



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

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

I caught my first fish on a refuge. My five children caught their first fish on a refuge. Some of us do not have the money to be a part of the high power fishing and hunting clubs. It is so important that the U.S. Government maintains the season for people like me and my fishing for bass, red fish, and other wildlife. When you work as hard as I do, it is good to have a refuge where you can go and have a little fun.

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



Lacassine 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 Lacassine 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 Lacassine 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 Lacassine National Wildlife Refuge

Lacassine NWR is located in southwestern Louisiana and covers nearly 35,000 acres of mostly freshwater marsh and open water. The refuge was established in 1937 to provide a refuge and breeding ground for migratory birds and other wildlife. Aside from 32,500 acres of managed and natural freshwater marsh and open water, including Lacassine Pool, refuge habitat also consists of rice, wheat, soybean and natural moist soil fields, flooded gum and cypress trees, and restored tall-grass prairie. Lacassine NWR is home to wildlife species indigenous to the marshes of coastal Louisiana, including a large population of wading and water birds, furbearers such as nutria and raccoon, alligators, and many others. The refuge is primarily known for attracting thousands of pintails each winter. Pintail numbers were in the hundreds of thousands until the mid 1980s, but have since declined to current estimates of approximately 18,000, making refuge habitat even more important. Endangered or threatened species that have been spotted on the refuge include bald eagles, peregrine falcons, and Louisiana black bears.

Along with Cameron Prairie, Sabine, and Shell Keys NWRs, Lacassine NWR is part of the Southwest Louisiana NWR Complex. The refuge sees nearly 55,000 visitors each year (2011 Refuge Annual Performance Plan measures; Rob Miller, U.S. Fish and Wildlife Service, 2012, written commun.). Visitors have the opportunity to participate in a wide range of activities including fishing, hunting, birdwatching,

photography, interpretation, boating and the use of hiking trails, an auto-tour route, and observation towers. The refuge also has an active volunteer group and the opportunity for students to earn college credit through an internship. Figure 1 displays a map of the refuge. For more information, please visit <http://www.fws.gov/swlarefugecomplex/lacassine/>.

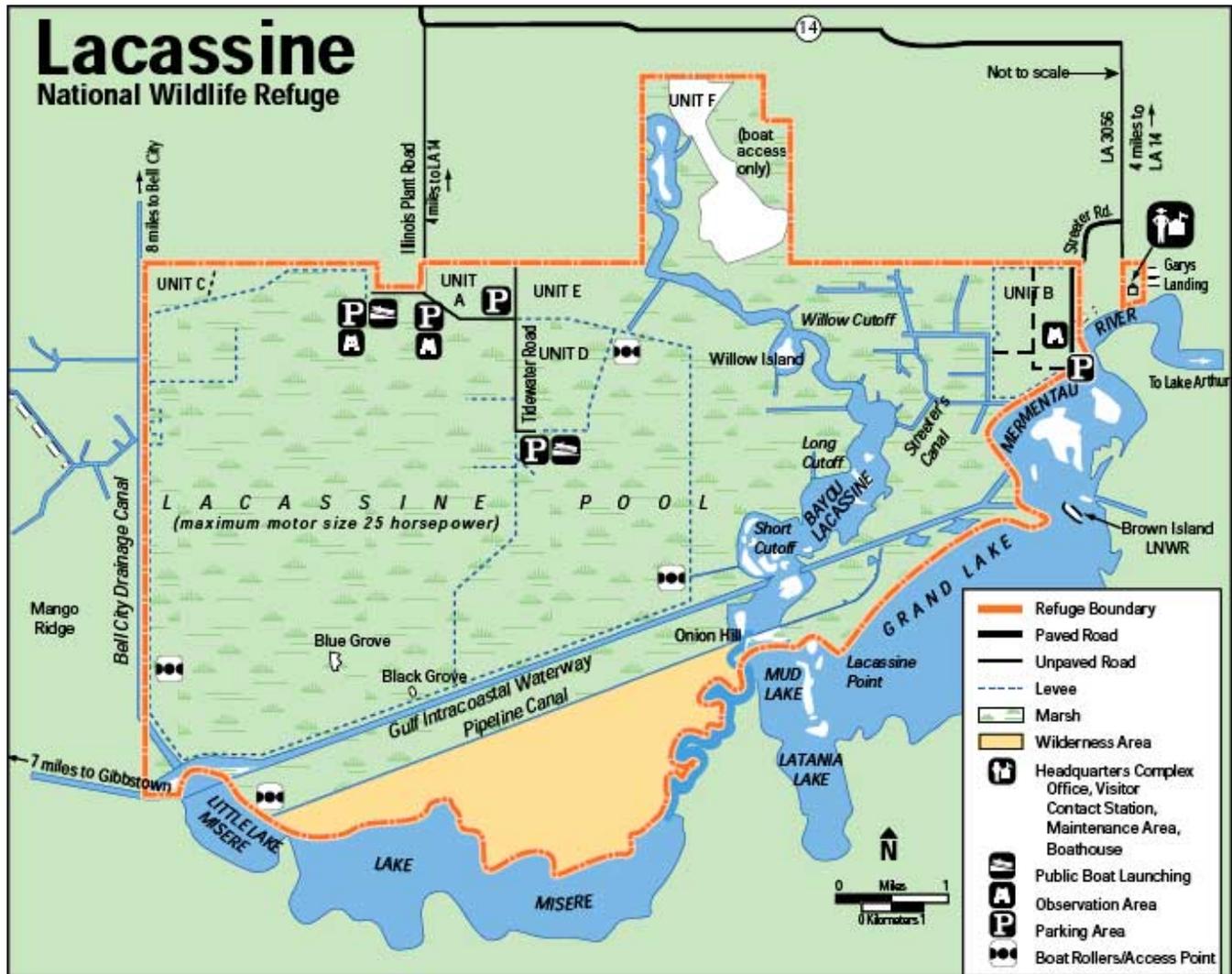


Figure 1. Map of Lacassine NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at Lacassine National Wildlife Refuge

A total of 294 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Lacassine NWR (table 2). In all, 121 visitors completed the survey for a 41% response rate, and $\pm 7.1\%$ margin of error at the 95% confidence level.²

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

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	3/15/2012 to 3/31/2012	Lacassine Pool Entrance Streeter Road Contact Station/Boat Launch				
SP1 Totals			159	4	75	48%
2	11/10/2012 to 11/24/2012	Gary's Landing Boat Launch Waterfowl Hunt				
SP2 Totals			135	2	46	35%
Combined Totals			294	6	121	41%

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 Lacassine NWR reported that before participating in the survey, they were aware of the role of the Service in managing refuges (97%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants, and their habitats (98%). 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.

Most visitors (80%) 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.

Close to half of visitors to Lacassine NWR had been to at least one *other* national wildlife refuge in the past year (45%), with an average of 6 visits to *other* refuges during the past 12 months.

Visiting This Refuge

Few surveyed visitors (17%) had only been to Lacassine NWR once in the past 12 months, while many had been multiple times (83%). These repeat visitors went to the refuge an average of 13 times during that same 12-month period. Visitors used the refuge during only one season (38%), during multiple seasons (45%), and year-round (18%).

Visitors first learned about the refuge from friends/relatives (86%), people in the local community (23%), or signs on the highway (11%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (84%), and to a lesser degree, a GPS navigation system (12%), signs on the highways (10%) and directions from friends or family (10%; fig. 3).

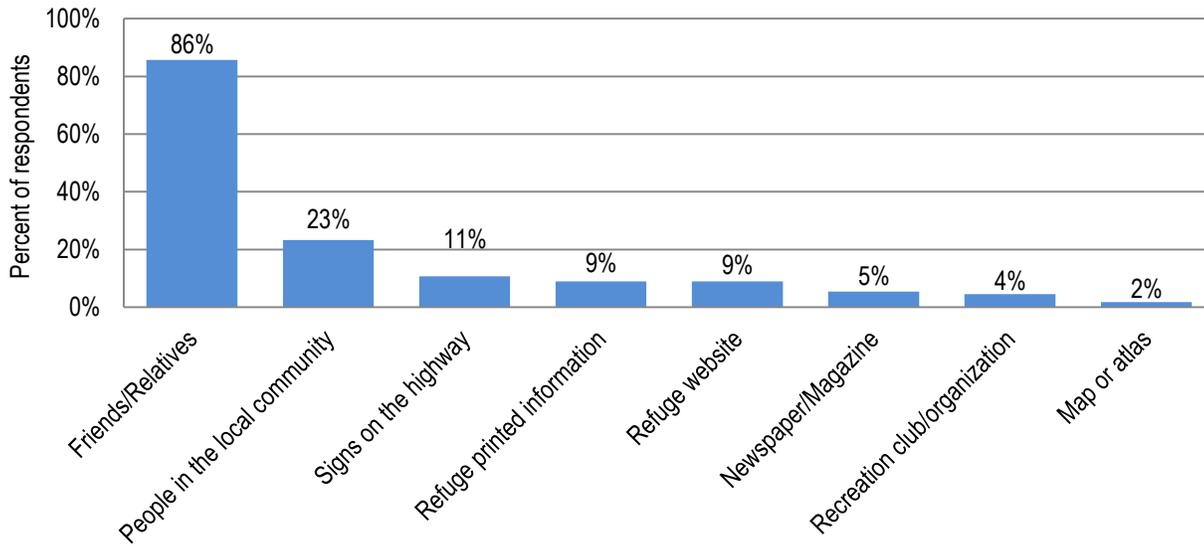


Figure 2. How visitors first learned or heard about Lacassine NWR (n = 112).

