



National Wildlife Refuge Visitor Survey 2012: Individual Refuge Results for Felsenthal National Wildlife Refuge

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

It is a beautifully protected resource. I am not able to express in words what makes our refuge unique. It has to be experienced. It has such an effect on me that I will spend the rest of my living days exploring, hunting, fishing, and enjoying this refuge and passing it on to my kids and grandkids. This refuge is one of the centerpieces of my life.

— *Survey comment from a visitor to Felsenthal National Wildlife Refuge*



Felsenthal 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 Felsenthal 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 Felsenthal 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 Felsenthal National Wildlife Refuge

Felsenthal NWR, established in 1970, is located in southern Arkansas near the Louisiana border. Named after the adjacent community of Felsenthal, this refuge covers nearly 65,000 acres, including the 15,000 acre Felsenthal Pool which can more than double to 36,000 acres during winter flooding. The Felsenthal Pool is the world's largest green tree reservoir, a land of bottomland hardwood forest that creates a shallow pool when flooded. The Ouachita and Saline Rivers feed the Felsenthal Pool. This aquatic habitat is critical for many migratory birds as well as year-round resident species. Bottomland hardwood and upland habitats also account for a good portion of the refuge's habitat. Felsenthal NWR provides significant habitat for many animal species, including deer, turkey, raccoon, beaver, coyote, abundant waterfowl and songbirds, quail, and even endangered species such as the red cockaded woodpecker or threatened species such as the American alligator and bald eagle.

Felsenthal NWR, is part of the South Arkansas Refuges Complex, along with the Overflow NWR and Pond Creek NWR. There are many opportunities available to visitors including environmental education, fishing, hunting, wildlife observation, photography, and interpretation and use of the Visitor Center. Each year approximately 390,000 people visit the refuge and take advantage of the wide range of visitor activities and opportunities (2011 Refuge Annual Performance Plan measures; Rob Miller, U.S. Fish and Wildlife

Service, 2012, written commun.). Figure 1 displays a map of the refuge. For more information, please visit <http://www.fws.gov/felsenthal/>.

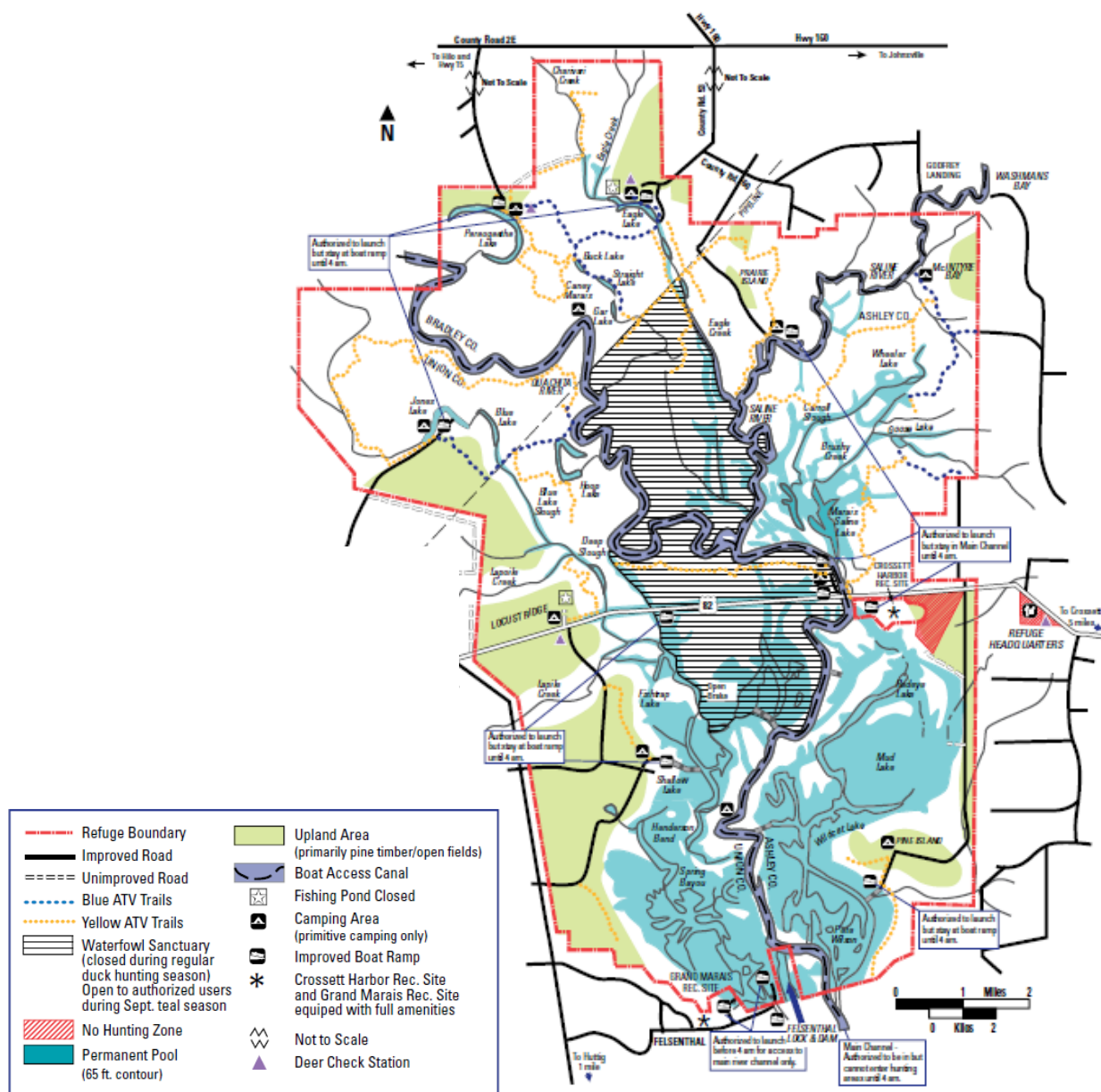


Figure 1. Map of Felsenthal NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at Felsenthal National Wildlife Refuge

A total of 249 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Felsenthal NWR (table 2). In all, 134 visitors completed the survey for a 55% response rate, and $\pm 6.8\%$ margin of error at the 95% confidence level.²

Table 2. Sampling and response rate summary for Felsenthal NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	6/23/2012 to 7/7/2012	Crossett Harbor Boat Launch				
		SP1 Totals	70	1	35	51%
2	11/17/2012 to 12/1/2012	Old Beer Joint Boat Launch HQ Check Station Pereogeethe Check Station Shallow Lake Check Station Eagle Lake Check Station				
		SP2 Totals	179	12	99	59%
		Combined Totals	249	13	134	55%

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

Almost all visitors to Felsenthal NWR reported that before participating in the survey, they were aware of the role of the Service in managing refuges (99%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants, and their habitats (99%). 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 (69%) 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.

Some visitors to Felsenthal NWR had been to at least one *other* national wildlife refuge in the past year (38%), with an average of 8 visits to *other* refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (28%) had only been to Felsenthal NWR once in the past 12 months, while the majority had been multiple times (72%). These repeat visitors went to the refuge an average of 33 times during that same 12-month period. Visitors used the refuge during only one season (41%), during multiple seasons (25%), and year-round (35%).

Visitors first learned about the refuge from friends/relatives (75%), people in the local community (21%), or signs on the highway (14%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (87%), directions from friends/family (13%), or a GPS navigation system (12%; fig. 3).

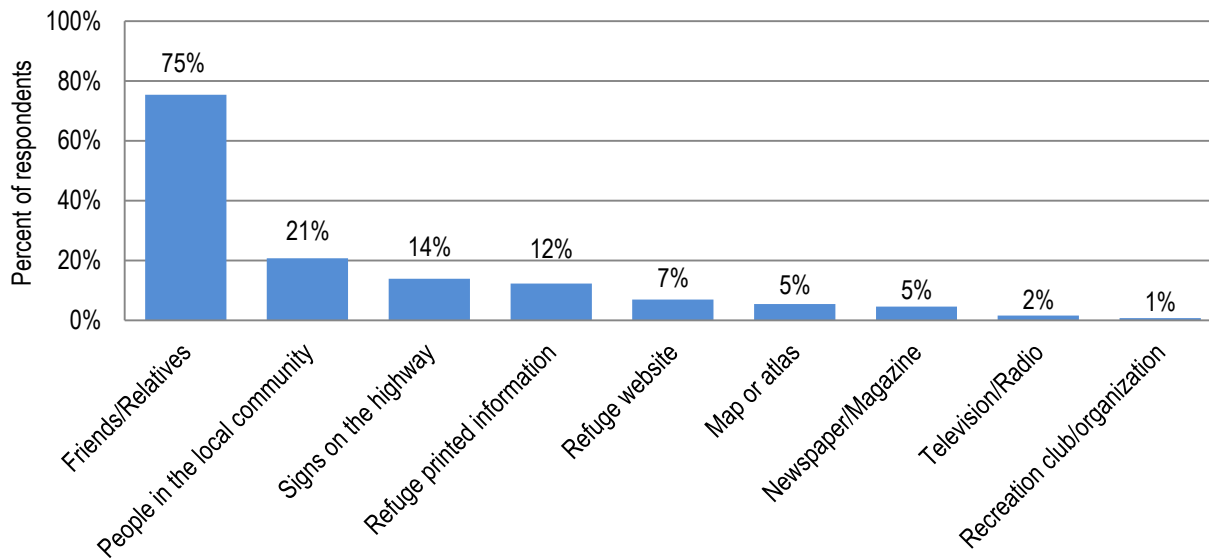


Figure 2. How visitors first learned or heard about Felsenthal NWR (n = 130).

