



U.S. Fish & Wildlife Service

NATIONAL WILDLIFE REFUGE VISITOR SURVEY

*2018 Results for
Loess Bluffs National Wildlife Refuge*



**THE OHIO STATE
UNIVERSITY**



Acknowledgments

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Front cover: A visitor enjoying an afternoon of birding on a boardwalk trail at Loess Bluffs National Wildlife Refuge. Photo credit: Kylie Campbell.

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Understanding Wildlife Refuge Visitors & Their Experiences

A hundred years in the making, the National Wildlife Refuge System (Refuge System) is a vast network of habitats that supports over 2,000 species of birds, mammals, reptiles, amphibians, and fish across the United States on national wildlife refuges (wildlife refuges). Wildlife refuges also provide unparalleled outdoor recreation experiences and health benefits to people by offering a chance to unplug from the stresses of modern life and reconnect with their natural surroundings. The National Wildlife Refuge System Improvement Act of 1997 specifically identified six priority recreational uses: hunting, fishing, wildlife observation and photography, environmental education, and interpretation (Fig. 1). These recreational activities are prioritized on every refuge where compatible with the refuge's stated purposes. Visitors may also engage in many other activities (for example, hiking, paddling, boating, and auto tour routes) where compatible.

At least one wildlife refuge exists within an hour's drive of most major metropolitan areas. With over 55 million visits per year, the Refuge System is committed to maintaining customer satisfaction and public engagement while helping people and wildlife to thrive. Increased

visitation is not limited to the Refuge System—over the past few years, there has been a rise in the number of people traveling to public lands and waters for recreation (Outdoor Foundation, 2018). This nationwide trend demands effective management of visitor access and use to ensure benefits for present and future generations.

The need to understand visitors and their experiences, as well as preferences for future opportunities, is further underscored by widespread societal changes that are shaping how people engage with nature and wildlife (Kellert et al., 2017; Manfredo et al., 2018). Researchers and land management professionals alike recognize the need to connect the next generation to nature and wildlife to enhance mental and physical well-being and build a broader conservation constituency (Charles & Louv, 2009; Larson, Green, & Cordell, 2011).

The National Wildlife Refuge Visitor Survey is a Refuge System-wide effort to monitor visitor characteristics, experience, and satisfaction with refuge experiences, as well as visitor economic contributions to local communities. The survey is conducted every five years on a rotating basis on wildlife refuges that have at least 50,000 visits per year. This effort provides refuge professionals with reliable baseline information and trend data that can be used to plan, design, and deliver quality visitor experiences, communicate the value of wildlife refuges to different audiences, and set future priorities. The National Wildlife Refuge Visitor Survey is a collaboration between the U.S. Fish & Wildlife Service (Service), The Ohio State University (OSU), and American Conservation Experience (ACE).

This report summarizes visitors and their experiences at Loess Bluffs National Wildlife Refuge, referred to as “this wildlife refuge” or “refuge” throughout this report. Percentages noted throughout the report were rounded



Fig. 1: Priority recreational uses of National Wildlife Refuges.

to the nearest whole number and, when summarized per survey question, may not equal 100%. Additionally, most figures do not display a percentage for any category containing less than 5% of visitors. See Appendix A for the

survey methodology and limitations of findings. See Appendix B and C for visitor responses to specific survey questions for this wildlife refuge.



2018 National Visitor Survey interns in action at wildlife refuges across the United States. Photo credit: U.S. Fish & Wildlife Service.

Surveying Visitors at This Wildlife Refuge

REFUGE DESCRIPTION

Loess Bluffs National Wildlife Refuge is located in northwestern Missouri about 90 miles north of Kansas City, MO. The refuge was established in 1935 to provide feeding and breeding grounds for migratory birds and other wildlife. The Civilian Conservation Corps (CCC) constructed many of the trails, road, dikes, and buildings in 1935. The 7,440 acres of this refuge are home to many species of migrating birds, ducks, deer, coyotes, and other smaller mammals. As many as 300 immature and adult bald eagles may be seen here during peak migration. There were a record 476 bald eagles counted during a 2001 survey. According to the National Audubon Society, Loess Bluffs National Wildlife Refuge is one of America's Top 500 Globally Important Birding areas. The refuge is named after the 30-million-year-old geological formations of finely ground bedrock from receding glaciers that have been blown into steep hills. These loess soil mounds contain remnants of Missouri's vast native prairie.

Loess Bluffs National Wildlife Refuge attracts over 85,000 visitors annually (U.S. Fish and Wildlife Service, 2018, written comm.). At the welcome center, visitors can learn about the



A sunset view of Eagle Pool from the Loess Hills Overlook at Loess Bluffs National Wildlife Refuge. Photo credit: Kylie Campbell.

history of the refuge and the wildlife that use it by watching a short film. A network of hiking trails starts at the visitor center where visitors can experience the unique habitat contained within this refuge. The main attraction for visitors is the 13-mile auto tour loop that surrounds the outer edge of the wetlands. While driving this loop, visitors can enjoy birding, wildlife observation, and photography. Bald eagles, mallards, pelicans, and thousands of snow geese can be seen throughout various seasons. There are convenient observation spots scattered throughout the loop to allow visitors to step out and experience this wildlife refuge with all their senses.

SAMPLING

Refuge professionals at this wildlife refuge identified two separate 14-day sampling periods and one or more sampling locations that best reflected the primary uses of the refuge as well as the diversity of activities that occur (Fig. 2). For more details on methodology for the National Wildlife Refuge Visitor Survey, see Appendix A.

- During the two sampling periods, a total of 381 visitors agreed to participate in the survey by providing their names and addresses.
- In all, 222 visitors completed the survey online (48%) or by mail (52%) after their refuge visit, resulting in a 62% response rate.
- Results for this wildlife refuge have a $\pm 5\%$ margin of error at the 95% confidence level. For more details on limitations of results and survey methodology, see Appendix A.



Fig. 2: Map of Loess Bluffs National Wildlife Refuge. Visitors were contacted at the circled locations from 11/2/2018–11/9/2018 and 12/7/2018–12/20/2018.

Visitor Characteristics

An important first step in managing visitor experiences is to understand the characteristics of those who currently visit wildlife refuges. Refuge professionals can compare visitor demographics to the demographic composition of nearby communities or the nation to inform engagement efforts with new audiences. Useful tools for these comparisons include Headwaters Economics' Economic Profile System and their Populations at Risk (<https://headwaterseconomics.org>) or U.S. Census Bureau products (www.census.gov; www.socialexplorer.com).

AGE & GENDER

- 36% of visitors were female with an average age of 61 years (Fig. 3).
- 64% were male with an average age of 60 years.

EDUCATION

- 20% of visitors had a high school degree or less.
- 53% had at least some college.
- 27% had an advanced degree.

RACE & ETHNICITY

Most prevalent race or ethnicity (Fig. 4):

- White (95%).
- Multiracial (2%).

INCOME

- Visitors had a mean income range of \$75,000-\$99,999 (Fig. 5).

OTHER TRIP CHARACTERISTICS

- Average group size of 2 people.
- 18% visited the refuge alone.
- 68% visited with at least one other adult.
- 14% visited with a combination of at least 1 adult and 1 child.

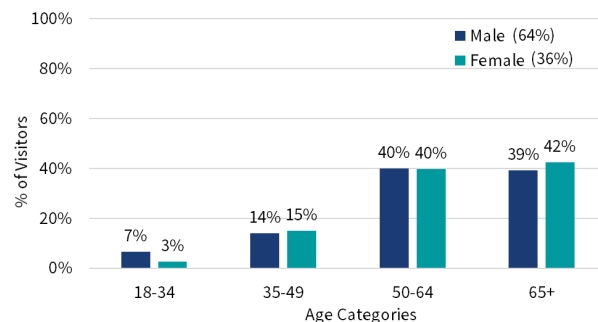


Fig. 3: Distribution of visitors to this refuge by gender and age group.

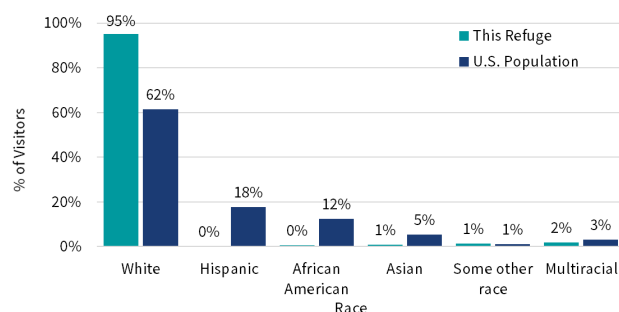


Fig. 4: Race and ethnicity of visitors to this refuge compared to the national average.

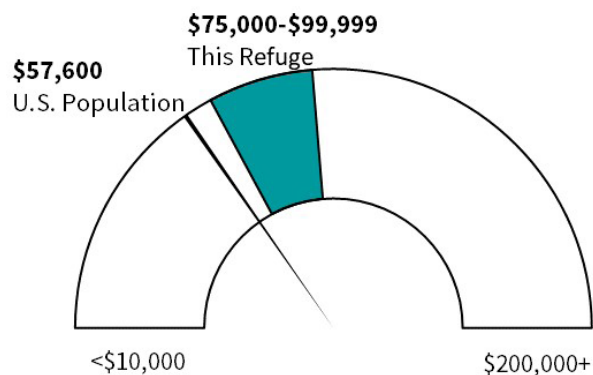


Fig. 5: Mean income range of visitors to this refuge compared to the national median income.

Trip Characteristics

Understanding the travel patterns of visitors and why they choose to visit wildlife refuges is important for effective visitor use management. Comparisons of responses from local visitors (those living ≤ 50 miles from the refuge) and nonlocal visitors (those living > 50 miles from the refuge) can inform communication efforts with current visitors and those who have yet to visit. Understanding seasonality helps refuge professionals better understand visitor use patterns and gauge supply and demand.

LOCAL VISITORS

Highlights of trip characteristics for local visitors to this wildlife refuge (45%) include:

- For locals, this refuge was the primary reason for their trip (77%) (Fig. 6).
- Local visitors traveled an average of 36 minutes to arrive at this refuge (Fig. 7).

NONLOCAL VISITORS

Highlights of trip characteristics for nonlocal visitors to this wildlife refuge (55%) include:

- For nonlocals, this refuge was the primary reason for their trip (72%) (Fig. 6).
- Nonlocal visitors traveled an average of 4 hours to arrive at this refuge (Fig. 8).
- Of the 100% of visitors who lived in the U.S., nonlocal visitors were most often from Missouri (47%) and Kansas (27%).

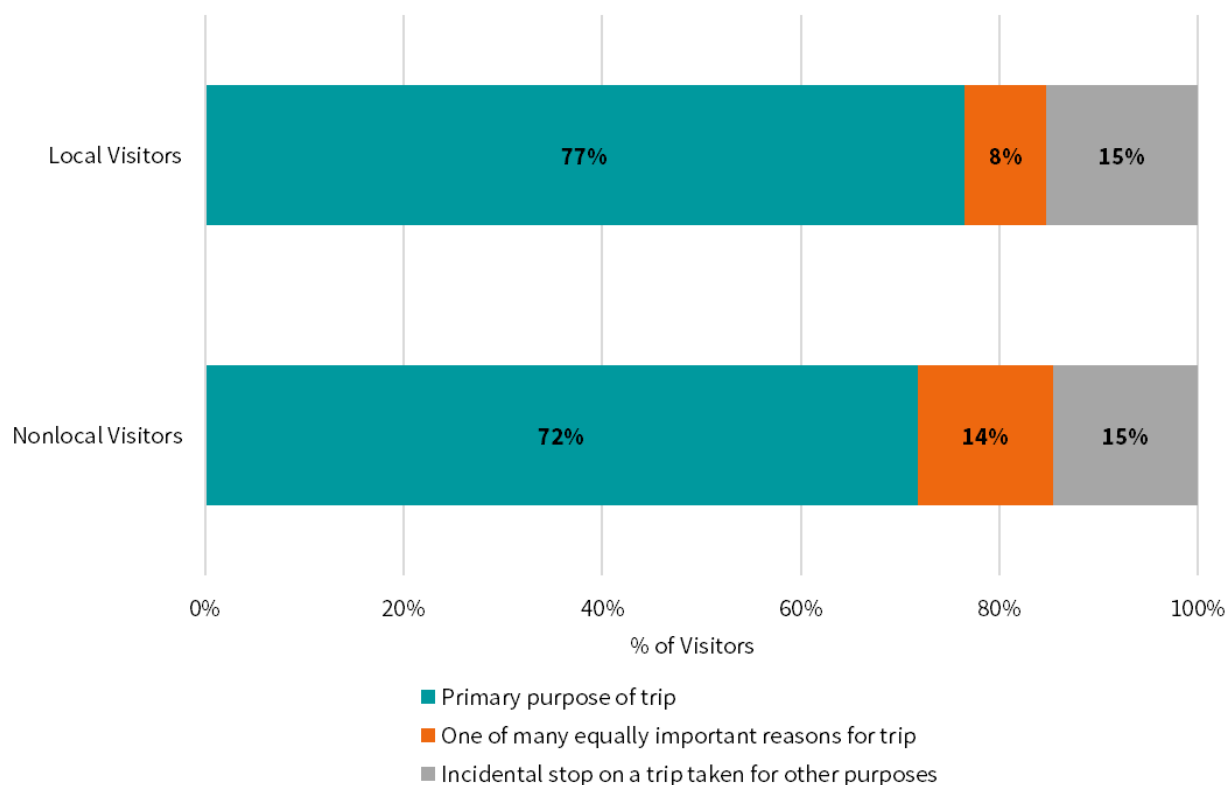


Fig. 6: Purpose of most recent refuge visit for local (living ≤ 50 miles from the refuge) and nonlocal (living > 50 miles from the refuge) visitors.

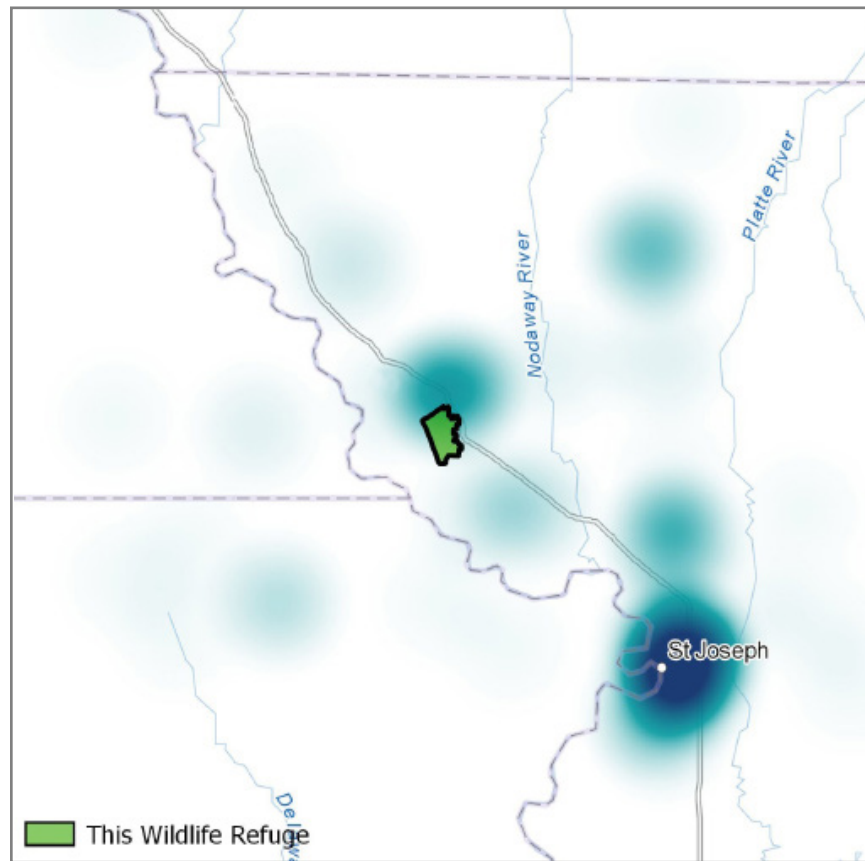


Fig. 7: Map showing residence of local visitors to this refuge. Darker shading represents relatively higher visitation from that area.

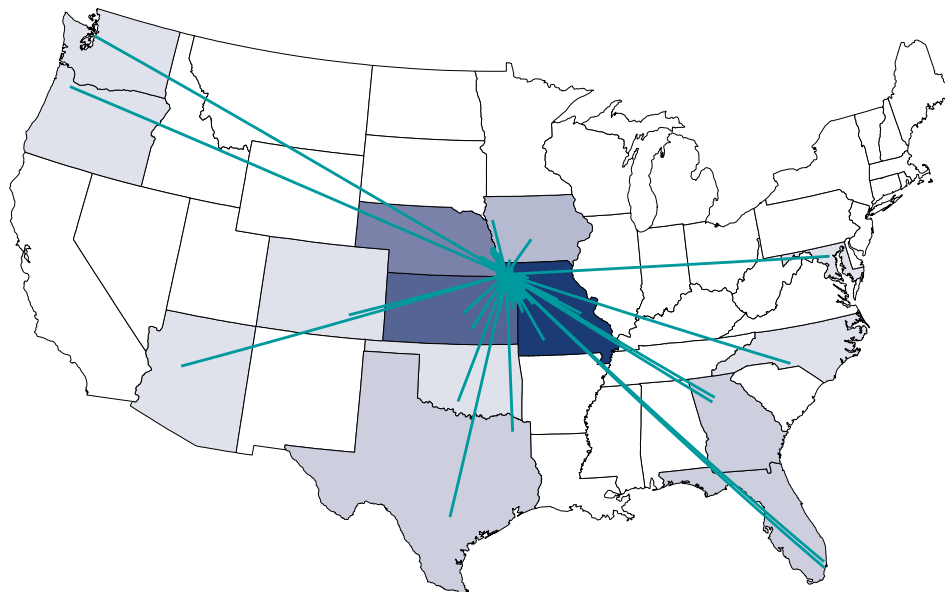


Fig. 8: Map showing residence of visitors to this refuge by zip code, with each line representing visitation from a different zip code. The convergence point of the lines is the geographical center of the refuge. Darker shading of the states represents higher visitation from that state.