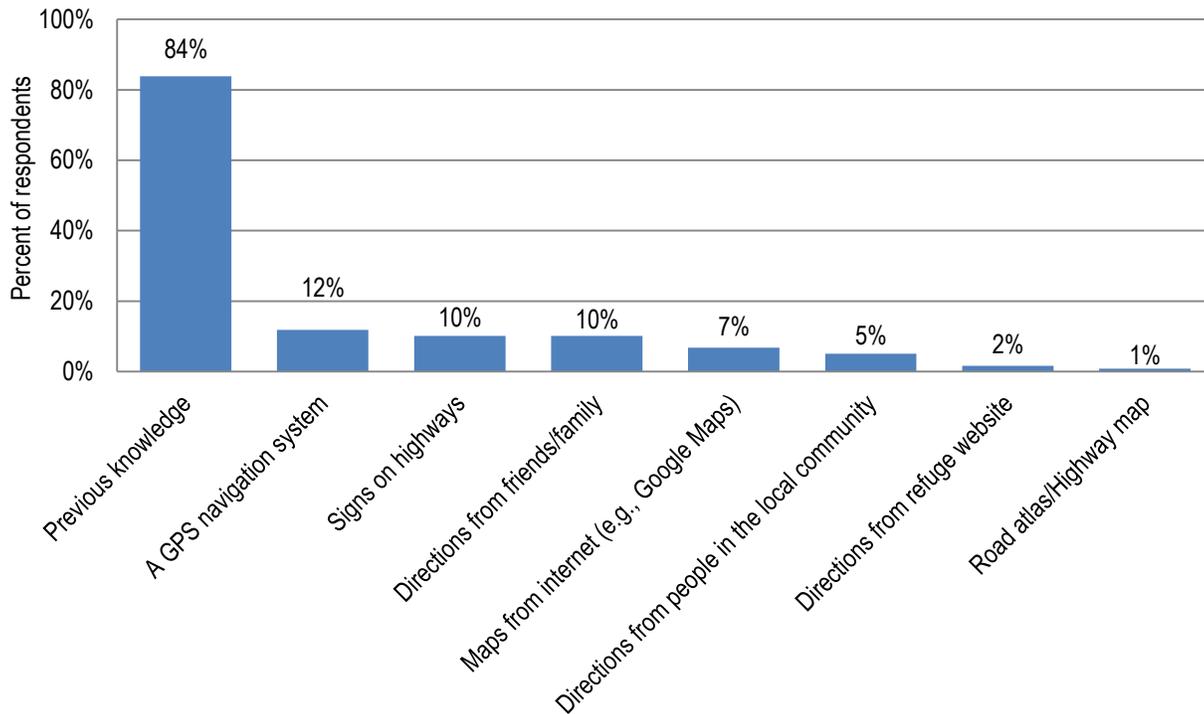


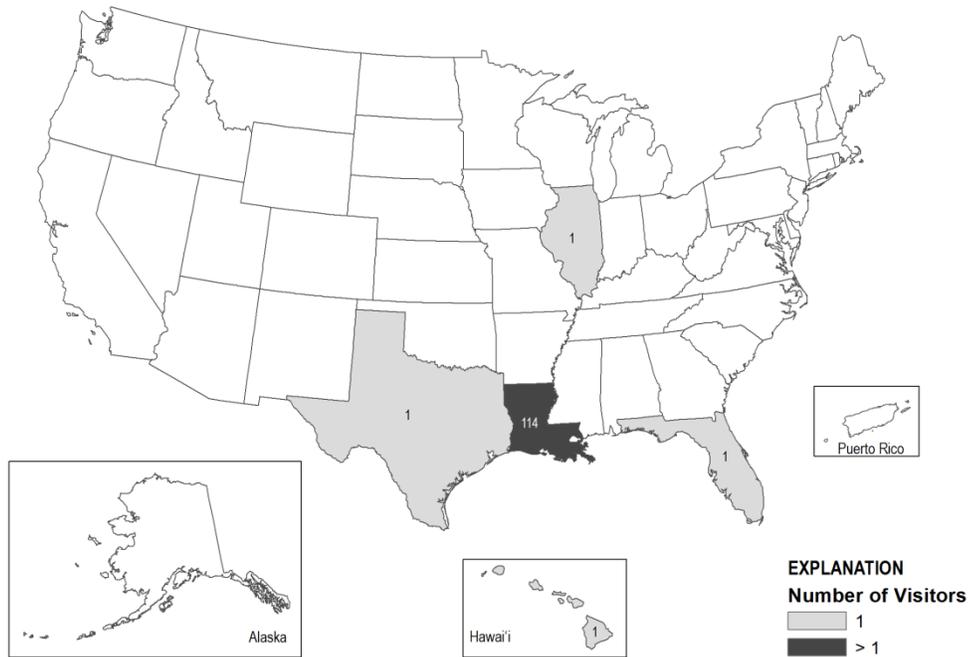
Figure 3. Resources used by visitors to find their way to Lacassine NWR during this visit (n = 118).

Most visitors (86%) lived in the local area (within 50 mi of the refuge), whereas 14% were nonlocal visitors. For almost all local visitors, Lacassine NWR was the primary purpose or sole destination of their trips (96%; table 3).

Local visitors reported that they traveled an average of 31 mi to get to the refuge. There were not enough nonlocal visitors (n = 16) to adequately estimate their travel distance. Figure 4 shows the residences of visitors traveling to this refuge. About 97% of visitors traveling to Lacassine NWR were from Louisiana.

Table 3. Influence of Lacassine 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	<i>The sample size of nonlocals was too low (n = 16) to adequately report these data.</i>		
Local	96%	3%	1%
All visitors	94%	4%	3%



Explanation

- States
- Refuge Boundary

Number of Visitors

- 1 - 3
- 4 - 9
- > 9

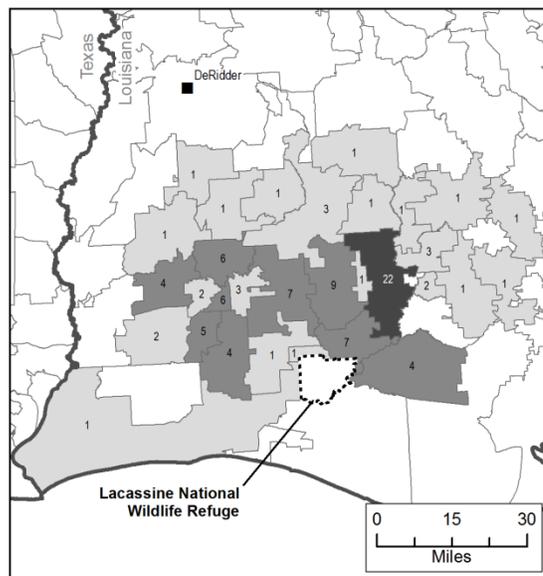


Figure 4. Number of visitors travelling to Lacassine NWR by place of residence. The top map shows visitors residence by state and the bottom map shows residence by zip codes near the refuge (n = 118).

Surveyed visitors reported that they spent an average of 6 hr at the refuge during one day there, while the most frequently reported length of a day visit (the modal response) was 8 hr (32%). Most visitors indicated they were part of a group on their visit to this refuge (82%). 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 Lacassine NWR (for those who indicated they were part of a group, n = 94).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	99%	2	1	3
Commercial tour group	0%	0	0	0
Organized club/School group	0%	0	0	0
Other group type	1%	6	2	8

The key modes of transportation used by visitors to travel around the refuge were private vehicles with trailers (51%) and private vehicles (47%; fig. 5).

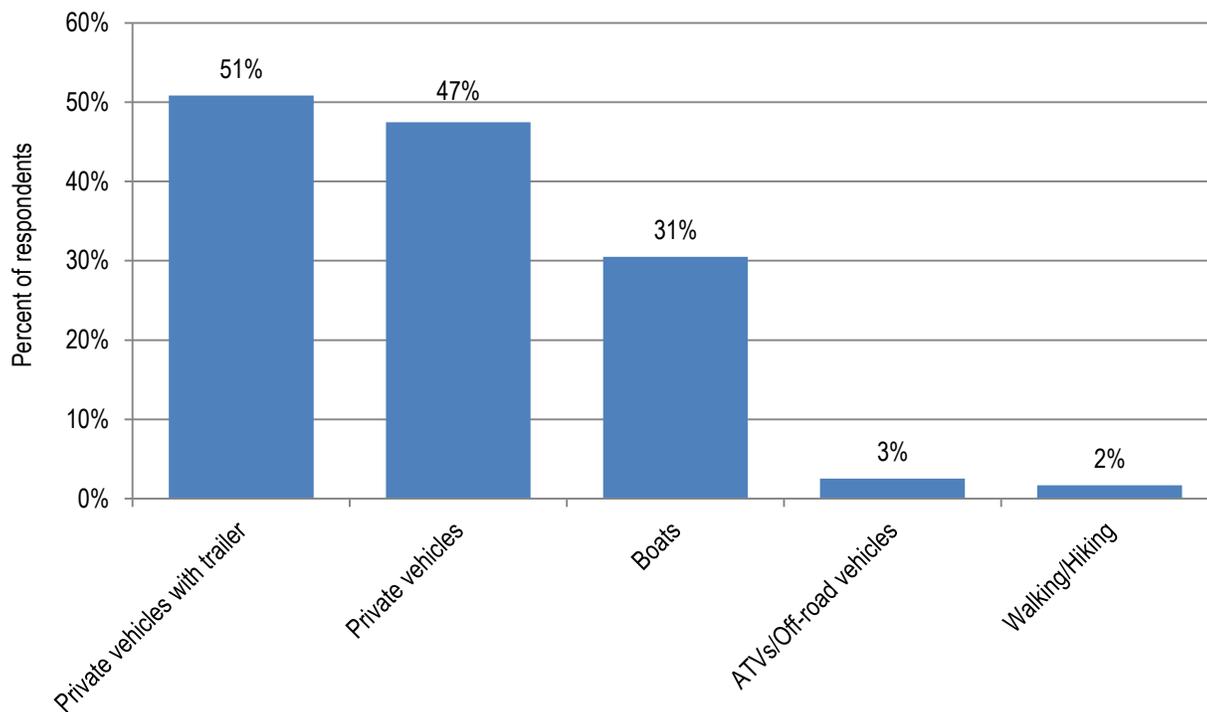


Figure 5. Modes of transportation used by visitors to Lacassine NWR during this visit (n = 118).

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 freshwater fishing (72%), migratory bird/waterfowl hunting (41%), and motorized boating (24%). The primary reasons for visitors' most recent visits included fishing (56%) and hunting (36%; fig. 7).

