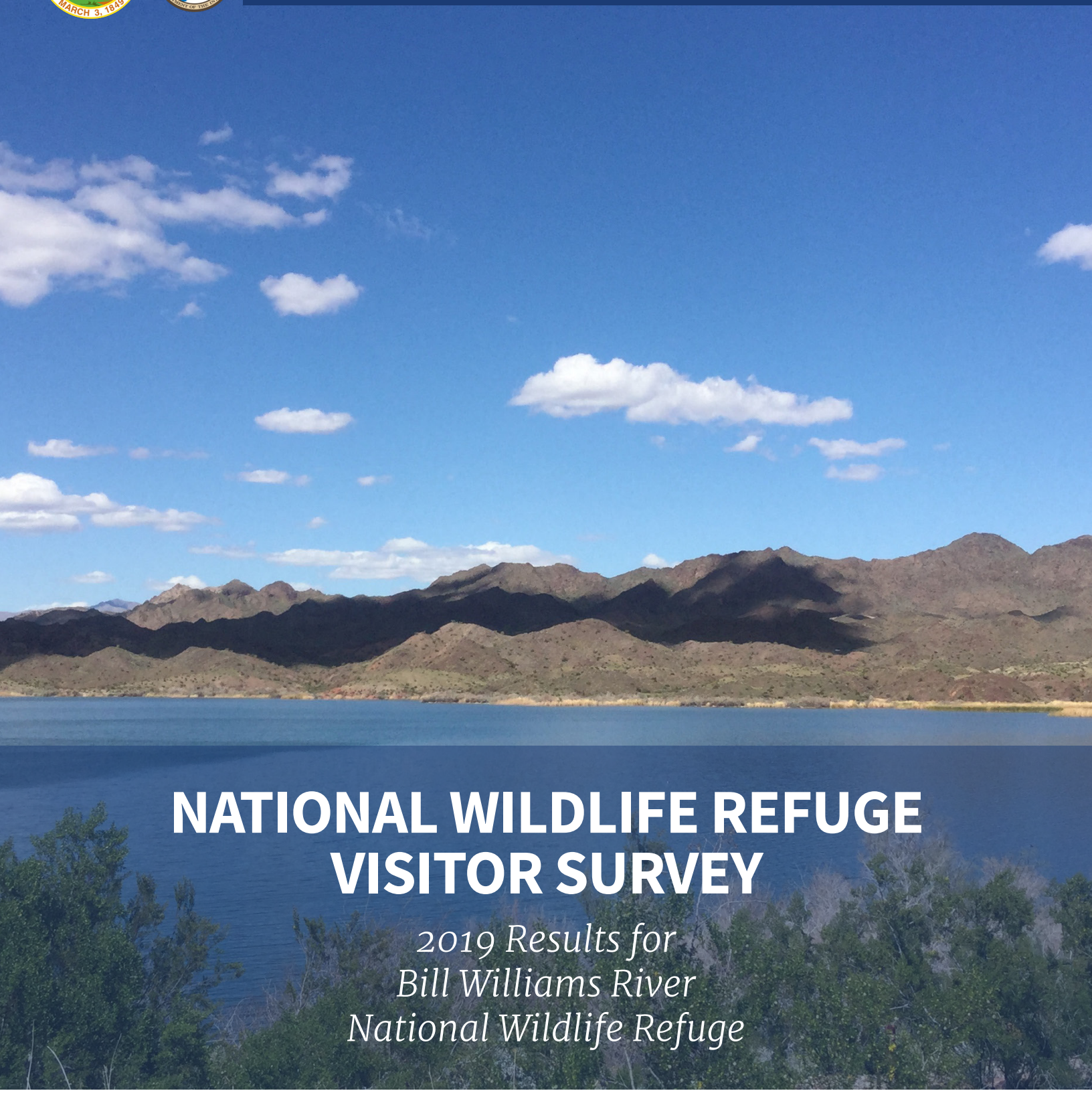
U.S. Fish & Wildlife Service



NATIONAL WILDLIFE REFUGE VISITOR SURVEY

2019 Results for
Bill Williams River
National Wildlife Refuge

THE OHIO STATE UNIVERSITY

AMERICAN CONSERVATION EXPERIENCE ACE

Acknowledgments

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Front cover: A view of the mountains at the Bill Williams River National Wildlife Refuge. Photo credit: Amelia Liberatore.

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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, 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.

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

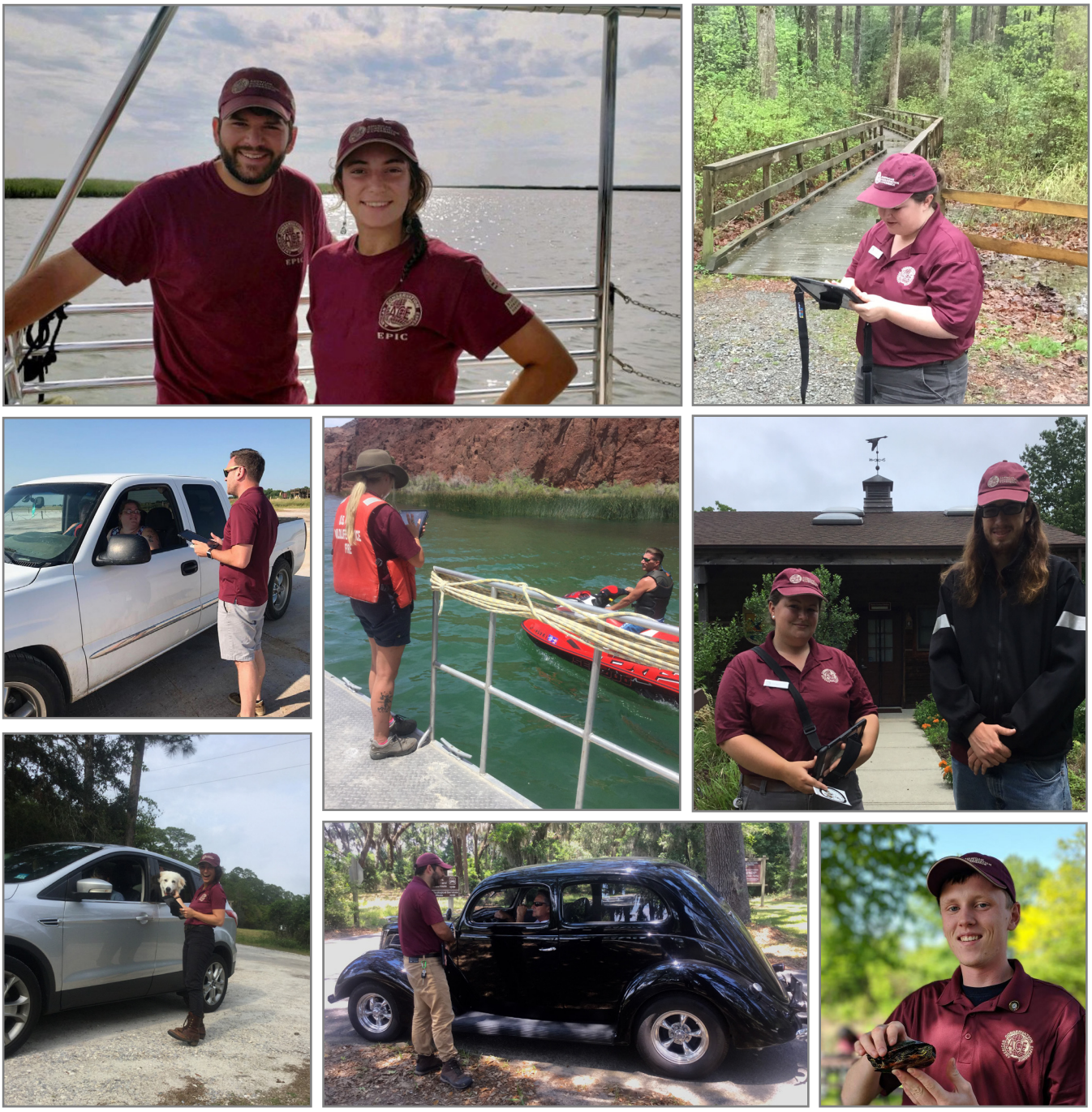
The need to understand visitors and their experiences, as well as preferences for future opportunities, is further underscored by widespread societal changes that are shaping how people engage with nature and wildlife (Kellert et al., 2017; Manfredo et al., 2018). Researchers and land management professionals 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, experiences, and satisfaction with their refuge experiences, as well as visitor economic contributions to local communities. The survey is conducted on a rotating basis every five years (e.g., 2018-2022) 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 Bill Williams River National Wildlife Refuge, referred to as "this wildlife refuge" or "refuge" throughout this report. Percentages noted in this report were rounded

to the nearest whole number and, when summarized per survey question, may not equal 100% due to rounding. 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.



2019 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

Bill Williams River National Wildlife Refuge is located in central-western Arizona along the Lower Colorado River. The 6,100-acre refuge was established in 1993 due to its unique and diverse habitats. Earliest written records of the area come from Spanish explorers who traveled through here as early as 1598 who, along with other explorers, took note of the ecologically rich landscape, including miles-thick stands of cottonwood and willow trees along the river's banks, and an abundance of mesquite above the river. Today, the refuge holds one of the last stands of naturally regenerated cottonwood-willow forest along the lower Colorado River and is one of the last ecologically functioning riparian areas in the southwest United States. Though very small, the refuge has retained nearly all of the original terrestrial wildlife species found here at the time of exploration.

Bill Williams River National Wildlife Refuge attracts over 90,000 visitors annually (U.S. Fish and Wildlife Service, 2019, written comm.). Visitors typically engage in a variety of recreation activities, including hunting, fishing, boating, and kayaking. Wildlife watching and hiking on nature trails are also popular activities on the refuge.

Sunset at the Bill Williams River National Wildlife Refuge. Photo credit: Dan Shahar.

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.

- Only visitors aged 18 years of age or older were eligible to participate in the survey. Therefore, use of the term "visitor" throughout this report refers to adult visitors only.
- During the two sampling periods, a total of 199 visitors agreed to participate in the survey by providing their names and addresses.
- In all, 102 visitors completed the survey online (36%) or by mail (64%) after their refuge visit, resulting in a 55% response rate.
- Results for this wildlife refuge have a ±8% margin of error at the 95% confidence level. For more details on limitations of results and survey methodology, see Appendix A.