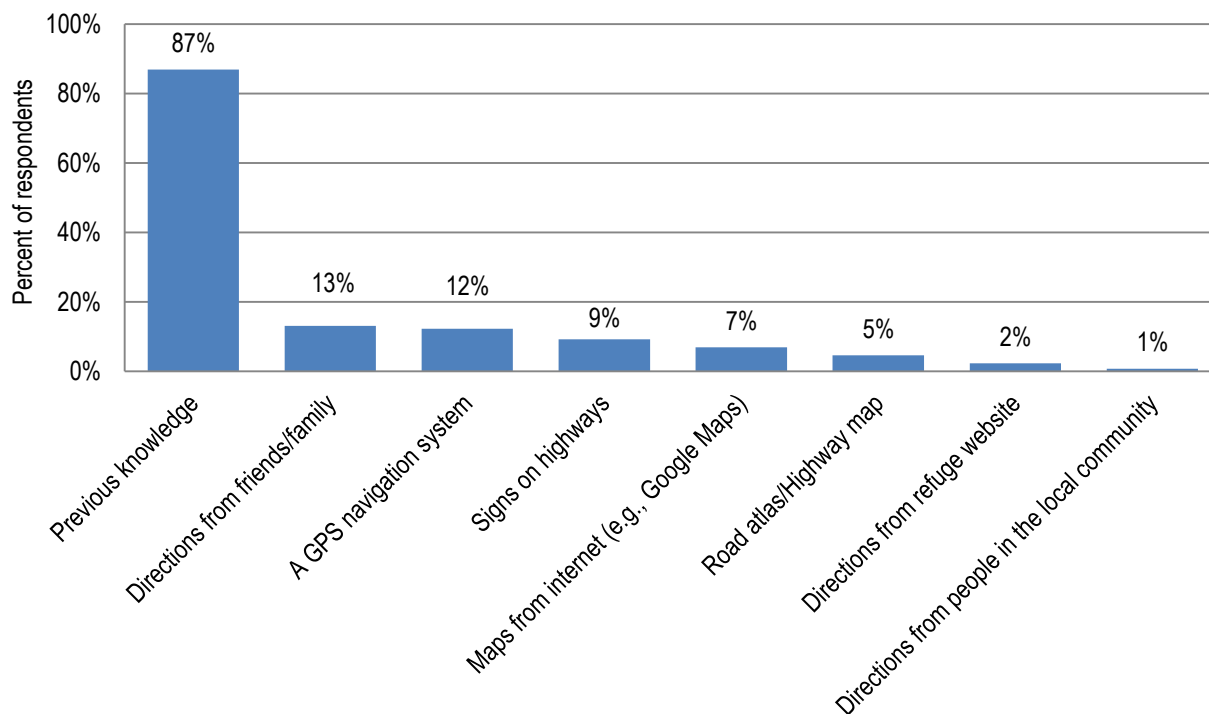


Figure 3. Resources used by visitors to find their way to Felsenthal NWR during this visit (n = 130).

More than half of visitors (56%) lived in the local area (within 50 mi of the refuge), whereas 44% were nonlocal visitors. For most local visitors, Felsenthal NWR was the primary purpose or sole destination of their trips (92%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of their trips (96%).

Local visitors reported that they traveled an average of 24 mi to get to the refuge, while nonlocal visitors traveled an average of 220 mi. The average distance traveled for all visitors to this refuge was 102 mi, while the median was 45 mi. Figure 4 shows the residences of visitors traveling to this refuge. About 82% of visitors traveling to Felsenthal NWR were from Arkansas.

Table 3. Influence of Felsenthal 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	96%	2%	2%
Local	92%	7%	1%
All visitors	94%	5%	2%

Surveyed visitors reported that they spent an average of 7 hr at the refuge during one day there, while the most frequently reported length of a day visit (the modal response) was 8 hr (79%). Most visitors indicated they were part of a group on their visit to this refuge (89%). 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 Felsenthal NWR (for those who indicated they were part of a group, n = 117).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	90%	4	1	5
Commercial tour group	7%	0	0	0
Organized club/School group	3%	31	0	31
Other group type	0%	24	0	24

The key modes of transportation used by visitors to travel around the refuge were private vehicles with trailers (76%), boats (38%), and ATVs/Off-road vehicles (34%; fig. 5).

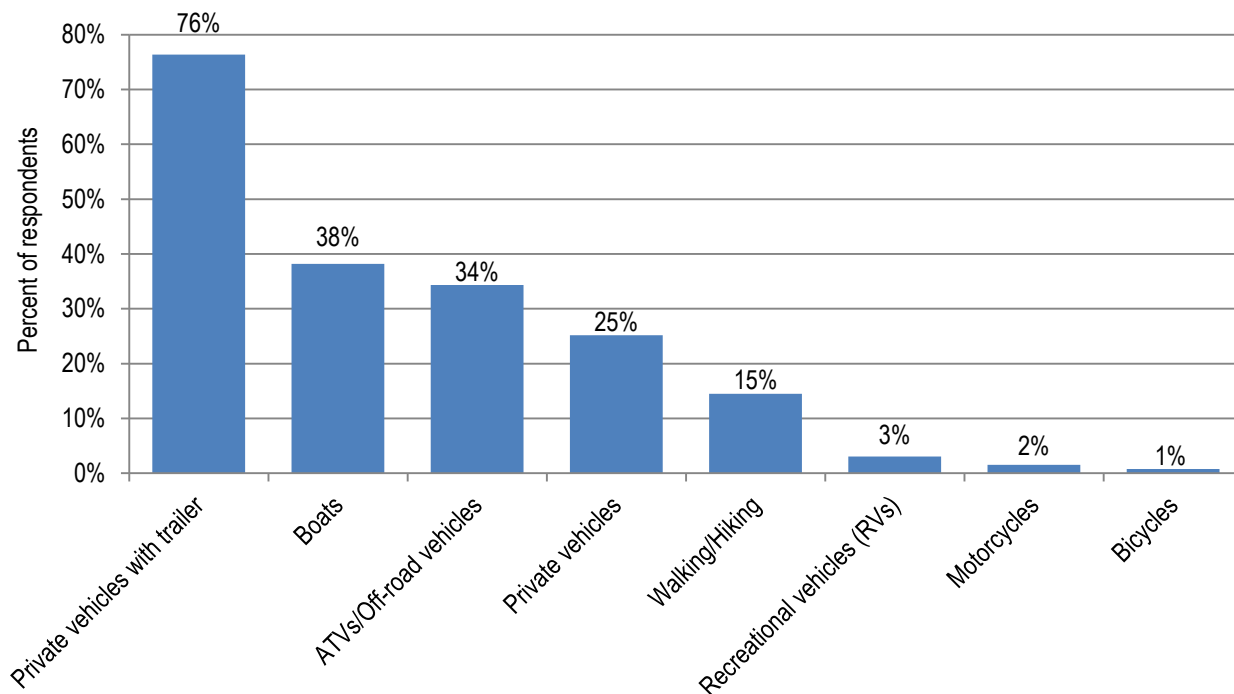


Figure 5. Modes of transportation used by visitors to Felsenthal NWR during this visit (n = 131).

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 big game hunting (61%), freshwater fishing (47%), and motorized boating (36%). The primary reasons for visitors' most recent visits included hunting (68%), fishing (21%), and a special event (7%; fig. 7). Some visitors also used the Visitor Center during their trips (30%), mostly to pick up/purchase a license, permit, pass (62%), ask information of staff or volunteers (46%), and view the exhibits (36%; fig. 8).

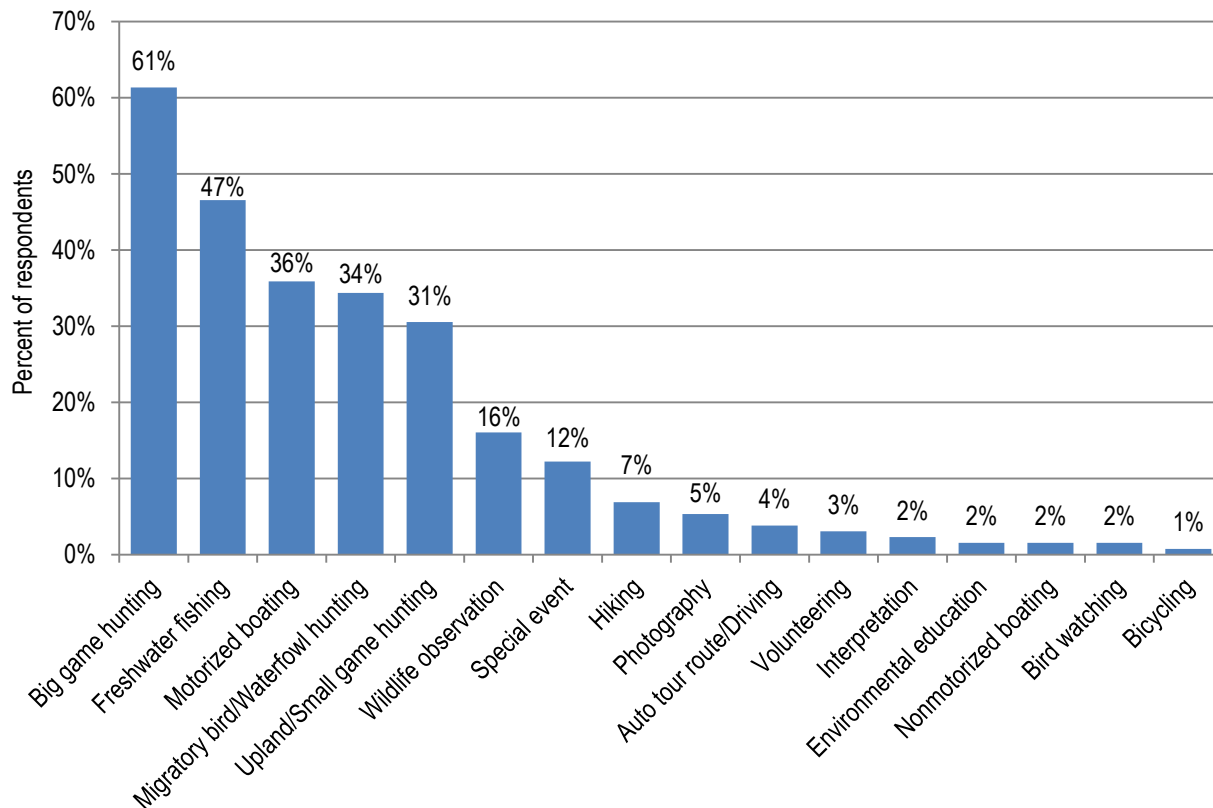


Figure 6. Activities in which visitors participated during the past 12 months at Felsenthal NWR (n = 132). See Appendix B for a listing of “other” activities.