OTHER TRIP CHARACTERISTICS

Other trip characteristics include:

- To get to this wildlife refuge, visitors primarily traveled by private vehicle without a trailer (92%) and by foot (5%) (Fig. 9).
- Once on the refuge, visitors primarily traveled by private vehicle without a trailer (78%) and by foot (19%) (Fig. 9).
- Visits occurred during winter (68%), spring (44%), summer (31%), and fall (69%).
- 95% of visitors made a single-day trip to this refuge, spending an average of 3 hours, while 5% of visitors were on a multi-day trip to this wildlife refuge that averaged 3 days.

During the 12 months prior to completing the survey, visitors also made multiple trips to this wildlife refuge, other wildlife refuges, and other public lands:

- 70% were repeat visitors to this wildlife refuge, visiting an average of 13 times.
- 42% visited other national wildlife refuges, averaging 2 visits.
- 61% visited other public lands, averaging 5 visits.

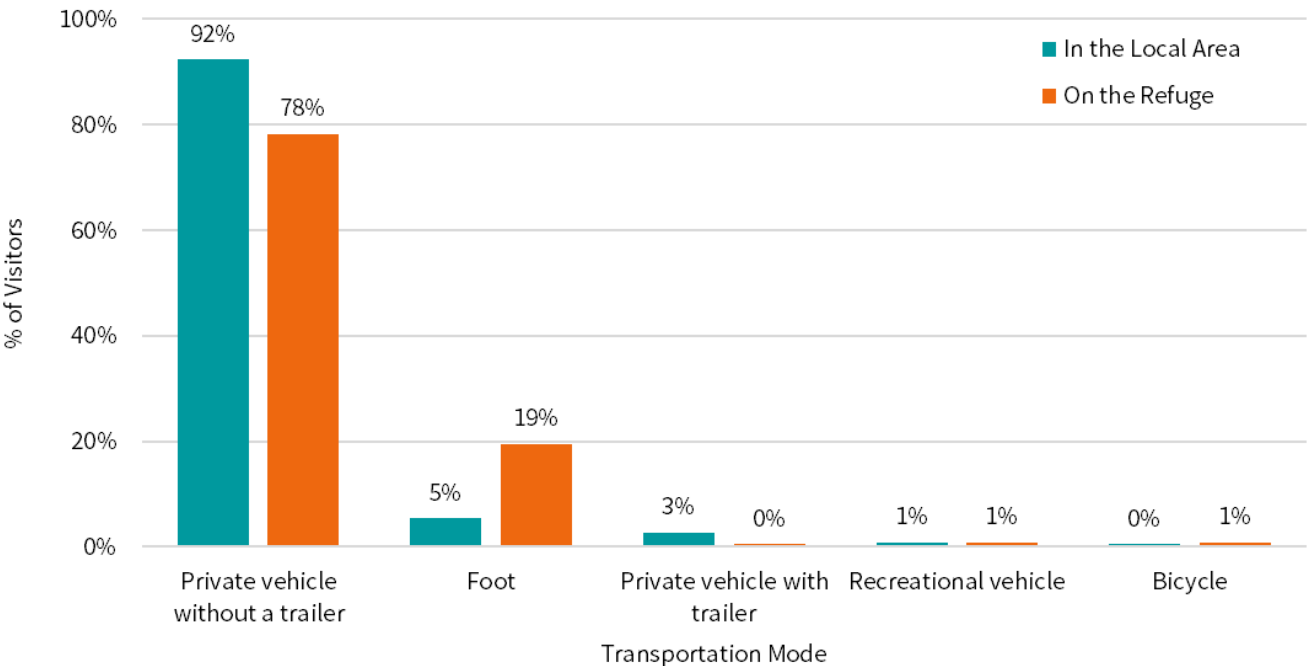


Fig. 9: Modes of transportation used by visitors to get from the local area to this refuge and within the boundaries of this refuge.

Information Sources Used for Trip Planning

Knowing more about which information sources visitors use (or do not use) to plan their trips can improve communication strategies and facilitate positive experiences on refuges. The Refuge System's success in reaching new and diverse audiences as well as current visitors also depends on its ability to keep pace with communication trends (U.S. Fish & Wildlife Service, 2016a).

Visitors to this wildlife refuge found a variety of in-person, print/internet, and refuge-specific information sources helpful when planning their trips. Details for information sources identified as very or extremely helpful include:

- In-person sources that were most helpful to visitors regardless of age included word of mouth and tourist information/welcome center.
- Print and internet sources that were most helpful to visitors regardless of age included social media and printed map/atlas.
- Refuge-specific sources that were most helpful to visitors regardless of age included refuge website and refuge employees/volunteers.
- Use of information sources varied by age groups (see Figs. 10-12 for details).

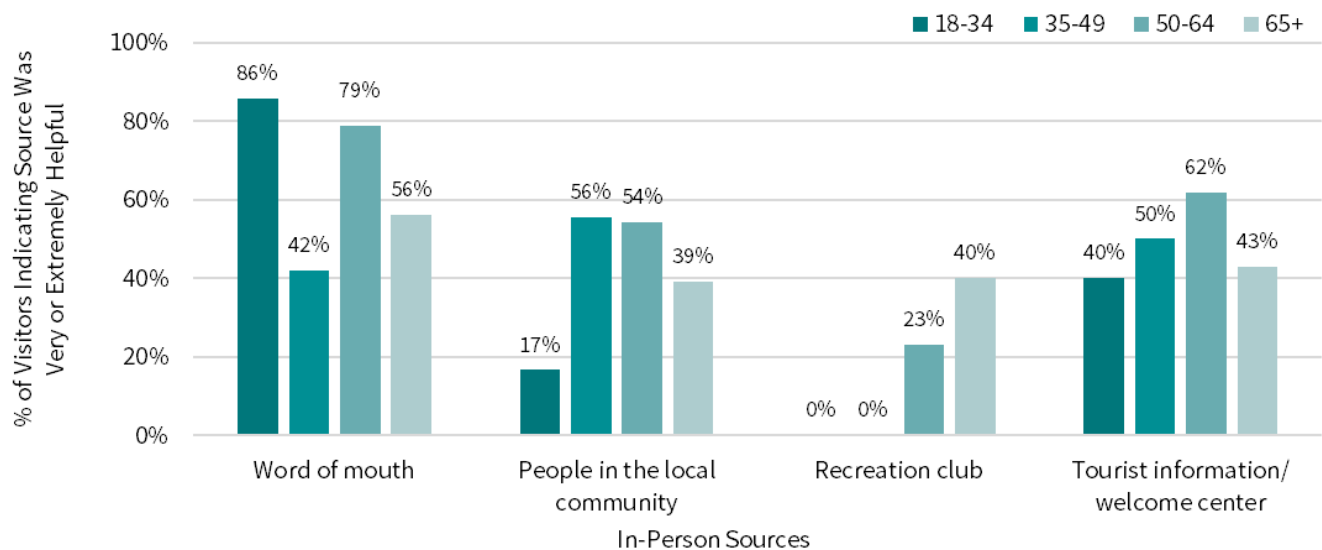


Fig. 10: Percent of visitors by age group who found in-person information sources very or extremely helpful in planning their trip.

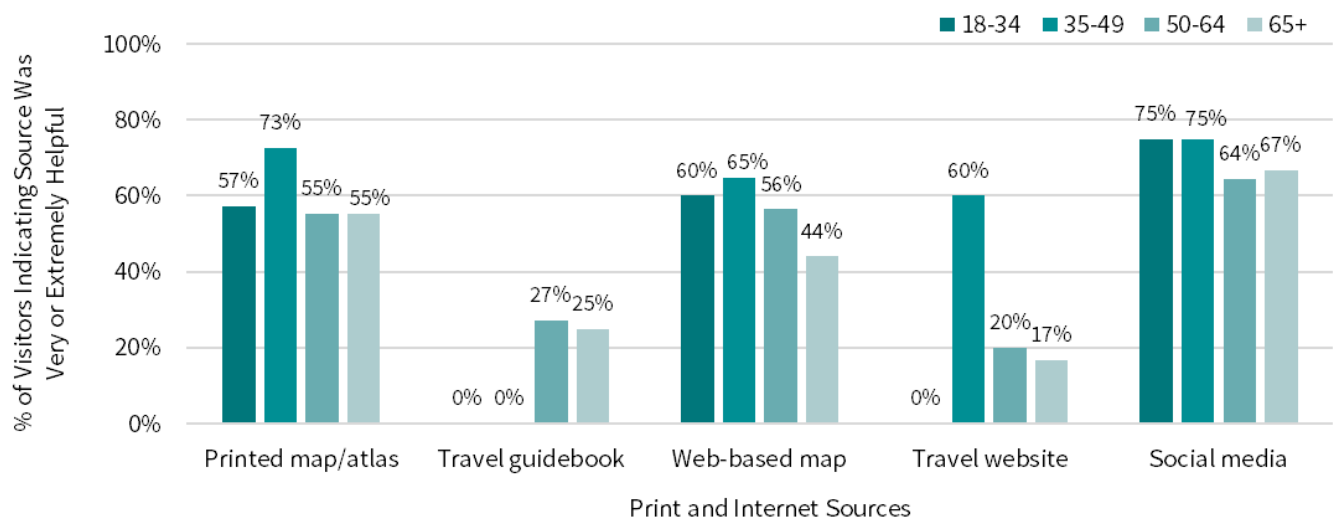


Fig. 11: Percent of visitors by age group who found print and internet information sources very or extremely helpful in planning their trip.

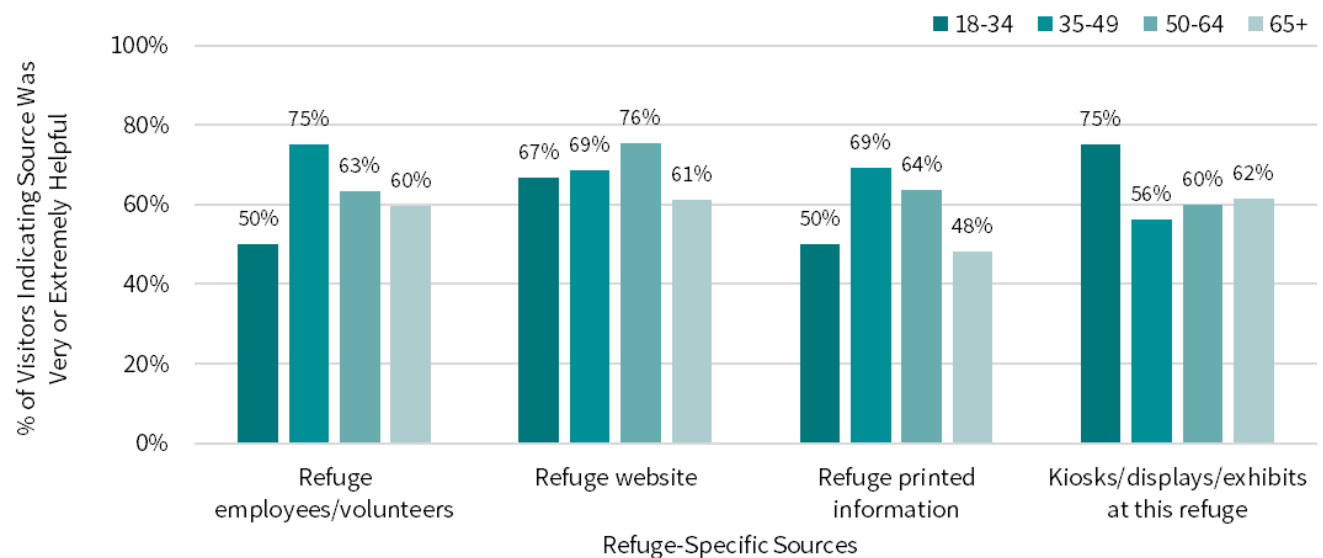


Fig. 12: Percent of visitors by age group who found refuge-specific information sources very or extremely helpful in planning their trip.

Use of Social Media

Around 70% of Americans use social media to connect with one another, engage with news content, share information, and entertain themselves (Smith & Anderson, 2018). Social media posts can act as a virtual “word of mouth” method for increasing awareness about the refuge to the visitor’s network and beyond. A social media presence can further generate awareness of the refuge and its resources among audiences that do not use or did not otherwise learn about the refuge through traditional advertising outlets.

Social media was used by 55% of visitors to share their experience on this refuge with others. Use of specific social media platforms varied by age group (Fig. 13):

- Visitors 18-34 years old preferred to use Instagram (67%), Facebook (44%) and Snapchat (44%).
- Visitors 35-49 years old preferred to use Facebook (63%) and Instagram (22%).
- Visitors 50-64 years old preferred to use Facebook (51%).
- Visitors 65 or older preferred to use Facebook (43%).

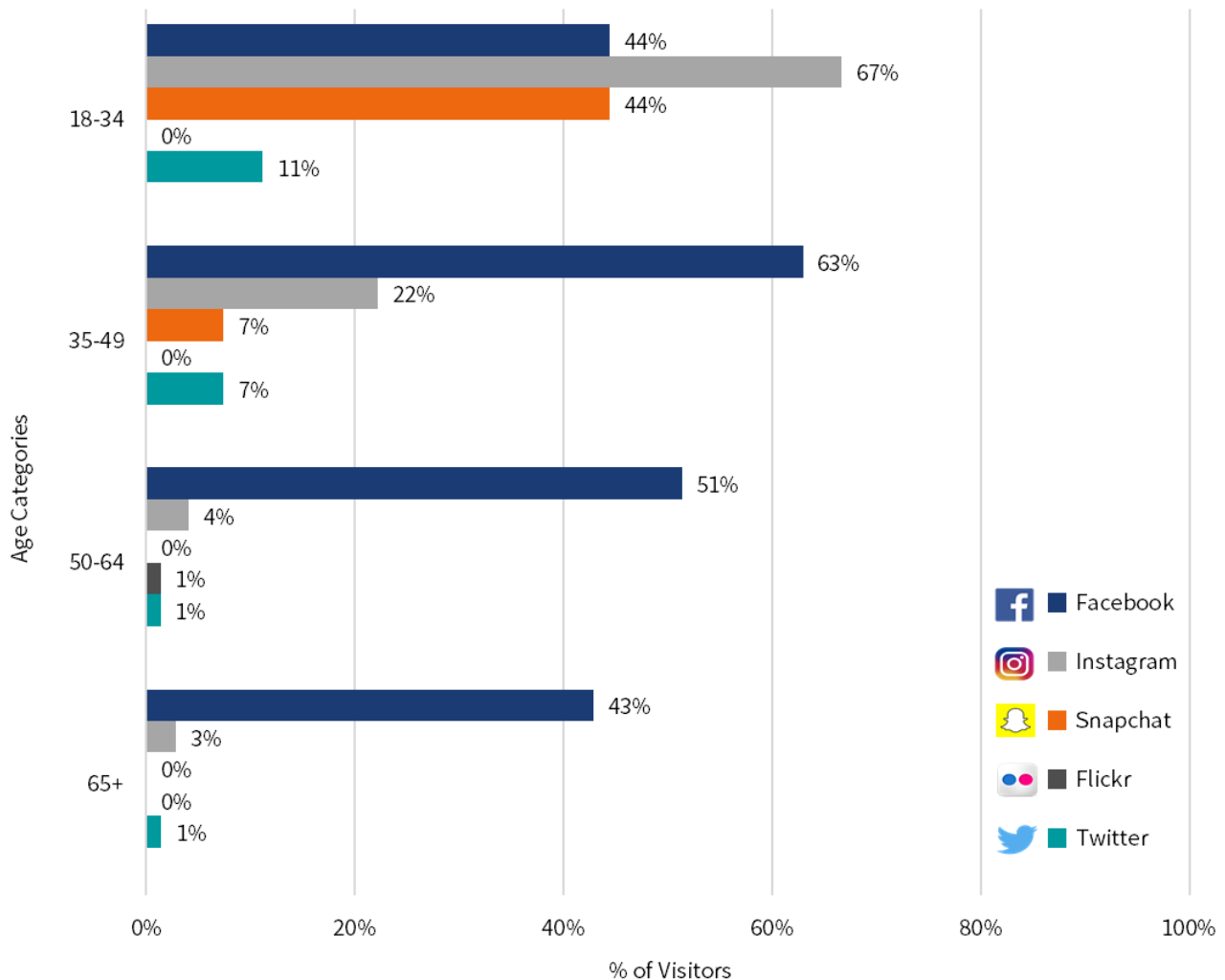


Fig. 13: Percent of visitors by age group who used various social media platforms to share their experience on this refuge with others.