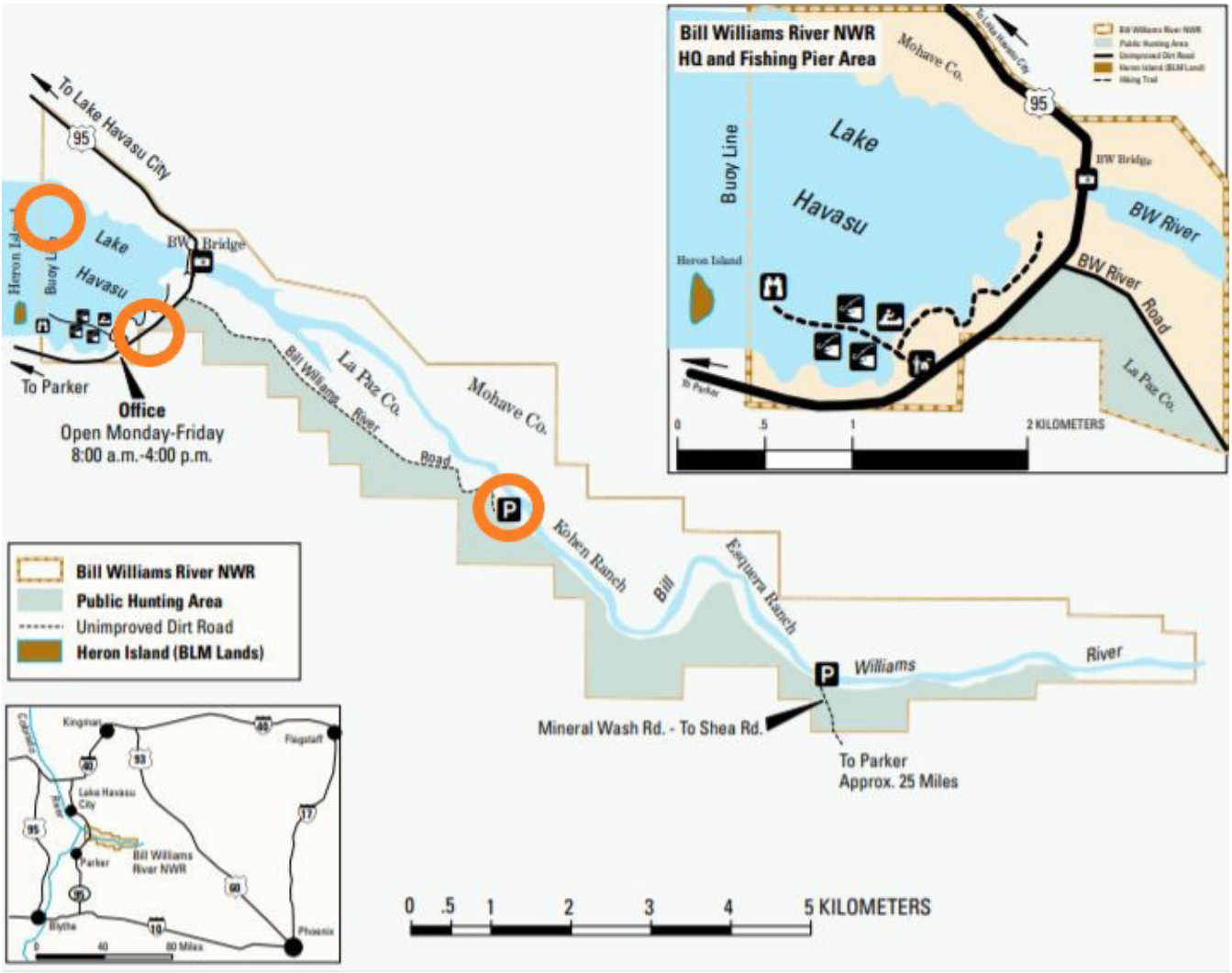


Fig. 2: Map of Bill Williams River National Wildlife Refuge. Visitors were contacted at the circled locations from 2/26/2019-3/12/2019 and 11/5/2019-11/19/2019.

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

- 39% of visitors were female with an average age of 62 years (Fig. 3).
- 61% were male with an average age of 67 years.

EDUCATION

- 13% of visitors had a high school degree or less.
- 58% had at least some college.
- 29% had an advanced degree.

RACE & ETHNICITY

Most prevalent race or ethnicity (Fig. 4):

- White (95%).
- Some other race (2%).
- Multiracial (2%).

INCOME

- The median household income range for visitors was $50,000-$74,999 (Fig. 5).

OTHER TRIP CHARACTERISTICS

- Average group size of 2 people.
- 13% visited the refuge alone.
- 80% visited with at least one other adult.
- 7% visited with a combination of at least 1 adult and 1 child.

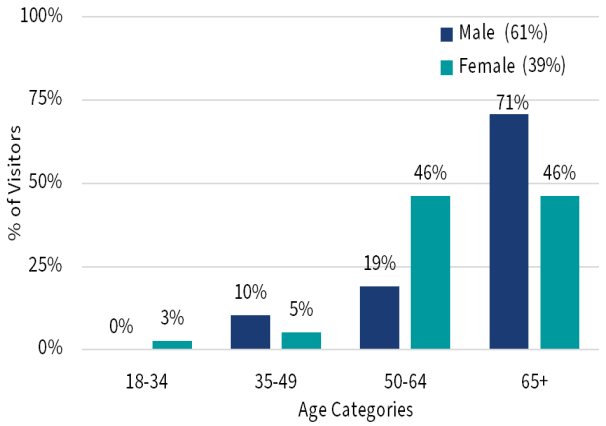


Fig. 3: Distribution of visitors to this refuge by gender and age group.

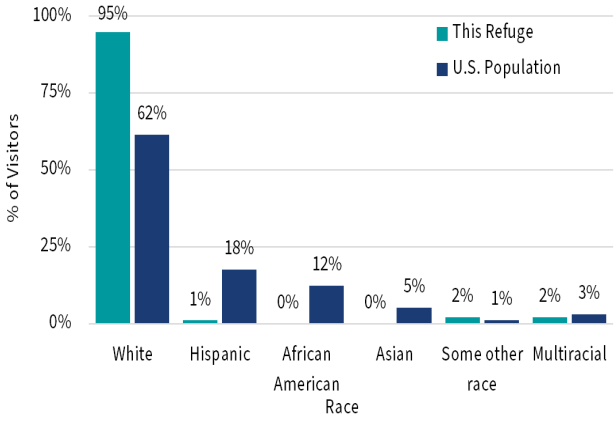


Fig. 4: Race and ethnicity of visitors to this refuge compared to the national average.

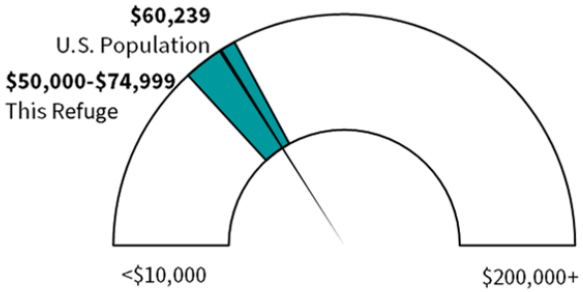


Fig. 5: Median household income range of visitors to this refuge compared to the median household income for the U.S. population as of July 1, 2019 (U.S. Census Bureau)..

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 showcase how far visitors are willing to travel for the unique experiences that are offered by this refuge. Results related to the seasonality of visitation helps refuge professionals gauge refuge use patterns throughout the year.

LOCAL VISITORS

Highlights of trip characteristics for local visitors to this wildlife refuge (34%) include:

- For locals, this refuge was the primary reason for their trip (53%) (Fig. 6).
- Local visitors traveled an average of 27 minutes to arrive at this refuge (Fig. 7).

NONLOCAL VISITORS

Highlights of trip characteristics for nonlocal visitors to this wildlife refuge (66%) include:

- For nonlocals, this refuge was an incidental stop taken as part of a trip for other purposes (41%) (Fig. 6).
- Nonlocal visitors traveled an average of 8 hours to arrive at this refuge.

VISITORS POINT OF ORIGIN

- 97% of visitors lived in the U.S., and 3% lived in other countries.
- Most visitors lived in the states of Arizona (47%), California (13%), and Washington (5%) (Fig. 8).

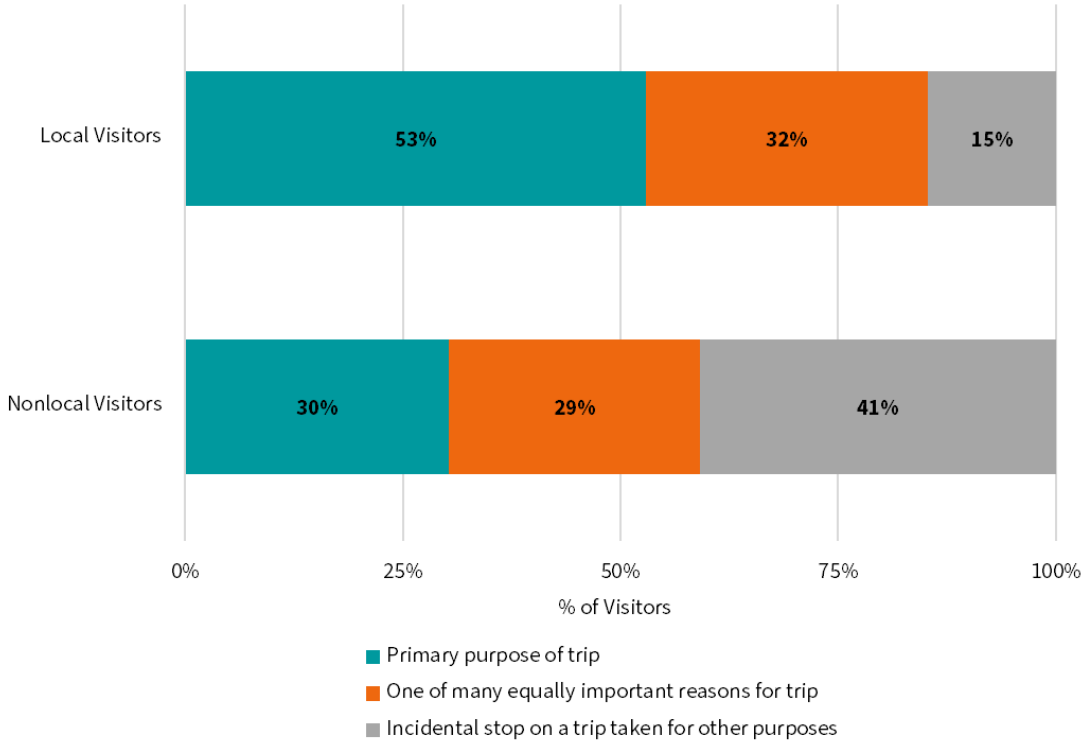


Fig. 6: Purpose of most recent refuge visit for local (living ≤ 50 miles from the refuge) and nonlocal (living > 50 miles from the refuge) visitors.