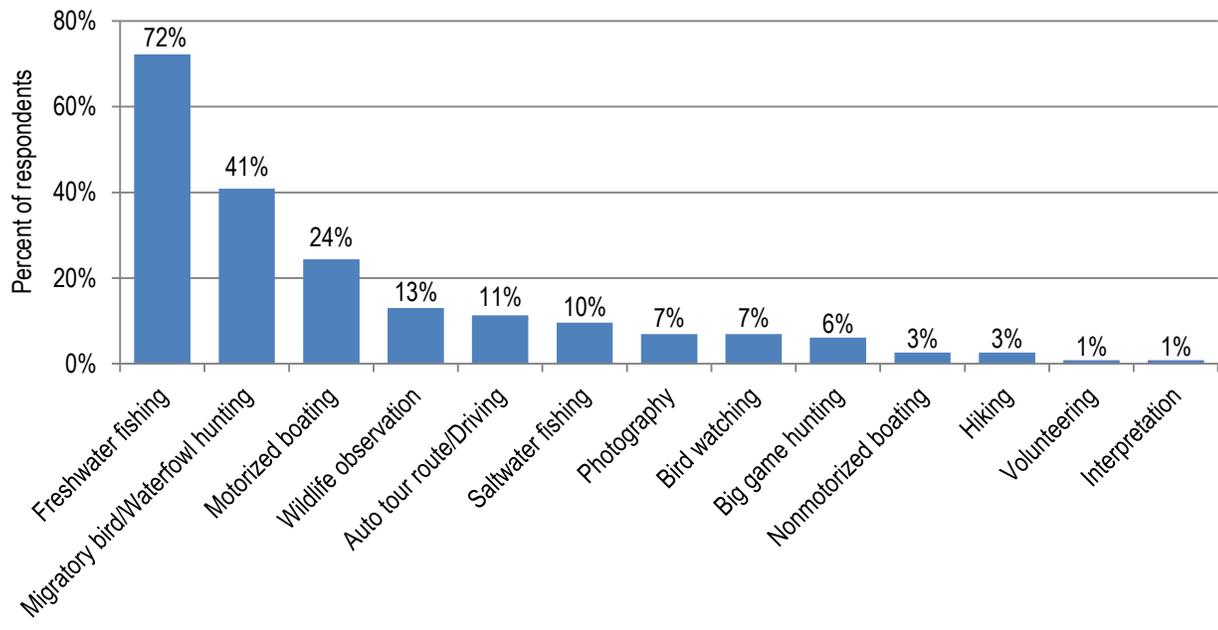


Figure 6. Activities in which visitors participated during the past 12 months at Lacassine NWR (n = 115). See Appendix B for a listing of “other” activities.

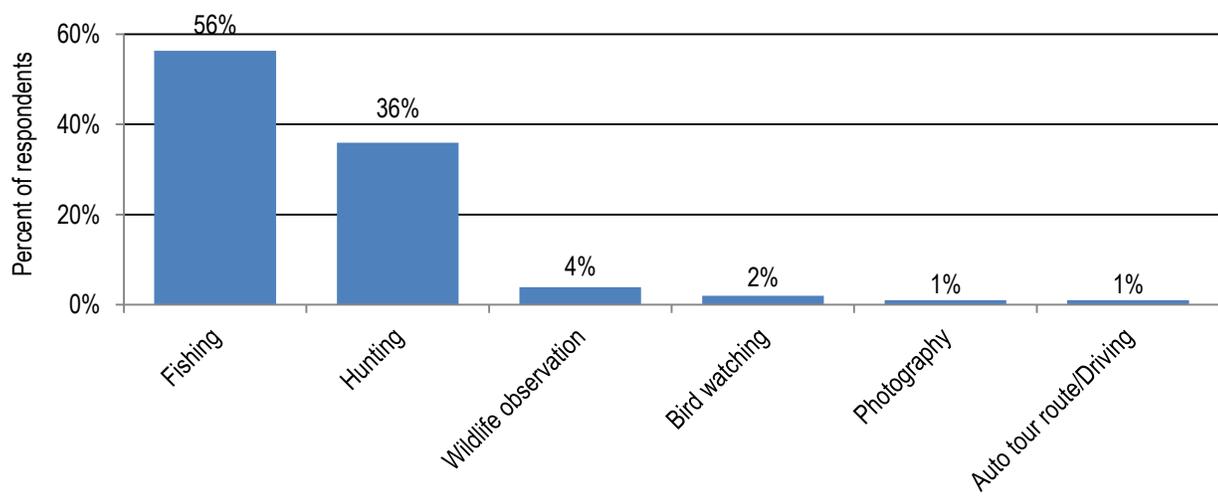


Figure 7. The **primary** activity in which visitors participated during this visit to Lacassine NWR (n = 103). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (99%) visitors who participated in the survey at Lacassine NWR indicated that they were citizens or permanent residents of the United States. These visitors were a mix of 87% male (with an average age of 45 years) and 13% female (with an average age of 48 years). Visitors, on average, reported they had 13 years of formal education (equivalent to one year 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, 86% of surveyed visitors to Lacassine NWR indicated that they live within the local 50-mi area, while 14% of the visitors were nonlocal. Due to the very low numbers of nonlocals visitors (n = 13), economic data for this visitor group are not reported. Table 5 shows summary statistics for local 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, local visitors spent an average of \$48 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 Lacassine NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	<i>The sample size of nonlocals (n = 13) was too low to adequately represent this visitor group.</i>					
Local	72	\$39	\$48	\$45	\$0	\$200

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 Lacassine NWR were as follows (fig. 8):

- 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,
- 79% of visitors were satisfied with the services provided by employees or volunteers, and
- 75% of visitors were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

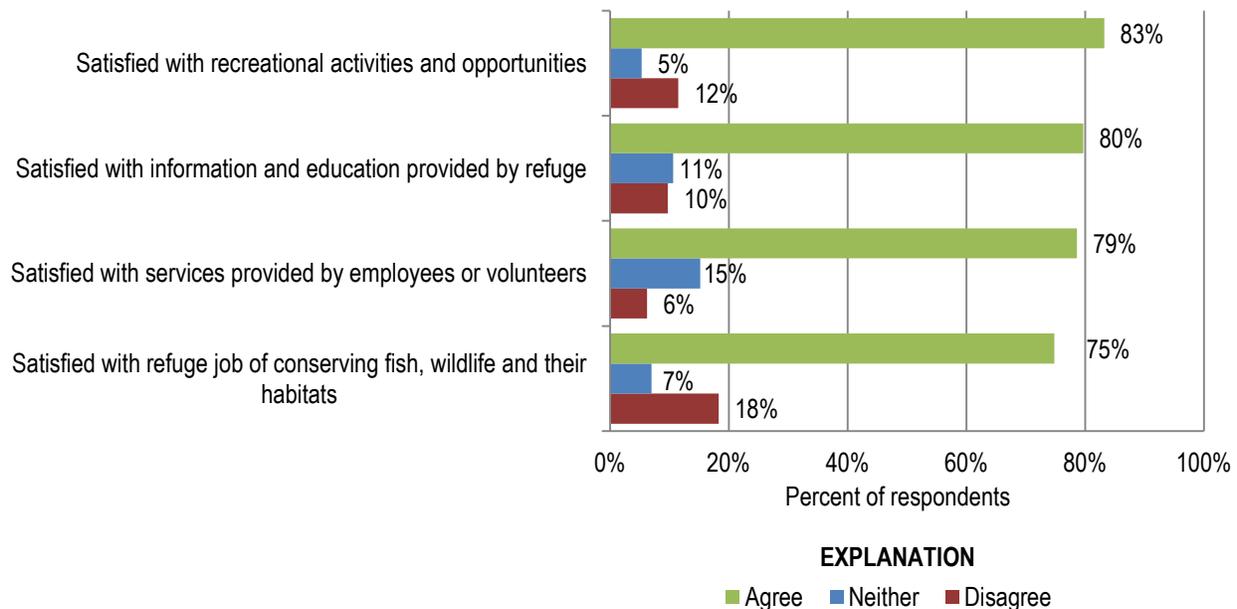


Figure 8. Overall satisfaction with Lacassine NWR during this visit (n ≥ 112).

Importance/Satisfaction Ratings

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

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

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

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

- All refuge *services and facilities* fell in the "Keep Up the Good Work" quadrant (fig. 9).
- All refuge *recreational opportunities* fell in the "Keep Up the Good Work" quadrant (fig. 10).
- All *transportation-related features* fell in the "Keep Up the Good Work" quadrant (fig. 11).