Participation in Recreational Activities

Some research shows that rates of participation in outdoor recreation activities have increased (Outdoor Foundation, 2018), while other studies have indicated declines in participation in heritage activities such as hunting (U.S. Fish & Wildlife Service, 2016a). In light of these trends it is important to understand recreation participation on refuges to create quality visitor experiences and foster personal and emotional connections to the refuge and its resources (U.S. Fish & Wildlife Service, 2011). Understanding what people do while visiting refuges can also aid in developing programs that facilitate meaningful interactions between visitors and refuge professionals. Finally, such information can help to ensure impacts to resources and conflicts among visitor groups are minimized.

Participation in recreational activities at this wildlife refuge can be characterized as follows:

- The top three activities in which visitors participated during the past 12 months were wildlife observation (95%), bird watching (82%), and auto tour route/driving (68%) (Fig. 14).
- The top three activities noted as their primary activity on the day visitors were contacted to participate in the survey were wildlife observation (37%), bird watching (33%), and photography (14%) (Fig. 14).
- Approximately 26% of visitors went to the visitor center, and they most often used the facilities (81%), viewed the exhibits (58%), and asked for information (49%) (Fig. 15).



Photo credit: U.S. Fish & Wildlife Service.

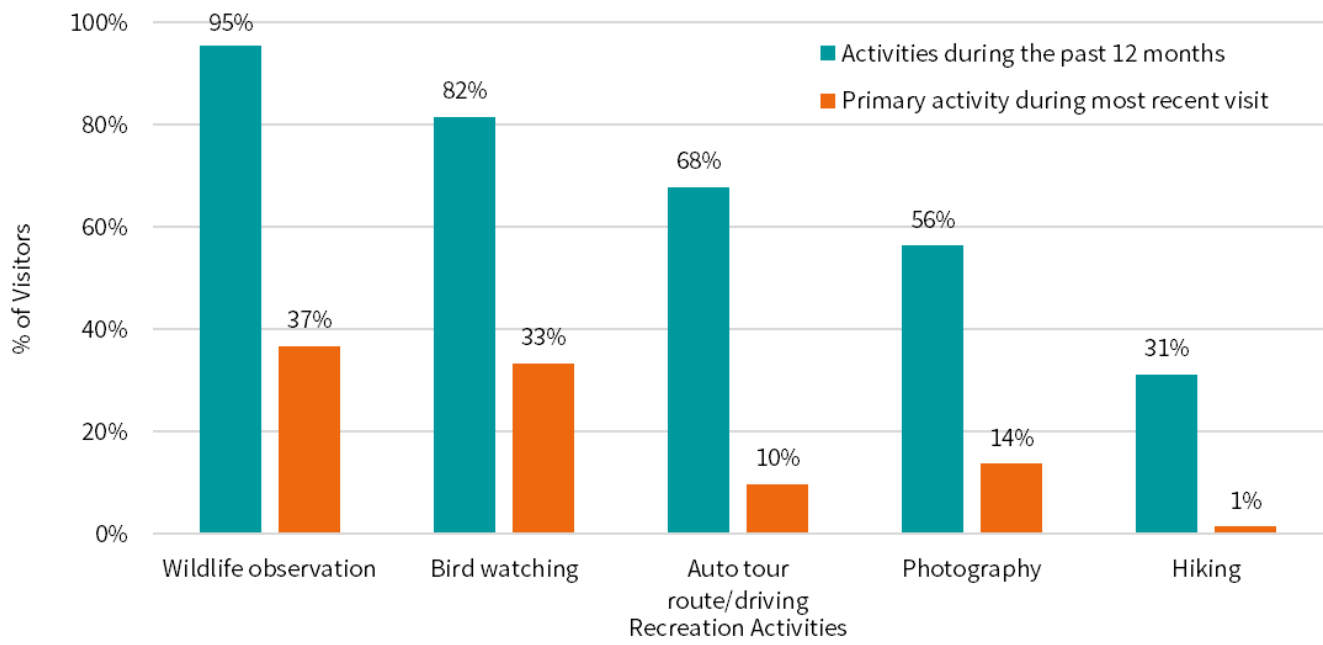


Fig. 14: Recreational activities visitors participated in during the past 12 months and their primary activity during their most recent visit to this refuge.

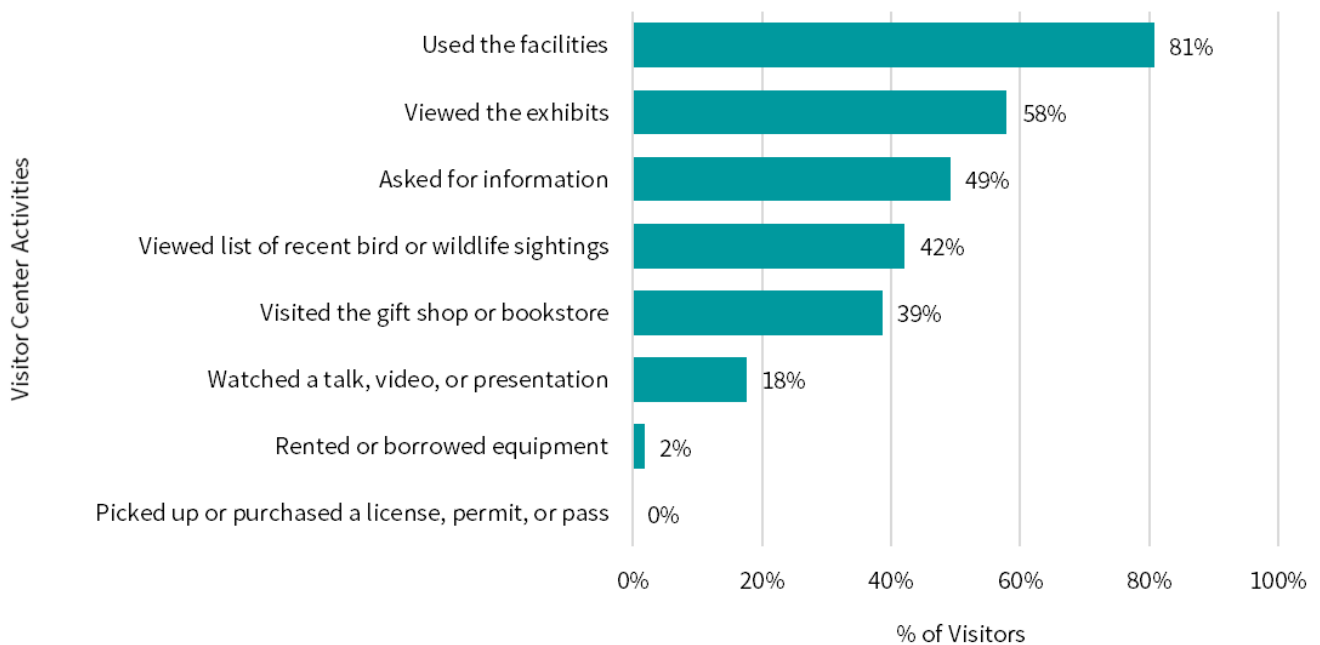


Fig. 15: Reasons visitors used the visitor center during their most recent visit to this refuge.

Comfort in Nature/Feeling Safe & Welcome

While many people are repeat visitors to refuges, each year thousands of people experience these lands and waters for the first time. One barrier for some visitors, particularly those living in urban areas or with little past exposure to nature-based recreation, is the perception that being in nature is dangerous or unsafe (U.S. Fish & Wildlife Service, 2014). There may also be negative stigmas associated with outdoor spaces that arise from social contexts (for example, people associating being outdoors with poverty or ‘dirty’ contexts) and historical contexts in which being ‘in the woods’ was dangerous and unsafe (Sexton, Ross-Winslow, Pradines, & Dietsch, 2015).

While ensuring that visitors feel safe and welcome is a foundational standard of the Urban Wildlife Conservation Program (<https://www.fws.gov/urban>), these basic needs apply across the Refuge System.

Before visitors can appreciate the wonders of nature, their basic need for safety and belonging must be met. Thus, an understanding of how visitors perceive safety, belonging, accessibility, and comfort in nature is critical to ensure real threats to safety are minimized, and that individuals from all demographic groups feel as welcome and comfortable in nature as possible.

Visitors to this wildlife refuge shared the following about safety, belonging, and their comfort while being in nature:

- 93% of visitors felt welcome during their refuge visit (Fig. 16).
- 98% of visitors felt safe during their refuge visit (Fig. 16).
- 97% of visitors reported that they feel comfortable being in nature, but 5% do not like being in nature alone (Fig. 17).

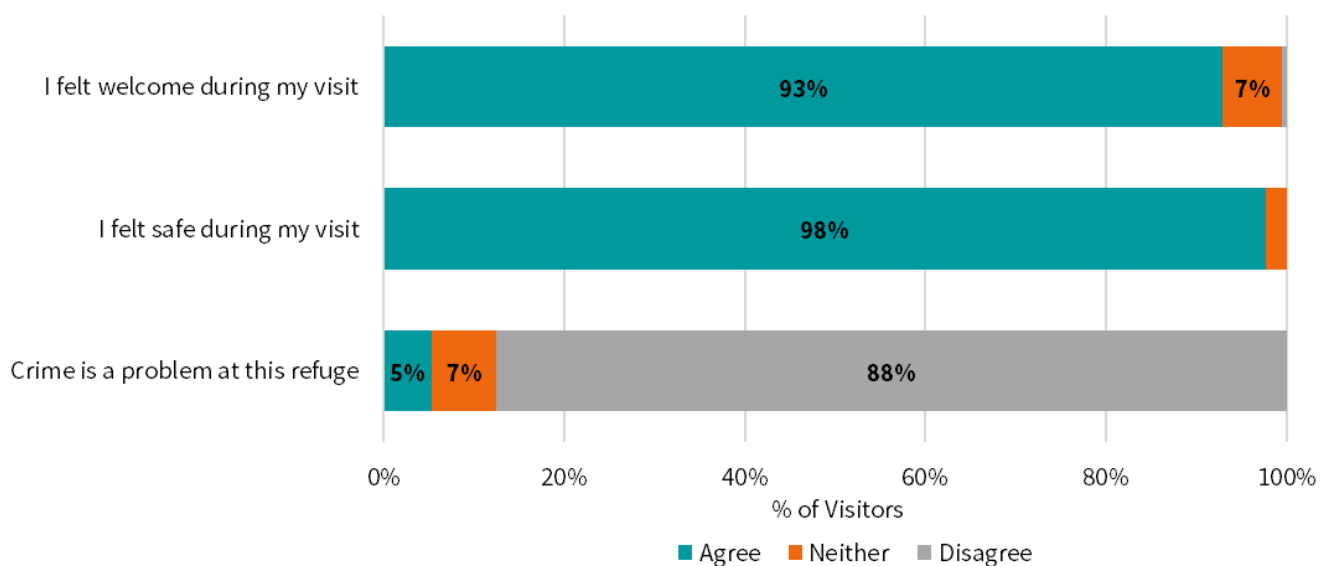


Fig. 16: Visitors' perceptions of safety and feeling welcome at this refuge during their visit.

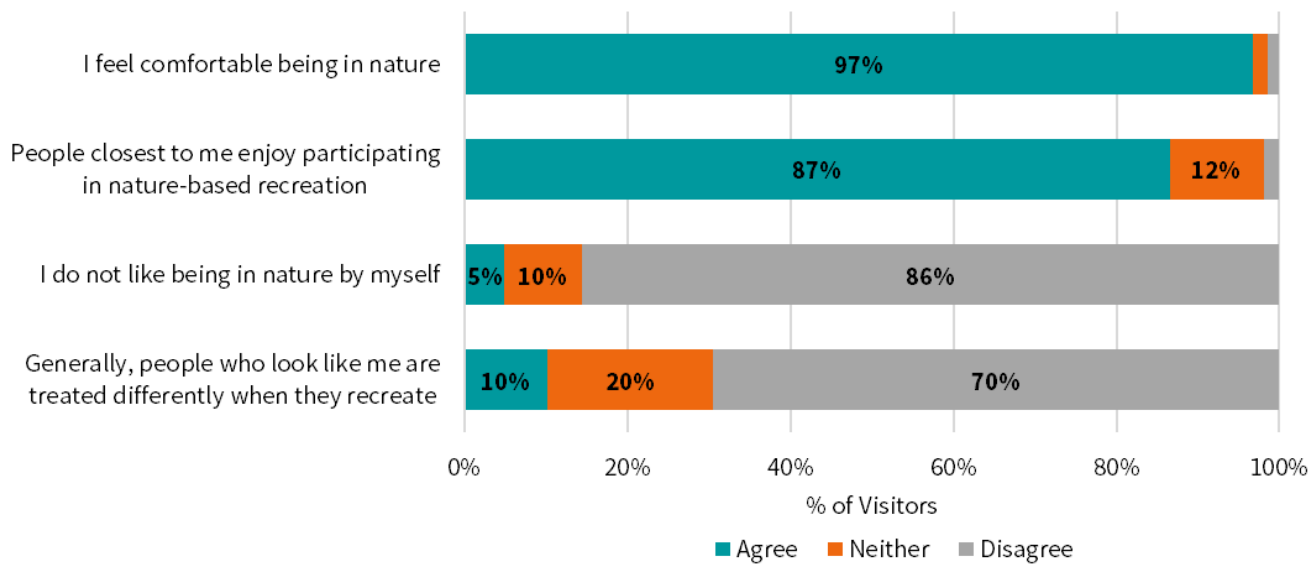


Fig. 17: Visitors’ comfort with being in nature.



Photo credit: U.S. Fish & Wildlife Service.

Satisfaction with Refuge Experiences

OVERALL SATISFACTION

Refuge professionals strive to maintain a high level of customer satisfaction by operating visitor centers; designing, installing, and maintaining accessible trails; constructing viewing blinds; and much more to facilitate quality recreational experiences. A solid understanding of visitors' perceptions of their experiences provides a framework for monitoring and responding to trends across time. Overall satisfaction with this wildlife refuge is summarized as follows:

- 90% of visitors were very or extremely satisfied with the overall experience at this wildlife refuge (Fig. 18).
- 88% of visitors were very or extremely satisfied with this wildlife refuge's job of conserving fish, wildlife, and their habitats (Fig. 18).

CUSTOMER SERVICE

Refuge professionals regularly interact with visitors and maintain facilities to ensure high quality experiences. From greeting visitors, to keeping bathrooms clean, to clearly stating regulations, providing quality customer service is important to ensuring overall satisfaction.

Satisfaction with customer service was highest among visitors for the following (Fig. 19):

- restrooms (87%),
- refuge hours/days of operation (84%), and
- visitor center (80%).

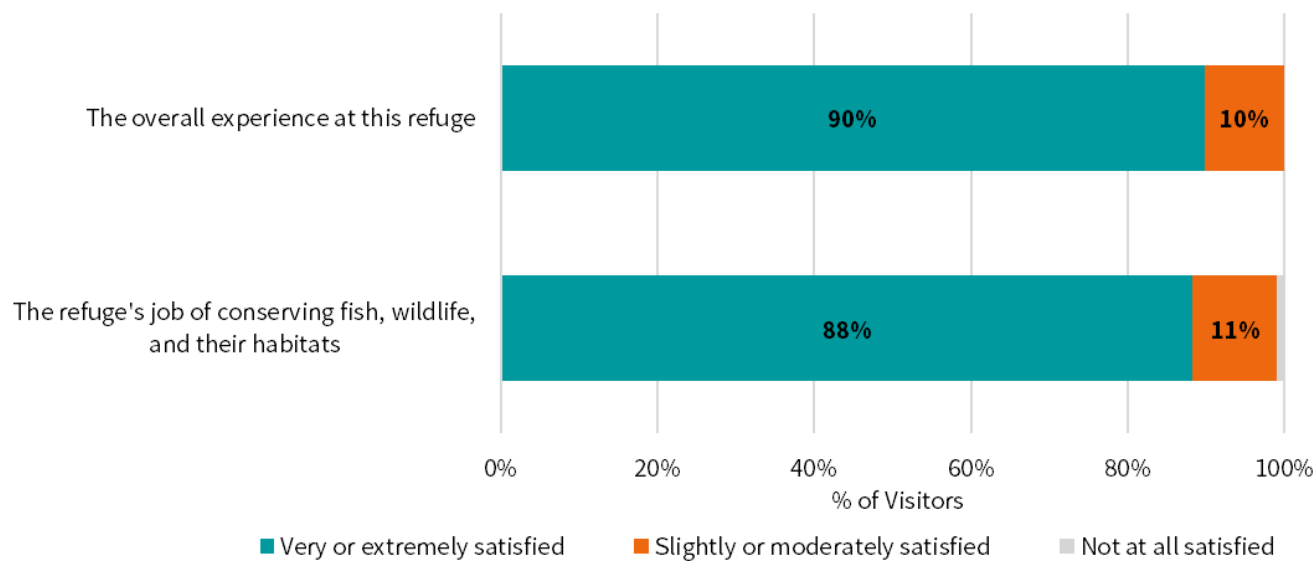


Fig. 18: Visitors' satisfaction with their experience at this refuge and with this refuge's job of conserving fish, wildlife, and habitats.