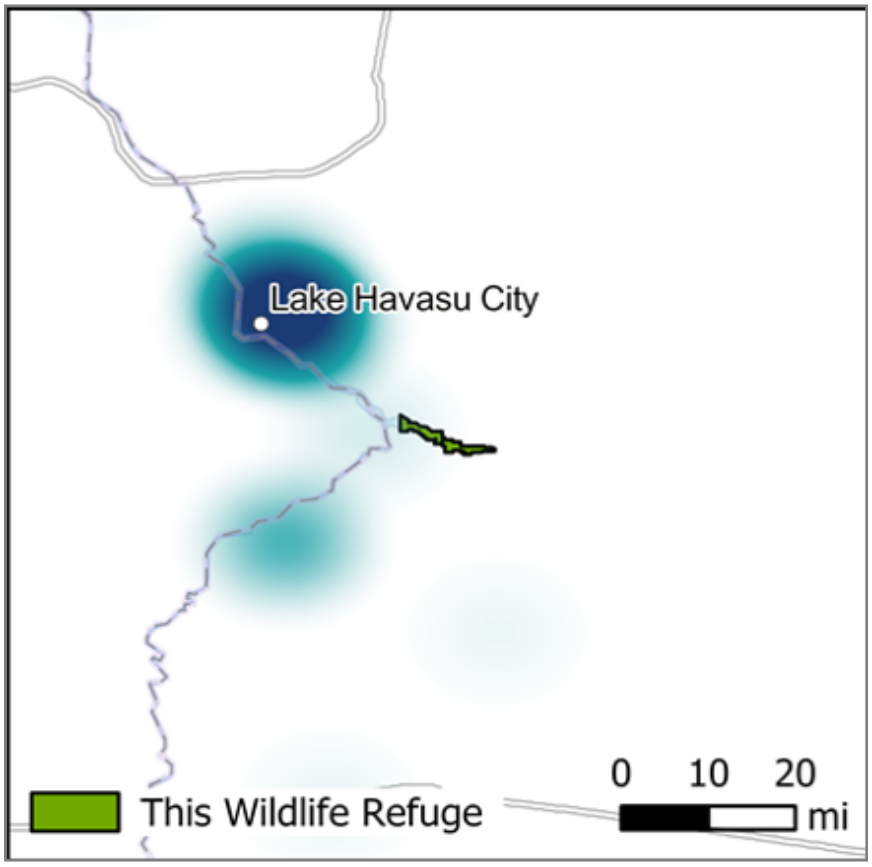


Fig. 7: Map showing residence of local visitors to this refuge. Darker shading represents relatively higher visitation from that area.

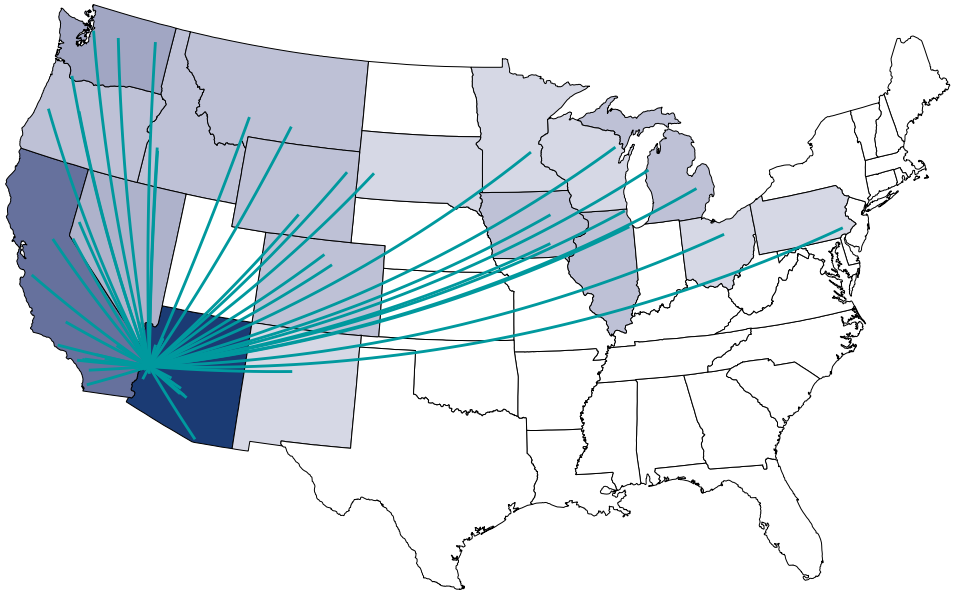


Fig. 8: Map showing residence of visitors to this refuge by zip code, with each line representing visitation from a different zip code. The convergence point of the lines is the geographical center of the refuge. Darker shading of the states represents higher visitation from that state.

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 private vehicle with a trailer (8%) (Fig. 9).
- Once on the refuge, visitors primarily traveled by foot (41%) and by private vehicle without a trailer (34%) (Fig. 9).
- Visits occurred during spring (56%), fall (53%), winter (51%), and summer (9%).
- 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 5 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:

- 57% were repeat visitors to this wildlife refuge, visiting an average of 13 times.
- 58% visited other national wildlife refuges, averaging 3 visits.
- 80% visited other public lands, averaging 9 visits.

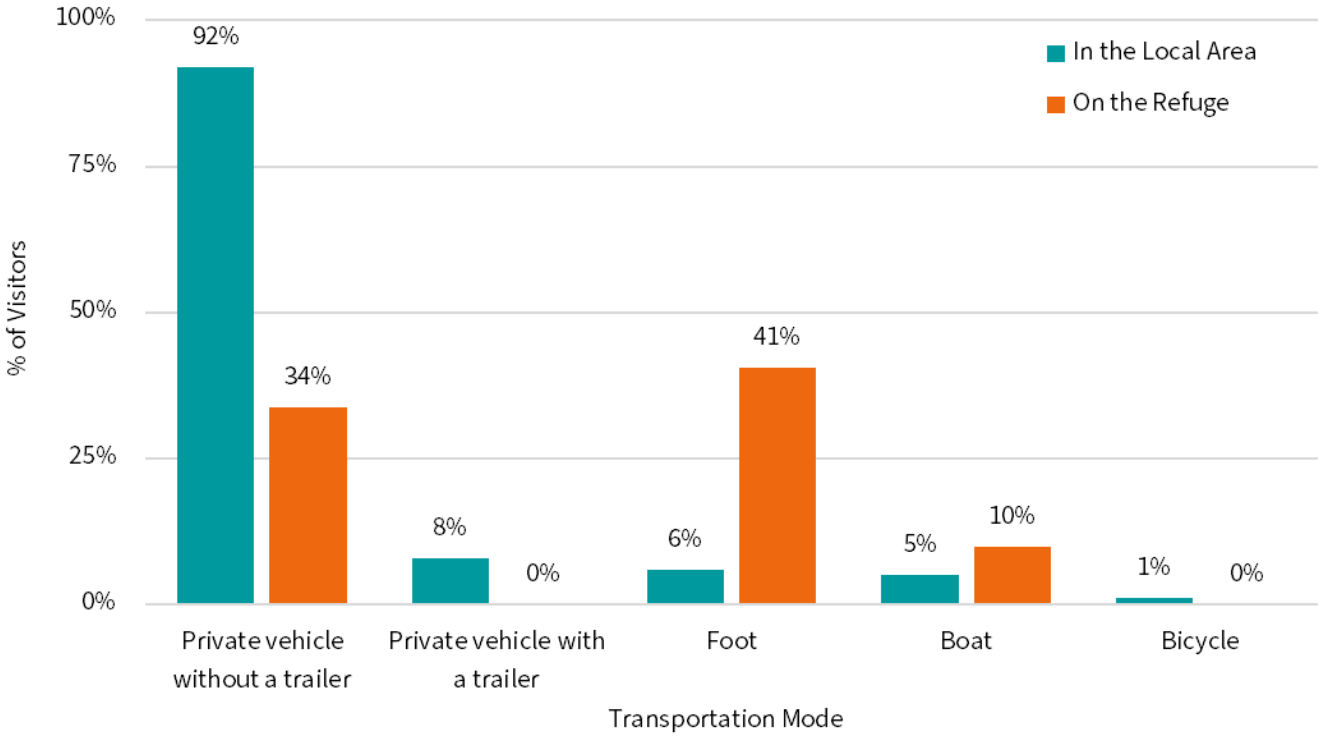


Fig. 9: Modes of transportation used by visitors to get from the local area to this refuge and within the boundaries of this refuge.

Information Sources Used for Trip Planning

The Refuge System's success in connecting with current visitors as well as new and diverse audiences through different information sources depends on its ability to keep pace with communication trends (U.S. Fish & Wildlife Service, 2016a). In particular, understanding which information sources visitors use to learn about a refuge and its resources can guide communication strategies (e.g., provide financial support for maintaining information sources that are being used by many visitors). Additionally, one information source may be more helpful than others regardless of how many visitors use it. Helpful sources may be worth promoting, whereas sources that are not helpful may need to be improved.

This effort asked visitors two questions: (1) which information sources they used, and (2) the degree of helpfulness for each source used. Overall, visitors to this wildlife refuge used a variety of in-person, print/internet, and refuge-specific information sources to get information about this refuge and its resources. Percentages of people who used each source are reported in Figs. 10-12.

Of the visitors who used each source, the following were considered *the most helpful*:

- For in-person sources, the most helpful source was word of mouth.
- For print and internet sources, the most helpful source was web-based map.
- For refuge-specific sources, the most helpful source was refuge employees or volunteers.

For some refuges, the most helpful information sources presented in the bullet points may also be widely used by a lot of visitors (Fig. 10-12), whereas other refuges may find that a smaller proportion of visitors are using an information source deemed particularly helpful.

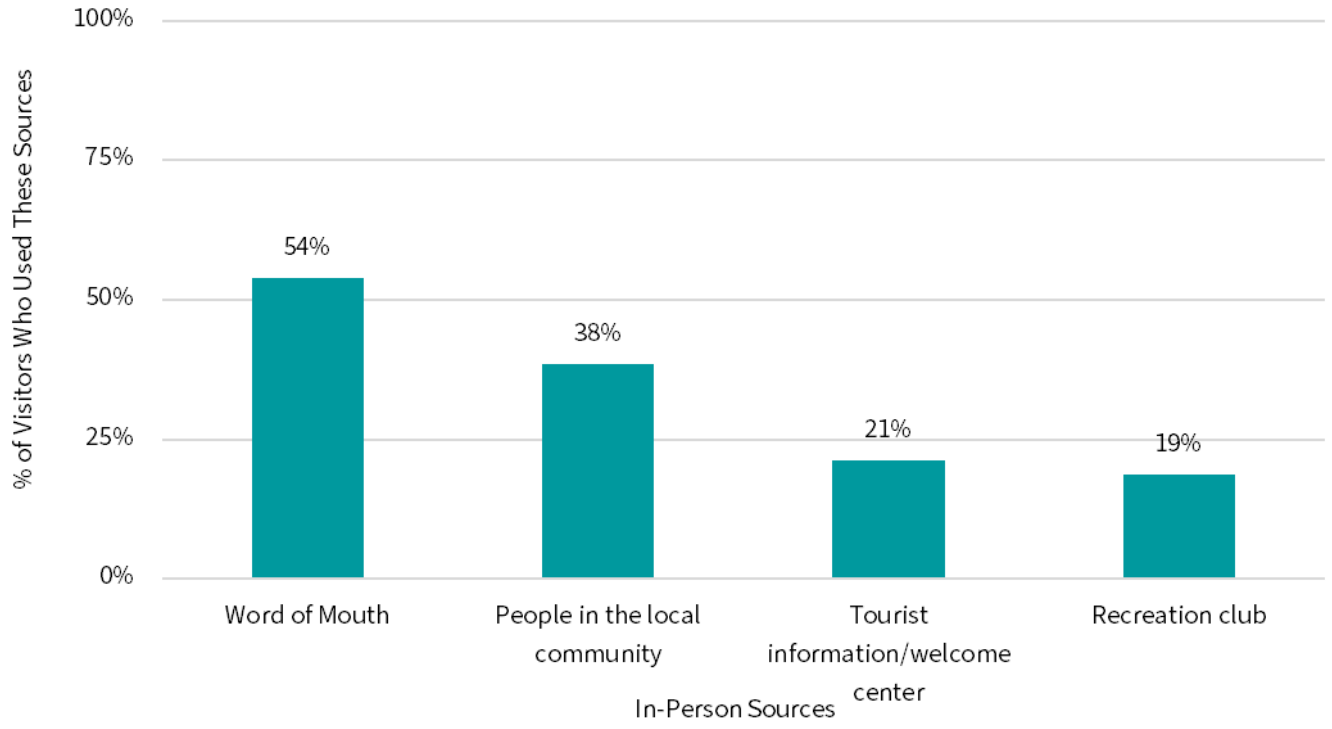


Fig. 10: Percent of visitors who used in-person information sources to plan their trip.