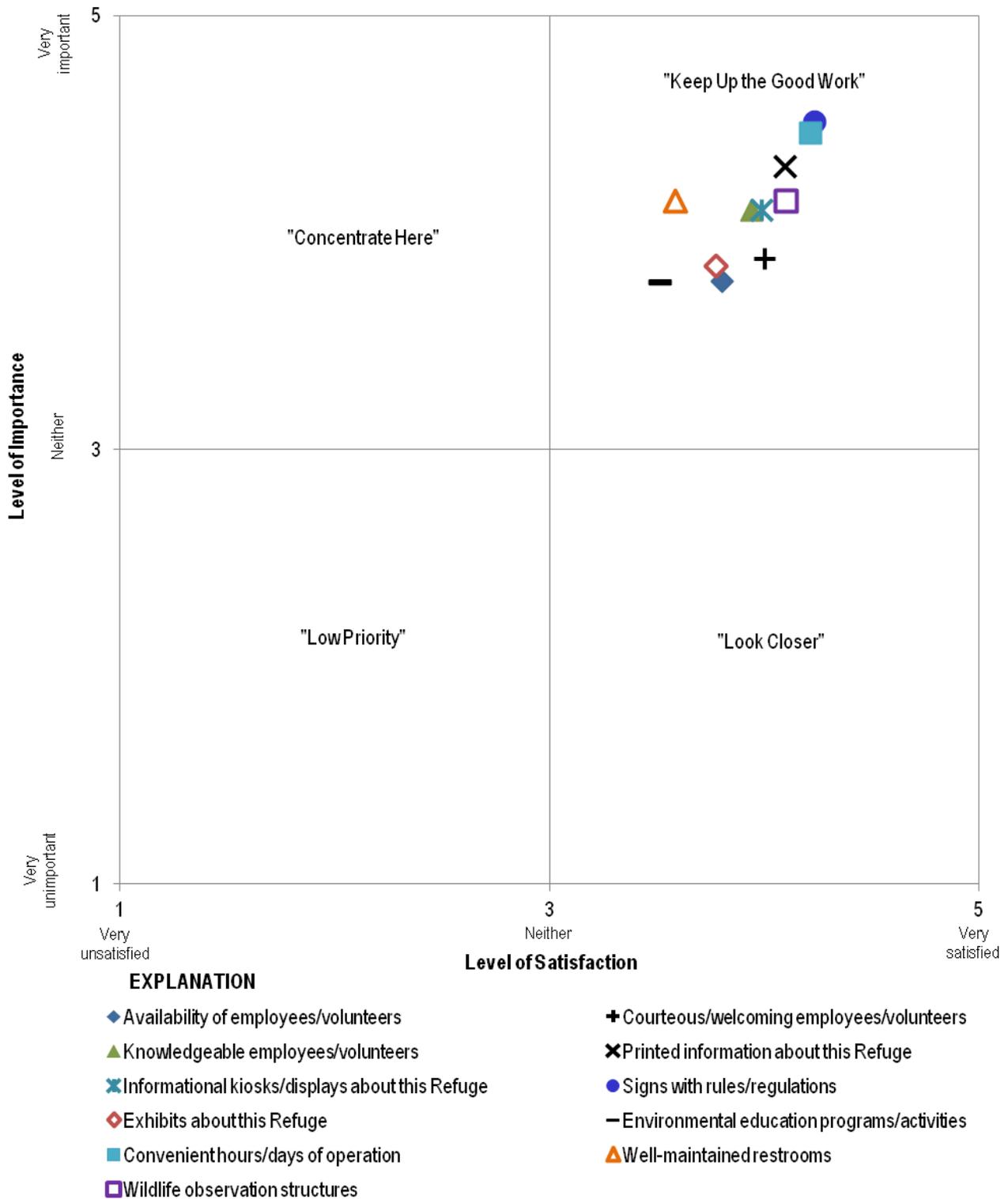
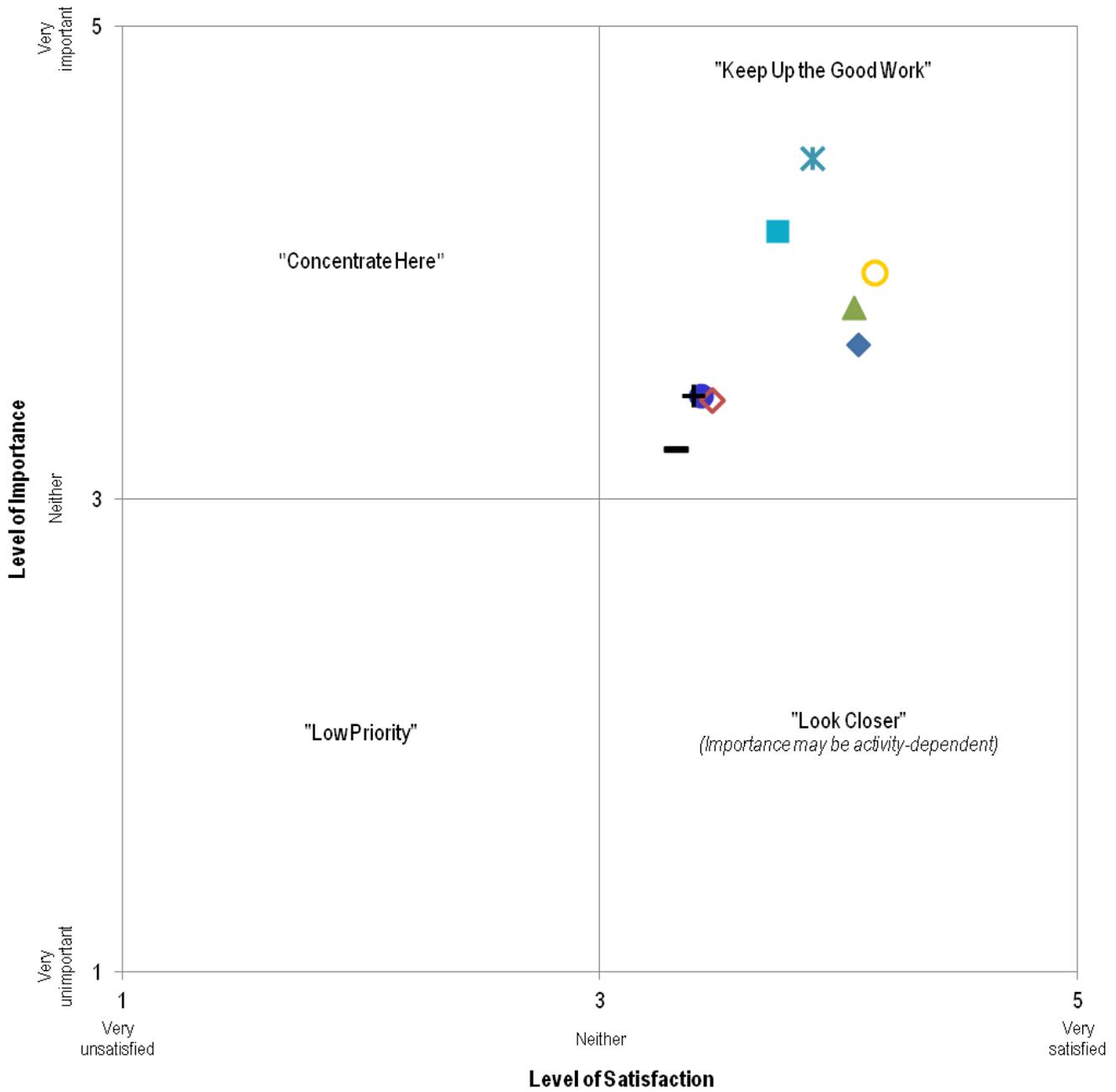


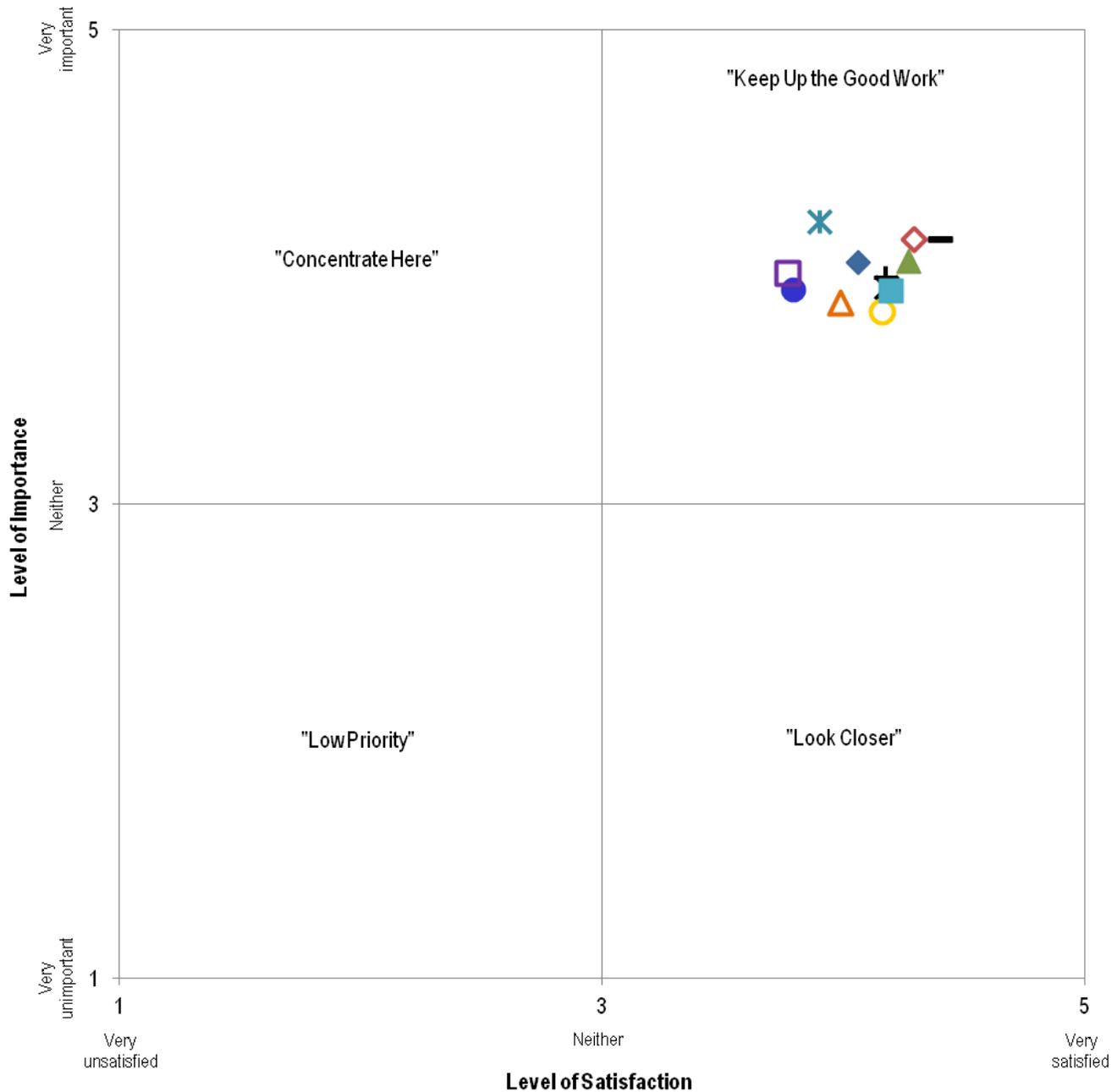
Figure 9. Importance-satisfaction ratings of services and facilities provided at Lacassine NWR.



EXPLANATION

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

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



EXPLANATION

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

Figure 11. Importance-satisfaction ratings of transportation-related features at Lacassine 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 Lacassine NWR are reported here.

Alternative Transportation and the Refuge System

Visitors use various types of transportation to access and enjoy refuges. While many visitors arrive at the refuge in private vehicles, alternatives such as buses, trams, watercraft, and bicycles are increasingly becoming a part of the visitor experience. Previous research has identified a growing need for transportation alternatives within the Refuge System (Krechmer and others, 2001), and recent efforts are beginning to characterize the use of transit and non-motorized transportation modes for visitor access to refuges (Volpe Center, 2010). However, less is known about how visitors perceive these new transportation options. An understanding of visitors' likelihood of using certain alternative transportation options can help in future planning efforts. Visitors were asked their likelihood of using alternative transportation options at refuges in the future.

Of six alternative transportation options listed on the survey, a majority of Lacassine NWR visitors were likely to use a boat that goes to different points on refuge waterways at refuges in the future (fig. 12). A majority of visitors indicated they were *not* likely to use a bus/tram that takes passengers to different points on the refuge, a bus/tram that provides a guided tour, a bus/tram that runs during a special event, or a bike share program.

When asked specifically about using alternative transportation at Lacassine NWR, some visitors thought alternative transportation would enhance their experience (17%) while others thought it would not (45%). An additional 39% of surveyed visitors indicated they were unsure whether alternative transportation would enhance their experiences.