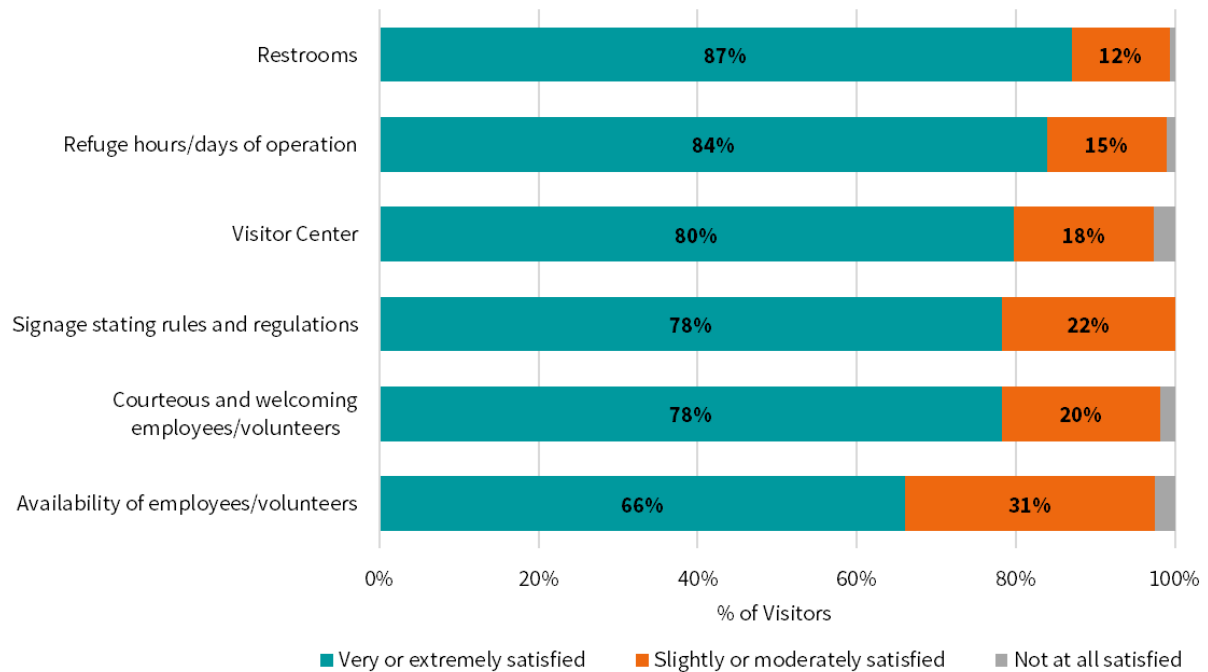


Fig. 19: Visitors' satisfaction with customer service and amenities at this refuge.

RECREATIONAL OPPORTUNITIES

Outdoor recreation on wildlife refuges is a fundamental part of a visit. As American's values toward wildlife and their relationship with nature continue to shift (Kellert et al., 2017; Manfredo et al., 2018), public desires for recreational experiences on public lands are also likely to shift. In addition, researchers and land management professionals recognize the need to connect the next generation to nature and wildlife (Charles & Louv, 2009; Larson et al., 2011). A solid understanding of visitors' perceptions of their experiences provides a

framework for monitoring and responding to these recreation trends across time.

Satisfaction with recreation opportunities among visitors who had participated in the activity during the last 12 months was highest for the following (Fig. 20):

- bird watching (88%),
- photography (88%), and
- wildlife observation (78%).

"We love Loess Bluffs National Wildlife Refuge. We visit there at least once a year. Each experience is unique and we always see something new or different each trip."
 - Visitor to Loess Bluffs National Wildlife Refuge

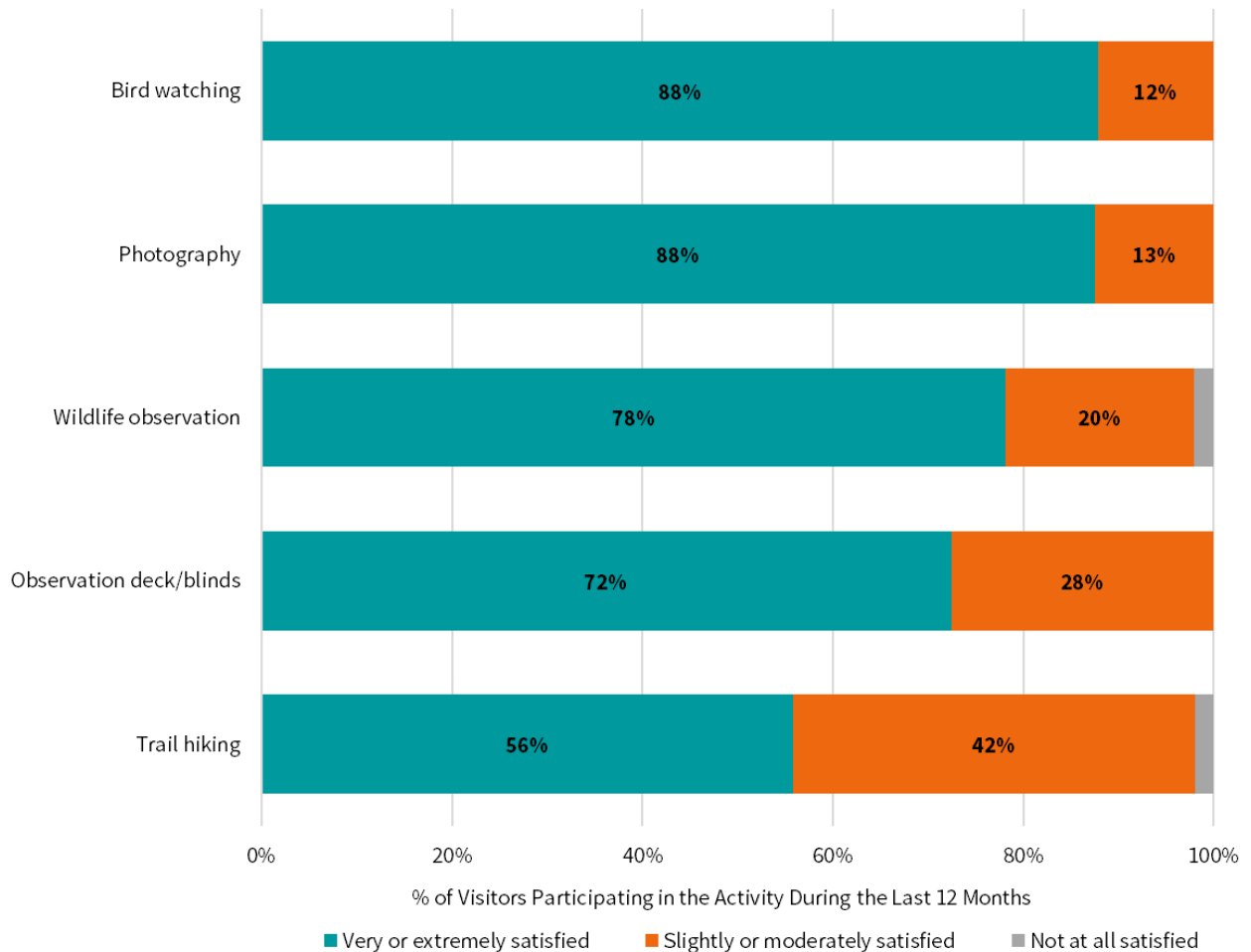


Fig. 20: Visitors' satisfaction with recreational opportunities at this refuge. Only visitors (10 or more) who participated in activities related to each opportunity at this refuge during the last 12 months were included.

TRANSPORTATION SAFETY & ACCESS

Transportation networks connect local communities to refuges and are critical to visitors' experiences there. Visitors access refuges by plane, car, train, boat, bike, and foot. The Service works to ensure that the roads, trails, and parking areas are welcoming and safe for visitors of all abilities. A goal of the Service's National Long-Range Transportation Plan is to enhance experiences on wildlife refuges and fish hatcheries through improvement to the transportation network (U.S. Fish & Wildlife Service, 2016b). How visitors perceive different transportation features can be used to prioritize access and transportation improvements.

Visitors were satisfied with transportation safety and access at this wildlife refuge as follows (Fig. 21):

- Getting to this wildlife refuge, visitors were most satisfied with safety of refuge road entrances and exits (90%).
- Getting around this wildlife refuge, visitors were most satisfied with safety of driving conditions on refuge roads (85%), condition of parking areas (83%), and condition of bridges on roadways (83%).
- Accessing recreation on this wildlife refuge, visitors were most satisfied with condition of trails and boardwalks (79%), safety of roads or trails for nonmotorized use (77%), and directional signs on trails (75%).

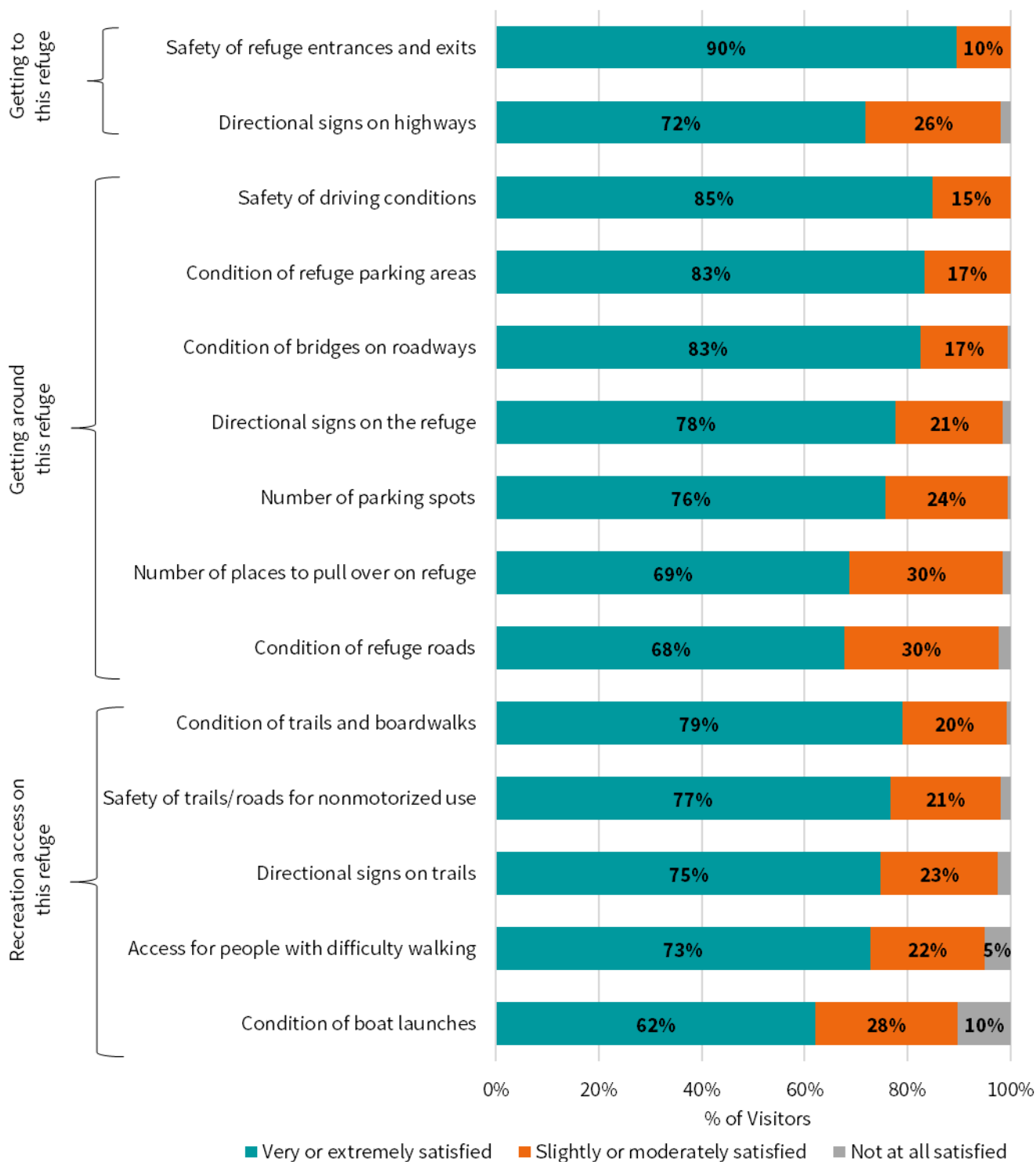


Fig. 21: Visitors' satisfaction with how the refuge is managing transportation-related features.

Economic Benefits to Local Communities & Visitors

The value of any commodity is comprised of two elements: 1) the amount paid and 2) the additional benefit derived above and beyond what is paid. The first element equates to direct expenditures. Visitors to wildlife refuges pay for a variety of things, including nearby lodging, gas, food, and other purchases from local businesses. This spending has a significant positive contribution to local economies. The *Banking on Nature* report (Caudill & Carver, 2017) highlights how nearly 54 million visits to wildlife refuges during 2017 generated \$3.2 billion of economic output in local communities and supported over 41,000 jobs. The report further indicates that recreational spending on wildlife refuges generated \$229 million in tax revenue at the local, county, and state levels.

Determining benefits derived above and beyond what is paid is commonly estimated by “willingness to pay” for an experience. Studies show people are often willing to pay more for a recreational experience than what they actually spent (Neher, Duffield, & Patterson, 2011; Rosenberger & Loomis, 2001). For example, a visitor may have spent \$500 on lodging, food, and gasoline to make the trip possible, while also indicating that they would be willing to pay an additional \$50 to visit this wildlife refuge if total trip costs were to increase.

Results for local visitors (those living ≤ 50 miles from this wildlife refuge; 45%) are as follows:

- On average, local visitors accounted for 29% of expenditures.
- Top trip expenditures by locals were for retail and food/drink (Fig. 22).
- The average amount paid by locals to visit this wildlife refuge was \$36 per person per day (Fig. 22).
- Local visitors were personally willing to pay an additional \$36 per day on average to visit this wildlife refuge (Fig. 23).

Results for nonlocal visitors (those living >50 miles from this wildlife refuge; 55%) are as follows:

- On average, nonlocals accounted for 71% of expenditures.
- Top trip expenditures by nonlocals were for food/drink and transportation (Fig. 22).
- The average amount paid by nonlocals to visit this wildlife refuge was \$37 per person per day (Fig. 22).
- Nonlocal visitors were personally willing to pay an additional \$76 per day on average to visit this wildlife refuge (Fig. 23).
- Nonlocal visitors spent an average of 3 days in the local community during this visit.





Fig. 22: Individual daily expenditures in the local community for local, nonlocal, and all visitors. Expenditures were reported by respondents on a per group basis; the total expenditures were divided by the number of people in the group who shared trip expenditures and the number of days spent in the local community. The number of people sharing trip expenditures was often smaller than the total group size.

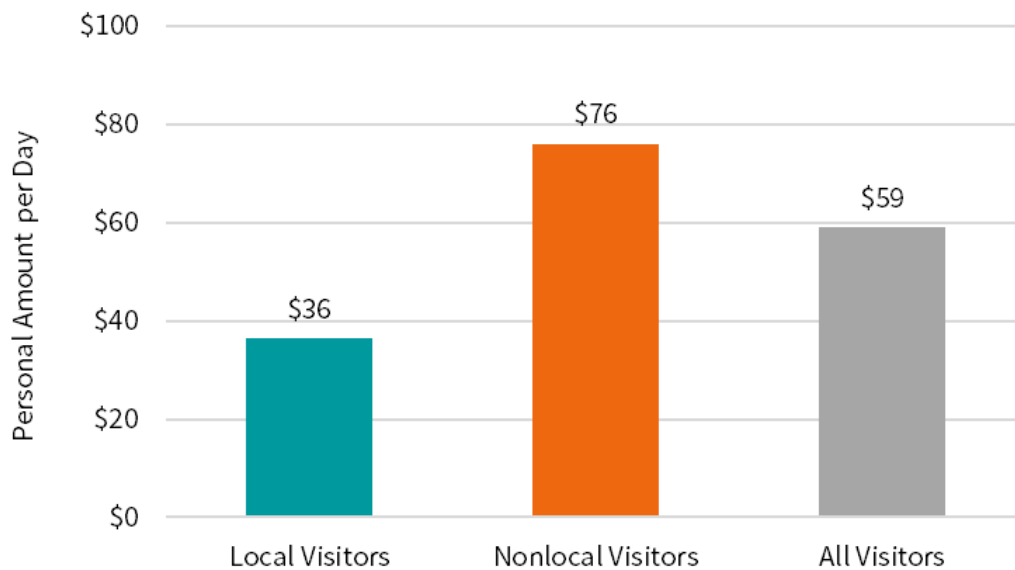


Fig. 23: Total personal willingness to pay per day above and beyond most recent trip expenses if costs were to increase for local, nonlocal, and all visitors. Due to the fixed-response question format, estimates of willingness to pay may underestimate the amount visitors would actually pay. Responses were divided by the number of days spent at the refuge.