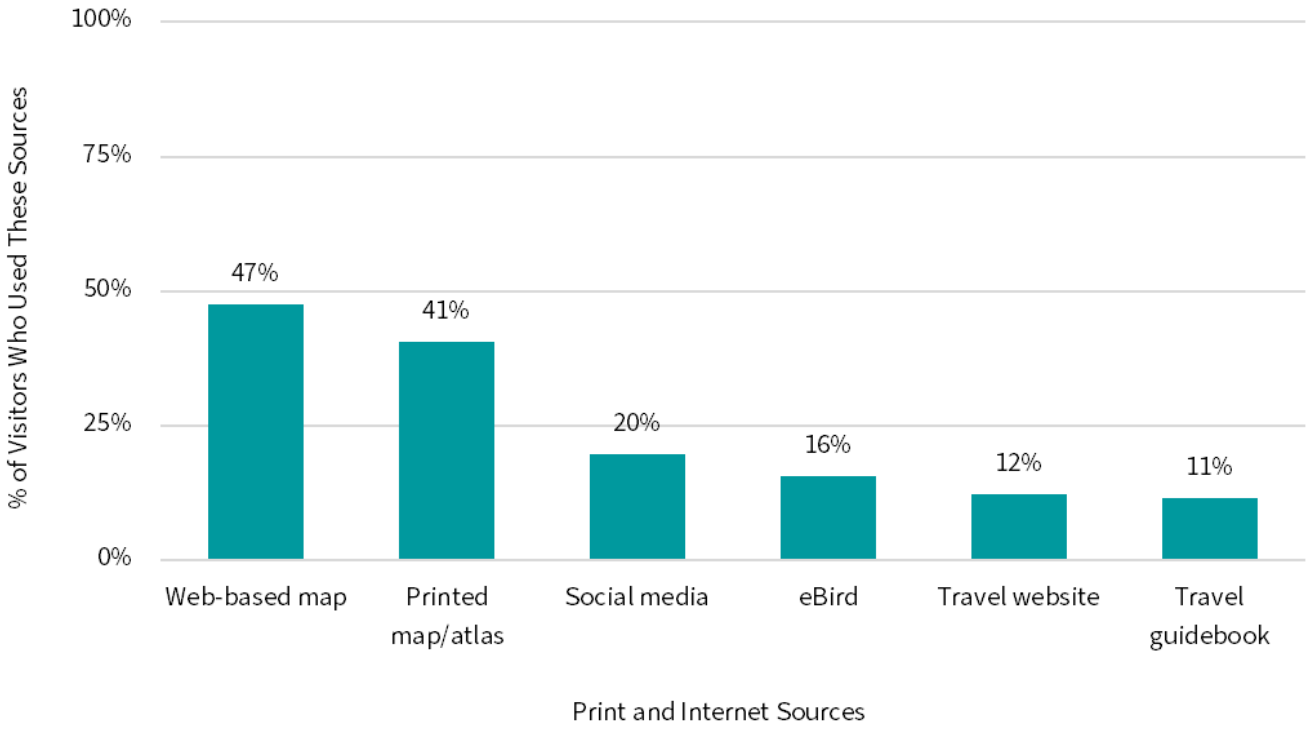


Fig. 11: Percent of visitors who used print and internet information sources to plan their trip.

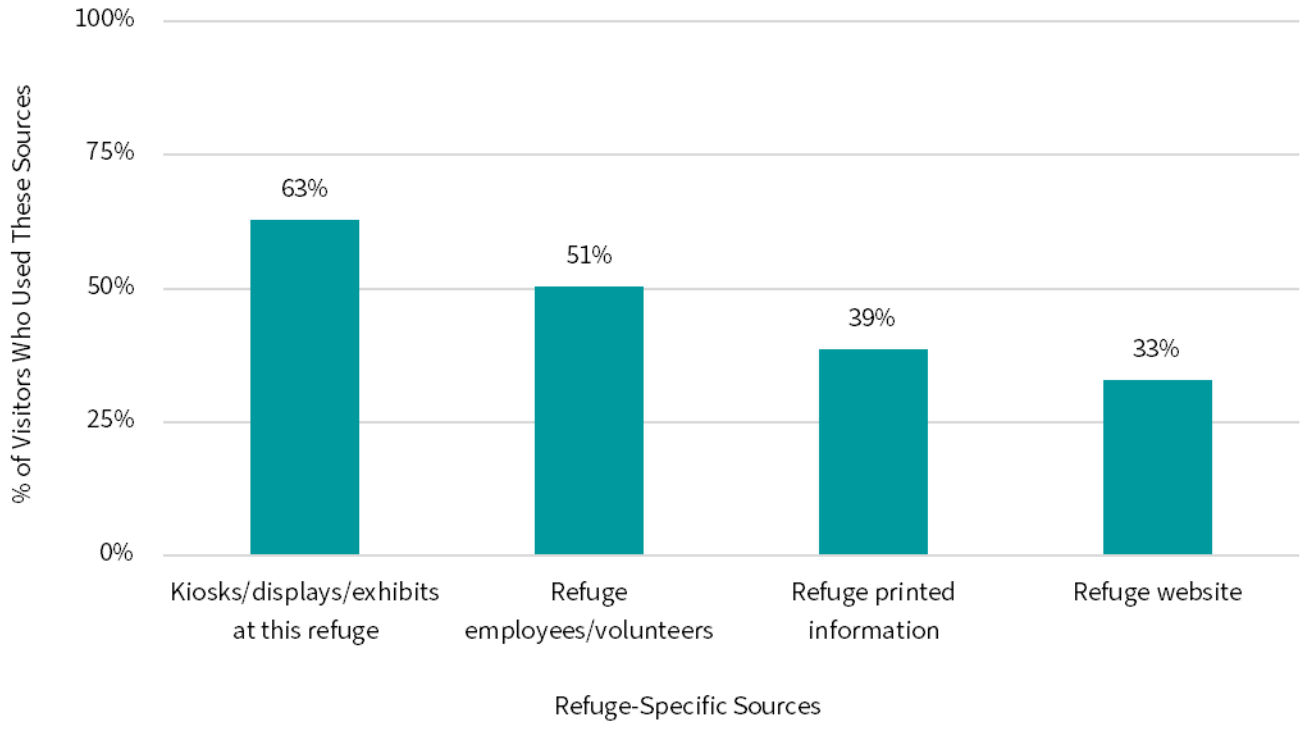


Fig. 12: Percent of visitors who used refuge-specific information sources to plan their trip.

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. Thus, learning about the ways in which visitors share their experiences with others can help refuge professionals better reach different audiences.

Visitors shared their refuge experiences with other people in a variety of ways, including text (22%), email (14%), and citizen science sites such as eBird (3%).

Additionally, 29% of visitors used social media platforms (websites and apps) to share about their experiences. The top social media platforms used by visitors was (Fig. 13):

- Facebook (28%).

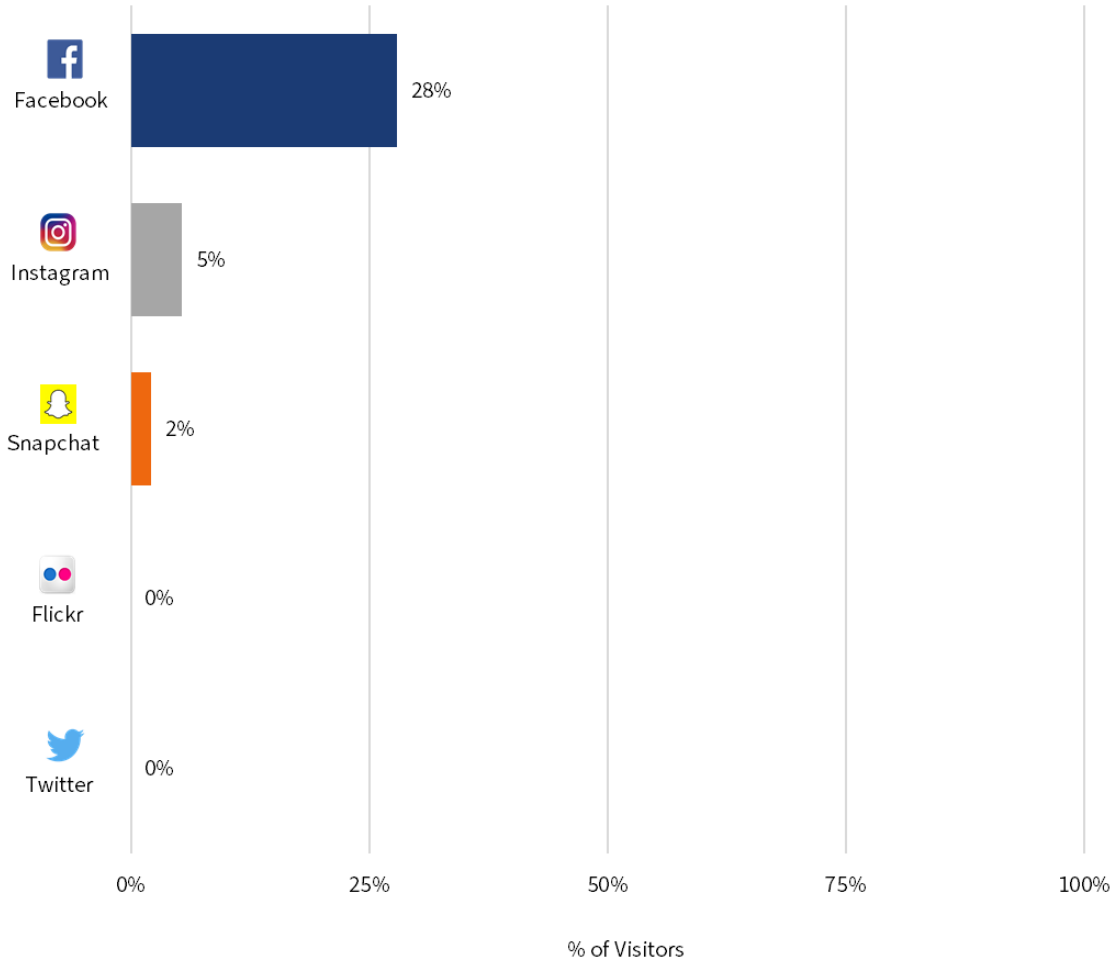


Fig. 13: Percent of visitors who used specific social media platforms to share their experience on this refuge with others.

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 potential social 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 hiking (69%), wildlife observation (67%), and bird watching (61%) (Fig. 14).
- The top three activities noted as their primary activity on the day visitors were contacted to participate in the survey were hiking (25%), fishing (15%), and nonmotorized boating (15%) (Fig. 14).
- Approximately 28% of visitors went to the visitor center, and they most often viewed the exhibits (64%), used the restrooms (48%), and asked for information (33%) (Fig. 15).