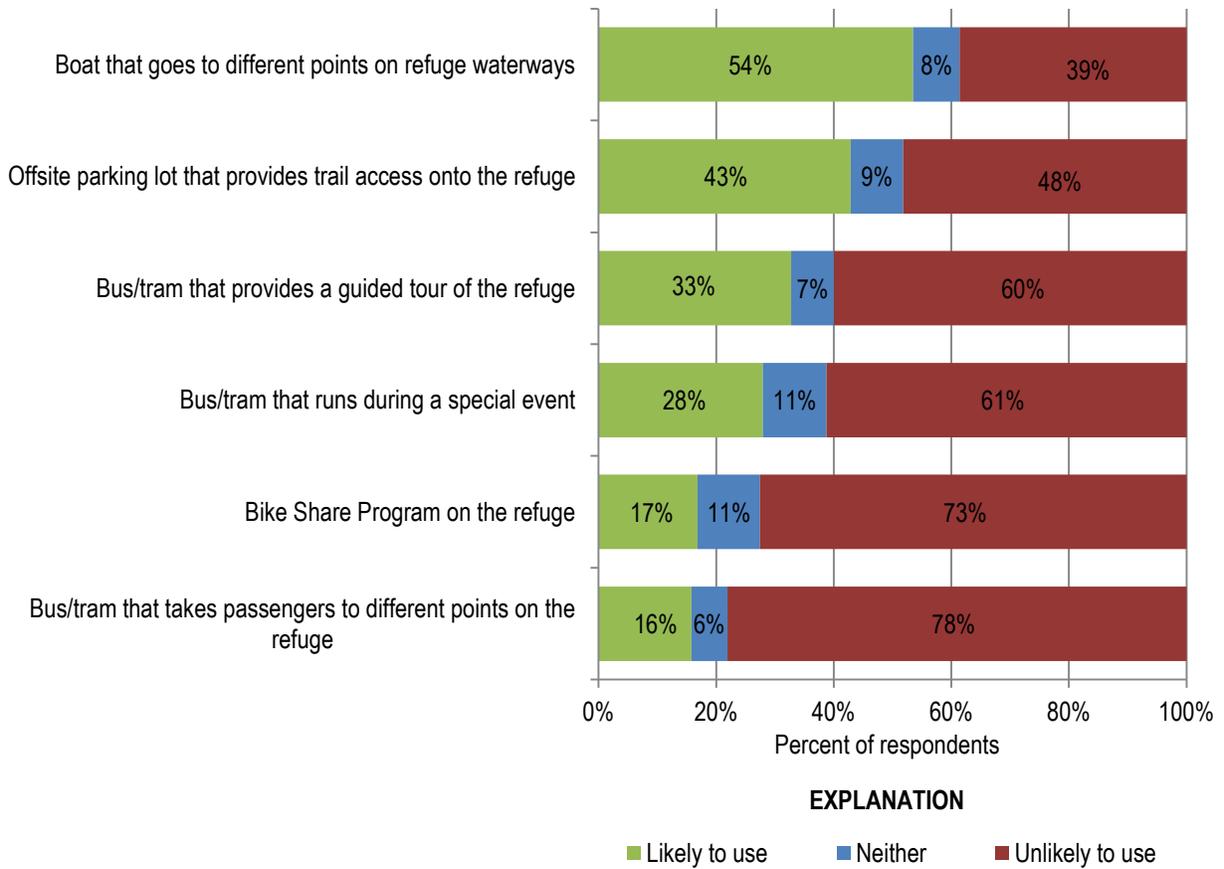


Figure 12. Visitors' likelihood of using alternative transportation options at refuges in the future (n ≥ 110).

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

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

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

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

Results regarding such beliefs are important to consider when communicating with visitors about this topic, since almost half of visitors (48%) indicated their experiences would be enhanced if Lacassine NWR provided information about how visitors can help to address climate change impacts on fish, wildlife, and their habitats (fig. 13).

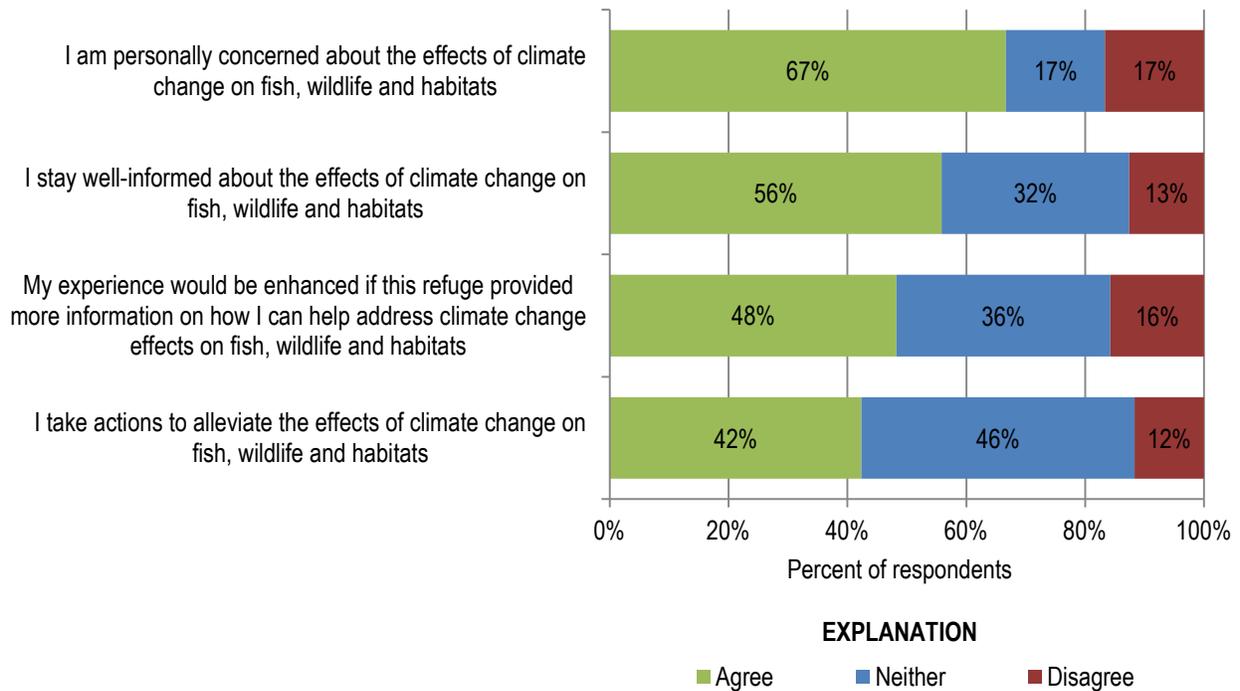


Figure 13. Visitors' personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 111).

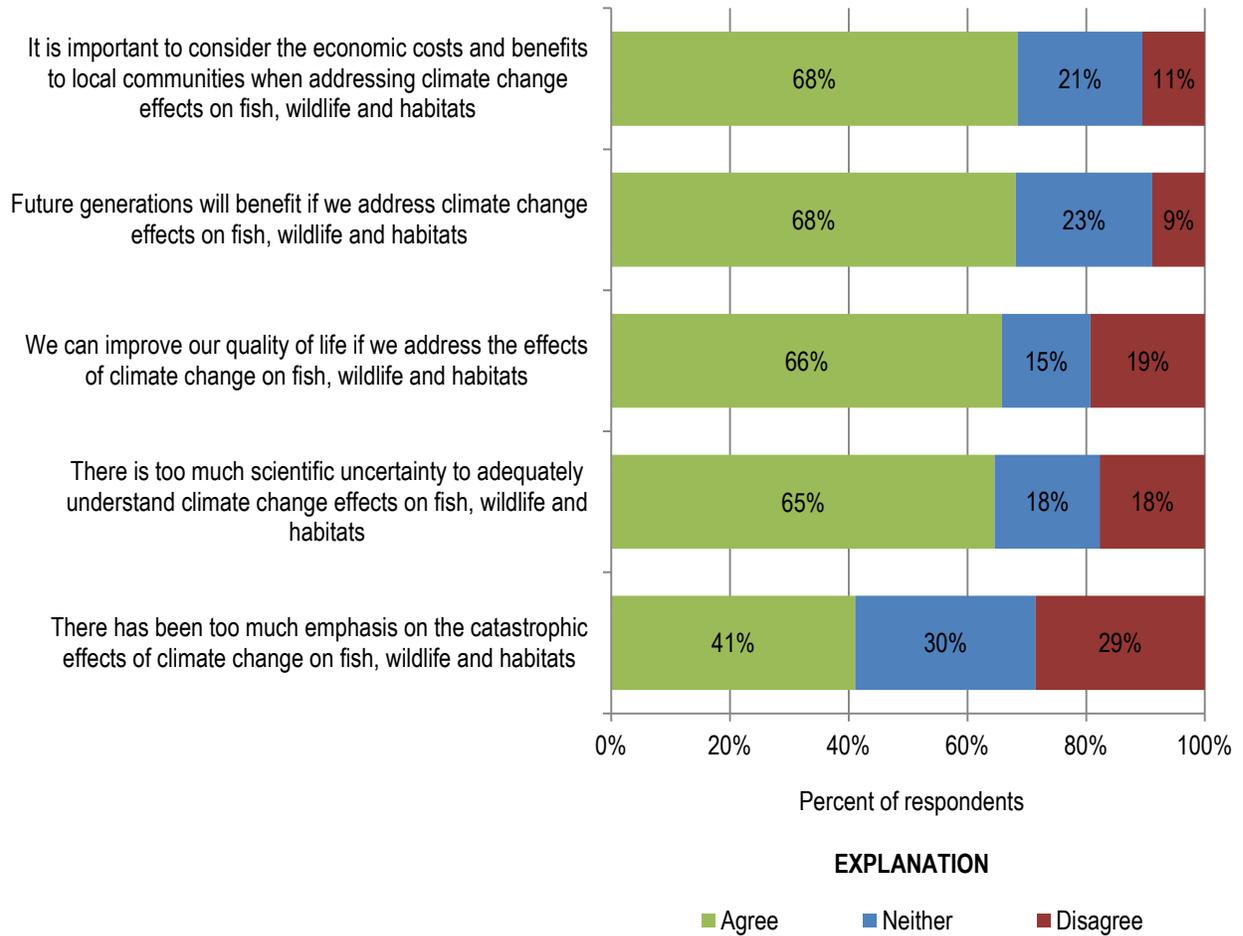


Figure 14. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 112).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Lacassine NWR during 2012 and are intended to inform decision-making efforts related to visitor services and transportation at the refuge. Additionally, the results from this survey can be used to inform planning efforts, such as a refuge's Comprehensive Conservation Plan. With an understanding of visitors' trip and activity characteristics and visitor-satisfaction ratings with existing offerings, refuge managers are able to make informed decisions about possible modifications (whether reducing or enhancing) to visitor facilities, services, or recreational opportunities. This information can help managers gauge demand for refuge opportunities and inform both implementation and communication strategies. Similarly, an awareness of visitors' satisfaction ratings with refuge offerings can help determine if potential areas of concern need to be investigated further. As another example of the utility of these results, community relations may be improved or bolstered through an understanding of the value of the refuge to visitors, whether that value is attributed to an appreciation of the refuge's uniqueness, enjoyment of its recreational opportunities, or spending contributions of nonlocal visitors to the local economy. Such data about visitors and their experiences, in conjunction with an understanding of biophysical data on the refuge and its resources, can ensure that management decisions are consistent with the Refuge System mission while fostering a continued public interest in these special places.