Encouraging Return Visits & Future Recreation Participation

Public land managers strive to maximize benefits for visitors while achieving and maintaining desired resource conditions. This complex task requires that managers accurately estimate visitor numbers, as well as where visitors go, what they do, their impacts on resources, how they perceive their experiences, and their desires for future visits. Gaining a sense of what would encourage visitors to return and how management activities affect their likelihood of returning can lead to improved visitor use and resource management (U.S. Fish & Wildlife Service, 2014).

PROGRAMS AND OTHER OFFERINGS

Programming and other offerings that are compatible with the purpose of a refuge and the Refuge System mission can encourage people to continue visiting the refuge. Additionally, changes to regulations and access for improving resource availability may increase or decrease future participation, or have little effect at all.

In the future, changes in programming, offerings, or regulations would have an effect on visitation to this wildlife refuge as follows:

- Programs most likely to encourage visitors to return to this wildlife refuge included those focused on engaging families and multiple generations (51%), skill-building (47%), and supporting people with accessibility concerns (43%) (Fig. 24).
- The top two factors likely to increase visitors' future participation in their primary recreation activity were more infrastructure (32%) and recreation equipment available for rent (14%) (Fig. 25).
- The top two factors likely to decrease visitors' future participation in their primary recreation activity were less regulations on hunting (31%) and less regulations on fishing (21%) (Fig. 25).

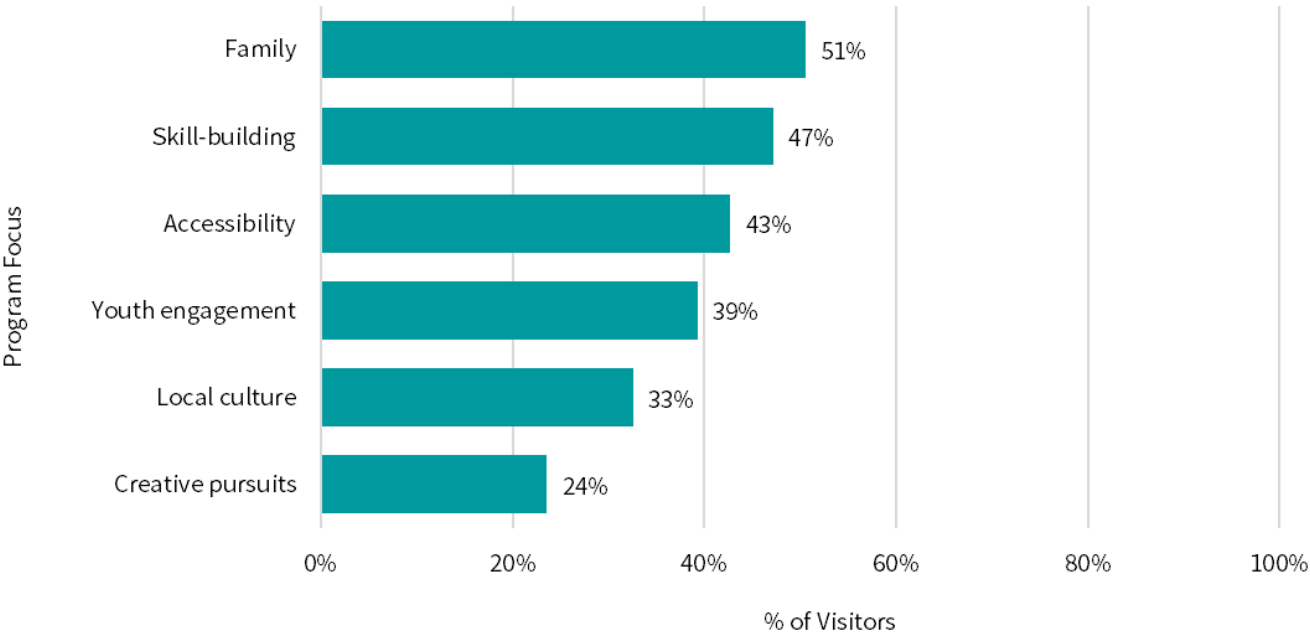


Fig. 24: Types of programs that would encourage visitors to return to this refuge.

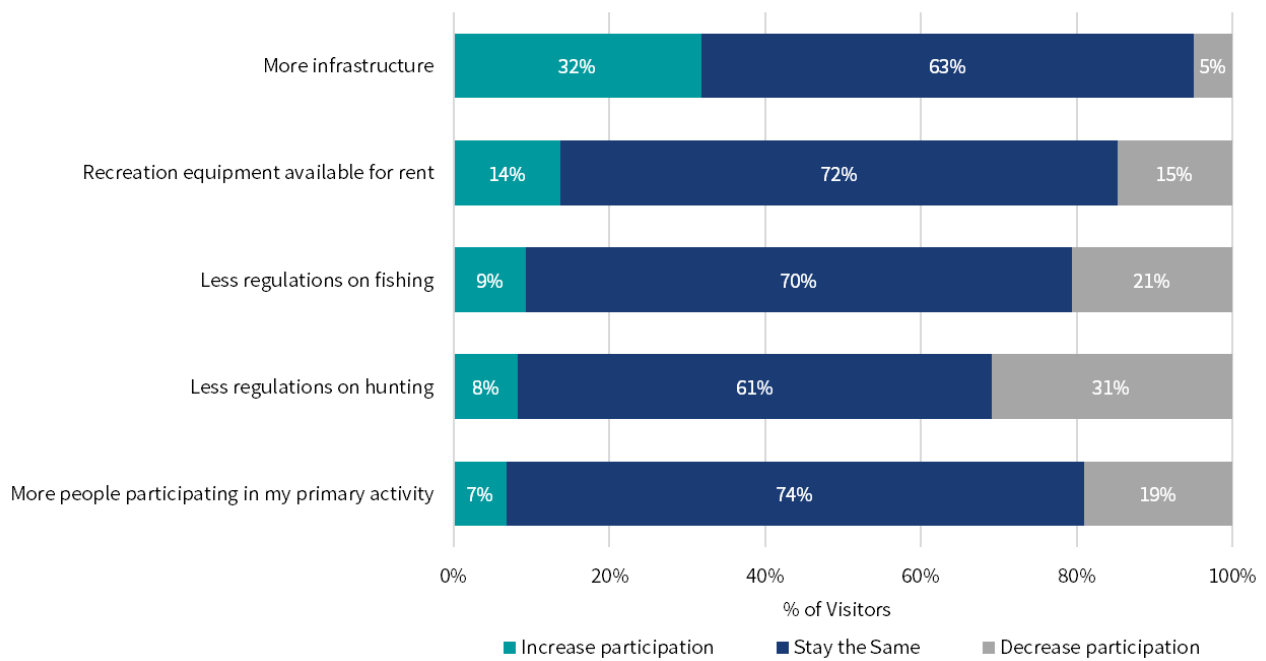


Fig. 25: Changes in visitors’ participation in their primary activity if the listed recreation factors were to change.

ALTERNATIVE TRANSPORTATION

Understanding visitor demand for alternative transportation options is a goal of the Service’s National Long-Range Transportation Plan (U.S. Fish & Wildlife Service, 2016b). Alternative transportation options can be valuable in realizing refuge goals to conserve natural resources, reduce visitors’ carbon footprint (Volpe Center, 2010), and improve visitor experiences. Even though demand may be relatively small, any use of alternative transportation that is feasible at a wildlife refuge can help to meet goals.

The top future alternative transportation options supported by visitors at this wildlife refuge included (Fig. 26):

- bus/tram that provides a guided tour (20%),
- a bike-share program (11%), and
- pedestrian paths (9%).

ECOSYSTEM SERVICES

Natural processes associated with wildlife refuges can provide benefits to people, including provisioning services such as food and water; regulating services such as flood

and disease control; cultural services such as spiritual, recreational, and educational benefits; and supporting services such as nutrient cycling (Millennium Ecosystem Assessment, 2005). Understanding how changes in natural resources and related processes may impact future visitation and participation in certain recreation activities can improve resource and visitor management, as well as inform communication efforts with stakeholders and policy-makers (Patton, Bergstrom, Covich, & Moore, 2012).

In the future, changes to resources would affect visitation to this refuge as follows (Fig. 27):

- The top two resource changes likely to increase visitors’ future participation in their primary recreation activity were an improvement in the quality of wetlands (62%) and a greater diversity of species (59%).
- The top two resource changes likely to decrease visitors’ future participation in their primary recreation activity were less water available for recreation (41%) and more acreage open to hunting and fishing (31%).

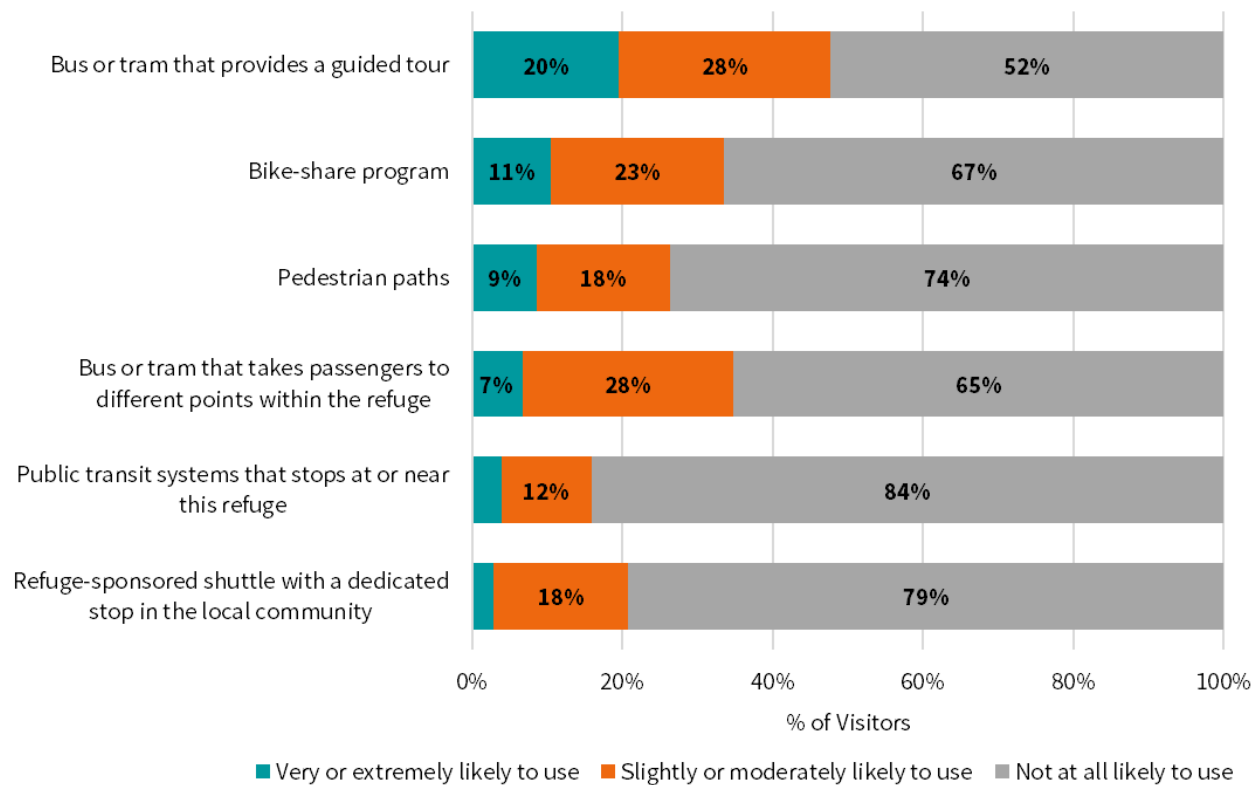


Fig. 26: Visitors' likelihood of using alternative transportation options if offered at this refuge.

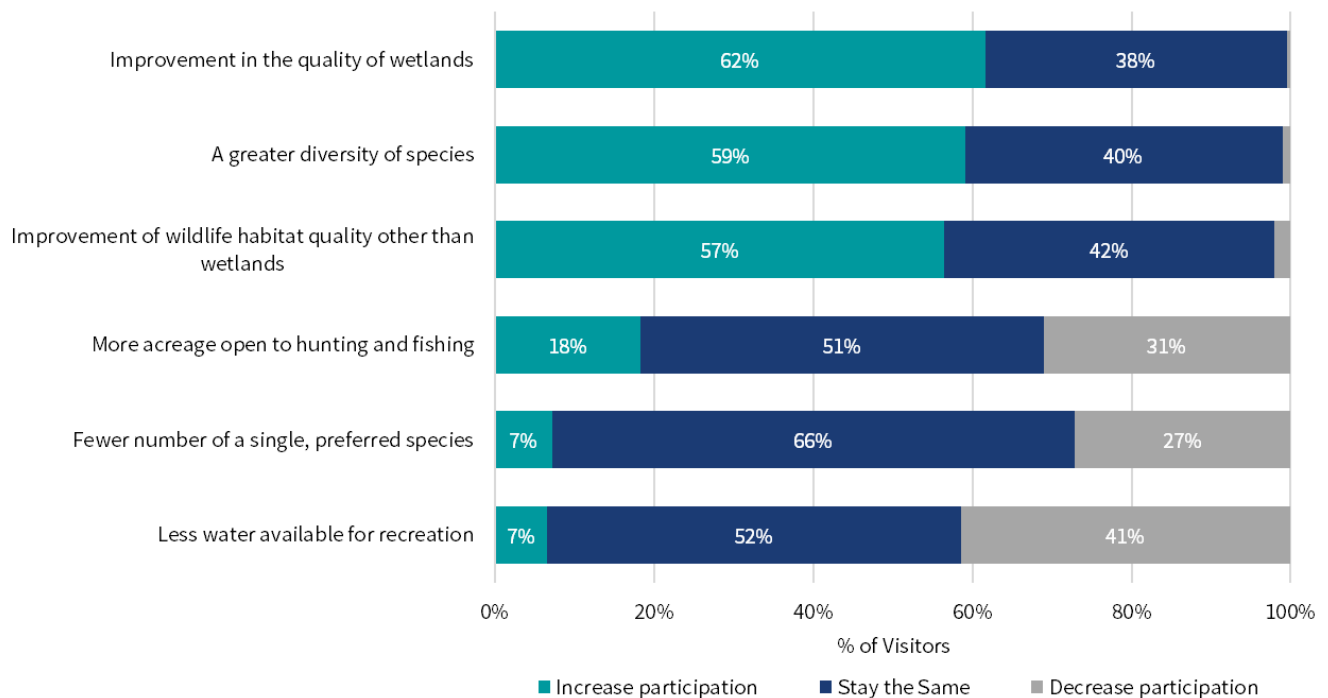


Fig. 27: Changes in visitors' participation in their primary activity if the listed resources were to change.

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Loess Bluffs National Wildlife Refuge during 2018. They are intended to inform refuge planning, including the management of natural resources, recreation, and the design and delivery of programs for visitors. These results offer a baseline that can be used to monitor and evaluate efforts over time. Refuge professionals who understand

visitor demographics, trip characteristics, and desires for future conditions can make informed decisions for proactive visitor management and resource protection. Integrating this social science with biophysical science ensures that management decisions are consistent with the Refuge System mission while fostering a continued public interest in and connection with these special places we call national wildlife refuges.



Photo credit: U.S. Fish & Wildlife Service.

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Appendix A: Survey Methodology

The National Wildlife Refuge Visitor Survey (NVS) team consisted of staff from The Ohio State University (OSU), U.S. Fish & Wildlife Service (Service), and American Conservation Experience (ACE) who collectively developed the following NVS methodology. Staff from OSU and the Service designed the survey instrument with multiple reviewers within the Refuge System providing feedback about content and wording. The logistical coordinator and interns from ACE conducted sampling on refuges. OSU staff coordinated survey mailings, analyzed data, and in cooperation with Service staff, designed the report template and created each refuge report.

SAMPLING SCHEDULE

Interns (survey recruiters) sampled on each participating refuge for two 14-day sampling periods between March 2018 and February 2019. Refuge staff identified the sampling periods and locations that best reflected the diversity of use and visitation patterns of the refuge.

The national visitor survey team developed a sampling schedule for each refuge that included eight randomly selected sampling shifts during each 14-day sampling period. Shifts were four-hour time bands stratified across mornings and afternoons/evenings. The NVS team customized the schedule as needed to accommodate the individual refuge sampling locations and specific spatial and temporal patterns of visitation. The target number of contacts was 25 adult visitors (18 years of age or older) per shift for a total of 375 participants contacted per refuge. Shifts were moved, added, or extended to address logistical limitations (for example, bad weather or low visitation).

CONTACTING VISITORS ONSITE

ACE interns received a multi-day training that included role-play exercises on a refuge to

simulate engagement of visitors. Once onsite, the interns contacted visitors following a protocol developed by OSU and Service staff. Interns surveyed across the entire sampling shift and only one visitor per group was asked to participate. If a visitor declined to participate, interns recorded a direct refusal. Visitors willing to participate provided their name, mailing address, language preference (English or Spanish), and answered a few initial questions about their experience that could be used for nonresponse comparisons. Willing visitors were also given a small token incentive (for example, sticker) as a thank you and reminder of their participation.