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

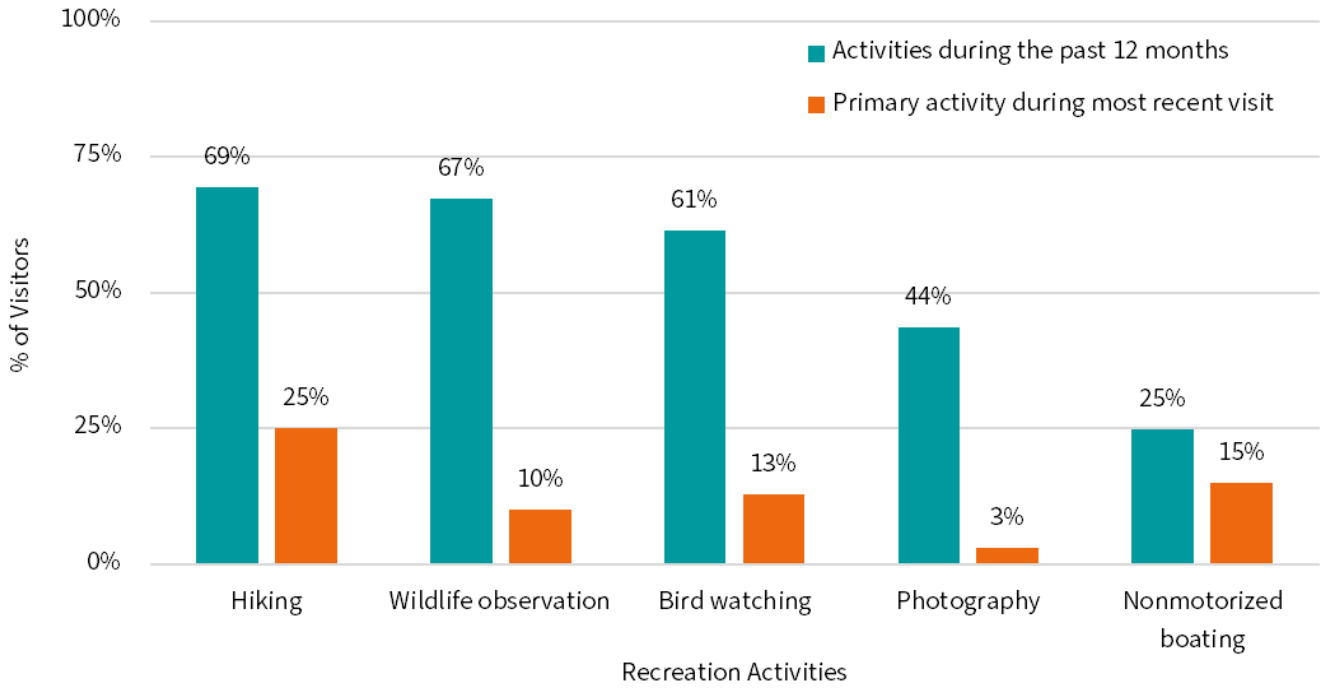


Fig. 14: Recreational activities in which visitors participated during the past 12 months and their primary activity during their most recent visit to this refuge.

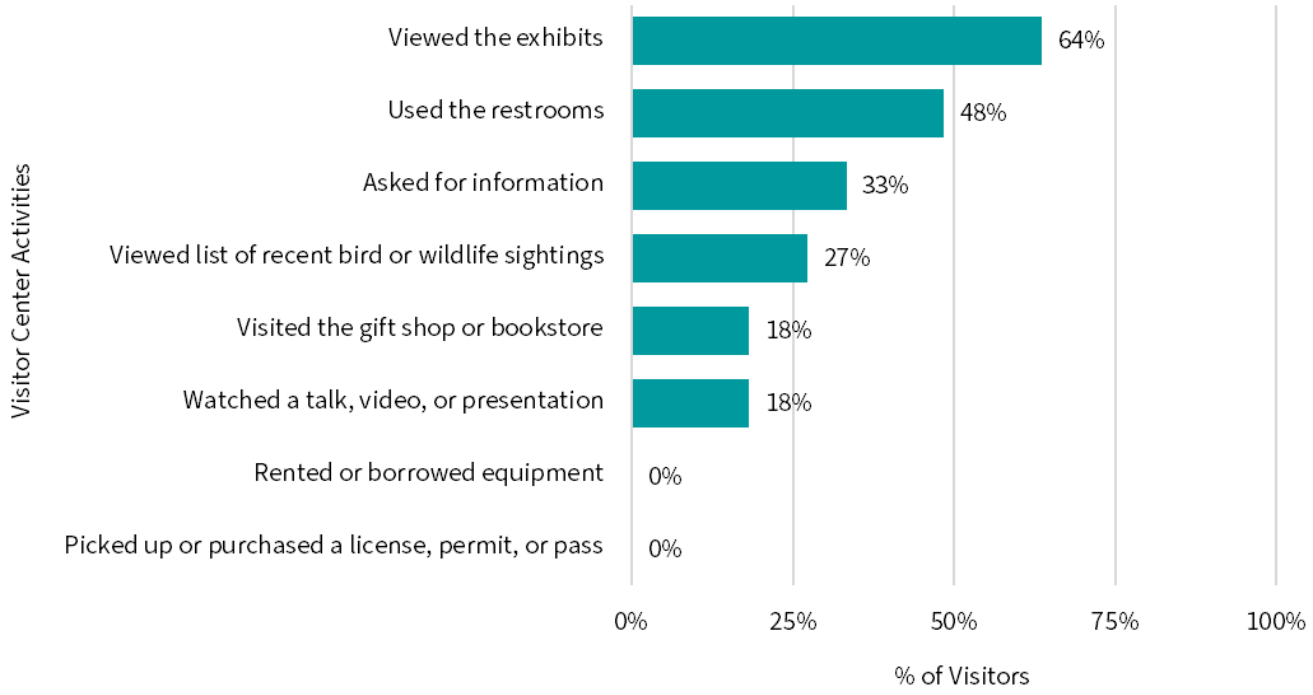


Fig. 15: Reasons visitors used the visitor center during their most recent visit to this refuge.

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:

- 86% of visitors felt welcome during their refuge visit (Fig. 16).
- 97% of visitors felt safe during their refuge visit (Fig. 16).
- 99% of visitors felt comfortable in nature, but 5% did not like being in nature alone (Fig. 17).

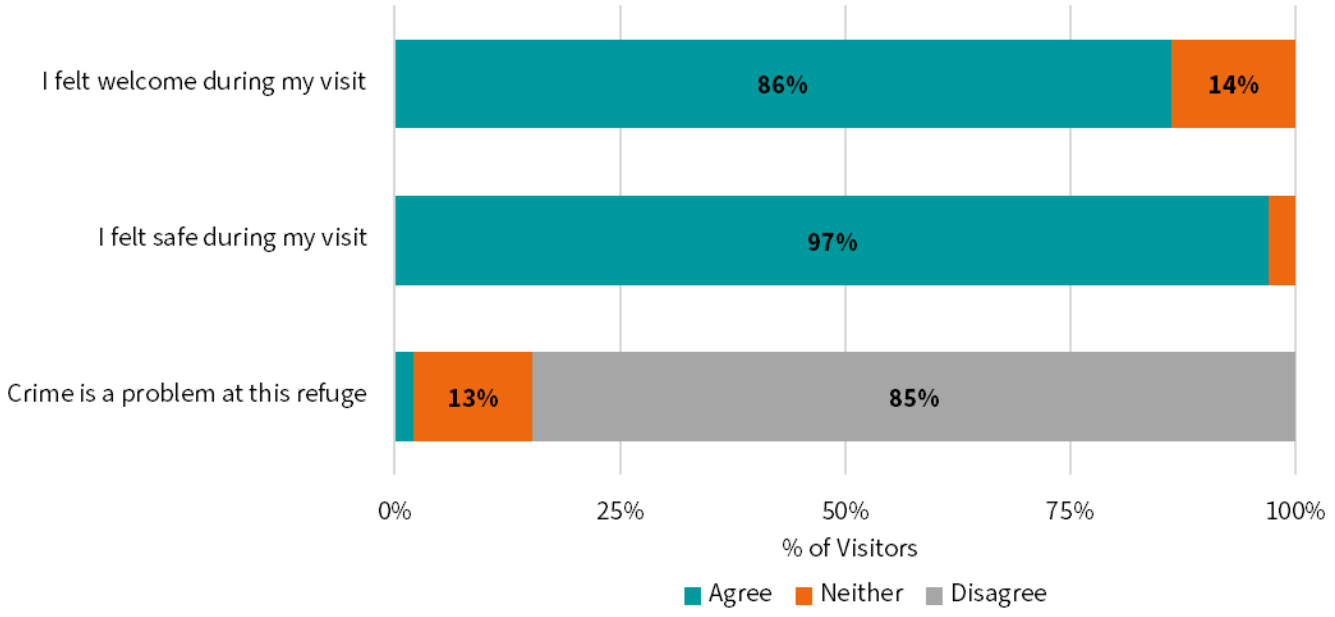


Fig. 16: Visitors' perceptions of safety and feeling welcome at this refuge during their visit.

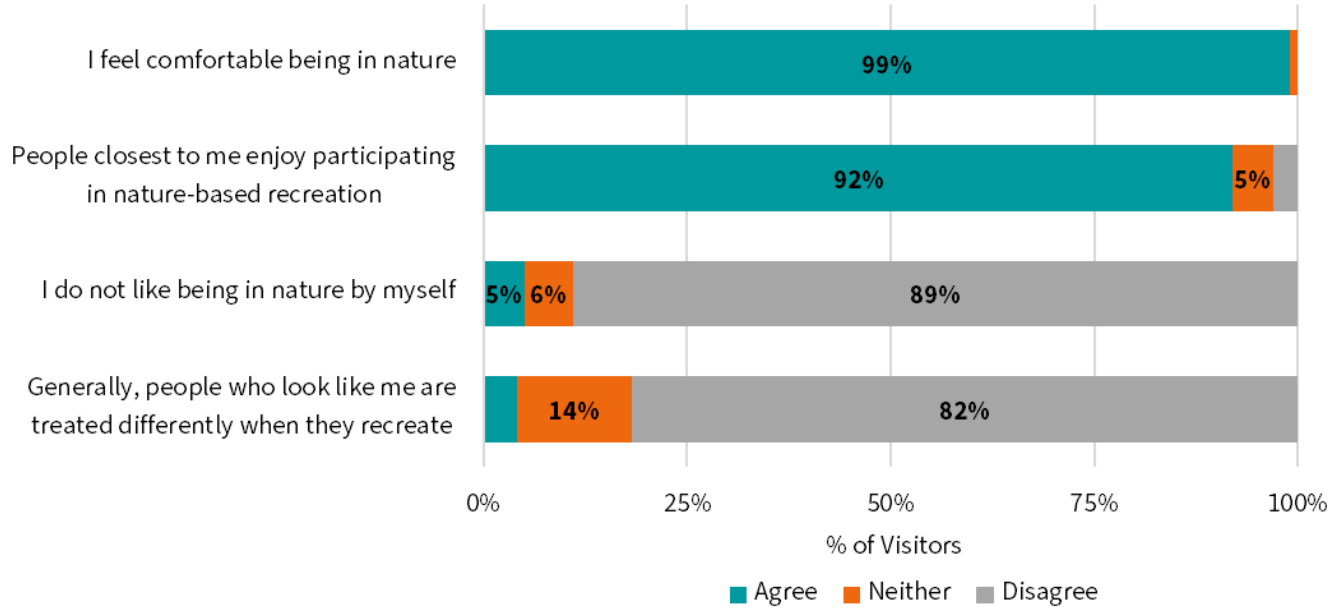


Fig. 17: Visitors' comfort with being in nature.