Individual refuge results are available for downloading at <http://pubs.usgs.gov/ds/754/>. For additional information about this project, contact the USGS researchers at national_visitor_survey@usgs.gov or 970.226.9205.

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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

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

Even if you have recently visited more than one National Wildlife Refuge or made more than one visit to the same Refuge, please respond regarding only the Refuge and the visit when you were asked to participate in this survey for any question that uses the phrase “this Refuge.” Please reference the cover letter included with this survey if you are unsure of which refuge you visited.

SECTION 1. Your visit to this Refuge

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

- | | | |
|---|--|--|
| <input type="checkbox"/> 6% Big game hunting | <input type="checkbox"/> 3% Hiking | <input type="checkbox"/> 0% Environmental education (for example, classrooms or labs) |
| <input type="checkbox"/> 0% Upland/Small game hunting | <input type="checkbox"/> 0% Bicycling | |
| <input type="checkbox"/> 41% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 11% Auto tour route/Driving | <input type="checkbox"/> 1% Interpretation (for example, exhibits, kiosks, videos) |
| <input type="checkbox"/> 13% Wildlife observation | <input type="checkbox"/> 24% Motorized boating | <input type="checkbox"/> 0% Refuge special event (<i>please specify</i>)
See Appendix B |
| <input type="checkbox"/> 7% Bird watching | <input type="checkbox"/> 3% Nonmotorized boating (including canoes/kayaks) | |
| <input type="checkbox"/> 12% Freshwater fishing | | <input type="checkbox"/> 0% Other (<i>please specify</i>)
See Appendix B |
| <input type="checkbox"/> 10% Saltwater fishing | <input type="checkbox"/> 1% Volunteering | |
| <input type="checkbox"/> 7% Photography | | |

2. Which of the activities above was the **primary** purpose of your visit to this Refuge?
(Please write **only one activity** on the line.) See report for categorized results; see Appendix B for miscellaneous responses

3. Did you go to a Visitor Center at this Refuge?

- 100% No *Lacassine National Wildlife Refuge does not have a Visitor Center.*
 0% Yes → *This question does not apply.*

- | | |
|---|--|
| <input type="checkbox"/> * Visit the gift shop or bookstore | <input type="checkbox"/> * Pick up/purchase a license, permit, or pass |
| <input type="checkbox"/> * View the exhibits | <input type="checkbox"/> * Stop to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> * Ask information of staff/volunteers | |
| <input type="checkbox"/> * Watch a nature talk/video/presentation | <input type="checkbox"/> * Other (<i>please specify</i>) See Appendix B |

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

Nonlocal Local All visitors * *There were too few nonlocal visitors to report these data.*

- | | | | |
|----------------------------|------------------------------|------------------------------|---|
| <input type="checkbox"/> * | <input type="checkbox"/> 96% | <input type="checkbox"/> 94% | It was the primary purpose or sole destination of my trip. |
| <input type="checkbox"/> * | <input type="checkbox"/> 3% | <input type="checkbox"/> 4% | It was one of many equally important reasons or destinations for my trip. |
| <input type="checkbox"/> * | <input type="checkbox"/> 1% | <input type="checkbox"/> 3% | 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

****The sample size was too low (n=16) to adequately represent travel time and distance for nonlocals.****

Local 0 Hours 55 Minutes *and* 31 Miles

All visitors 1 Hours 12 Minutes *and* 49 Miles

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

18% None, I visited this Refuge alone

(of those visiting with a group)

99% Family and/or friends

0% Organized club or school group (for example, Boy/Girl Scouts, hiking club, bird watching group)

0% Commerical tour group

1% Other (*please specify*) See Appendix B

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

 2 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.*)

86% Family and/or friends

9% Refuge website

11% Signs on highway

1% Other website (*please specify*) See Appendix B

4% Recreation club or organization

0% Television or radio

23% People in the local community

5% Newspaper or magazine

9% Refuge printed information (brochure, map)

0% Travel guidebook or other book

2% Map or atlas

1% 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.*)

72% Spring
(March-May)

47% Summer
(June-August)

48% Fall
(September-November)

38% Winter
(December-February)

10. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 11 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"/> 47% | Private vehicle without a trailer | <input type="checkbox"/> 0% | Refuge shuttle bus or tram | <input type="checkbox"/> 0% | Bicycle |
| <input type="checkbox"/> 51% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 0% | Motorcycle | <input type="checkbox"/> 2% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 3% | ATV or off-road vehicle | <input type="checkbox"/> 1% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 0% | Recreational vehicle (RV) | <input type="checkbox"/> 31% | 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"/> 84% | 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"/> 10% | Signs on highways | <input type="checkbox"/> 2% | Directions from Refuge website |
| <input type="checkbox"/> 12% | A GPS navigation system | <input type="checkbox"/> 5% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 1% | A road atlas or highway map | <input type="checkbox"/> 10% | 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"/> 71%	<input type="checkbox"/> 7%	<input type="checkbox"/> 6%	<input type="checkbox"/> 11%	<input type="checkbox"/> 5%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 64%	<input type="checkbox"/> 9%	<input type="checkbox"/> 11%	<input type="checkbox"/> 9%	<input type="checkbox"/> 8%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 50%	<input type="checkbox"/> 10%	<input type="checkbox"/> 7%	<input type="checkbox"/> 20%	<input type="checkbox"/> 13%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 31%	<input type="checkbox"/> 8%	<input type="checkbox"/> 8%	<input type="checkbox"/> 30%	<input type="checkbox"/> 24%
...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"/> 10%	<input type="checkbox"/> 11%	<input type="checkbox"/> 22%	<input type="checkbox"/> 6%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 40%	<input type="checkbox"/> 8%	<input type="checkbox"/> 9%	<input type="checkbox"/> 28%	<input type="checkbox"/> 15%
...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"/> 0%	<input type="checkbox"/> 29%	<input type="checkbox"/> 71%

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

- 17% Yes 45% No 39% 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
8%	4%	10%	33%	44%	Surface conditions of roads	2%	13%	9%	28%	47%	NA
9%	6%	10%	34%	42%	Surface conditions of parking areas	1%	8%	15%	24%	52%	NA
8%	3%	18%	21%	51%	Condition of bridges	4%	3%	13%	24%	56%	NA
10%	3%	16%	28%	43%	Condition of trails and boardwalks	1%	6%	19%	22%	52%	NA
8%	1%	8%	29%	54%	Number of places for parking	8%	7%	14%	30%	42%	NA
10%	5%	16%	25%	45%	Number of places to pull over along Refuge roads	9%	5%	21%	27%	37%	NA
10%	2%	13%	14%	60%	Safety of driving conditions on Refuge roads	2%	6%	12%	20%	60%	NA
9%	3%	15%	14%	59%	Safety of Refuge road entrances/exits	0%	3%	12%	27%	58%	NA
13%	6%	10%	30%	42%	Signs on highways directing you to the Refuge	5%	5%	14%	22%	54%	NA
11%	5%	14%	22%	48%	Signs directing you around the Refuge roads	3%	3%	19%	21%	54%	NA
12%	4%	17%	24%	44%	Signs directing you on trails	5%	5%	24%	21%	46%	NA
11%	5%	13%	16%	54%	Access for people with physical disabilities or who have difficulty walking	8%	9%	22%	19%	42%	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)?

86% Yes

14% 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: _____ * day(s)

only If you spent less than one day in the local area, enter the number of hours: _____ * 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: _____ 1 day(s)

If you spent less than one day at this Refuge, enter the number of hours: _____ 5 hour(s)

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

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

See Report for Results

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

_____ 2 number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
7%	11%	25%	9%	22%	5%	12%	1%	1%	3%	5%

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)

Lacassine 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.

Lacassine 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"/> 6%	<input type="checkbox"/> 5%	<input type="checkbox"/> 5%	<input type="checkbox"/> 48%	<input type="checkbox"/> 35%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 3%	<input type="checkbox"/> 7%	<input type="checkbox"/> 11%	<input type="checkbox"/> 49%	<input type="checkbox"/> 31%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 3%	<input type="checkbox"/> 4%	<input type="checkbox"/> 15%	<input type="checkbox"/> 42%	<input type="checkbox"/> 37%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 11%	<input type="checkbox"/> 7%	<input type="checkbox"/> 7%	<input type="checkbox"/> 29%	<input type="checkbox"/> 46%	NA

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

Importance					Refuge Services, Facilities, and Activities	Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
6%	6%	25%	29%	33%	Availability of employees or volunteers	6%	5%	28%	28%	34%	NA
8%	5%	21%	22%	43%	Courteous and welcoming employees or volunteers	6%	4%	24%	18%	49%	NA
7%	3%	15%	21%	53%	Knowledgeable employees or volunteers	5%	5%	24%	25%	42%	NA
6%	1%	9%	24%	60%	Printed information about this Refuge and its resources (for example, maps and brochures)	4%	8%	11%	30%	48%	NA
5%	2%	19%	26%	48%	Informational kiosks/displays about this Refuge and its resources	3%	6%	19%	32%	40%	NA
5%	0%	6%	17%	72%	Signs with rules/regulations for this Refuge	5%	5%	6%	33%	52%	NA
6%	3%	28%	26%	37%	Exhibits about this Refuge and its resources	2%	9%	30%	26%	33%	NA
5%	3%	38%	18%	36%	Environmental education programs or activities	5%	8%	43%	16%	27%	NA
*	*	*	*	*	Visitor Center <i>(not offered)</i>	*	*	*	*	*	NA
4%	0%	10%	17%	68%	Convenient hours and days of operation	4%	7%	9%	22%	58%	NA
6%	1%	23%	12%	58%	Well-maintained restrooms	10%	11%	26%	19%	35%	NA
4%	3%	19%	22%	52%	Wildlife observation structures (decks, blinds)	3%	2%	21%	28%	46%	NA
11%	7%	27%	16%	39%	Bird-watching opportunities	4%	0%	31%	16%	49%	NA
6%	3%	23%	24%	44%	Opportunities to observe wildlife other than birds	2%	2%	22%	25%	48%	NA
5%	6%	30%	19%	39%	Opportunities to photograph wildlife and scenery	2%	2%	29%	20%	47%	NA
9%	1%	18%	11%	61%	Hunting opportunities	7%	9%	22%	26%	36%	NA
9%	0%	7%	6%	78%	Fishing opportunities	11%	11%	6%	23%	50%	NA
11%	8%	36%	18%	27%	Trail hiking opportunities	8%	4%	49%	14%	25%	NA
11%	2%	44%	20%	23%	Water trail opportunities for canoeing or kayaking	4%	7%	50%	15%	24%	NA
14%	4%	44%	21%	16%	Bicycling opportunities	4%	3%	63%	15%	15%	NA
7%	8%	47%	14%	25%	Volunteer opportunities	4%	1%	62%	15%	17%	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?