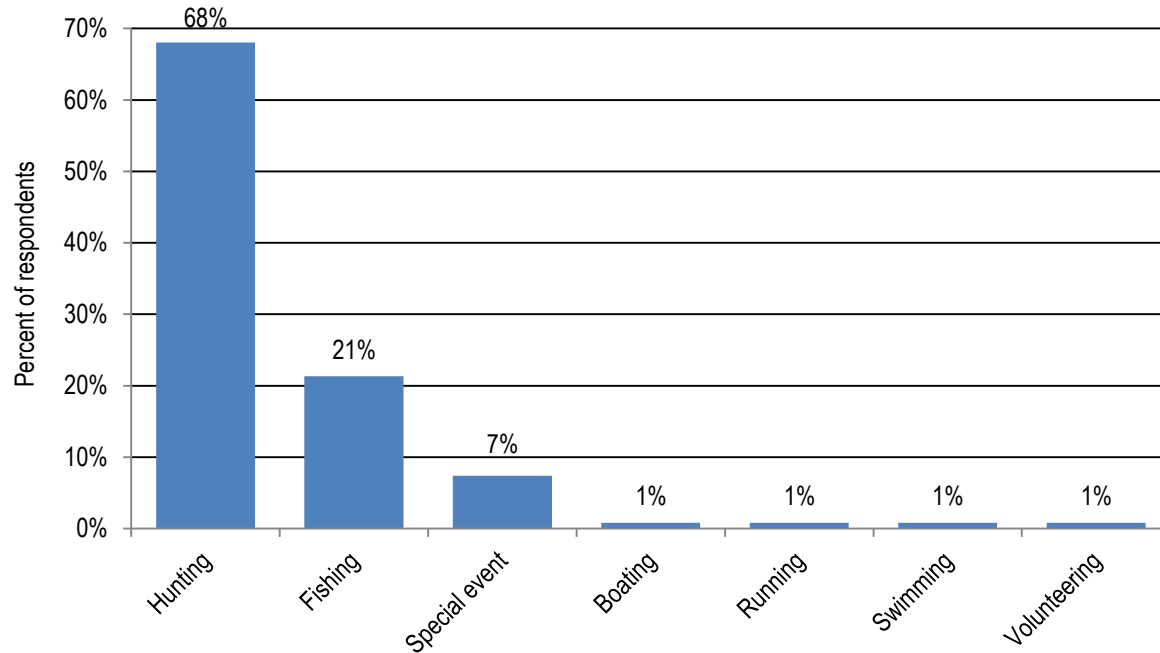


Figure 7. The **primary** activity in which visitors participated during this visit to Felsenthal NWR (n = 122). See Appendix B for a listing of “other” activities.

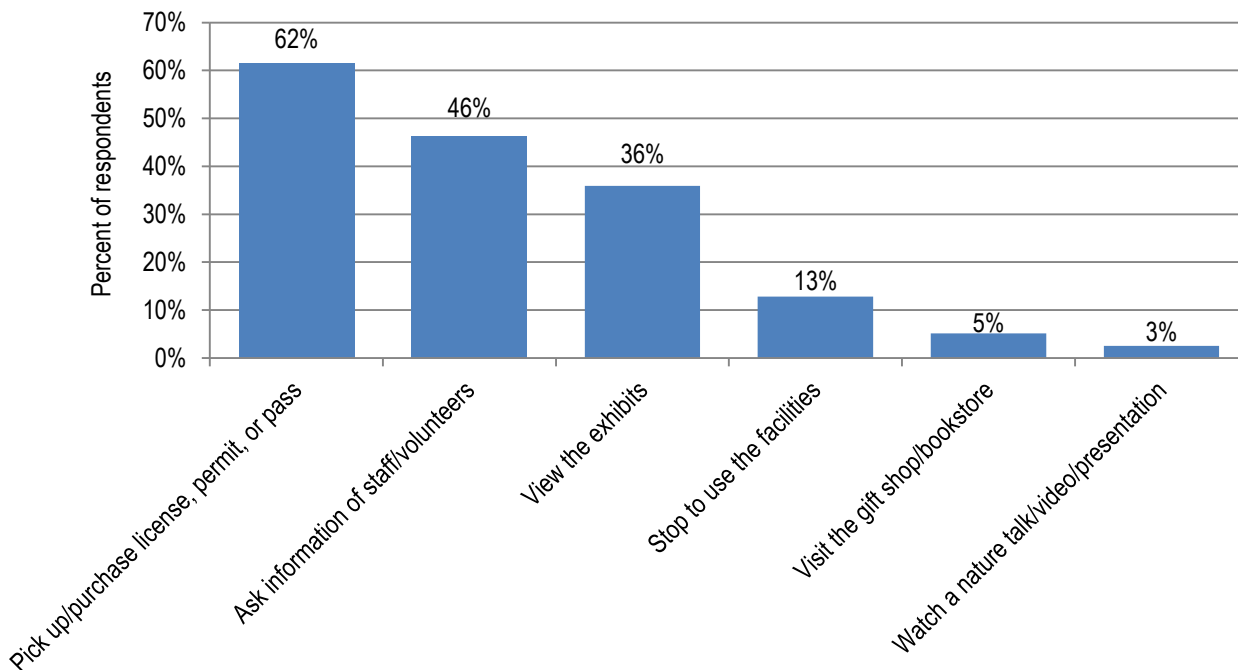


Figure 8. Visitor Center activities in which visitors participated at Felsenthal NWR (n = 39).

Visitor Characteristics

All visitors who participated in the survey at Felsenthal NWR indicated that they were citizens or permanent residents of the United States. These visitors were a mix of 91% male (with an average age of 45 years) and 9% female (with an average age of 41 years). Visitors, on average, reported they had 14 years of formal education (equivalent to two years of college or technical school). The median level of income was \$50,000-\$74,999. 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, 56% of surveyed visitors to Felsenthal NWR indicated that they live within the local 50-mi area while nonlocal visitors (44%) stayed in the local area, on average, for 4 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 \$49 per person per day and local visitors spent an average of \$59 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 Felsenthal NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	53	\$33	\$49	\$47	\$0	\$200
Local	55	\$30	\$59	\$81	\$0	\$358

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 Felsenthal NWR were as follows (fig. 9):

- 83% of visitors were satisfied with the recreational activities and opportunities,
- 80% of visitors were satisfied with the information and education about the refuge and its resources,
- 80% of visitors were satisfied with the services provided by employees or volunteers, and
- 80% of visitors were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

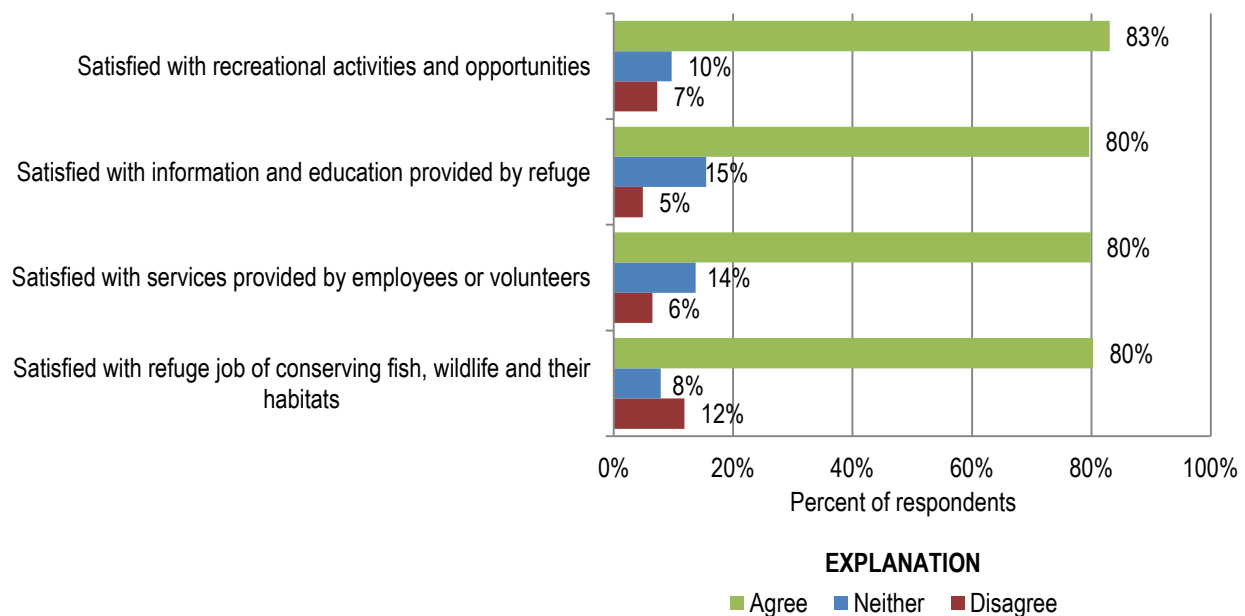


Figure 9. Overall satisfaction with Felsenthal NWR during this visit (n ≥ 123).

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 10–12 depict surveyed visitors' importance-satisfaction ratings for refuge services and facilities, recreational opportunities, and transportation-related features at Felsenthal NWR. Results are summarized as follows:

- All refuge *services and facilities* fell in the "Keep Up the Good Work" quadrant (fig. 10).
- All refuge *recreational opportunities* fell in the "Keep Up the Good Work" quadrant (fig. 11).
- All *transportation-related features* fell in the "Keep Up the Good Work" quadrant (fig. 12).

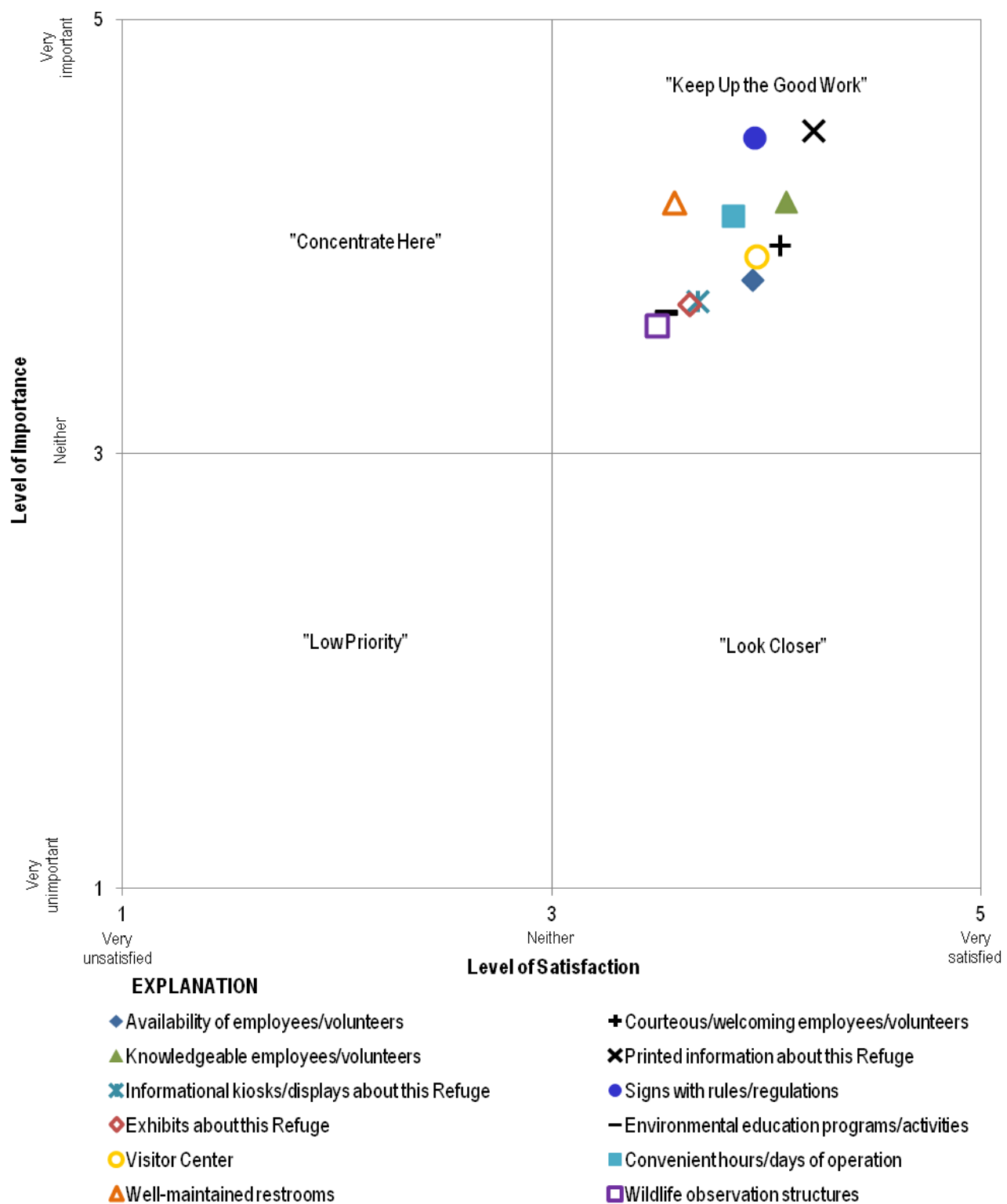


Figure 10. Importance-satisfaction ratings of services and facilities provided at Felsenthal NWR.