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:

- 81% of visitors were very or extremely satisfied with the overall experience at this wildlife refuge (Fig. 18).
- 78% 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):

- refuge hours/days of operation (90%),
- restrooms (88%), and
- courteous and welcoming employees/ volunteers (75%).

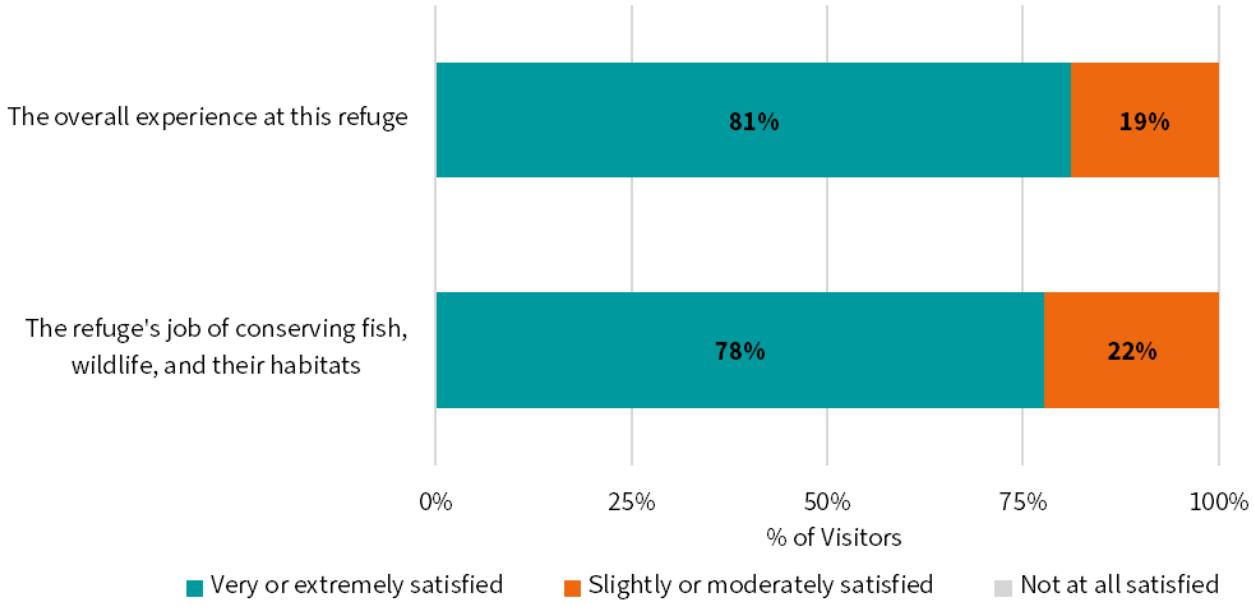


Fig. 18: Visitors' satisfaction with their experience at this refuge and with this refuge's job of conserving fish, wildlife, and habitats.

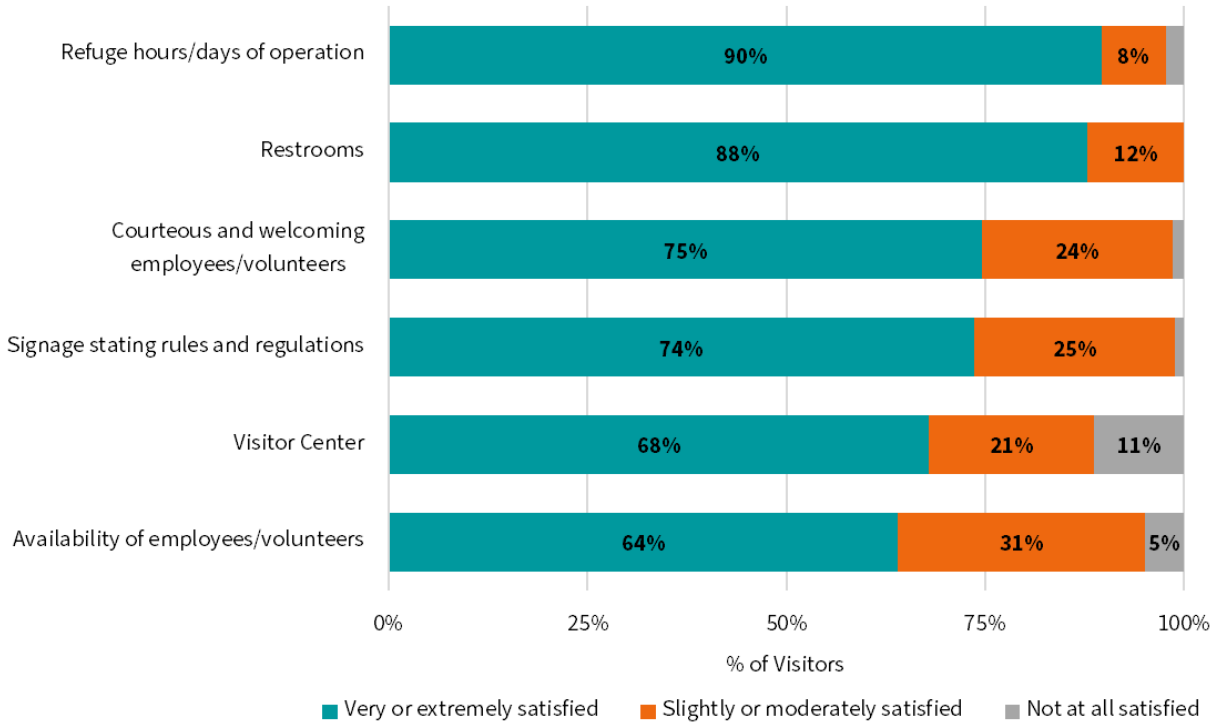


Fig. 19: Visitors' satisfaction with customer service and amenities at this refuge.

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 of people 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):

- fishing (100%) and
- canoeing/kayaking (96%).

"Beautiful, well-kept, and clean place to visit. I really enjoyed the peaceful walk and scenery." - Visitor to Bill Williams River National Wildlife Refuge

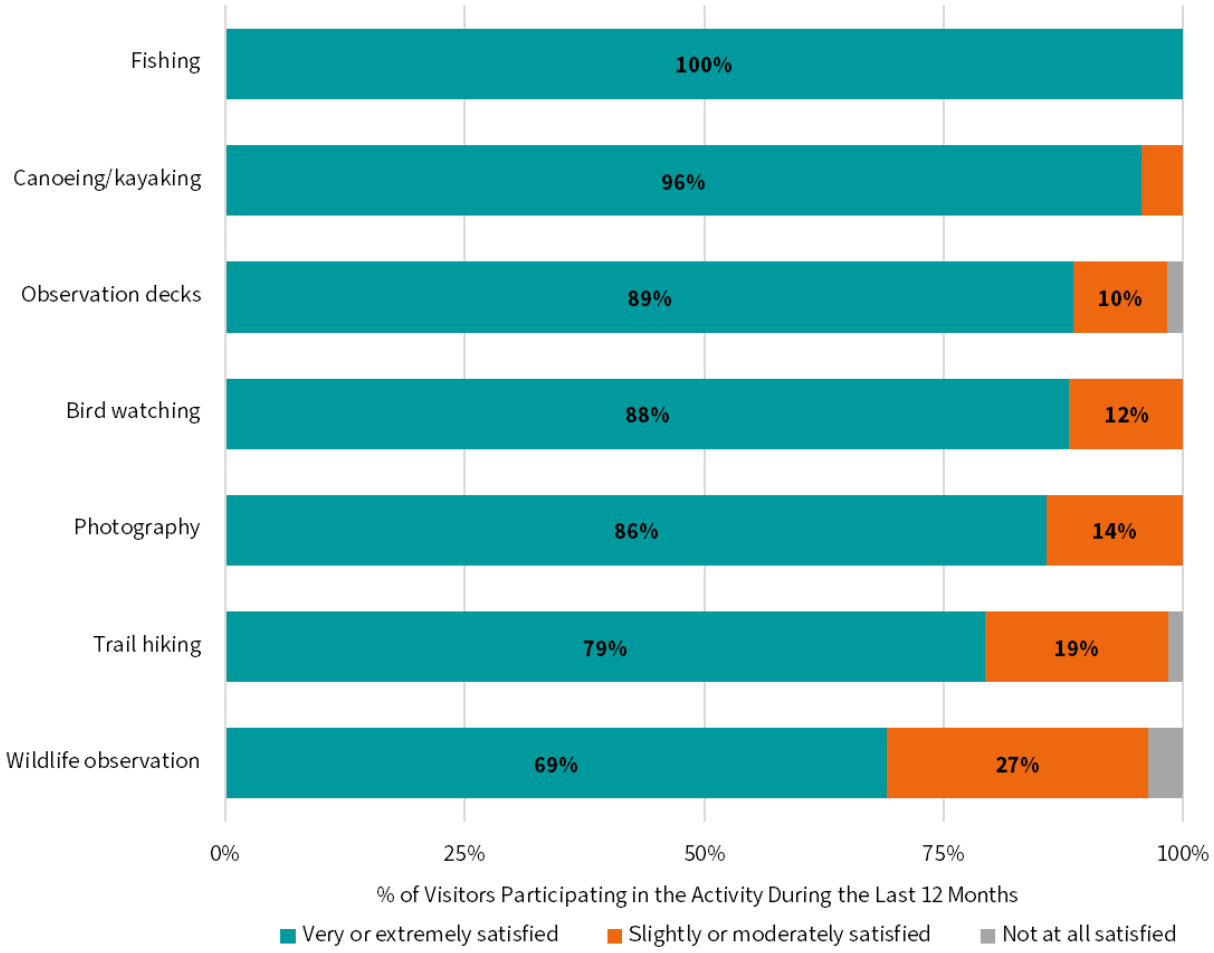


Fig. 20: Visitors' satisfaction with recreational opportunities at this refuge. Only visitors (10 or more) who participated in activities related to each opportunity at this refuge during the last 12 months were included.

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 (66%).
- Getting around this wildlife refuge, visitors were most satisfied with condition of bridges on roadways (89%), number of parking places (80%), and condition of parking areas (73%).
- Accessing recreation on this wildlife refuge, visitors were most satisfied with condition of trails and boardwalks (85%), safety of roads or trails for nonmotorized use (76%), and access for people who have physical disabilities or who have difficulty walking (75%).