97% Yes

3% No

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

98% Yes

2% No

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

80% Yes

20% No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	7%	10%	17%	30%	37%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	7%	12%	15%	32%	33%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	4%	13%	18%	43%	21%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	6%	6%	32%	37%	19%
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.	4%	6%	21%	44%	25%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	5%	7%	46%	27%	15%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	13%	15%	30%	30%	11%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	4%	5%	23%	31%	37%
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%	9%	36%	33%	15%

SECTION 6. A Little about You

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

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

99% Yes 1% No → *If not, what is your home country?* See Figure 2 in Report

2. Are you? 87% Male 13% 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)			
					2%							45%		42%			12%		

5. What ethnicity do you consider yourself? 2% Hispanic or Latino 98% 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"/> 7%	Black or African American	<input type="checkbox"/> 92%	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"/> 4%	Less than \$10,000	<input type="checkbox"/> 18%	\$35,000 - \$49,999	<input type="checkbox"/> 11%	\$100,000 - \$149,999
<input type="checkbox"/> 13%	\$10,000 - \$24,999	<input type="checkbox"/> 23%	\$50,000 - \$74,999	<input type="checkbox"/> 3%	\$150,000 - \$199,999
<input type="checkbox"/> 8%	\$25,000 - \$34,999	<input type="checkbox"/> 18%	\$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.)?

27 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 Lacassine National Wildlife Refuge

Survey Section 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
Duck hunting group	1

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

Other Ways Heard about This Refuge	Frequency
I'm an outdoor writer and sought information for story purposes.	1
Different refuge	1

Survey Section 2

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

Other Ways Found This Refuge	Frequency
Directions from another refuge.	1
Have a camp nearby.	1

Question 3: "Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future...please tell us how likely you would be to use each transportation option."

Other Transportation Option Likely to Use	Frequency
ATV	2
Horseback	1
Install rollers on Bell Ditch.	1
Motorcycle	1
Party barge	1
Personal vehicle	2

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

Comments on Transportation-related Items at This Refuge (n = 22)

At the east boat launch, there is a gate that is closed. If you are fishing along the shore, you cannot see the small sign that says this area is closed and why is this closed. There are some good spots there.

Have boat lanes thru marshes to allow people to run motors. This would allow people to spread out more to hunt.

I only use a boat when in the refuge area.

I was fishing in the marsh when you can in the over rollers.

I would like to see a public launch into the Mermentau River.

I would like to see the roads paved. We have to eat a lot of dust when road fishing. I think if you would charge at the entrance, 2 or 3 dollars to enter, then you could use that to pave and maintain the roads.

My comment about the refuge is that if you do not have a boat, you do not need to go. Bank fishing is limited. Everything is closed off to a bank fisherman. Upon entering Lacassine Refuge, the first mile is dead water and the next miles are water with nothing in it. You park and this is it. Then it is closed off for good looking water but you can't fish it. But for some reason, you take a little walk to the closed off area and there is fish. You can look but you do not fish there. To drive I have to spend 30 dollars for gas, 15 for food, and 8 for bait then when you get the water that you can fish in, where you see the fish, is closed off. Can someone tell me why?

Need better signs. I got lost.

Need roads wet; too much dust.

Pavement of roadways would be a great improvement.

People need to be more courteous to others fishing on the side of the road. Vehicles are driving initially too fast and are dusting people out.

Roads and trail well kept and in great condition.

Signage outside the refuge is terrible. Could not have found it without asking at a local store. Brochure picked up at different refuge tens of miles away had no address to use with GPS and brochure map road description inadequate to find refuge.

The entrance to the refuge was not clearly marked on where to go when you get there.

The use of ATV's for senior hunts on Cameron Prairie is not allowed. Vehicles at Lacassine NWR are not allowed to put out decoys the day before. These two rules need to be removed for seniors. We had to walk 2 miles! Never again!

There could be better and more descriptive maps for boundaries.

There is a sign to the entrance to the West Pipeline Canal. It does not state any entrance time during waterfowl season. I received a ticket for early entrance into the refuge and was unaware that the restriction included the canal as the pamphlet states the 4am entrance is for the "hunting area" which you cannot hunt waterfowl in a canal. I feel this "might" help other patrons of the refuge avoid the extremely disappointing and embarrassing position I found myself in. The sign only states the dates of entry for freshwater fishing.

There is no transportation related items at this refuge.

There's not enough parking for bank fishing with children.

We duck hunt in Willow Lake in the refuge, signs need to be more visible on the open water, should have areas on the water marking ways to other parts to the refuge. Need a public dock at Gary's landing, it's too small, need a public one with bathrooms more than 2 docks for boats and they charge three dollars a truck. We love hunting the refuge but not the fight to dock on weekends.

We used a four-wheeler to go places and were very satisfied.

You need more parking for boat trailers.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 35)

As stated previously in this survey, I received a ticket for early entrance into the Refuge West Pipeline Canal a few weeks ago. The answers above reflect this incident. I am a 42 year old male and this is the first year I have hunted the Refuge West Pipeline Hunting area. I take 2 young men whose father is disabled, hunting with me. After hearing of the good hunting in the refuge I decided to seek information from the website. After reading the pamphlet, I thought I had a good grasp on the regulations. The problem I encountered is that I interpreted the pamphlet's use of the labeling "hunting area" as a literal place to hunt. Also, when you look at the pamphlet map, the diagonal lines indicating the "hunting area" stop over the west pipeline canal and then begin again after it. Furthermore, there is a huge refuge sign at the entrance to the west pipeline canal and it has no information on it regarding hunting season or the time of which you can enter. This led me to believe that as long as you do not enter the marsh or what I consider the actual place you hunt before 4am that you were within the Refuge rules. Obviously, I was wrong. I can only hope that the fine money I submit for myself and the other young man I was responsible for will be used to revise the pamphlet so that some other law abiding citizen will not find them self in a similar situation! I feel that I must also state that the 2 state agents and the one federal agent that stopped us were both very courteous and professional and although I was extremely unhappy to be receiving a citation, I know these gentlemen were only doing their job.

Control water level and vegetation.

Could you please restock with largemouth bass and white perch in Lacassine Pool and the Big Berns.

Hunting and fishing should not be done on the refuge.

I feel there should be more areas open to waterfowl hunting and make access to waterfowl hunting a little easier. Also, I would like to see better management of fisheries of the refuge.

I fish from daylight to dark, and I did not see one agent.

I have one concern on the waterfowl hunting: I believe the marsh should be managed and taken a little better care of for hunters like myself.

I have taken my son and daughter hunting at this location for the last few years. For some reason the ducks don't seem to be at this location. Our last visit we didn't fire a shot. Didn't see any ducks.

I primarily hunt duck or fish. The duck blinds are magnificent, but the ponds around the blinds have incorrectly been dug out with machines, making the ponds impossible to walk in, due to mud. We are 70 and 69 years old and fell all three times in the pond.

I used this refuge for fishing in the past. It was pretty good but in the past few years it has seemed to be declining, with most recent trips catching no fish! I knew it was probably due to drought, water control, and maybe over-fishing.

I wish the duck hunting season would be pushed back, by the time the ducks start coming down its time for the season to close.

I would like to see some type of restrooms at more locations.

Information posted inside the refuge and available in the brochure we picked up at a different refuge was very cursory. We accidently bumped into the wildlife agent who signed us up for this questionnaire who was very helpful with directions and some questions we had about wildlife. She was the only person we saw.

It is a privilege to be able to visit such a well-run and well-staffed nature refuge. Thanks.

Lacassine bass fishing is bad. People in charge let the pool get so low that all the fish die. Streeters is nearly as bad; no one is catching fish. You need to launch neat Streeter so we don't have to use the bad launch at Gory's.

My only problem is the small sign saying this area is closed. Why is this area closed to walking and fishing there?

Need running water at the refuge! Like in Cameron at the Jetty's! Thanks.

Need to manage the refuge better. Fishing was great until about 10 years ago. Now I feel there should be a slot limit put in place on black bass. I think the refuge south of the intercoastal should be burnt every few years to control the vegetation.

Present facilities are good and well-maintained. I would like to see a public launch into Mermentau River with some good, adequate parking.

Should have garbage cans at fishing areas so the areas stay clean.

Some additional deep water areas would keep fish refuge from high heat stress.

The management of the fishing impoundment needs to be greatly improved!

The restrooms are dirty and there are not enough. I think a fee should be charged per year to each fisherman and hunter. This fee should be used to re-stock and pay employees.

There is no one to help you. I have not seen a restroom in about 3 years. Bank fishermen need to not go because it is closed off. Water in the fishbowl is just dead water. Come take a look for yourself. Do not take my word for it; come and see. Seeing is believing. If you come, I will ride along with you.

There needs to be better opportunities for bank fishing with young kids. When I went it was to bank fish and see if I could bring my young kids out there the next week for spring break but I could not because it was not safe enough with the uncut grass along the bank fishing area and the large dump trucks passing on the road were not following the speed limit.

They do a good job. Need more volunteers.

Water can be managed a little better. Also, fishing should be managed a little better.

We have been on duck hunting trips. We were very pleased. Game warden was very polite and very friendly. We had a great time.

We hunted and fished the refuge all our life. The pool has gone from good, to bad, to real bad, to waste of time. Their ideas and money spent was a waste of time and money. There's more dry ground than water inside the pool. Ducks and fish don't live on dry ground. Fix it.

We need a better management on the fish population; need a few more stocking than just once a year. I love to fish there and I think it needs more attention on the fishing.

Wish you all could keep more water in (no suggestions) pool. Wish you all could burn the marsh, it's very over grown.

Would like to have bow season during the duck hunting, split.

You don't put enough concern into the Bass fishing.