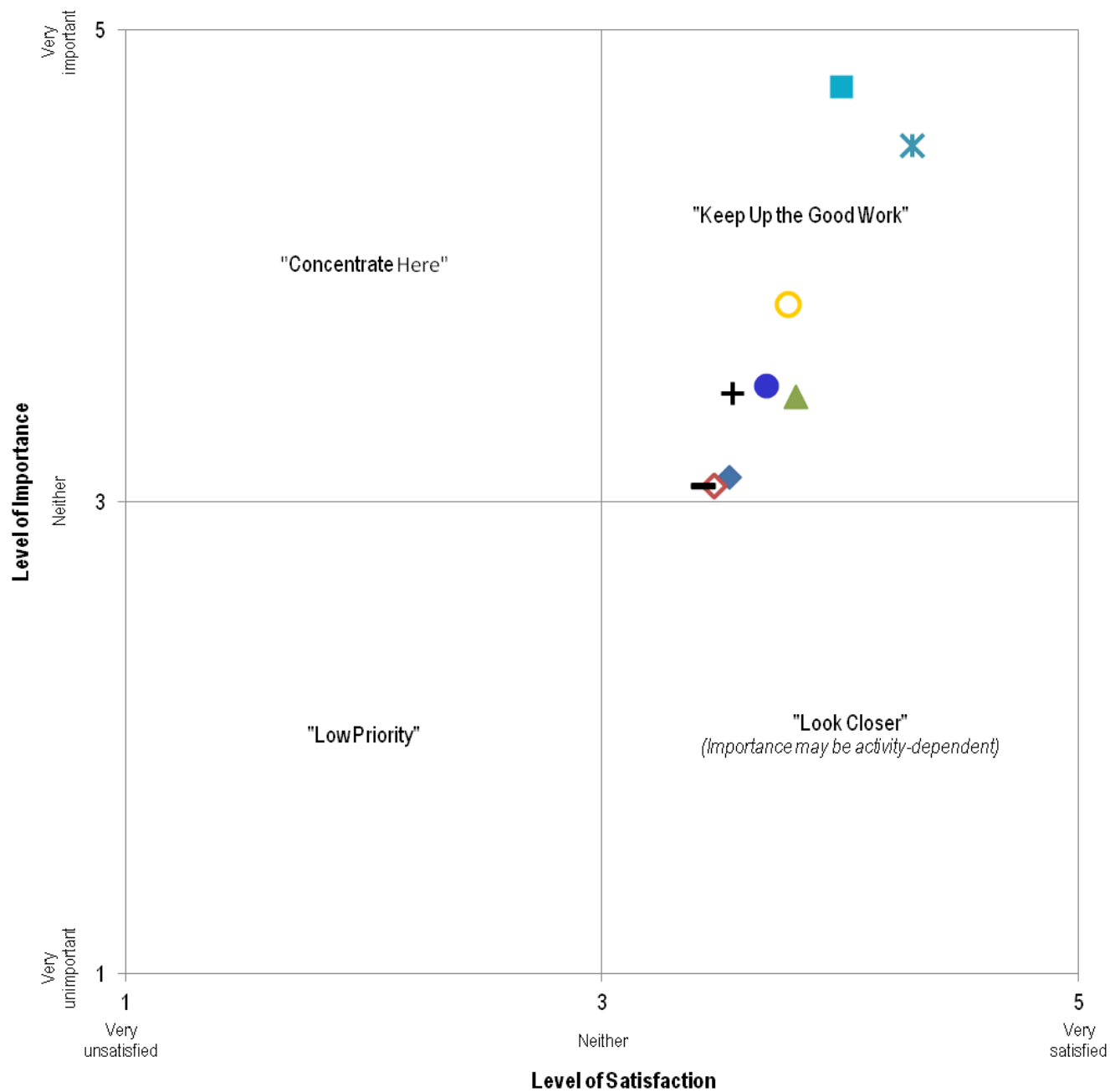
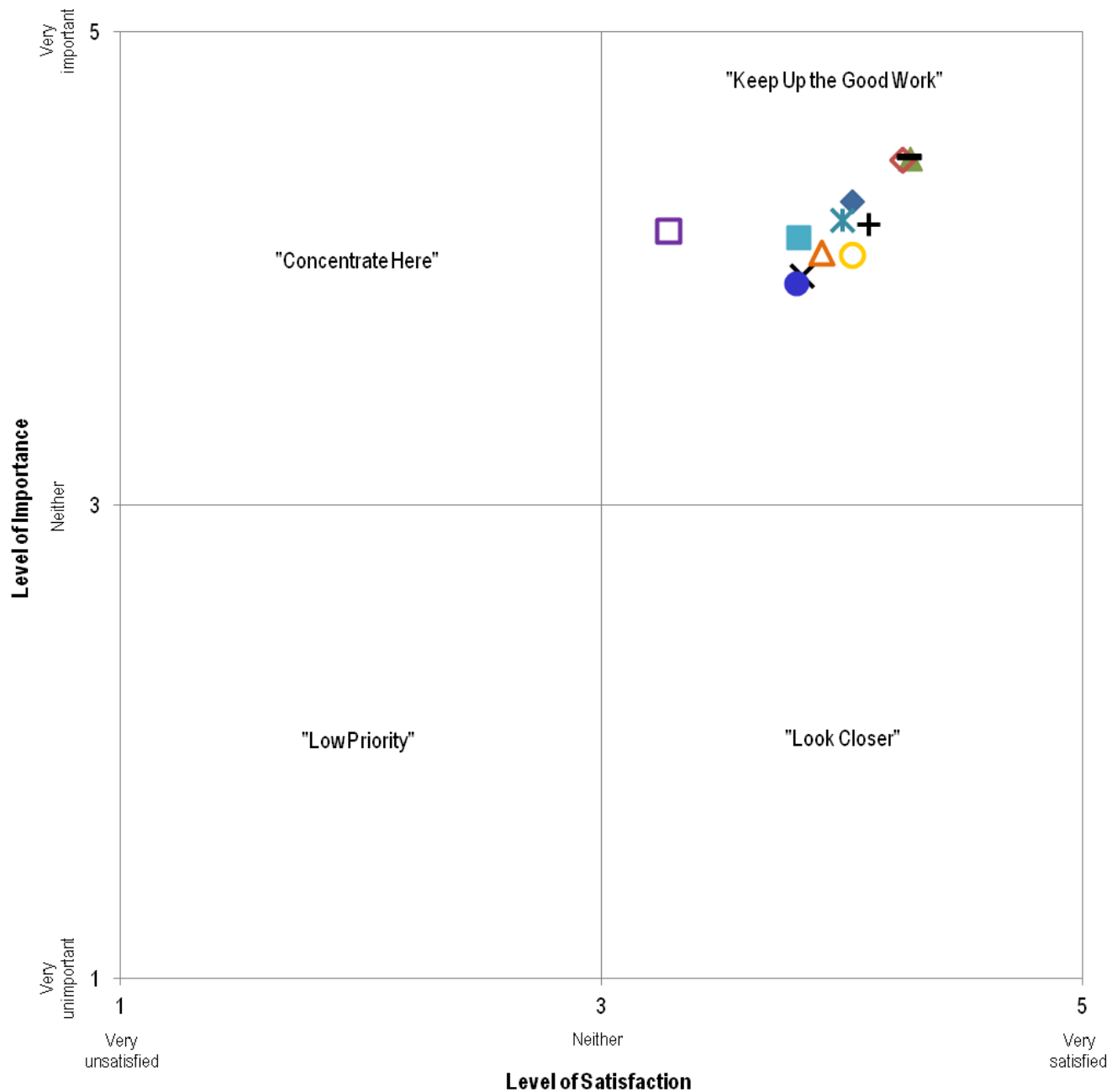


Figure 11. Importance-satisfaction ratings of recreational opportunities provided at Felsenthal NWR.



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 12. Importance-satisfaction ratings of transportation-related features at Felsenthal 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 Felsenthal 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.

A majority of Felsenthal NWR visitors indicated they were unlikely to use any of the six alternative transportation options listed on the survey (fig. 13).

When asked specifically about using alternative transportation at Felsenthal NWR, few visitors thought alternative transportation would enhance their experience (14%) while more than half of visitors thought it would not (55%). An additional 31% of surveyed visitors indicated they were unsure whether alternative transportation would enhance their experiences.