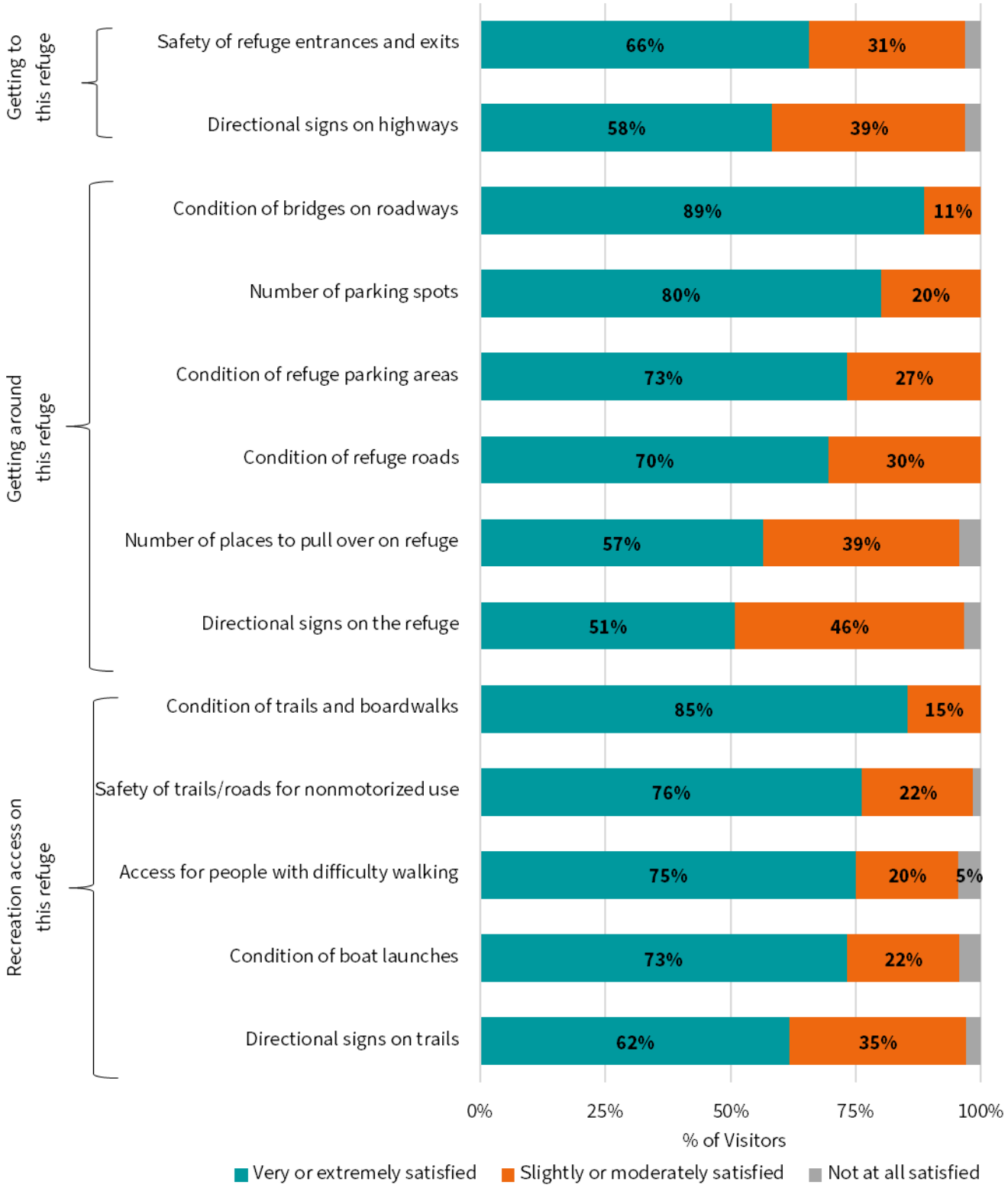


Fig. 21: Visitors' satisfaction with how the refuge is managing transportation-related features.

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; 34%) are as follows:

- On average, local visitors accounted for 2% of expenditures.
- Top trip expenditures by locals were for food/drink and transportation (Fig. 22).
- The average amount paid by locals to visit this wildlife refuge was $15 per person per day (Fig. 22).
- Local visitors were personally willing to pay an additional $41 per day on average to visit this wildlife refuge (Fig. 23).

Results for nonlocal visitors (those living >50 miles from this wildlife refuge; 66%) are as follows:

- On average, nonlocals accounted for 98% of expenditures.
- Top trip expenditures by nonlocals were for lodging and food/drink (Fig. 22).
- The average amount paid by nonlocals to visit this wildlife refuge was $61 per person per day (Fig. 22).
- Nonlocal visitors were personally willing to pay an additional $111 per day on average to visit this wildlife refuge (Fig. 23).
- Nonlocal visitors spent an average of 22 days in the local community during this visit.

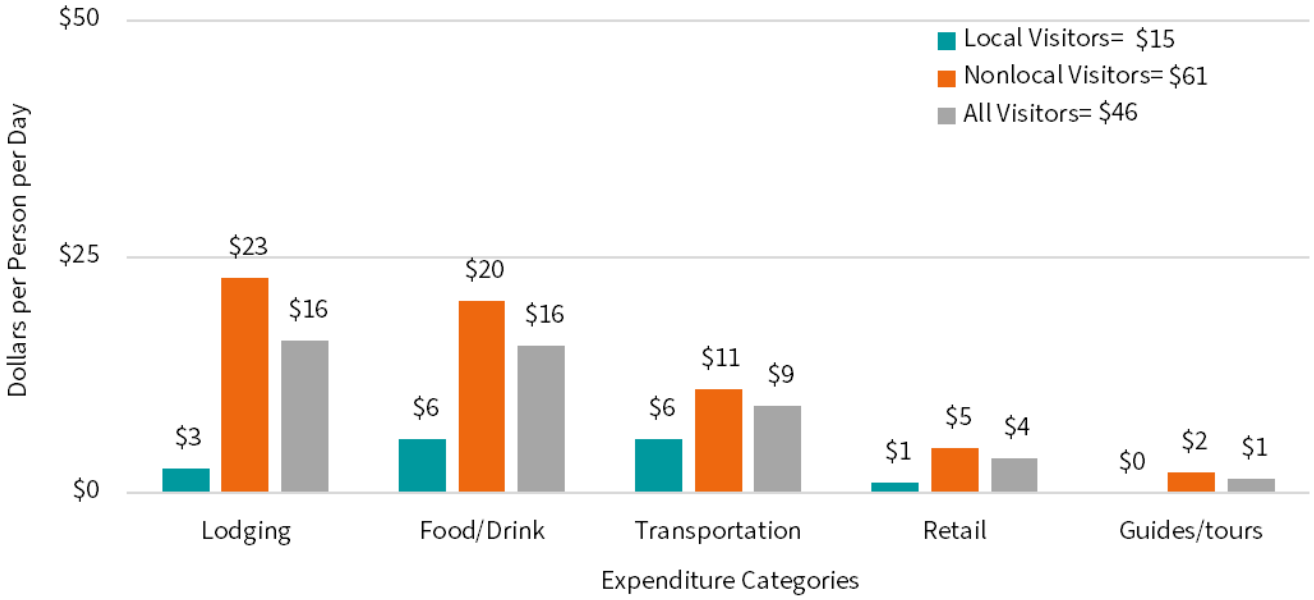


Fig. 22: Individual daily expenditures in the local community for local, nonlocal, and all visitors. Expenditures were reported by respondents on a per group basis; the total expenditures were divided by the number of people in the group who shared trip expenditures and the number of days spent in the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

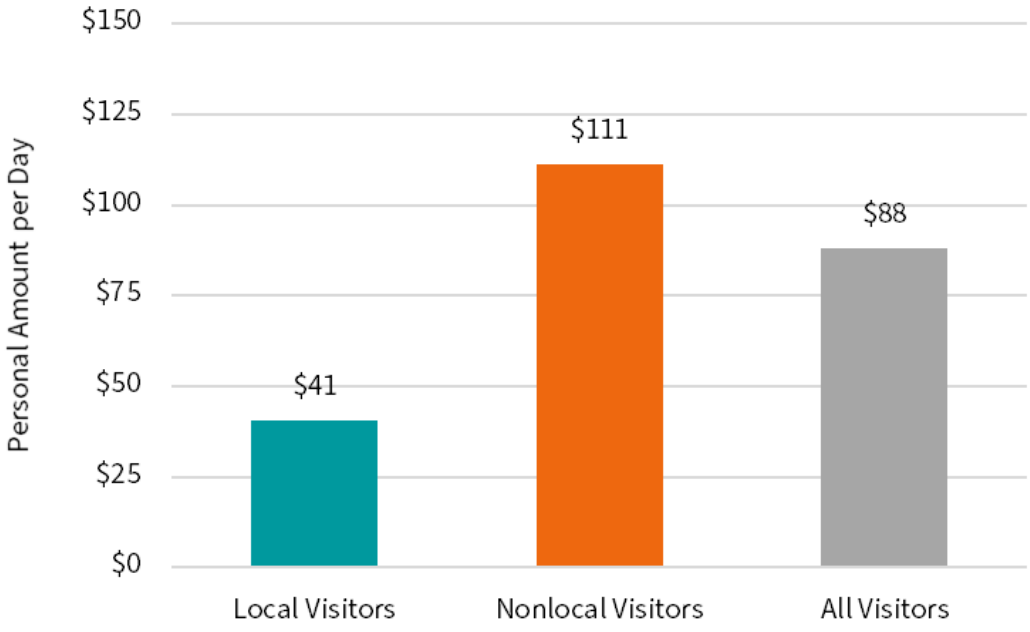


Fig. 23: Total personal willingness to pay per day above and beyond most recent trip expenses if costs were to increase for local, nonlocal, and all visitors. Due to the fixed-response question format, estimates of willingness to pay may underestimate the amount visitors would actually pay. Responses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

- The programs most likely to encourage a return visit from the 39% of visitors who typically engage in programs are those focused on highlighting unique local culture (67%) and skill-building (39%)(Fig. 24).
- The top two factors likely to increase visitors' future participation in their primary recreation activity were more infrastructure (27%) and recreation equipment available for rent (20%) (Fig. 25).
- The top two factors likely to decrease visitors' future participation in their primary recreation activity were more people participating in their primary activity (27%) and less regulations on hunting (15%) (Fig. 25).