You need to add more fish at Lacassine Refuge. You need to keep the water level high. You need to maintain the grass on the refuge. I would like to see us get our Fridays back for hunting season; take Wednesday and Thursday away and give us Friday back.

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 = 68)

Abundance of wildlife.

Access by general public.

Allows public access.

As a father of two boys, having a place to bring them duck hunting is very unique.

Because of the management it gives the visitor a better opportunity of watching wildlife at its best.

Because of the way the habitat is managed, NWRs provide much better opportunities for seeing wildlife in their natural state.

Being a senior citizen, the duck blinds are easy to hunt out of. They are very secure and safe.

Being able to bring my son hunting in a refuge's marsh.

Better maintained habitat.

Better opportunity due to there is no public land to hunt waterfowl anymore.

Cleaner

Fishing

Give better opportunities to fish and hunt in the same area. Get to spend more time learning the areas.

Gives a place for people that don't have a place to go, the opportunity to go and catch fish, hunt ducks, enjoy the outdoors, and gives our kids the same opportunity. Years ago they raised the boards and raised the level inside the pool. We had some of the best fishing and hunting that we ever had in 25 years, then they dropped the level back down to normal and we don't have anything to catch or hunt. There's no fish or ducks anymore. They tell us at work if it doesn't work the way it is. Do something about it. Don't just sit back. Our kids future depends on what we do about it. Stop blaming mother nature, it is easy.

Gives people a place to go have fun doing what they enjoy.

Great place to hunt, fish, and watch ducks, geese, and wildlife in a natural setting.

How clean it is and some signs - need more.

Hunting and fishing are great. Hunters are courteous to others. Good to have a dock, to dock our boats. Nice place to go hunting.

I caught my first fish on a refuge. My five children caught their first fish on a refuge. Some of us do not have the money to be a part of the high power fishing and hunting clubs. It is so important that the US Government maintain the season for people like me and my fishing for bass, red fish, and other wildlife. When you work as hard as I do, it is good to have a refuge where you can go and have a little fun. Man, it is so nice to call one of my friends and say, "Man, I caught a 5lb and 7lb in my refuge. Can you beat this?" The US is the greatest place to live in the world. Let's make our refuges the great place to fish.

I do not fish on the refuge pond area, to fish on international waterway where it goes through the W.L.B.

I think the tax dollars spent on wildlife management is a great investment for the future generations of hunters and fishers.

It gives me the chance to catch salt and fresh water fish and crabs.

It has more wildlife to see and experience and all the opportunities to go with it.

It is a different world from the rest of us.

It is a very good place to observe wildlife and a very good place to fish.

It is beautiful out there and close to home for me. I like the marsh atmosphere. It is a good place for birds and fish.

It is very convenient and well-kept. It's likely you will have a chance to catch fish.

It keeps the outlaws out and good conservation efforts.

It preserves a world, that unprotected would be lost. I want my children to see what I saw as a child.

It provides opportunities for recreation that we might not otherwise have.

It provides opportunity for some to experience wildlife, habitat, and areas not readily available otherwise.

It provides recreation to all people. I do not need expensive recreational equipment to enjoy being outdoors.

It's a really nice place to go as a family and enjoy fishing even if you don't have a boat.

It's fun to take the kids and self.

Its beauty and it covers a lot of territory for fishing and the wildlife to roam.

Its habitat.

Its locations and its unique topography!

Lacassine NWR has the best bass fishing and the best duck hunting in southwest Louisiana.

Lacassine Refuge is very important to the bass fisherman. I think more needs to go towards stocking and maintaining the water level for the fish to grow. There should be some kind of fee to help with restocking, maybe installing a deep water well to help with levels in the pool. Right now the levels have gotten so low and we have lost so many fish due to the drought.

Less crowded.

My wife and I have been to over 45 refuges. We plan our vacations around refuges and national parks. They are the best.

Nice waterfowl hunting location compared to other areas.

Numerous reptiles, game animals, and fish.

Property is well taken care of and provides information about wildlife.

The cleanliness of such lands and marshes.

The diverse wildlife to see and catch makes it unique.

The game agents have become friends. The experience is always a treat for seniors like us. Even though the duck blinds and ponds are difficult to access. A duck hunt or fishing trip is always thrilling regardless of the take. If not too difficult to make, we will continue to join in the lottery hunts for seniors.

The opportunity to view wildlife and nature in its natural habitat is outstanding.

The platforms for wildlife watching are so easy to access. The wharfs are easy to access for the handicap and it's so clean and well-maintained.

The preservation of true natural habitat with access for all to enjoy.

The quality of its facilities makes it unique.

The scene is nice looking!

Their continuous efforts to make hunting opportunities as good as possible.

Their contribution to the preservation of migratory birds.

There are a lot of places to fish and many different kinds of animals. It's big enough to where you do not feel crowded.

There are alligators on the road sides, turtles sunbathing, purely nature, and no city-life added.

There are many different species of fish you can catch.

These refuges offer an assortment of activities year round for the people who truly enjoy spending time outdoors. The national wildlife refuge services play a vital role in protecting our wildlife habitats.

They had duck blinds for us to hunt out of. They were well maintained. A very pleasant trip.

They have more ducks.

They help maintain life for animals and fish. The way this world is going is going, they don't care about them and what they mean to us.

This is a great place for tourists to visit. Gives them a little taste of what Louisiana is about.

This is all most of us have to enjoy. The outdoor public lands are very important for people who can't pay for private lands for the outdoors. I use refuges all over the state of LA and I am pleased with the opportunities they provide and I hope we could see more lands and opportunities in the future. I would like to say thanks to all NWR employees and volunteers for what they do.

Varied species of wildlife and fish that are available to pursue and observe.

Yes, because our youth need to be in touch with nature!

You are able to show your children and grandchildren how beautiful the refuge is and how wildlife lives.

You get to see nature in their own habitat. It is nice and quiet.

You get to see wildlife in their natural environment.

Additional Comments (n = 26)

Both Lacassine and Sabine should consider a lease program. \$200.00/yr for a particular hunt area. This would stop a lot of problems with people tampering with boats and personal property. This would also stop the overcrowding. It is becoming increasingly dangerous in the marshes. Burn the marshes yearly.

I am on disability. I have one leg cut off and half of the other foot cut off. I love to go hunting and fishing.

I enjoy the duck hunting and fishing with friends and family.

I enjoy the refuge!

I have participated in waterfowl surveys in 2009-2010 seasons; I am glad to help anytime.

I live in Lake Charles, LA. We have Lacassine Wildlife Refuge in Hayes, LA, about 40 miles east of us. We have Hackberry Wildlife Refuge in Hackberry, LA. It is about 1 hour southwest. We fish both of them. When Lacassine is open, I fish it at least 3 times a week and Hackberry Wildlife Refuge all year round. This is why I have some concern about my refuge that is around me. I would love to talk to someone in Lacassine Wildlife Refuge; I would love to know about wildlife refuges in the US so when I travel I will know where they are. If there is some pamphlet you could send me, I would love to have it.

I think of this refuge as my home!

I was born and raised in southwest LA. I have hunted, fished, and trapped fur since I was ten years old. I commercial fished for Red Fish and Trout until 1994 when it was outlawed. Like many others, I know this industry as well as anyone. I am an avid bass fisherman. Lacassine Refuge could be the best by far than any in the country if you take care of it. Most of the public agrees with me as far as you guys are worried about the birds, not the bass. You cannot have a lot of baths. You mud waters for bass. Lots of water, not a mud hole like what the birds want. Build up the bass, hold plenty of water, and charge the fishermen, per year, per dog, or whatever else helps maintain. We will pay, unlike the birds watchers.

I would like to take this time to tell about an experience I had on a fishing trip I took at the refuge. It was a weekday (Wednesday) afternoon. I went fishing alone. While there, I did not see a wildlife agent, but there was a pick-up truck that came around where I was fishing. After he came the third time, I was starting to be afraid (being a middle-aged, handicapped female), so I quickly packed up and left. I hate to think this could happen again because I really enjoy the peace and quiet but need to feel safe while there. Just wanted to pass this along to you!

I've been fishing at this refuge all my life; I never miss March 15th! I would like to talk to an agent in person. There is too much to write and I don't spell well. May God bless. (Name and Address Given).

It seems that because of low water levels, some types of fish, such as bass and perch, are few and need to be restocked.

Just wish they had more access to hunt ducks from a boat and not need to walk out into the marsh. I am getting older and much harder to walk in the marsh. Thanks for all everyone does so I can enjoy the outdoors.

Keep up the good work.

Keep up the great work!

Lacassine Refuge is very important to the bass fisherman. I think more needs to go towards stocking and maintaining the water level for the fish to grow. There should be some kind of fee to help with restocking maybe installing a deep water well to help with levels in the pool. Right now the levels have gotten so low and we have lost so many fish due to the drought.

More deep water areas on the east side and deeper trails throughout would make for a more pleasurable experience.

Other than the incident previously stated, my experience with the duck hunting this year has been very positive. I wish I would have found this gem years ago. The only improvement other than the pamphlet I would recommend would be a boat launch provided by the refuge to access the refuge. I only duck hunt on the refuge so all the information I have provided is based on that.

Please build us a public dock and parking area by Gary's landing. The U.S. wildlife management has the federal money to do it, and it could be a good thing for future hunters to continue going to the refuge from this end of the woods!

Please restock with bass.

Thank you all.

Thanks for keeping our hunting and fishing rights going. We need to hunt and fish until we die. No one should stop hunting or fishing at all. God bless.

The canes around the duck blinds are too tall, limiting the view.

The roads into Lacassine NWR are adequate for vehicle traffic. Since decoys are not provided now, old guys without an ATV cannot get the joy of putting out decoys before the hunt. It's too far to walk. The ponds(around the blind) are impossible to walk in. Birds are being lost because we can't walk out into the pond. In summer, when you drain the ponds, flatten the bottom with a box blade so the tractor ruts won't catch unsuspecting seniors who fall in cold water and cuss! Put a north arrow on all maps sent out. The blinds are magnificent. You all have done a great job on them! Add two more blinds on the north end of Lacassine NWR for elderly or handicapped hunters. The east-west road could have a blind adjacent to it, for very easy access. For some of us, just being out there is the thrill and a camera is just as effective as a gun when access is easy. Thank you.

We did not even have a nibble on our fishing lines when we went fishing the last 2 times.

We were very impressed with the refuge and glad we persisted in finding it.

You need to leave water up in the pools and put more fish in the pools, not kill the fish. Families like to go fish in Lacassine Refuge but they kill the fish out; that is not good. They spend money for fish and make fish bedding and let water out. The killing out of the fish is wasting my money.