COMPLETING A SURVEY AT HOME

All visitors that agreed onsite to participate in the survey received a postcard mailed to their address within 10 days. The postcard thanked visitors for agreeing to participate, provided a weblink and unique password, and invited the visitor to complete the survey online. All participants then received the following sequence of correspondence by mail from OSU until a survey was returned and the address removed from the mailing list (as suggested by Dillman et al., 2014):

- 1) A packet consisting of a cover letter, survey, and postage-paid return envelope approximately seven days after the first postcard was mailed.
- 2) A reminder postcard mailed 14 days after the first packet was mailed.
- 3) A final packet consisting of a cover letter, survey, and postage-paid return envelope mailed seven days after the reminder postcard.

All printed correspondence and online material were provided in the language chosen by visitors onsite; however, visitors who went online to complete the survey were able to switch between English and Spanish. The

survey was designed to take no more than 25 minutes to complete, and the average completion time recorded by the online survey software was approximately 20 minutes.

DATA ENTRY & ANALYSIS

The NVS team used Qualtrics survey software to collect survey data online. OSU staff then exported the data for cleaning (for example, treatment of missing data) and analyses. The team entered data from the paper surveys into Microsoft Excel using a standardized survey codebook and data entry procedures. All data from the two sources (paper and online) were merged and analyzed using Statistical Package for the Social Sciences (SPSS, v.25) software.

LIMITATIONS OF RESULTS

The degree to which these results represent overall visitation at a wildlife refuge depends on the number of visitors who completed the survey (sample size), and how well the sample reflects the degree of use at the refuge (Scheaffer et al., 2011). Many respondents completing the survey will produce a smaller margin of error, leading to greater confidence in results, but only to a point. For example, a margin of error of $\pm 5\%$ at a 95% confidence level signifies 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 of the same sample). The margin of error for this survey was calculated with an 80/20

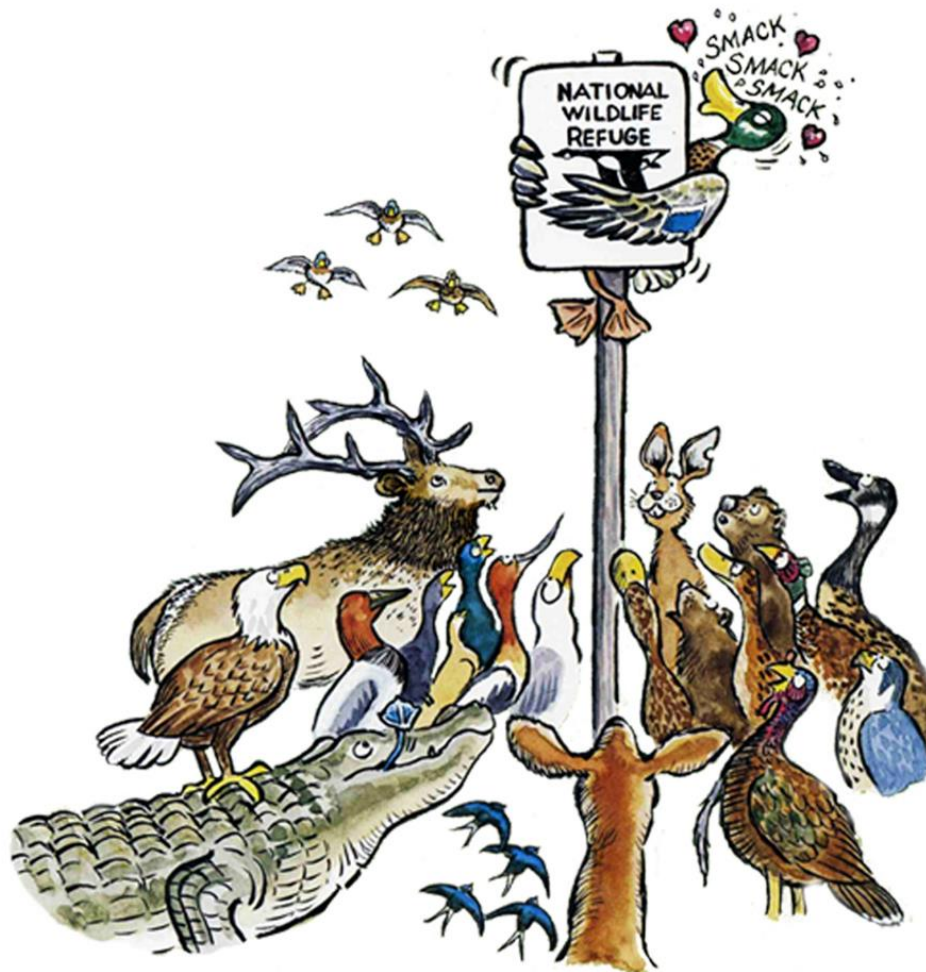
response distribution, meaning if respondents were given a dichotomous choice question, approximately 80% of respondents would select one choice and 20% would select the other (Salant & Dillman, 1994).

While OSU designed the standardized sampling protocol to account for spatial and temporal visitation patterns, the geography and infrastructure of wildlife refuges vary widely. This variation can affect who is ‘captured’ as part of the survey. For example, contacting visitors is much easier if everyone must pass through a single-entry point and much more difficult if a refuge has multiple access points over a large area. Additionally, the two 14-day sampling periods may not have effectively captured all visitor activities throughout the year on some wildlife refuges (for example, visitors who solely engage in ice fishing). As such, results presented in any one of these reports are aimed at representing overall visitation at a wildlife refuge while recognizing that particular visitor groups may vary in their beliefs and activities.

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National Wildlife Refuge Visitor Survey



Front cover of the 2018 National Wildlife Refuge Visitor Survey instrument. Artwork credit: Kent Olson.

PLEASE READ THIS FIRST:

Thank you for visiting a national wildlife refuge and agreeing to participate in this study! We hope that you had an enjoyable experience. The U.S. Fish and Wildlife Service and The Ohio State University are conducting this survey to learn more about refuge visitors and their experiences in order to improve management and enhance visitor opportunities.

Please respond regarding the refuge and the visit for which you were asked to participate in this survey. The cover letter indicates the refuge you visited.

SECTION 1. Your visit to this refuge

1. Including your most recent visit, which activities did you participate in during the past 12 months at this refuge?
(Mark all that apply.)

<input type="checkbox"/> 95%	Wildlife observation	<input type="checkbox"/> 31%	Hiking/Walking	<input type="checkbox"/> 3%	Volunteering
<input type="checkbox"/> 82%	Bird watching	<input type="checkbox"/> 3%	Jogging/Running/Exercising	<input type="checkbox"/> 2%	Environmental education program (classroom visits, labs)
<input type="checkbox"/> 56%	Photography	<input type="checkbox"/> 3%	Bicycling		
<input type="checkbox"/> 2%	Big game hunting	<input type="checkbox"/> 68%	Auto tour route/Driving	<input type="checkbox"/> 3%	Interpretative program (bird walks, staff/volunteer-led talks)
<input type="checkbox"/> 0%	Upland/Small game hunting	<input type="checkbox"/> 0%	Motorized boating		
<input type="checkbox"/> 4%	Waterfowl/Migratory bird hunting	<input type="checkbox"/> 0%	Nonmotorized boating (canoeing, kayaking)	<input type="checkbox"/> 7%	Refuge special event (<i>specify</i>) <u>See Appendix C</u>
<input type="checkbox"/> 2%	Freshwater fishing	<input type="checkbox"/> 0%	Foraging (berries, nuts, other)	<input type="checkbox"/> 0%	Other (<i>specify</i>) <u>See Appendix C</u>
<input type="checkbox"/> 0%	Saltwater fishing	<input type="checkbox"/> 6%	Picnicking		

2. Which of the activities above was the primary purpose of your most recent visit to this refuge?

(Please write **only one activity** here.) See Appendix C

3. Which of the following best describes your most recent visit to this Refuge? (*Mark only one.*)

<input type="checkbox"/> 74%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> 11%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> 15%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

4. How many people were in your personal group, including yourself, on your most recent visit to this refuge?
(Please answer each category.)

2 number of people 18 years and older 0 number of people under 18 years

5. Did you go to a visitor center at this refuge during your most recent visit?

☐ 74% No / Not Applicable

☐ 26% Yes → If yes, what did you do there? (*Mark all that apply.*)

☐ 49% Asked information of employees/volunteers

☐ 42% Looked at list of recent bird/wildlife sightings

☐ 18% Attended a talk/video/presentation

☐ 81% Stopped to use the facilities (for example, got water, used restroom)

☐ 58% Viewed the exhibits

☐ 0% Picked up/purchased a license, permit, or pass

☐ 2% Rented/borrowed equipment (for example, binoculars, fishing rod, snowshoes)

☐ 39% Visited the gift shop or bookstore

☐ 14% Other (*specify*) See Appendix C

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

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

If you spent one day or more at this refuge, enter the number of days: 3 day(s)

7. Do you live in the local area (within 50 miles of this refuge)?

☐ 45% Yes

☐ 55% No → How much time did you spend in **the local area** on this trip?

If you spent less than one day in the local area, enter the number of hours: 3 hour(s)

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

8. Approximately how many hours/minutes (one-way) did you travel from your home to this refuge?

If you travelled less than one hour, enter the number of minutes: 35 minutes

If you travelled more than one hour, round to the nearest hour: 4 hours

9. Including this visit, during which seasons did you visit this refuge in the last 12 months? (*Mark all that apply.*)

☐ 44% Spring
(March-May)

☐ 31% Summer
(June-August)

☐ 69% Fall
(September-November)

☐ 68% Winter
(December-February)

10. In the last 12 months, how many times have you visited...

...this refuge (including this visit)? 9 number of visits

...other national wildlife refuges? 2 number of visits

...other public lands (for example, national or state parks) to participate in the same primary activity as this visit? 5 number of visits

11. Which, if any, of the following social media outlets did you use to share your refuge experience with other people? (*Mark all that apply.*)

<input type="checkbox"/> 51%	Facebook	<input type="checkbox"/> 3%	Snapchat	<input type="checkbox"/> 1%	Personal blog (for example, Tumblr, Wordpress)
<input type="checkbox"/> 1%	Flickr	<input type="checkbox"/> 3%	Twitter	<input type="checkbox"/> 1%	Travel-related website (for example, Trip Advisor)
<input type="checkbox"/> 9%	Instagram	<input type="checkbox"/> 0%	Vimeo	<input type="checkbox"/> 2%	Other (<i>specify</i>) <u>See Appendix C</u>
<input type="checkbox"/> 0%	Pinterest	<input type="checkbox"/> 1%	YouTube	<input type="checkbox"/> 45%	I do not use social media

SECTION 2. Information about this refuge and its resources

1. How helpful was each of the following sources to get information about this refuge and its resources? (*Circle one number for each source, or mark the box if you did **not** use a source.*)

Information source	For those who used a source, the % who found it to be...					Did not use
	Not at all helpful	Slightly helpful	Moderately helpful	Very helpful	Extremely helpful	
Personal knowledge from previous visit(s)	<input type="checkbox"/> 2%	<input type="checkbox"/> 1%	<input type="checkbox"/> 8%	<input type="checkbox"/> 37%	<input type="checkbox"/> 52%	<input type="checkbox"/> 16%
Word of mouth (for example, a friend or relative)	<input type="checkbox"/> 5%	<input type="checkbox"/> 10%	<input type="checkbox"/> 22%	<input type="checkbox"/> 38%	<input type="checkbox"/> 26%	<input type="checkbox"/> 38%
People in the local community near the refuge	<input type="checkbox"/> 23%	<input type="checkbox"/> 14%	<input type="checkbox"/> 19%	<input type="checkbox"/> 27%	<input type="checkbox"/> 18%	<input type="checkbox"/> 62%
Refuge employees or volunteers	<input type="checkbox"/> 8%	<input type="checkbox"/> 11%	<input type="checkbox"/> 17%	<input type="checkbox"/> 35%	<input type="checkbox"/> 29%	<input type="checkbox"/> 44%
Printed map or atlas	<input type="checkbox"/> 16%	<input type="checkbox"/> 12%	<input type="checkbox"/> 14%	<input type="checkbox"/> 36%	<input type="checkbox"/> 22%	<input type="checkbox"/> 57%
Web-based map (for example, Google Maps, Waze)	<input type="checkbox"/> 17%	<input type="checkbox"/> 10%	<input type="checkbox"/> 19%	<input type="checkbox"/> 26%	<input type="checkbox"/> 28%	<input type="checkbox"/> 58%
Refuge website	<input type="checkbox"/> 6%	<input type="checkbox"/> 7%	<input type="checkbox"/> 18%	<input type="checkbox"/> 30%	<input type="checkbox"/> 39%	<input type="checkbox"/> 45%
Travel website (for example, TripAdvisor)	<input type="checkbox"/> 44%	<input type="checkbox"/> 20%	<input type="checkbox"/> 12%	<input type="checkbox"/> 12%	<input type="checkbox"/> 12%	<input type="checkbox"/> 88%
Other website (<i>specify</i>) <u>See Appendix C</u>	<input type="checkbox"/> 56%	<input type="checkbox"/> 11%	<input type="checkbox"/> 0%	<input type="checkbox"/> 22%	<input type="checkbox"/> 11%	<input type="checkbox"/> 95%
Social media (for example, Facebook, Instagram)	<input type="checkbox"/> 18%	<input type="checkbox"/> 5%	<input type="checkbox"/> 9%	<input type="checkbox"/> 35%	<input type="checkbox"/> 33%	<input type="checkbox"/> 68%
Recreation club or organization	<input type="checkbox"/> 48%	<input type="checkbox"/> 4%	<input type="checkbox"/> 22%	<input type="checkbox"/> 15%	<input type="checkbox"/> 11%	<input type="checkbox"/> 87%
Refuge printed information (for example, brochure)	<input type="checkbox"/> 13%	<input type="checkbox"/> 6%	<input type="checkbox"/> 22%	<input type="checkbox"/> 30%	<input type="checkbox"/> 29%	<input type="checkbox"/> 60%
Kiosks/displays/exhibits at the refuge	<input type="checkbox"/> 13%	<input type="checkbox"/> 9%	<input type="checkbox"/> 16%	<input type="checkbox"/> 40%	<input type="checkbox"/> 23%	<input type="checkbox"/> 58%
Travel guidebook or other book	<input type="checkbox"/> 44%	<input type="checkbox"/> 4%	<input type="checkbox"/> 28%	<input type="checkbox"/> 4%	<input type="checkbox"/> 20%	<input type="checkbox"/> 88%
Tourist information or welcome center	<input type="checkbox"/> 17%	<input type="checkbox"/> 6%	<input type="checkbox"/> 21%	<input type="checkbox"/> 31%	<input type="checkbox"/> 25%	<input type="checkbox"/> 75%
Other source (<i>specify</i>) <u>See Appendix C</u>	<input type="checkbox"/> 31%	<input type="checkbox"/> 0%	<input type="checkbox"/> 6%	<input type="checkbox"/> 25%	<input type="checkbox"/> 38%	<input type="checkbox"/> 88%

SECTION 3. Transportation and access at this refuge

1. First rate how important each of the following transportation-related features 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 have a specific feature or you did not experience it during this visit, 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>					Transportation-Related Features	Satisfaction <i>Circle one for each item.</i>					
Not at all Important	Slightly Important	Moderately important	Very Important	Extremely Important		Not at all Satisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied	Extremely Satisfied	Not Applicable
4%	8%	40%	33%	15%	Surface conditions of refuge roads	2%	6%	24%	47%	21%	NA
8%	11%	37%	31%	13%	Surface conditions of parking areas	0%	2%	15%	49%	34%	NA
3%	9%	28%	40%	21%	Condition of bridges on roadways	1%	2%	16%	53%	30%	NA
5%	7%	32%	39%	16%	Condition of trails and boardwalks	1%	3%	17%	53%	26%	NA
66%	9%	10%	9%	6%	Condition of boat launches	10%	3%	24%	48%	14%	NA
8%	19%	34%	27%	12%	Number of places for parking	1%	5%	19%	45%	31%	NA
2%	3%	25%	44%	25%	Number of places to pull over on refuge roads	1%	7%	23%	37%	32%	NA
2%	5%	23%	42%	29%	Safety of driving conditions on refuge roads	0%	1%	14%	51%	33%	NA
2%	5%	22%	43%	29%	Safety of refuge road entrances/exits	0%	0%	10%	56%	33%	NA
18%	8%	21%	35%	18%	Safety of roads/trails for nonmotorized users (for example, bicyclists and hikers)	2%	1%	21%	49%	28%	NA
6%	9%	27%	34%	25%	Signs on highways directing you to this refuge	2%	3%	23%	39%	33%	NA
5%	5%	31%	39%	22%	Signs directing you around refuge roads	2%	3%	18%	49%	29%	NA
14%	5%	23%	36%	21%	Signs directing you on trails	3%	3%	19%	50%	24%	NA
22%	7%	17%	27%	27%	Access for people with physical disabilities or who have difficulty walking	5%	8%	14%	48%	24%	NA

2. If you have any comments about transportation-related features at this refuge, please write them here.

See Appendix C

3. What modes of transportation did you use to travel from the local area to this refuge and within this refuge during your most recent trip? (*Mark all that apply.*)

Transportation modes used to travel...	...from the local area to this refuge	...within the boundaries of this refuge
Private/rental vehicle without a trailer	92%	78%
Private/rental vehicle with a trailer (for boat, camper, or other)	3%	0%
Recreational vehicle (RV)	1%	1%
Refuge shuttle bus/tram	0%	0%
Tour bus/van	0%	0%
Public transportation	0%	0%
Motorcycle	0%	0%
Bicycle	0%	1%
Foot (for example, walking/hiking)	5%	19%
Boat	0%	0%
Other (<i>specify</i>): <u>See Appendix C</u>	1%	1%
Other (<i>specify</i>): <u>See Appendix C</u>	0%	0%

4. Please tell us how likely you would be to use each transportation option **at this refuge** if it were available in the future. Not all options are currently available at every refuge. (*Circle one number for each option.*)

Transportation options	Not at all Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely
Bus or tram that takes passengers to different points within refuge boundaries (such as the Visitor Center)	65%	12%	16%	5%	1%
Bus or tram that provides a guided tour of the refuge with information about this refuge and its resources	52%	13%	15%	12%	7%
Refuge-sponsored shuttle with a dedicated stop in the local community for picking up people at set times	79%	10%	8%	2%	1%
Public transit system that stops at or near this refuge	84%	7%	5%	3%	1%
Bike-share program that offers bicycles for rent on or near this refuge	67%	11%	12%	6%	4%
Pedestrian paths for access to this refuge from the local community	74%	8%	10%	4%	5%

SECTION 4. Your expenses related to your refuge visit

1. Record the amount of money that you and other members of your group spent in the local 50-mile area during your most recent visit to this refuge. Your group would include you and those with whom you shared expenses (for example, family members, traveling companions). *Enter the amount spent or enter 0 (zero) if you did not spend any money in a particular category.*

Categories	Amount spent in the local area/communities & at this refuge (within 50 miles of this refuge)
Hotel, bed & breakfast, cabin, etc.	
Camping fees (for example, tent, RV)	
Restaurants and bars	
Groceries	
Gasoline and oil (for private vehicles, boats, RVs, or other motors)	
Local transportation (for example, public transit, rental car)	See report for summary of visitor expenditures
Guides and tour fees	
Equipment rental (for example, bicycle, canoe, kayak)	
Sporting goods (for example, bait, binoculars)	
Souvenirs/clothing and other retail	
Other (specify) <u>See Appendix C</u>	

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

2 number of people sharing expenses

3. As you know, costs of travel such as gasoline, hotels, and public transportation often increase. If your total trip costs were to increase, what is the maximum extra amount you would pay and still visit this refuge? (Mark the dollar amount that represents your response.)