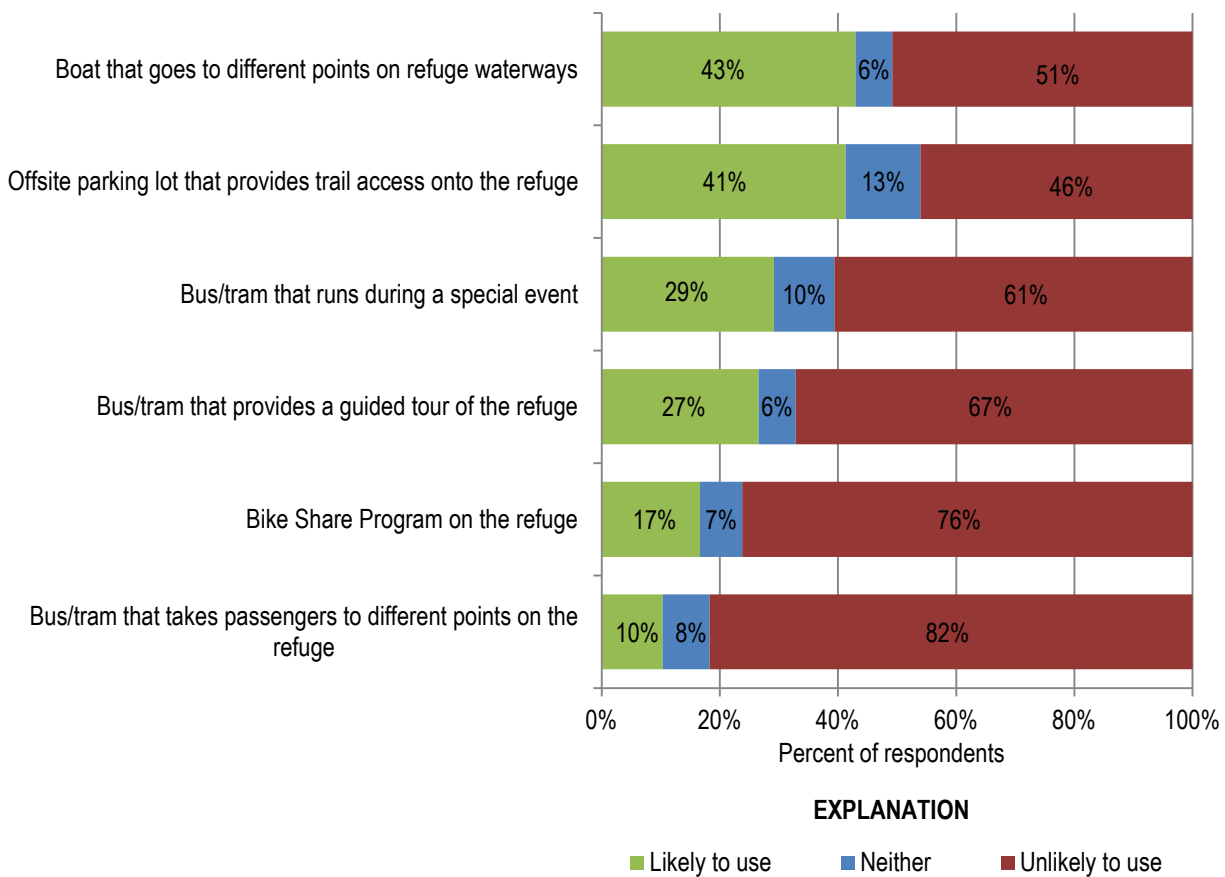


Figure 13. Visitors' likelihood of using alternative transportation options at refuges in the future (n ≥ 126).

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 Felsenthal NWR agreed with the following statement related to their own *personal involvement* with the topic of climate change as it relates to fish, wildlife, and habitats (fig. 14):

- I am personally concerned about the effects of climate change on fish, wildlife and habitats.

The majority of visitors also agreed with the following *belief statements* regarding climate change effects on fish, wildlife and their habitats (fig. 15):

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

Results regarding such beliefs are important to consider when communicating with visitors about this topic, since some visitors (39%) indicated their experiences would be enhanced if Felsenthal NWR provided information about how visitors can help to address climate change impacts on fish, wildlife, and their habitats (fig. 14).

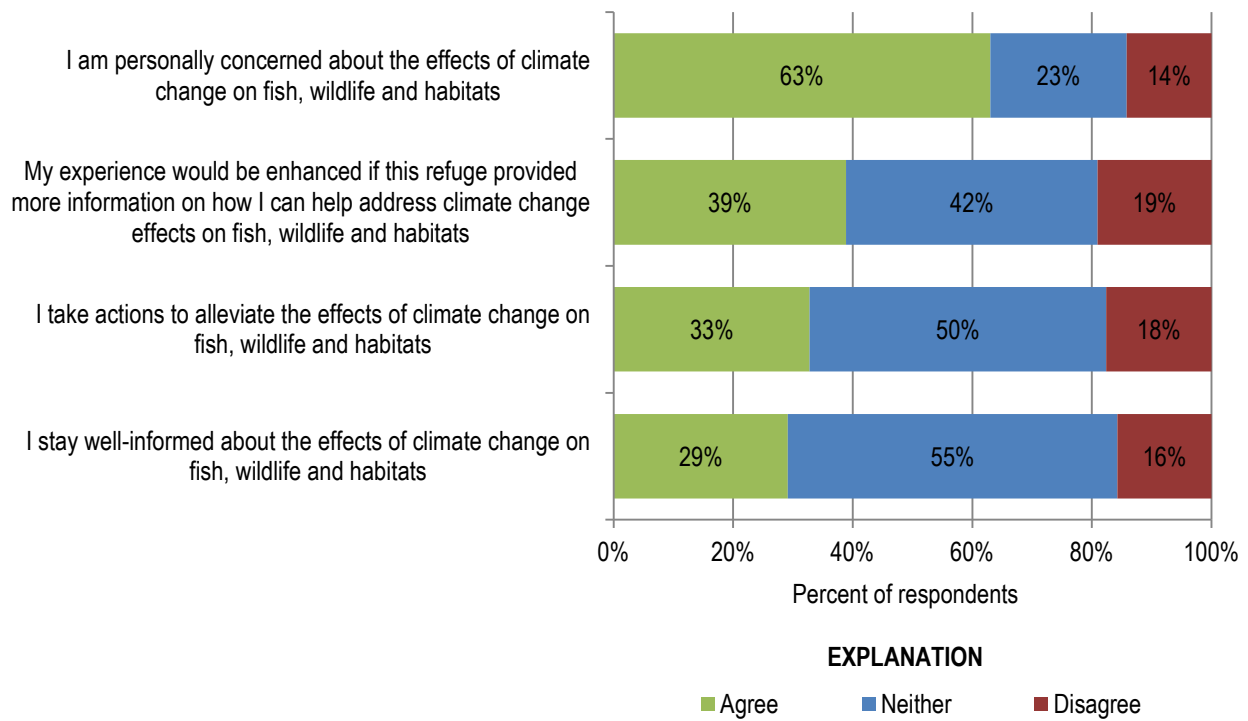


Figure 14. Visitors' personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 125).

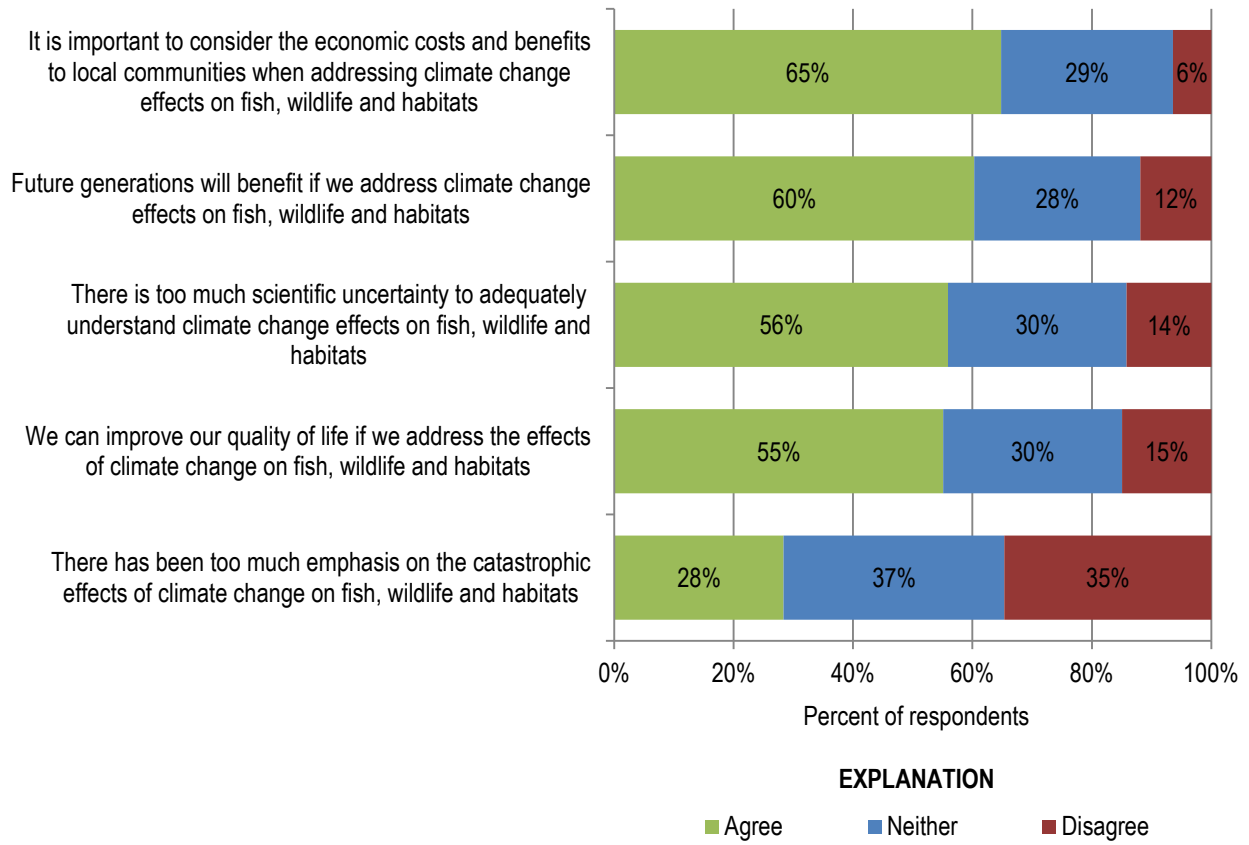


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 125).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Felsenthal 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

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"/> 61% Big game hunting	<input type="checkbox"/> 7% Hiking	<input type="checkbox"/> 2% Environmental education (for example, classrooms or labs)
<input type="checkbox"/> 31% Upland/Small game hunting	<input type="checkbox"/> 1% Bicycling	
<input type="checkbox"/> 34% Migratory bird/Waterfowl hunting	<input type="checkbox"/> 4% Auto tour route/Driving	<input type="checkbox"/> 2% Interpretation (for example, exhibits, kiosks, videos)
<input type="checkbox"/> 16% Wildlife observation	<input type="checkbox"/> 36% Motorized boating	
<input type="checkbox"/> 2% Bird watching	<input type="checkbox"/> 2% Nonmotorized boating (including canoes/kayaks)	<input type="checkbox"/> 12% 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"/> 3% Volunteering	<input type="checkbox"/> 8% Other (<i>please specify</i>) See Appendix B
<input type="checkbox"/> 5% Photography		

are unsure of which refuge you visited.

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?

