has been roughly used in the last 200 years and needs a rest.

New and exciting part of the country for me. I was impressed with the terrain, the dense vegetation, geological formations and the water sources not to mention so many bird species that don't occur in California. I really liked the birding opportunities right around Refuge Headquarters and appreciated hearing about the management for endangered bird species.

Nice free secluded park. Some sections nearby roads are noisy, affecting its secludedness.

One of my favorite places. I am an officer of the Friends group. Thank you.

Picked up my life bird Golden-cheeked Warbler and Black-capped Vireo so this was a memorable trip!

Please continue to allow public hunting on refuges where applicable to the resource.

Refuge is very beautiful and a special place. We support your efforts to keep it that way!

Thanks for the blue grocery bags.

The Balcones NWR Is a national treasure. The staffers are extremely knowledgeable, which makes them very valuable. Unlike a lot of people, I have very high regard for what the federal government does to protect nature (and a lot of other services, too). Keep up the good work. I'll do whatever I can to communicate with my senators and representatives about the valuable work of the USFWS and USGS.

The refuge is well organized, with several locations open to the public, which are easily found and well mapped. I wanted very much to see the Golden-cheeked Warbler and Black-capped Vireo, and on the guided tour, had sightings of both, as well as many other birds. Great trip and results.

The staff person that was at the refuge when we visited was very nice and knowledgeable.

Very nice and close to home. Great peaceful place.

Very nice area and for sure I will come back.

Very pleasant. One of the best NWRs I have been to and I will return.

Visiting the Balcones Canyonlands Refuge has always been an enjoyable experience.

Headquarters closed Sunday, mildly disappointing.

We appreciate the opportunities that festivals and guided trips provided to see birds on the refuge. We would recommend visiting this refuge to friends. We joined the Friends of Balcones Canyonlands NWR to support the refuge.

We had a great time on this refuge even though we did not harvest a deer. Being outdoors was great.

We had a tremendous experience at the refuge. We had a bad experience with the private vendor that ran the hunt selection process, with remarkably poor email communication and they were hard to get hold of by phone; this all occurred after we were notified of selection. The refuge staff was very helpful in overcoming these difficulties with the vendor.

We had a wonderful day hiking here.

We have been living in the Netherlands where there aren't many outdoor experiences available, but now that we are back in the U.S. we plan to take many trips. We will be going on a few ski trips, visiting caverns in new Mexico and pueblo ruins. We also plan to go kayaking, canoeing, more trail running, rock climbing and camping. We would love if there were backpacking opportunities near Austin. We are excited that Austin parks and recreation offers fly fishing classes.

Went strictly for hunting. The whole experience was enjoyable. It was well organized and all the employees were both helpful and knowledgeable.

With an average of only 60 deer per 1000 acres; knowing this ahead of time would have kept me from applying to draw this hunt and save my money. On the other hand, the beauty of the area and the efforts to preserve it offset the hunting experience. After all, these refuges are not about hunting primarily. There are so many other areas of refuge use to experience. I'm glad the place is there.

You should consider instituting a hunting program like the Granger Lake WMA has. It allows hunters all season access to the refuge, the hunting is restricted to bow only and is not as labor intensive as your current system.