<input type="checkbox"/> 8% \$0	<input type="checkbox"/> 24% \$30	<input type="checkbox"/> 15% \$100	<input type="checkbox"/> 2% \$250
<input type="checkbox"/> 3% \$5	<input type="checkbox"/> 8% \$45	<input type="checkbox"/> 1% \$125	<input type="checkbox"/> 1% \$350
<input type="checkbox"/> 7% \$10	<input type="checkbox"/> 9% \$60	<input type="checkbox"/> 2% \$150	<input type="checkbox"/> 1% \$500
<input type="checkbox"/> 14% \$20	<input type="checkbox"/> 3% \$75	<input type="checkbox"/> 1% \$200	<input type="checkbox"/> 2% \$750

SECTION 5. Your experience at this refuge

1. First rate how important each of the following services, facilities, and opportunities 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 item or you did not experience it on this visit, 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 Opportunities	Satisfaction <i>Circle one for each item.</i>					
Not at all Important	Slightly Important	Moderately important	Very Important	Extremely Important		Not at all Satisfied	Slightly Satisfied	Moderately satisfied	Very Satisfied	Extremely Satisfied	Not Applicable
2%	2%	17%	36%	43%	Convenient hours/days of operation for this refuge	1%	1%	14%	43%	40%	NA
16%	18%	36%	19%	10%	Availability of employees or volunteers	3%	3%	29%	42%	25%	NA
15%	13%	22%	28%	23%	Courteous and welcoming employees or volunteers	2%	1%	19%	39%	39%	NA
3%	5%	26%	42%	23%	Signs with rules/regulations for this refuge	0%	3%	19%	49%	29%	NA
8%	6%	31%	33%	22%	Visitor center	3%	1%	16%	40%	40%	NA
4%	2%	16%	38%	41%	Well-maintained restrooms	1%	4%	9%	42%	45%	NA
7%	10%	26%	36%	21%	Recreational structures (decks, blinds, platforms)	0%	5%	23%	42%	30%	NA
2%	1%	11%	33%	52%	Bird-watching opportunities	0%	2%	12%	36%	51%	NA
1%	1%	16%	37%	45%	Opportunities to observe wildlife other than birds	2%	7%	14%	39%	39%	NA
3%	5%	14%	29%	48%	Opportunities to photograph wildlife and scenery	0%	3%	12%	38%	48%	NA
12%	10%	32%	31%	15%	Environmental education opportunities	1%	7%	32%	38%	21%	NA
71%	11%	7%	5%	6%	Hunting opportunities	29%	11%	20%	18%	22%	NA
61%	13%	13%	8%	6%	Fishing opportunities	26%	14%	24%	21%	14%	NA
13%	9%	28%	31%	18%	Trail hiking opportunities	4%	14%	32%	34%	17%	NA
42%	16%	18%	14%	11%	Bicycling opportunities	11%	16%	44%	16%	13%	NA
49%	12%	23%	10%	6%	Water trail opportunities for canoeing or kayaking	40%	13%	24%	9%	13%	NA
41%	18%	23%	14%	5%	Volunteer opportunities	9%	8%	42%	23%	18%	NA
23%	6%	27%	25%	18%	Wilderness experience opportunities	7%	6%	28%	30%	30%	NA

2. If you have comments about the services, facilities, and opportunities at this refuge, please write them here.

See Appendix C

3. How much do you disagree or agree with each statement below? (*Circle one number for each statement.*)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I felt welcome during my visit to this refuge.	0%	0%	7%	47%	46%
I felt safe during my visit to this refuge.	0%	0%	2%	38%	60%
Crime <u>is</u> a problem at this refuge.	63%	25%	7%	1%	4%
I feel comfortable being in nature.	0%	1%	2%	29%	67%
I do <u>not</u> like being in nature by myself.	69%	16%	10%	2%	2%
People closest to me enjoy participating in nature-based recreation.	0%	2%	12%	45%	42%
Generally, people who look like me are treated differently when they participate in nature-based recreation.	55%	15%	20%	6%	4%

4. How satisfied are you with the following? (*Circle one number for each statement.*)

	Not at all Satisfied	Slightly Satisfied	Moderately satisfied	Very Satisfied	Extremely Satisfied
The job this refuge is doing of conserving fish, wildlife, and their habitats.	1%	2%	8%	49%	39%
The quality of the overall experience when visiting this refuge.	0%	3%	7%	44%	46%

SECTION 6. Future visits to this refuge

1. Considering **the primary activity** you participated in during your most recent visit to this refuge, please tell us how the following factors, if they occurred, could affect your future participation in that activity at this refuge. (*Circle one number for each factor.*)

If there was...	My participation in my primary activity would...		
	Decrease	Stay the same	Increase
Less water in lakes, rivers, or streams available for recreation	41%	52%	7%
More acreage open to hunting and fishing	31%	51%	18%
More infrastructure (for example, bathrooms, observation decks)	5%	63%	32%
Recreation equipment available for rent (for example, fishing rods, binoculars, snowshoes)	15%	72%	14%
Less regulations on fishing	21%	70%	9%
Less regulations on hunting	31%	61%	8%
A greater diversity of species	1%	40%	59%
Fewer numbers of a single, preferred species	27%	66%	7%
More people participating in my primary activity	19%	74%	7%
An improvement in the quality of wetlands	1%	38%	62%
An improvement in the quality of wildlife habitat other than wetlands	2%	42%	57%

2. Do you plan to return to this refuge in the next 12 months?

85% Yes 3% No 12% Not sure

3. Which of the following types of programs, if offered, would encourage you to return to this refuge in the future? (*Mark all that apply.*)

55% I do not typically participate in refuge programs

For those that do participate in refuge programs, the % that would be encouraged to return if the following programs were offered:

39% Programs that engage youth	24% Programs that focus on creative pursuits (for example, art, writing, meditation)
51% Programs that focus on family/multiple-generations	43% Programs that support people with accessibility concerns (for example, difficulty walking, in a wheelchair)
47% Programs that teach skills to visitors	7% Other (<i>specify</i>) <u>See Appendix C</u>
33% Programs that highlight unique local culture	

SECTION 7. A little about you

**** Please tell us a little bit about yourself. Your answers to these questions will help us to know more about who visits national wildlife refuges. Answers will not be linked to any individual taking this survey. ****

1. Are you? ☐ 64% Male ☐ 36% Female

2. In what year were you born? 1958 (YYYY)

3. How many years of formal schooling have you had? (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)			
					<input type="checkbox"/> 0%			<input type="checkbox"/> 20%				<input type="checkbox"/> 53%				<input type="checkbox"/> 27%			

4. What race or ethnicity do you consider yourself? (Mark all that apply.)

<input type="checkbox"/> 97% White	<input type="checkbox"/> 2% American Indian or Alaska Native
<input type="checkbox"/> 0% Hispanic, Latino, or Spanish	<input type="checkbox"/> 0% Middle Eastern or North African
<input type="checkbox"/> 0% Black or African American	<input type="checkbox"/> 0% Native Hawaiian or Other Pacific Islander
<input type="checkbox"/> 1% Asian	<input type="checkbox"/> 1% Some other race or ethnicity

5. How many people (including yourself) live in your household? 2 persons

6. What was your approximate household income from all sources (before taxes) last year? (Mark only one.)

<input type="checkbox"/> 1% Less than \$10,000	<input type="checkbox"/> 14% \$35,000 - \$49,999	<input type="checkbox"/> 17% \$100,000 - \$149,999
<input type="checkbox"/> 5% \$10,000 - \$24,999	<input type="checkbox"/> 25% \$50,000 - \$74,999	<input type="checkbox"/> 5% \$150,000 - \$199,999
<input type="checkbox"/> 5% \$25,000 - \$34,999	<input type="checkbox"/> 20% \$75,000 - \$99,999	<input type="checkbox"/> 8% \$200,000 or more

7. Which of the following best describes your current employment situation? (Mark only one.)

<input type="checkbox"/> 35% Employed full-time	<input type="checkbox"/> 0% Unemployed	<input type="checkbox"/> 43% Retired
<input type="checkbox"/> 3% Employed part-time	<input type="checkbox"/> 2% Homemaker/caregiver	<input type="checkbox"/> 4% Disabled/unable to work
<input type="checkbox"/> 11% Self-employed	<input type="checkbox"/> 0% Student	<input type="checkbox"/> 0% Other (specify): <u>See Appendix C</u>

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 C

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 inform 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 # 0596-0236 EXPIRATION DATE 11/30/2020

Appendix C: Open-Ended Survey Responses by Question

Survey Section 1

Question 1: “Including your most recent visit, which activities did you participate in during the past 12 months at this refuge?”

Special Event	Frequency
Butterfly tagging	1
Eagle Days	12
Eagle Days, public lands day	1
Handicap hunt	1

Other Activity	Frequency
Wildflower planting and seed collection	1

Question 2: “Which of the activities above was the primary purpose of your most recent visit to this refuge?”

Primary Activity	Frequency
Auto tour route/driving	20
Bird watching	68
Hiking	3
Hunting	6
Photography	28
Sightseeing	1
Volunteering	2
Wildlife observation	75

Question 3: “Did you go to a visitor center at this refuge during your most recent visit?”; If Yes, “What did you do there?”

Other Visitor Center Activity	Frequency
Keys to refuge gates, pick up sacks and clippers	1
Managed deer hunt	1
Picked up map	1
Snapped a picture of the park map, the center was closed.	1
Though the "open" sign was on the doors were locked. I was hoping to just make it before closing.	1
Volunteered in nature shop and visitors' center	1
Wanted to go in visitors center, but it was closed. We were there in the morning of Dec. 15th just before noon and it was closed.	1
Went but it was closed	1

Question 11: “Which, if any, of the following social media outlets did you use to share your refuge experience with other people?”

Other Social Media Outlets	Frequency
Adobe photo stock	1
eBird	1

Survey Section 2

Question 1. “How helpful was each of the following sources to get information about this refuge and its resources?”

Other Information Sources	Frequency
Apple Maps	1

Other Information Sources	Frequency
Conservation magazine	1
Internet	1
Local TV don't know which one	1
Park ranger	1
Young man from your organization	1

Survey Section 4

Question 1: “Record the amount of money that you and other members of your group spent in the local 50-mile area during your most recent visit to this refuge. Your group would include you and those with whom you shared expenses (for example, family members, traveling companions).”

Other Expenses	Frequency
Donation	1
Items at office	1
MO (out of state) hunt license & duck stamps	1
Sam's	1

Survey Section 6

Question 3: “Which of the following types of programs, if offered, would encourage you to return to this refuge in the future?”

Other Programs	Frequency
Bird-related programs	2
Fishing-related activities	1
Nature-related programs	1
Other	1
Photography-related programs	3

Survey Section 3

Question 2: "If you have any comments about transportation-related features at this refuge, please write them here."

Comments on Transportation-Related Features at This Refuge (n=46)

Apple Maps takes you to the wrong side of the park and a smaller, less easily accessible entrance (you really need a truck to use that entrance). I submitted a request to update the app. Hopefully it works. The signs on the highway direct you to the correct location.

Auto tour needs gravel. A lot!

Because it's a refuge, I prefer the gravel roads and grass parking. Keeping it natural is important.

Easy to pull over and never anxious about being in the way.

Employees drive in the "out" exit constantly, through Do Not Enter signs.

Facilities overall are questionable for persons with disabilities. Refuge roads are horrible.

Good.

Google maps missed our exit! Would have taken us (coming from the south) way to the north for miles, to a different exit, then backtracked. If we hadn't seen the sign for the exit at the last minute, we would have wasted a lot of time.

I am not familiar with the walking/hiking trails, and plan to check them out with my next visit.

I am very disappointed that there are food plots for deer.

I do not want to see additional roads or parking lots be created. I do not want to see impacts to habitat for that. However, it's a good thing to keep the current roads in decent shape to drive or walk on.

I greatly look forward to visiting the Loess Bluffs National Wildlife Refuge at least once a year, particularly in December to see trumpeter swans, snow geese and bald eagles. It is extremely frustrating that the office and shop are closed on weekends. The weekly waterfowl count should be posted at least through December. The last one this year was Dec. 4. The bottom step of the observation deck between eagle pool and pelican pool was broken when we visited Dec. 15. This is a safety hazard.

I visit this refuge quite often as relaxation and I am never dissatisfied. If conditions are not safe, I have been instructed to leave the refuge by employees for safety reasons (ice for example). Always a variety of wildlife and scenery that never disappoints. I try to promote this refuge on Facebook with my photos and have interested people from Indiana to Oklahoma that visit now by following my page.

I wish there were more accessible hiking opportunities.

I've often thought that foot travel on the main refuge is overly prohibited. Many of the access roads into the main part of the refuge are signed for no access to public. While I understand the need to give wildlife its space, I've seen less restricted access to wildlife areas in many national parks. If all I'm doing is walking into an area to photograph the wildlife, I can't believe that my presence is much of disruption during off migration times of the year.

It looks as though at this time work is in progress and should enhance the refuge.

Local people often use tour road as a short cut, getting from one highway (east side) to north highway, normally ignoring reasonable speed for area.

More non-motorized opportunities. Improved safety for cyclist and pedestrians.

More pull offs for viewing wildlife.

More trails for the handicapped (wheelchair/scooters).

My daughter and I love coming to this refuge. We always see something we haven't seen before. The last time we came, when we were asked about the survey, the road on the east side needed gravel badly. It was very muddy. Thank you and keep up the good work!

Need more hiking trails.

New to area so I have only visited in the fall/winter. Looking forward to coming in spring/summer. Wished the official website had a "current conditions" section that gives info on weather, roads, etc.

Places were fairly muddy. Add some gravel would be good.

Please open access roads to foot and bicycle traffic to allow better access.

Refuge is in good condition. It is Squaw Creek and not Loess Bluffs. History and tradition have been destroyed making recognition a rebuilding process and disregards local heritage.

Regarding the dirt roads, it would be nice if they were graveled better for easiness of walking/driving.

Road needs to be re-graveled. Was a lot of mud with a lot of ruts. Couldn't pull over and stop. After going through Finlber Road.

Roads are sloppy in rainy weather.

Roads tend to be rough around the auto tour. I understand it's a dirt road but it can take a toll on your car when you are a frequent visitor.

The 2 turns into the refuge could use 9 1/2 mile heads-up sign.

The auto tour route roads could be wider with better access to pull off we enjoy viewing eagles and missed several excellent photography shots.

The northeast side of the 10-mile loop could use more gravel, if possible. It gets pretty muddy with moisture.

The road going around the duck and goose area was one way!!

The road was in really good condition on this visit.

The roads and bridges seem very well-kept.

The speed limit is 25 mph. What drives me crazy as a photographer is when I am trying to photograph wildlife and some jerk goes flying by. Dust rocks and dirt get thrown everywhere and the animal takes off. Why do these people come there if they aren't going to watch for wildlife?

There has been a lot of work done at this refuge in the past 12 months. Road conditions were very good. Recent snow melt had made area gravel roads very messy. However, we were pleasantly surprised how well they were groomed.