<input type="checkbox"/> 70% No	
<input type="checkbox"/> 30% Yes → If yes, what did you do there? (Please mark <i>all that apply.</i>)	
<input type="checkbox"/> 5% Visit the gift shop or bookstore	<input type="checkbox"/> 62% Pick up/purchase a license, permit, or pass
<input type="checkbox"/> 36% View the exhibits	<input type="checkbox"/> 13% Stop to use the facilities (for example, get water, use restroom)
<input type="checkbox"/> 46% Ask information of staff/volunteers	
<input type="checkbox"/> 3% Watch a nature talk/video/presentation	<input type="checkbox"/> 18% 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"/> 96%	<input type="checkbox"/> 92%	<input type="checkbox"/> 94%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> 2%	<input type="checkbox"/> 7%	<input type="checkbox"/> 5%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> 2%	<input type="checkbox"/> 1%	<input type="checkbox"/> 2%	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>4</u> Hours	<u>8</u> Minutes	and	<u>220</u> Miles
Local	<u>0</u> Hours	<u>40</u> Minutes	and	<u>24</u> Miles
All visitors	<u>2</u> Hours	<u>3</u> Minutes	and	<u>102</u> Miles

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

☐ 11% None, I visited this Refuge alone

(of those visiting with a group)

☐ 90% Family and/or friends

☐ 3% Organized club or school group (for example, Boy/Girl Scouts, hiking club, bird watching group)

☐ % Commerical tour group

☐ 8% Other (*please specify*) See Appendix B

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

6 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.*)

☐ 75% Family and/or friends

☐ 7% Refuge website

☐ 14% Signs on highway

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

☐ 1% Recreation club or organization

☐ 2% Television or radio

☐ 21% People in the local community

☐ 5% Newspaper or magazine

☐ 12% Refuge printed information (brochure, map)

☐ 0% Travel guidebook or other book

☐ 5% 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.*)

☐ 43% Spring
(March-May)

☐ 44% Summer
(June-August)

☐ 97% Fall
(September-November)

☐ 52% Winter
(December-February)

10. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 24 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"/> 25% Private vehicle without a trailer	<input type="checkbox"/> 0% Refuge shuttle bus or tram	<input type="checkbox"/> 1% Bicycle
<input type="checkbox"/> 76% Private vehicle with a trailer (for boat, camper or other)	<input type="checkbox"/> 2% Motorcycle	<input type="checkbox"/> 15% Walk/Hike
<input type="checkbox"/> 0% Commercial tour bus	<input type="checkbox"/> 34% ATV or off-road vehicle	<input type="checkbox"/> 1% Other (<i>please specify below</i>)
<input type="checkbox"/> 3% Recreational vehicle (RV)	<input type="checkbox"/> 38% 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"/> 87% Previous knowledge/I have been to this Refuge before	<input type="checkbox"/> 7% Maps from the Internet (for example, MapQuest or Google Maps)
<input type="checkbox"/> 9% Signs on highways	<input type="checkbox"/> 2% Directions from Refuge website
<input type="checkbox"/> 12% A GPS navigation system	<input type="checkbox"/> 1% Directions from people in community near this Refuge
<input type="checkbox"/> 5% A road atlas or highway map	<input type="checkbox"/> 13% Directions from friends or family
	<input type="checkbox"/> 2% 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"/> 77%	<input type="checkbox"/> 5%	<input type="checkbox"/> 8%	<input type="checkbox"/> 7%	<input type="checkbox"/> 3%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 65%	<input type="checkbox"/> 11%	<input type="checkbox"/> 7%	<input type="checkbox"/> 15%	<input type="checkbox"/> 2%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 59%	<input type="checkbox"/> 9%	<input type="checkbox"/> 6%	<input type="checkbox"/> 16%	<input type="checkbox"/> 10%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 41%	<input type="checkbox"/> 9%	<input type="checkbox"/> 6%	<input type="checkbox"/> 23%	<input type="checkbox"/> 20%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 51%	<input type="checkbox"/> 9%	<input type="checkbox"/> 10%	<input type="checkbox"/> 20%	<input type="checkbox"/> 9%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 37%	<input type="checkbox"/> 9%	<input type="checkbox"/> 13%	<input type="checkbox"/> 29%	<input type="checkbox"/> 13%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 0%	<input type="checkbox"/> 0%	<input type="checkbox"/> 15%	<input type="checkbox"/> 15%	<input type="checkbox"/> 69%

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

☐ 14% Yes ☐ 55% No ☐ 31% 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
3%	6%	4%	34%	53%	Surface conditions of roads	6%	9%	2%	42%	41%	NA
5%	4%	6%	38%	47%	Surface conditions of parking areas	6%	6%	6%	38%	45%	NA
4%	2%	5%	23%	66%	Condition of bridges	3%	3%	9%	29%	55%	NA
8%	2%	13%	40%	38%	Condition of trails and boardwalks	4%	10%	17%	36%	33%	NA
2%	5%	6%	43%	43%	Number of places for parking	4%	10%	10%	33%	43%	NA
2%	9%	15%	44%	31%	Number of places to pull over along Refuge roads	3%	12%	19%	34%	32%	NA
2%	2%	7%	26%	63%	Safety of driving conditions on Refuge roads	2%	7%	8%	29%	54%	NA
1%	2%	6%	30%	61%	Safety of Refuge road entrances/exits	3%	3%	9%	31%	53%	NA
5%	5%	15%	30%	45%	Signs on highways directing you to the Refuge	4%	9%	15%	21%	50%	NA
3%	7%	10%	35%	46%	Signs directing you around the Refuge roads	3%	16%	14%	28%	39%	NA
6%	5%	11%	34%	44%	Signs directing you on trails	4%	11%	12%	34%	38%	NA
7%	3%	14%	20%	56%	Access for people with physical disabilities or who have difficulty walking	8%	19%	28%	25%	19%	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)?

☐ 56% Yes

☐ 44% 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: 5 day(s)

only If you spent less than one day in the local area, enter the number of hours: 5 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: 5 day(s)

If you spent less than one day at this Refuge, enter the number of hours: 7 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> (within 50 miles of this Refuge)
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
7%	6%	14%	6%	17%	2%	24%	2%	4%	3%	14%

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.***)

☒ 100% Did not pay a fee (*skip to Section 4*)

Felsenthal National Wildlife Refuge 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.

Felsenthal National Wildlife Refuge 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"/> 3%	<input type="checkbox"/> 4%	<input type="checkbox"/> 10%	<input type="checkbox"/> 52%	<input type="checkbox"/> 31%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 2%	<input type="checkbox"/> 2%	<input type="checkbox"/> 15%	<input type="checkbox"/> 53%	<input type="checkbox"/> 27%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 4%	<input type="checkbox"/> 2%	<input type="checkbox"/> 14%	<input type="checkbox"/> 44%	<input type="checkbox"/> 35%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 5%	<input type="checkbox"/> 7%	<input type="checkbox"/> 8%	<input type="checkbox"/> 46%	<input type="checkbox"/> 34%	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 <i>Circle one for each item.</i>					Refuge Services, Facilities, and Activities	Satisfaction <i>Circle one for each item.</i>					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
7%	6%	18%	40%	29%	Availability of employees or volunteers	2%	8%	23%	30%	38%	NA
5%	4%	21%	29%	40%	Courteous and welcoming employees or volunteers	2%	7%	19%	29%	44%	NA
5%	3%	12%	30%	50%	Knowledgeable employees or volunteers	1%	8%	17%	28%	45%	NA
2%	1%	10%	22%	66%	Printed information about this Refuge and its resources (for example, maps and brochures)	2%	6%	10%	33%	49%	NA
4%	7%	32%	29%	28%	Informational kiosks/displays about this Refuge and its resources	2%	8%	33%	35%	22%	NA
2%	3%	8%	21%	66%	Signs with rules/regulations for this Refuge	4%	9%	13%	39%	36%	NA
4%	6%	33%	30%	27%	Exhibits about this Refuge and its resources	0%	9%	39%	30%	22%	NA
5%	6%	34%	28%	27%	Environmental education programs or activities	1%	12%	41%	23%	22%	NA
4%	4%	23%	33%	35%	Visitor Center	1%	8%	27%	24%	41%	NA
2%	3%	21%	32%	42%	Convenient hours and days of operation	6%	7%	21%	29%	37%	NA
4%	3%	21%	16%	56%	Well-maintained restrooms	8%	10%	29%	24%	30%	NA
7%	5%	33%	31%	24%	Wildlife observation structures (decks, blinds)	4%	7%	44%	26%	19%	NA
13%	10%	45%	18%	14%	Bird-watching opportunities	0%	2%	61%	19%	19%	NA
3%	7%	27%	28%	34%	Opportunities to observe wildlife other than birds	2%	4%	36%	30%	28%	NA
8%	8%	36%	30%	19%	Opportunities to photograph wildlife and scenery	0%	4%	40%	27%	29%	NA
2%	1%	5%	5%	88%	Hunting opportunities	4%	13%	6%	32%	45%	NA
3%	2%	10%	14%	72%	Fishing opportunities	2%	3%	12%	31%	53%	NA
7%	8%	39%	20%	25%	Trail hiking opportunities	1%	2%	51%	20%	27%	NA
14%	11%	45%	13%	17%	Water trail opportunities for canoeing or kayaking	0%	2%	66%	14%	18%	NA
17%	8%	43%	18%	15%	Bicycling opportunities	0%	3%	66%	15%	15%	NA
8%	4%	43%	24%	21%	Volunteer opportunities	0%	3%	58%	19%	20%	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?

☐ 99% Yes

☐ 1% No

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

☐ 99% Yes

☐ 1% No

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

☐ 69% Yes

☐ 31% 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.	6%	9%	23%	47%	16%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	6%	9%	30%	41%	14%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	3%	11%	30%	41%	15%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	3%	13%	55%	25%	4%
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%	3%	29%	54%	11%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	6%	12%	50%	28%	5%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	12%	23%	37%	20%	8%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	6%	6%	28%	43%	17%
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.	7%	12%	42%	29%	10%

SECTION 6. A Little about You

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

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

☒ 100% Yes ☐ 0% No → If not, what is your home country? See Figure 2 in Report

2. Are you? ☒ 91% Male ☐ 9% Female

3. In what year were you born? 1966 (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%			47%				44%				9%			

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

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

<input type="checkbox"/> 3% American Indian or Alaska Native	<input type="checkbox"/> 4% Black or African American	<input type="checkbox"/> 95% White
<input type="checkbox"/> 0% Asian	<input type="checkbox"/> 0% Native Hawaiian or Pacific Islander	

7. How many members are in your household? 3 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"/> 0% Less than \$10,000	<input type="checkbox"/> 17% \$35,000 - \$49,999	<input type="checkbox"/> 12% \$100,000 - \$149,999
<input type="checkbox"/> 5% \$10,000 - \$24,999	<input type="checkbox"/> 27% \$50,000 - \$74,999	<input type="checkbox"/> 6% \$150,000 - \$199,999
<input type="checkbox"/> 12% \$25,000 - \$34,999	<input type="checkbox"/> 19% \$75,000 - \$99,999	<input type="checkbox"/> 3% \$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.)?

33 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 Felsenthal 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
Deer permit hunt	7
Felsenthal Fall Festival	8
Fishing tournament	1

Other Activity	Frequency
ATV riding	1
Camping	3
Fishing tournaments, shed hunting	1
Frog gigging	1
Hunting	1
Scouting	1
Search and rescue for bass tournaments	1
Swimming	2

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

Other Visitor Center Activity	Frequency
Ask information concerning regulations on refuge.	1
Check deer	2
Got a map of the refuge.	2
Hike	1
Walk the nature trail.	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
Bass tournament	5
Crossett Rescue Unit	2
Fall Festival	1
Search and rescue	2
Tournament	1

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

Other Ways Heard about This Refuge	Frequency
Arkansas Game and Fish regulation booklet	1
School sent home a notice.	1
Was here when government bought out the camps at the bridge.	1
We had camps on the river when refuge came in.	1

Survey Section 2

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

Other Forms of Transportation	Frequency
Rescue boats	1

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

Other Ways Found This Refuge	Frequency
Refuge map on the permit brochure	1
School flyer	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
Air boat	1
ATV	8
Golf carts down trails with a guide.	1
Horse	1
More ATV trails for use of personal ATVs	1
My own transportation	1
Pirogue	1

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

Comments on Transportation-related Items at This Refuge (n = 25)

A large portion of the trails were removed from access. For me personally not an issue, but for my handicapped father it severely limited his access to most of the refuge. As you have to be at least 100 feet from the trail and the handicapped access permit only allows 100 yards of access he had problems finding a decent place to hunt. He has hunted the same area for over 40 years and now can't even get close. I suggest leaving the trails as is, but allowing the truly handicapped (not just lazy) individuals to have more freedom to go where they want. If you limited access to any other federal building there would be instant civil rights issues. Their taxes and fees help fund these refuge systems just like the rest of us.

Allow more ATV access onto refuge. It's a big refuge and hard to get where I need to be in a timely manner.

ATV trails are not kept clear of fallen trees. Also need to allow ATV off trails to retrieve game.

ATV trails that were cut off, cut off a lot of hunting ground. It is not so bad for hunting, I kind of like that, it cuts down on people, but if you kill a deer, two miles from the 4 wheeler trail, it is very hard to get it out. Need to be allowed to ride 4 wheeler back to pick up game.

Entrance roads into the refuge parking areas are in bad shape. McIntyre for example needs gravel and some serious tree trimming.

I am 71 years old and some ATV trails have been closed and I would like to see them reopened.

I am disabled. There are very few parking spaces.

I am very thankful to be able to use ATV and UTV on refuge trails for wildlife dependent activities. It adds to the pleasure of the outdoors experience. My wife and I carried her parents in our UTV's on the refuge viewing wildlife, they absolutely loved it. The beauty of the huge cypress sloughs and bottom land forest is in their memory forever. They can't wait to go again. I can't wait to take them.

I would like the trails to be open that are closed now.

Need more signs for the refuge on the highway.

Need to have more stores with supplies so you don't have to travel so far out of the refuge.

Need to stop taking away ATV trails for places to go and hunt. They have taken too many out of refuge already. Need to put trails back.

Parking lot at McIntyre Bay needs to be graveled in, lots of ruts and holes that cause problems in the dark.

Refuge fine as is.

Road maintenance lets the gravel road get in extremely bad shape before they grade them.

Shallow Lake needs more parking. Crowded during duck season.

Side by side ATVs are messing up the ATV trails. They are like small trucks driving down roads made for a 4-wheeler.

Some of the ATV trails were taken out 2 years ago. We were told it would be naturalized. Harder to get to areas, but that's nature of the refuge.

The refuge does a great job keeping the road smooth.

The refuge should allow someone to ride ATV off of trails to get dead game like deer/hogs and you should only be able to enter the refuge from designated parking areas not from leased land that borders the refuge.

They discontinue some trails leaving some areas unusable (4-wheeler trails).

Trails could be a little more maintained.

Us handicap cannot get to where we want to hunt, because lots of trails have been closed and the distance ATV has been cut to 100 yards of trails.

We have no roads for the disabled in the woods for a van.

Would like more access and more opportunity for ATV trails. This is an important past time in south Arkansas and this refuge could provide many opportunities to participate in this past time.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 32)

As a biologist I would like to view the game management plan. It seems almost every year there is a new strategy, and it takes several years to see appreciable results. If your plan changes that often, there is no way for you to scientifically assess the progress made. Each strategy needs to be evaluated at least yearly, but should only be altered as conclusive data are compiled. Weather conditions, etc. play a major role on habitat/wildlife condition and a strong baseline assessment must be validated in order to track progress.

Could do a better job of keeping up restrooms.

Do not think we need a doe hunt right now. Would like to see a 14 inch length limit put back on bass and possibly 9 or 10 on crappie.

During the permit hunts, you must kill a doe prior to killing a buck. That seems unfair. We drive more than 200 miles to hunt your refuge, and it is our favorite hunt, but it is next to impossible to harvest a doe first, even if you hunt the muzzle hunt prior to the modern gun hunt. I feel that is driving hunters away, and in speaking with several others on this trip, they also say that it is unfair.

During waterfowl season if the water level is not raised 2-4 feet it makes for lousy hunting conditions with the number of hunters in the refuge.

I do not like the doe tagging before a buck. This hinders lots of people from hunting there. We should be able to kill, 1 buck, 1 doe in any order.

I have hunted on this refuge for several years and have enjoyed it very much, but the recent rule about killing a doe first and checking it in before shooting a buck, has made me and many other hunters not want to come back. When someone drives four hours plus they just want an opportunity to shoot a deer. Many of these hunters don't have other places to hunt. Some of these hunters only saw bucks.

I love hunting at this refuge. See you next year.

I think we need more flooded timber to hunt. There were too many people and nowhere to hunt ducks.

I think you could not have found a better person than the park ranger who is there now. Terry does a great job on what he does down there.

I think youth hunters should be allowed to shoot any deer for first deer. Instead of doe first during deer hunts. We can't drive that far for youth season. All the deer my son saw were bucks.

I was assisted by a refuge employee who went out of his way to help me get my deer out. Thanks!

I wish that they would go back to a 14 inch length limit on bass.

I wish there was a program for hunting hogs with dogs to take care of the hog problem. I am not a big hog hunter by all means, but we have a problem.

I would like to be able to use my generator at night after 10 pm. I would like for four-wheeler roads to be re-opened instead of blocked off at deep slough.

My only suggestion this time is possibly some picnic tables for future festivals.

No store at boat ramps. No ranger patrolling. No security.

Only change needed is longer gun season for deer and eliminate doe having to be killed first.

Overall a very good experience.

Past management practices for water level (duck hunters) has killed a lot of hardwood timber in the lower areas on the refuge.

Restroom facilities need to be cleaned more often.

The company that Felsenthal uses to issue permits is very terrible! They issued my brother a permit only to tell him it was a mistake and they would refund his money and we contacted Felsenthal about it and they fixed it. So it would make our experience better if Felsenthal handled permits.

It is difficult to find a clean, unlocked, or maintained bathroom on the refuge. I realize this responsibility is shared with the Corps of Engineers and they of course have their own issues. The water management plan for wintering waterfowl is horrific. Jury still out on new project manager. Duck hunting is the lifeblood of this area and the previous manager was very rude and unappreciative of duck hunters visiting the refuge. Could not have possibly been more dissatisfied with the unit manager. Don't know what might be done about it, but lily pads took over 80% of the best fishing holes this spring and summer. The map provided on the refuge use, permit brochure is terrible. Should get a local to help draw a new map with traditional names of sloughs, lakes, and creeks. The attitude of the unit management towards fishing tournaments has driven massive amounts of tourism money from this area. Would love to see a more tournament friendly management system. Traditional waterfowl sanctuary areas should be rotated to prevent the domestication of waterfowl. I could write a master's thesis on this. Suffice it to say that the sanctuary areas are mismanaged and would love to have a roundtable with a refuge biologist and local water fowlers to discuss water fowling in the refuge. The Corps of Engineers has reduced funding to operate our locks and dams. This one item could spell the death of the place I love most in the world. Would love to see this fixed. Feral hogs have taken over many parts of the refuge, but the USFWS still will not allow the use of dogs to hunt and kill feral hogs. Really? That is just plain ignorant. Enforcement is cited as the reason this is disallowed but the current enforcement agents have no problems enforcing current law. Why would they have any trouble enforcing new laws that would allow dog pursuit of feral hogs? This obviously has not been thought through well.

The deer management is ridiculous. All the deer I saw were bucks and only 1 had a decent rack. The rest were scrub racks anywhere from spikes to 4 points. One buck had maybe 4 inch antlers that were forked. Didn't see a doe to kill first.

The deer season should come in after Thanksgiving. It gives the dominant bucks a chance to carry their seed forward. The hogs in the refuge should be exterminated completely. Dogs, traps, etc. should be used. They are not native and should be exterminated. Coyotes are a problem too.

There are access channels and canals that are so silted in that they are almost inaccessible to some primary hunting and fishing areas. These also pose a safety concern.

This is a great refuge, but we have a great problem with lily pads. We are losing most of our fishing area. Over 3/4's of our water you can't fish. This is a big problem.

This is mainly a hunting and fishing refuge and at times it seems that they make it hard to use the refuge. Too many rules.

Very satisfied.

Wardens and biologists need to clearly and intentionally explain to visitors the complete rules and regulations. Some of the very important rules weren't clearly communicated and cost me dearly on this trip.

Well maintained facility.

Would like to see more food plots for deer and other wildlife.

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 = 72)

Access to any activity that involves wildlife.

An inexpensive place where you can duck hunt!

Because everyone can enjoy recreational activities.

Because they take care of all wildlife and fish.

Deeper woods. Variety of hunting styles: hunting sloughs, ridges, hardwoods, pine trees, etc. Opportunities to see a host of different wildlife, from lake otters to black bears. Opportunities to hunt areas where you may never see another hunter--primitive areas.

Diversity of habitat is unique to South Arkansas. Availability of opportunities to harvest deer, lack of crowding at the campground, and friendliness of the wardens/biologists.

Each location presents its own range of habitat/wildlife opportunities, and many of the NWRs provide unique habitat structure.

Easy access and multiple activities to participate in such as hunting, fishing, trail riding, boating, and wildlife viewing.