This refuge was in very good condition.

Tower stairs overlook in disrepair needing rebuild for swan viewing.

Very muddy. Need gravel.

Very wet muddy conditions due to freeze/those expected but quite muddy.

Viewing areas, boardwalk, etc. are in disrepair and outdated. Road signs to park and entrance could be a lot better. Directions in Google Maps to us to the middle of a field! Not accurate

Visitor's center at Loess Bluffs is often closed on Sunday when we visit, so we rarely stop there.

Would be nice if we could get out to some of the pools farther away from the main road.

Would like more observation areas to view wildlife.

Survey Section 5

Question 2: "If you have comments about these services, facilities, and opportunities at this refuge, please write them here."

Comments on Services, Facilities, and Opportunities at This Refuge (n=57)

Additional restroom facilities along driving loop would be nice. Even portapotties.

Because this is a relatively small area a lot of these activities and facilities are just not practical. I think for what it is, they do a good job.

Everyone has always been glad to share any and all information. Including telling us what to look for in wildlife.

Everything looked fine in the visit.

Good.

Have visited Squaw Creek refuge for many, many years. Road needs gravel. The whole water was always covered with waterfowl. Hasn't been for 2 or 3 years why. I believe too many wind mills being placed. I used to have all these geese fly over my house and land in cornfields, not over this year at all.

I duck hunt in a club near Bigelow, MO. Our club, and the many others in the area, contributes thousands of \$ annually into the economy of Holt County. Without the L. P. Refuge, hunting would be pretty poor. If you are trying to figure the value the refuge brings to the local economy (sect. 4) the many duck clubs in the county should be included.

I greatly look forward to visiting the Loess Bluffs National Wildlife Refuge at least once a year, particularly in December to see trumpeter swans, snow geese and bald eagles. It is extremely frustrating that the office and shop are closed on weekends. The weekly waterfowl count should be posted at least through December. The last one this year was Dec. 4. The bottom step of the observation deck between eagle pool and pelican pool was broken when we visited Dec. 15. This is a safety hazard.

I have been visiting this refuge since 1970! A great facility! Keep it open!

I understand it is difficult to balance opportunities for public access and preservation of wildlife. Trails, restrooms, roads, and other public facilities must be carefully planned to prevent negative effects on the environment.

I was there for only a short time (few hours total). Did not require restroom or visitors center this time!

I wish there was more walking trails or visible signs. When we went the visitor center was closed.

I wish there were more walking trails.

I wish they would fix the all-weather spotting scopes out on the refuge.

In general, I think everything is nice here.

It is a great place to visit and important to the community and hopefully will continue to be and won't be underfunded or cut back in any way. Public lands should be protected and funded by all of us. Never let private companies have the land. Never let politicians take it away.

It really [expletive] me off when they changed the name.

It seems to me that the visitor's center is often closed on weekends when peak visitors would be present at times of the waterfowl migrations. I have been fortunate to have seen the visitor's center and its exhibits and spoken to the staff and volunteers, but being open often only on weekdays during peak migrations seems to make little sense to me for the benefit of other visitors who may be making their first visit.

It would be nice if the visitor center was open on Sunday.

It would be nice if there was a Johnny on the spot (portable john) halfway around the refuge during the eagle days.

Last year there was hardly any water in the ponds for the birds migration! 2018 was much better.

More interactive exhibits. Pleased with our interaction with the staff or volunteer at the visitor center. More opportunities for urban residents to have access to the refuge and/or extend the refuge into the urban area through stream corridors.

Need more viewing towers.

One of the viewing towers had a broken step. Enjoyed seeing otters.

People off on weekends and visit, visitor's center should close 2 week days and be open weekends. Wanted to buy grandkids some pins, etc. and show educational visitors but no possible when closed.

Previous trips have visited the visitor's center. All is great, but an educational video is a little outdated. Employees were courteous/nice.

Rarely see volunteers or workers mainly go to see eagles.

Restroom or portable rest room half way around auto route.

Roads are mostly dirt surface. It had been wet for the previous days and the roads were a little bit sloppy. Some gravel on the roads would help.

Signs to the hiking trails could be a little better. The lower parts of the trails are less marked and a little more difficult to know that you are on the correct path. A few boards may need replacing at the eagles nest observation deck. Otherwise, I was pleased.

Since farming has been halted on refuge. I rarely see deer, turkeys are scarce, and cranes that once used crop fields for food have stopped coming.

The name should have never been changed. I am very upset!

The observation deck had a viewing scope but was subpar. We stopped by on a whim and didn't bring binoculars with us, it would have been nice to use the scopes on deck, but they were in poor condition. We will be back and bring our binoculars.

The staff is great. The restrooms are always in great condition. I love this place!

There are no set times for hours of operation. It just says open at sunrise closed 1 hr. before sunset before gates automatically close. No idea if you will get locked in biggest problem with this refuge.

There is a need for another entrance/exit that could be conveniently located on highway 118 just pass the MO highway patrol and MO highway maintenance. Facility and rodeo grounds. There was once an existing road there and for the elder people gave them a safer and easier access to view the reservation and enjoy the auto tour. My cell [number] if you want to discuss this. Thank you.

They are severely understaffed for the amount of visitors they get and the work that needs to be done on the refuge.

This is a beautiful wildlife refuge but during the summer, all the weeds, bushes and vines grow along the shoreline and make it really hard to see anything on the water. If you could just clear out a few areas for viewing would be great. Thanks.

This is one of our favorite places to enjoy the lord's creation no matter what time of year. It has a calming effect on both of us and photography opportunities are abundant. We love this refuge and plan to visit again soon!

This was my second visit. The first visit there was an opportunity to view eagle nest with a volunteer or ranger and a field scope.

Very disappointed in appearance of the refuge not as well taken care of in recent times.

Very nice, well maintained visitor center, although I did not use it on this visit.

Very satisfied with the services and facilities.

Very satisfied.

Very well kept and managed.

Visitor center rarely open.

We enjoy visiting this refuge and like it much better than Desoto National Refuge, IA. This refuge has closer views of wildlife with easier access. The visitor's center is close by with restrooms. The hike to the top of the bluffs is fun and has a great view of a large area.

We had a great afternoon at the refuge. All of the work that has been completed made it much easier to see the wildlife. Everything was nice and being well maintained. Only exception was some of the exhibits are showing age at the visitor center.

We have visited the refuge and visiting center before and have found them both very educational. We like to take our grandchildren there.

We used to drive up to the refuge to see the deer herd. There is no herd since they stopped planting in the refuge. I see more down the street from my house. Plant again please.

We visit the refuge when we are near it. We may have been around it more than 6 times this past year. We try to visit for migration and deer and whatever kind of birds are in the air - we miss the old signs Squaw Creek. History should be part of the sign structure. Thanks for being there for Missouri Loess Bluff.

We wanted to visit the visitor center and store, but got there too late. Store sign said open but doors were locked. Better luck next time, if there is one.

We were surprised that the visitor's center was not open on weekends. Makes it hard for families to visit.

Why have no moose been restored to the refuge at Squaw Creek? Birds are beautiful but they are a small part of an ecosystem.

Wish there was a restroom 1/2 through our route. Once on the car route. Once on the car route (one-way), there are no restrooms until leaving the park.

Without volunteers visitor center would not be open. Cold winter day and center provided friendly welcome. Literature and helpful guidance to maximize visit.

Would like to see some short trails off tour road that would allow me to get closer to shy animals to photograph, without interfering with traffic on roadway. Sometimes taking a photo has to be rushed, as not to get in others way. This would only be foot traffic.

End of Survey

General Comments (n=50)

Acquire more significant buffers surrounding the refuge. At dawn there was a significant number of firearm shots heard. I am not opposed to hunting in the area, but some of the shots heard were very close, sometimes 8+ rounds at a time, and seemed to have questionable legality based on number of shots heard/proximity. Provide more opportunities in the urban areas and/or improve access to urban residents. Extend refuge access along stream corridors into urban area.

Apple maps used the wrong location for the main park entrance. I submitted a request to have the right location updated.

Change the name back to Squaw Creek. It was changed to Loess Bluffs Creek. It was changed to Loess Bluffs for strictly political reasons. Shameful!

Fabulous opportunity to spend as much or as little time as you want. Anyone and everyone has the opportunity to enjoy the refuge as they want. We winter at Port Isabel Texas and had another fabulous reserve called Laguna Atascosa. It has been totally destroyed by Texas. It was just like Loess. We would often wake early, fix a cup of coffee, and drive along a 15-mile drive. Stopping for as long as we wanted and observing something new every time we were there. It is no longer open (only for bikes) I have written to Calo, Washington and Texas to no avail. It is criminal what they have done and it's not for the ocelot it for money and greed.

Great place. Wish there were more refuges nearby.

I grew up in the immediate area of this refuge and have always loved coming back to see the bald eagles, geese, ducks, swans, etc. Keeps me coming back!

I had attempted to look online prior to my visit... However, the name of the reserve had changed, and I was looking for the previous name (Squaw Creek). I did not locate the new name of the reserve online.

I had heard about the Loess Bluffs Nat'l Wildlife Refuge from my in-laws several years ago. My husband and I decided to go to KC and visit the WWI memorial, spend the night in KC and then wing it the next day! I remembered the refuge and we decided to go. Great decision and so glad we had binoculars! And for late December, the weather was good for traveling around the refuge and getting out to walk/observe.

I have visited this refuge every year, two or more times a year, for the last 10 years. I have never had a bad experience, excepting for an occasional rude visitor. When staff is out and about, they have always been considerate of me and my activities. That is appreciated. Restrooms have always been clean and warm (wife really appreciates it). At times, when viewing or photographing wildlife, one will always wish for something at the refuge. But think things are managed pretty well. As a manager of such facilities, you cannot make everyone happy. Thank you for allowing me to express my opinion. [name]

I love that these nature preserves are funded in our country. I've never seen a bald eagle in my life. That day I saw 12. Thanks.

I often wish the refuge was open for stargazing/night time photography. The visibility is perfect and there is minimal light pollution.

I own roughly 1,000 acres of farm ground in close proximity to the refuge. We actively hunt waterfowl on private ground near the refuge as well. Traditionally I do not believe the refuge has been managed effectively to hold migrating waterfowl. 2018 was an exception, as I believe the water refraction and management was better. I believe the refuge's main focus should be on management for waterfowl. I also believe better long term practices at the refuge will have significant economic impacts on the small local community as well.

I went to see eagles and certainly was not disappointed!

I would just like to say I love visiting Loess Bluffs. It seems to me there are a lot of dead or dying trees, and often the refuge clears them by fire. I don't, however, see any evidence of replanting, and wonder why? During the last spring the burning of a largely dead woods removed many of the fallen logs that were used by raccoons, etc. When most of the refuge was allowed to dry up last summer during road work/water management construction, there were many dead fish, frogs, and muskrats seemingly everywhere. Many of the birds that depend on those food sources all but disappeared. I wondered if this was handled in the best way. Another suggestion: as many of the visitors seem to be single people driving the auto route for photography reasons, it would make sense to have the driving route be one-way counter-clockwise as it was last year for some time during construction/roadwork. That way, the wetlands would be on the driver's side of the car, making photography easier. The car serves as a natural blind, and getting out to approach the birds usually disturbs them. Overall, it's a great place to visit! Thanks for the opportunity to fill out this survey.

I'd like to continue to make sure that a sufficient number of trees remain on the refuge. I support prairie work and wetland habitat but making sure there are trees for eagles and other birds to sit on is important. I also wouldn't be against a few acres having corn grown on it in order to provide more habitat/food for whitetail deer. There doesn't need to be much added but a little might be beneficial for the disabled deer hunt and for people to view them on the refuge.

I'd love to see the results of this study. Perhaps the Loess Bluffs website?

If you really care about creating a "refuge" for the wildlife, it should include all wildlife that was present before we came and "looked" at it. Thus destroying it. The longer we wait, the less likely it will even be an option. Talk

to the people, ask local farmers, even though they stand to suffer crop damage the majority would get on board with any effort to restore species in our area.

Keep funding our parks.

Loess Bluffs is a real asset to the local community and area.

Loess Bluffs is near enough that I've been there 5 times in 5 weeks to watch eagles and other wildlife. The staff is nice and helpful. Road conditions are ok except rainy weather.

Loess Bluffs was the facility visited. Mainly went to view eagles.

Love Loess Bluff. Eagles. Could use more pheasant.

Love the place!

My son and I go through the refuge two times every year. We both really enjoy the refuge.

No matter what you call it, this is a well-run refuge. Thanks!

Our visit may skew results of the survey, for clarifications sake, we took a 1.5 hour drive from Kansas City on a whim to see bald eagles. We had very limited time as we only had a few free hours. Good luck with your survey!

Over the last few years there have been some drastic changes to the refuge. I guess it will take time to determine if those changes were for the best but it does seem there has been a decrease in some species that were seen on regular basis. Some of those changes wiped out areas and an ecosystem that had been there for many years and that was sad to see. I hope those making the decisions to make those changes know what they are doing. I spend a lot of hours at the refuge and it's a place I grew up visiting and that won't change. It's just difficult to understand some of the changes being made.

Over the years we have seen it grow and become a well-known spot for the citizens in the area of Kansas, Nebraska and Missouri. I do not know how many other states, but I am sure a registration place for visitors may be of importance, although I have no idea how other folks feel about this idea. Or, if there is another way to ascertain the visitors' origin that would be good. Happy New Year.

Person who welcomed us and asked us to do survey was our only contact and he was great! He was not a local but was very enthusiastic.

Please add additional restrooms equally spaced throughout refuge.

Put up signs on dikes if people can walk but no cars - but have off parking from road. Grass is hard to maneuver wheelchairs- gravel would be better and still keeping with nature. Telescopes are nice, but no ramp for wheelchairs nor are they telescopes adjust in height. So maybe one at chair eye level and one for standing? More trails for handicap if at all possible, to get up to the one overhead in the hills?

Restroom facilities or porta potties are an extremely needed item, throughout auto tour. An additional entrance/exit would be awesome for a quicker, easier and safer access to the reserves. Additional road would also provide more land to cover and observe during auto tour. Refuge manager as far as I'm concerned has the refuge looking better now than I can ever remember. Should be rewarded for her efforts. Additionally, eagle day is tomorrow (01 Dec 2018) I am arriving very early and will be there all day. Can't wait, extremely excited to see nature and its glory. Thanks.

Thank you for this wonderful refuge and see you soon!

The federal budget cuts and hiring freeze are making it hard to complete the refuges mission.

There needs to be some crops planted for the deer and other wildlife. The deer population is really low compared to when there were crops planted on the refuge.

This is my relaxation place. Check it on Facebook at [name and link of Facebook account]. I send several photos to the staff to use for whatever programs they need photos for. Great place, great people and the wildlife and scenery is beyond the greatest. I have visited refuges in Washington state, Minnesota and other states and feel like loess bluffs is the best by comparison. And the greatest thing is I can see it from my house! The couple that was taking the survey was polite and kind and very professional when approaching the vehicle. Just added to a great experience!

This refuge is a wonderful place for viewing birds and other wildlife. Many opportunities for volunteers are available for those interested.

Very nice place. We love to visit. I would be nice to some restrooms in another place or two.

Very satisfied with overall experience, just disappointed the visitors center was closed.

We enjoyed our visit and plan to return next year.

We have lake property at big lake which is near the refuge. We enjoy seeing the wildlife and birds on the refuge.

We learned of this refuge many years ago when our sons' Boy Scout troop would do a campout each December to go to Eagle Days. We thoroughly enjoyed the presentation and other activities that are offered during Eagle Days and the boys' learned a lot. Now that both sons are no longer in scouts, my husband and I still try to get up there each December to see the eagles and other birds. We try to go after the eagle days weekend mainly due to the crowd. We like to take our time driving the refuge and seeing the eagles at a leisurely pace without a lot of people around. This year we were happy to see at least 2 adult eagles and a number of juvenile eagles.

We love Loess Bluffs Refuge. We visit there at least once a year. Each experience is unique and we always see something new or different each trip. We plan to visit Quivira Refuge in the spring.

We love Squaw Creek. The young man representing you was really fun to visit with and learn from. We visit fairly often. I used to take my father from a nearby nursing home there. He loved the peace and ability to just sit and enjoy. I got some great video of the geese circling and getting ready for flight. Each visit has its own wonder.

We would like to see the lake refilled and more wildlife, especially deer encouraged. Horse drawn carts would be an interesting addition.

Wonderful visit. Will bring rest of family in the future. Thank you.

Would like to see more water in the refuge pools for the migrating geese fall and spring.

Would love to see better signing for the visitor's center. We would have missed it if we hadn't stopped for this survey, and asked the people handing out the information!

Would love to see the south end of this refuge flooded.

Your refuge is a gem in this area, and we can only imagine how much wildlife would be in this area if it was even larger. Thank you so much for all the work done to keep this one beautiful. I'm not sure what could be done with the north end wooded tree lined area, but it would be nice to attract more waterfowl there. We love going to the Badlands, Custer State Park & Wind Cave, SD & Big Horn mountains & Yellowstone National Park, WY. Grand Island & Kearney, NE. Have the areas for watching the crane migrations too. So we go to many places and can tell you, this refuge is great. Thank you, [name].