For those who cannot afford to lease land or water to duck hunt or fish, it is open to the public.

Gives the public an opportunity to experience the joys of nature and wildlife conservation that otherwise might not be available to most people.

Good hunting, big deer, and a good hunting grounds.

Good hunting, fishing, and ATV trails.

Good opportunity to kill hogs and deer hunt.

Hardwood River bottoms, good big and small game hunting and fishing.

Hunting and fishing is allowed.

Hunting opportunities.

I like the way it is maintained.

I love hunting the river bottoms, the hardwood timber, and the swamp area, all the different wildlife and plenty of hunting room.

I love to duck hunt and as a nonresident there are no additional fees, where as one state WMA's, Arkansas charges me an extra one hundred dollars!

I'm a hunter and the regulations are different enough to allow you experiences you couldn't get on state run lands. Examples are; no antler restrictions and the opportunity to bow hunt without gun hunters in the area.

Inform us on wildlife and fish and their habitats in this area. Hunting and fishing available and conservation limit of each.

It gives people with no land a good chance to hunt and fish.

It is a beautifully protected resource. I am not able to express in words what makes our refuge unique. It has to be experienced. It has such an effect on me that I will spend the rest of my living days exploring, hunting, fishing, and enjoying this refuge and passing it on to my kids and grandkids. This refuge is one of the center pieces of my life. Please don't screw it up.

It is very beautiful and nice.

It makes hunting and fishing affordable for everyone.

It provides a better habitat for the animals to live and to grow naturally.

It provides an opportunity for the general public to enjoy wild lands for a nominal cost/fee.

Just an easy place for me to hunt and fish, but it is a nice place to go.

Lake Ophelia and Grand Cote.

Land use practices favor wildlife which enhances the experiences of visitors, ie: timber harvesting is kept to a minimum. It is absolutely delightful to visit Felsenthal and see the towering oaks and pine forests- where else will our children get to see such beauty?

Lots of area for wildlife and good management.

Lush, green forest and good fishing.

Management of the wildlife.

National Wildlife Refuges allow us to conserve nature's natural resources while still being able to enjoy and use them.

Plenty of hunting land, but crowded.

Pretty hardwood bottoms creeks and other waterways. Good hunting.

Public access to nature.

Refuges are great places that give the public opportunities to see how environmentally sound the government can be with our land. Allowing us places to safely recreate in any way.

Refuges have better hunting and fishing opportunities. Refuges work harder to preserve natural hardwood bottomlands.

Reminds me of how the timber and wildlife used to be when I was growing up.

See more wildlife than most areas.

Thank God for the refuges. I've seen too much destruction and development by man. Save some for the next generations.

The ability to conserve but also the resources we are blessed with.

The ability to experience the outdoors in a natural setting. The refuge allows you to, for the most part, get away from people and relax.

The ability to hunt, however I would like to see Felsenthal adopt their deer hunting regulations and be consistent instead of changing the regulations every year. I think the policy of having to deck a doe before checking a buck is a little silly considering this hunt is only a few days long.

The conservation of wildlife. I enjoy seeing wildlife in its natural state. I miss being able to see and hear the Nutria Rat though. I believe the alligator has depressed the rat population way too low.

The fact that this refuge offers an opportunity to participate in quality hunts. The use of ATVs on well laid out trails enhances the experience.

The freedom to enjoy nature and its beauty.

The habitat, in my opinion, is better managed.

The way the forest is well maintained but yet still beautiful. Four wheeler trails and access is great. No cut over hardly.

The way the wildlife is managed.

The wildlife, the opportunity to see virgin timber and the ability to be able to navigate in it, unlike the clear cut timberland that is destroyed and planted so thickly, rutted, and overgrown with underbrush.

There are no hunting clubs on it, no leased land, no private fishing areas. And this has a controlled atmosphere with no drinking out in public.

There seems to be less hunting pressure at NWRs.

They are kept clean for walking and observing boating. They are patrolled for drinking and other things. Feels a little safer.

They are managed a little differently than state run wildlife refuges and I appreciate the diversity.

They are much more maintained and keep up than other places you go to.

They have hundreds of acres of unspoiled land to really get to see wildlife as it should be.

They maintain the opportunity to hunt and fish in bottomland hardwoods for the general public.

They preserve the most unique areas for public use, both today and for the future.

They provide unspoiled land and you can observe wildlife in its natural habitat.

They still have timber on them.

This NWR seems to have more areas with less traffic.

This was very kid friendly and organized well.

Trees.

Usually larger.

Vast amount of public land for waterfowl hunting in a good location.

Very large area, partially maintained yet still has wild habitat. Strict rules, but it seems to have a lower number of officers present. No more camp checks?

Well maintained and controlled safe land. Plenty of areas to hunt/fish.

You can see more wildlife because there are still woods instead of clear cuts like everywhere else.

You have a very good opportunity to see a lot of wildlife.

Your roads and camp grounds are far more superb than any refuge I've been on!

Additional Comments (n = 30)

1. We need more maintenance on our roads. They need to be graded more often. Very rough. 2. Lily pads taken over all of the refuge waters, hardly no place to fish. Everybody has to fish in the same areas. There is so much beautiful water to fish, but you can't because of the lily pads. Thank you.

Enjoyed it. Would like to see permit deer hunt start on Thursday through Saturday or Sunday like it used to.

Enjoyed, great experience. Will be back next year which makes approximately 27 years in a row to hunt this refuge.

Every morning I'm sitting on my deer stand 9 miles away from the river, I'm thanking God that I'm not in a lease land camp that borders any water. Close to the river trying to deer hunt with duck hunters banging away. Man give the ducks a break and the poor deer hunter too.

For the deer hunts, go back to one buck and one doe in any order. Reopen the closed ATV trails. Give some handicap ATV trails.

Get rid of bears. What purpose do they serve? None.

Great place!

Have enjoyed visiting the refuge and the habitat over the years.

Hello! I have enjoyed Felsenthal Wildlife Refuge for over 25 years. I fished professionally on the Wal-Mart FLW Tour for 4 years where I qualified for the world championship in Pittsburgh In 2009. I literally have fished from Canada to Mexico and most lakes in between while on tour. I still find "our" refuge as being one of the most beautiful places I have ever fished. The Black Bass population is once again on the increase after a battle with the Largemouth Bass Virus and over harvest (in my opinion). It has been on the come-back for about 3 years now with very nice spawns the last couple of years. Vegetation is very bad this year (mainly Lilly Pads) but I have noticed that all of the "extremes" are basically cyclical and will run the course with high water. I have noticed very high numbers of fur-bearing animals this year. Over all, "our" refuge seems to be very healthy but could use a little tweaking here and there!

I always look forward each year to deer hunting . I get to spend quality time with my son during the refuge hunts. It is a beautiful place. I have been visiting this refuge for many years.

I got a 120 inch, 9 pointer this year. Thanks for providing Felsenthal for us.

I have hunted the land that Felsenthal sits on, before it became Felsenthal. I am very thankful that the land is public land if it were not I would not have had the opportunity to share it with my children. Great memories have been made there. Thanks to all who work at the refuge.

I love to come hunt, fish, ride the trails, camp, and hike in the woods. I don't like the doe first rule.

I understand the refuge rule of harvesting a doe before a buck, but as a hunter it is very hard for me to distinguish that when the animal is in a thicket of brush or on the run in the forest, simply makes it difficult.

I would like to see the refuge flooded for ducks like it used to be. Trees are dying on ridges that never flood so water cannot be the reason they are dying. Tax dollars are spent to manage the water levels and as a tax payer I should have a say in water level management.

It is a good place if water levels are controlled better during waterfowl season and ramp fees are done away with.

It is grossly unfair that you must harvest a doe before you can harvest a buck. We come from 250 miles away, and if we did not come for multiple hunts, we would not be able to fulfill our doe tag first.

It would help if the cuts and sloughs were marked again and/or better. It is really easy to get turned around. Thanks for all you do!

Limit the number of duck hunters each day. Reduce the size of gun that can be used.

My biggest concern is hunting related. I believe the use of the new larger shotguns (12 gauge, 3 1/2" shells, and 10 gauge) put an excessive amount of pressure on waterfowl. The refuge limits the number of shot shells a hunter can legally possess. I would like to see a limit placed on the size of shot shells. These larger shot shells are extremely loud and put extra pressure on waterfowl. I also believe the excessive noise creates the need for more distance between hunting parties, therefore the larger shells causes more conflict between hunting parties. The refuge has changed or revised rules to protect wildlife and waterfowl from excessive noise in the past and I believe this issue should be looked at. Thank you for the opportunity to participate in this survey and voice my concerns.

My biggest concern is it seems Felsenthal throws darts at a board to decide the deer regulations from year to year. I think it would help if you would set a plan and then try to achieve that plan through your regulations. Opening the refuge to everyone for muzzleloader season and then granting 1000 permits for rifle hunt seems a little too much. It is a beautiful refuge and I enjoy spending time there, however if the regulations remain as they are, we (my hunting party) will most likely stop traveling 5 plus hours to visit. Thanks.

My dad is 65 years old. There needs to be away for me to take him farther into the refuge. I have spinal arthritis and degenerating disks in my back. Make more ATV trails or allow handicap personnel to go "off-trail". Also, might try adding porta potties to designated camping areas. Where are all the game wardens? You have all those rules and no one in the field to enforce them. I've seen a lot of violations. Some that are unsafe and just open. I think it was because they knew no officers would be around.

Needs more boat docks at the ramps.

On quota hunts I'd like to see hunters under 16 have more chances to kill a deer. My younger cousin (10 years old) had the chance to kill his first deer, but he couldn't because of the "doe first rule". I can personally live with this rule, but when a kid is upset because of it, then I think they should be able to shoot a deer regardless. Only their first one, of course.

Please, we need to keep the flooding to shorter periods. We have lost a lot of timber and can't establish a deer herd and turkey and even squirrels. Thank you.

Seriously, look at moving the bow, muzzleloader, and rifle seasons to after Thanksgiving. This will give the dominant bucks a chance. It wouldn't interfere with other deer seasons in the state and would be a better fall experience. Makes for a more enjoyable hunt and experience. I can live with the ATV road closures, but we have to address the hog issue in the refuge. Use dogs after the deer hunt. Have a hog hunt in January through February. Thank you.

The permit modern gun deer hunt, that I participated in, should be held later in the year so as to coincide with the deer rut.

There needs to be a way to go get your game when you are way off of the 4 wheeler trail.

There needs to be more bathrooms at some of the launches!

Would like to see hunters under 16 have a chance to shoot their first deer regardless of buck or doe. My cousin could have killed his first ever if it wasn't for the doe-first rule. I personally can live with this rule, but he was upset and it aggravated me.