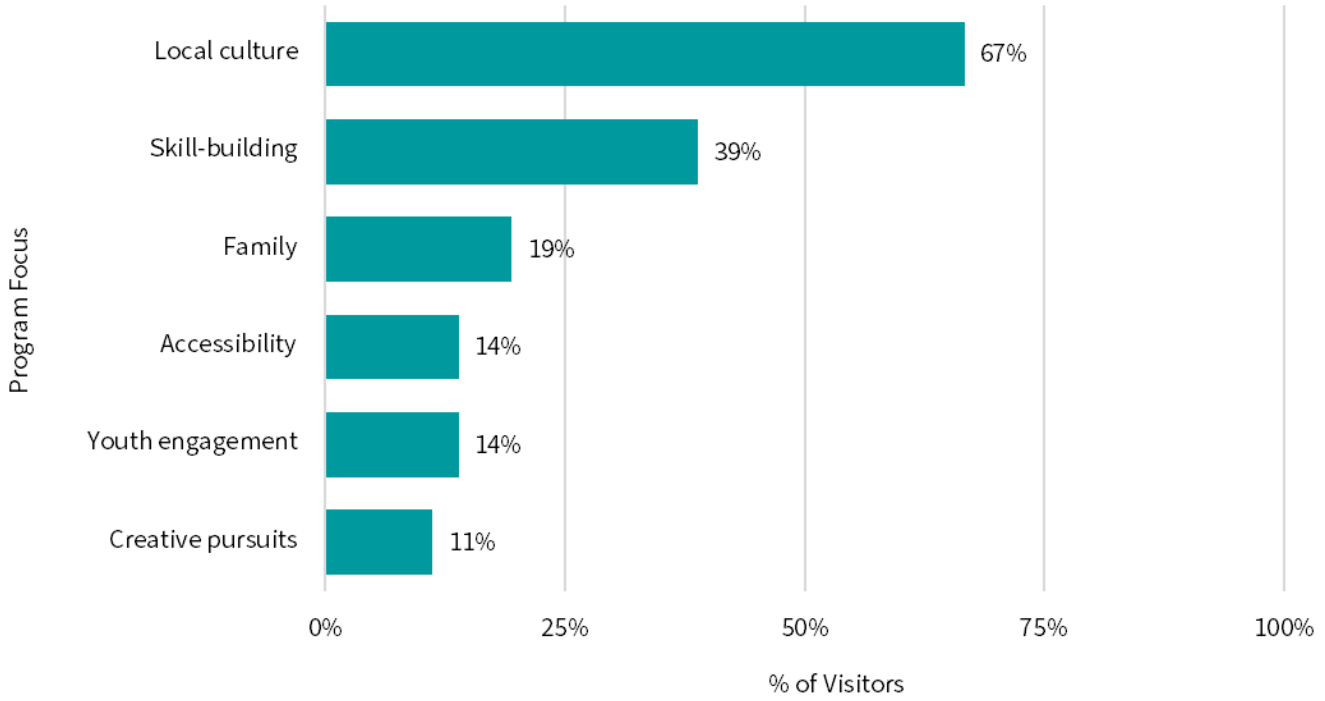


Fig. 24: Types of programs that would encourage visitors who typically participate in programs to return to this refuge.

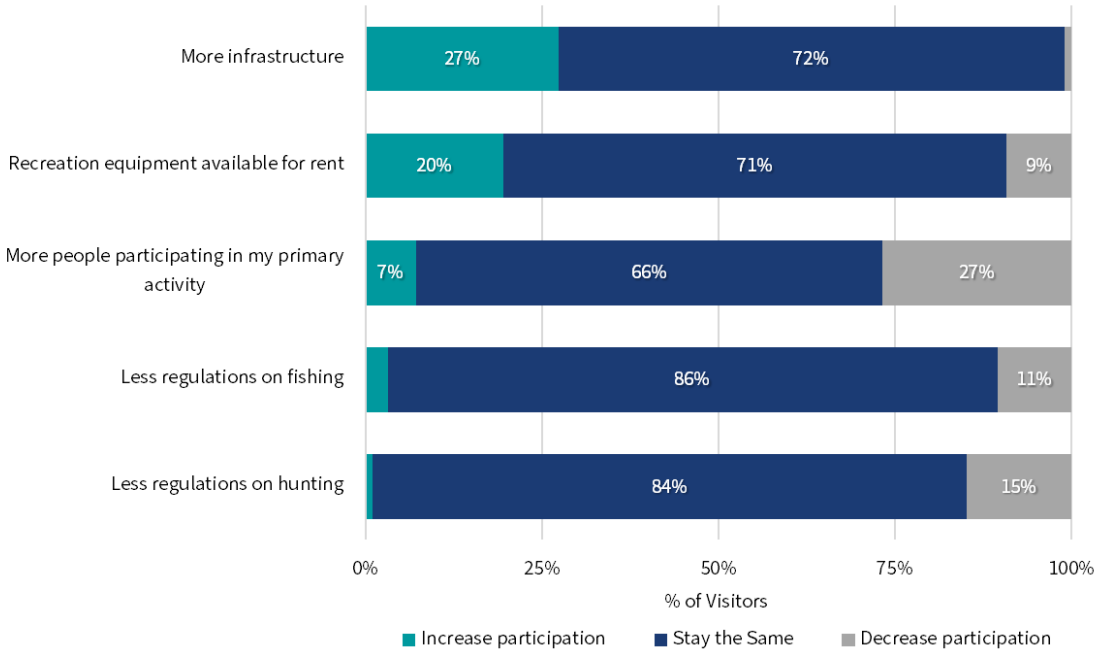


Fig. 25: Changes in visitors' participation in their primary activity if the listed recreation factors were to change.

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):

- pedestrian paths (23%),
- bus/tram that provides a guided tour (20%),
- bus/tram that takes passengers to different points within refuge boundaries (15%).

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 resource changes likely to increase visitors' future participation in their primary recreation activity were an improvement in the quality of wetlands (40%), a greater diversity of species (39%), and improvement of wildlife habitat quality other than wetlands (38%).
- The top resource changes likely to decrease visitors' future participation in their primary recreation activity were less water available for recreation (48%) and more acreage open to hunting and fishing (21%).

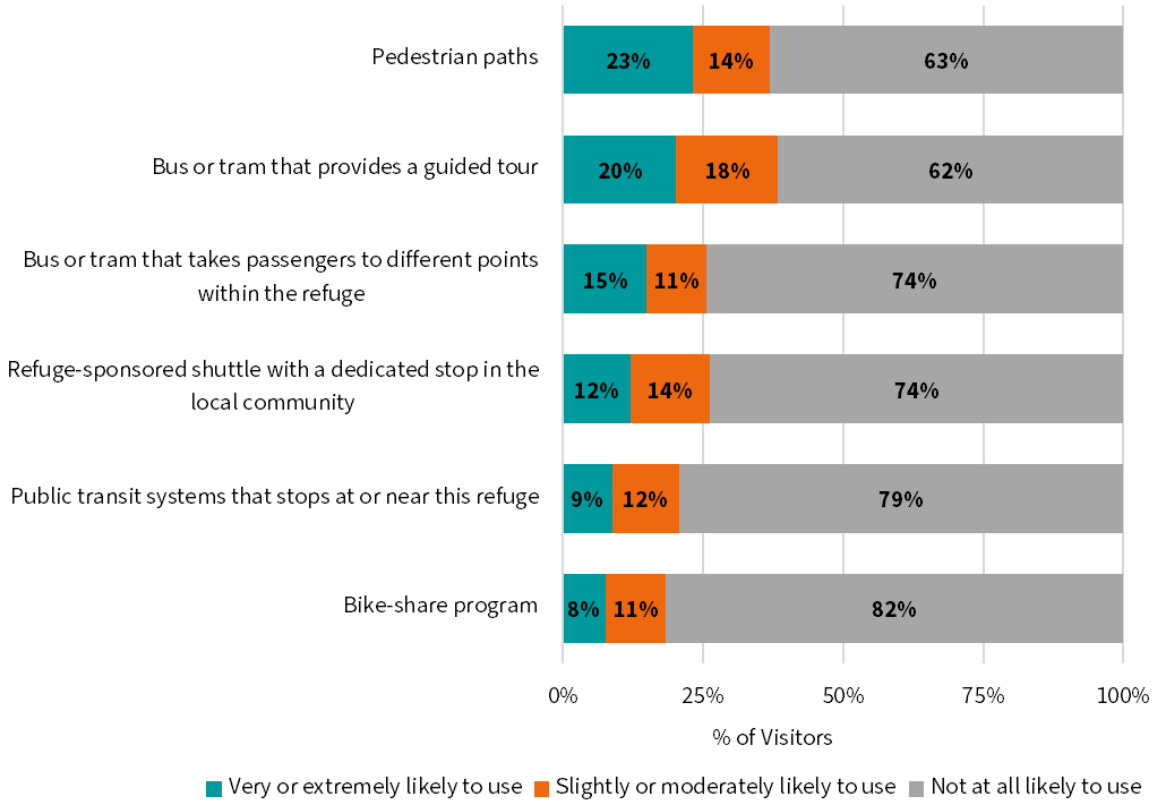


Fig. 26: Visitors' likelihood of using alternative transportation options if offered at this refuge.

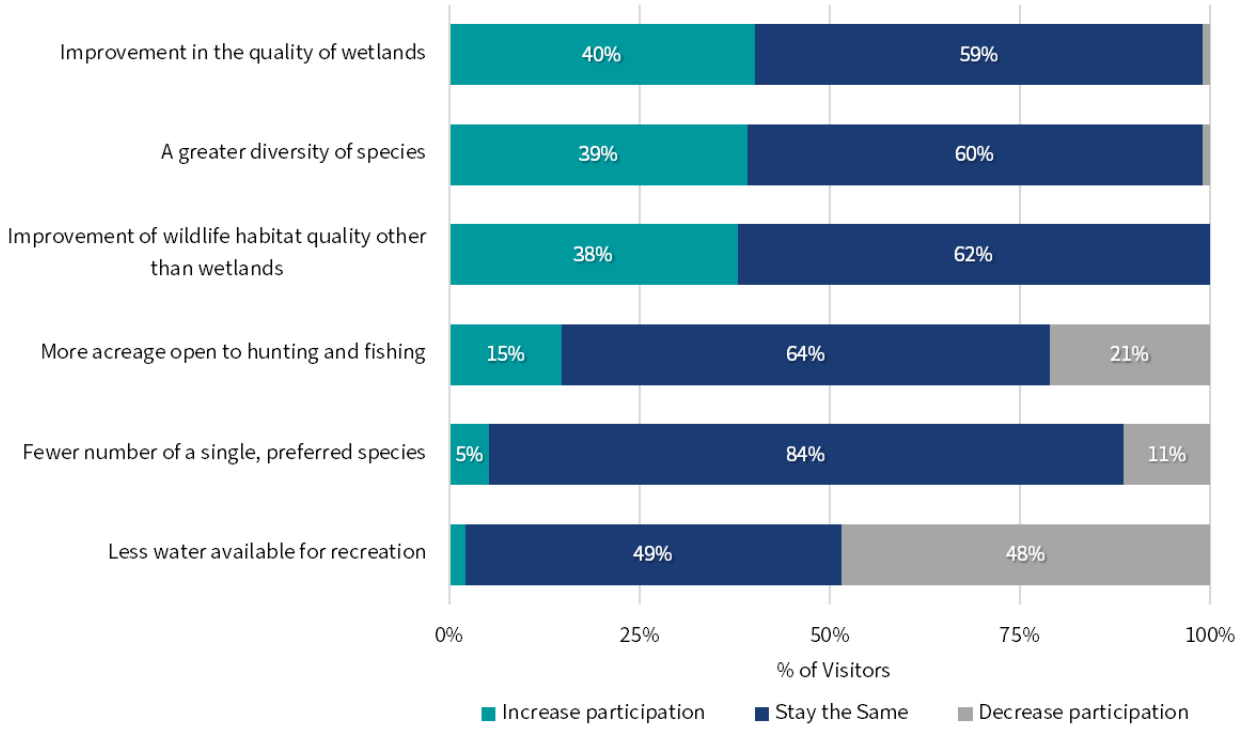


Fig. 27: Changes in visitors' participation in their primary activity if the listed resources were to change.

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Bill Williams River National Wildlife Refuge during 2019. 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 between February 2019 and January 2020. 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 a total of 15 sampling shifts, which occurred at set times during each of two separate 14-day sampling periods (note: some refuges conducted sampling during only one 21-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 who 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 was 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 time respondents took to complete the online survey during the 2018 sampling effort 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. A margin of error of ± 5% at a 95% confidence level signifies that if a reported percentage is, for example, 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 passes through a single-entry point and much more difficult if a refuge has multiple access points over a large area. Additionally, sampling may not have effectively captured all visitor activities that occur 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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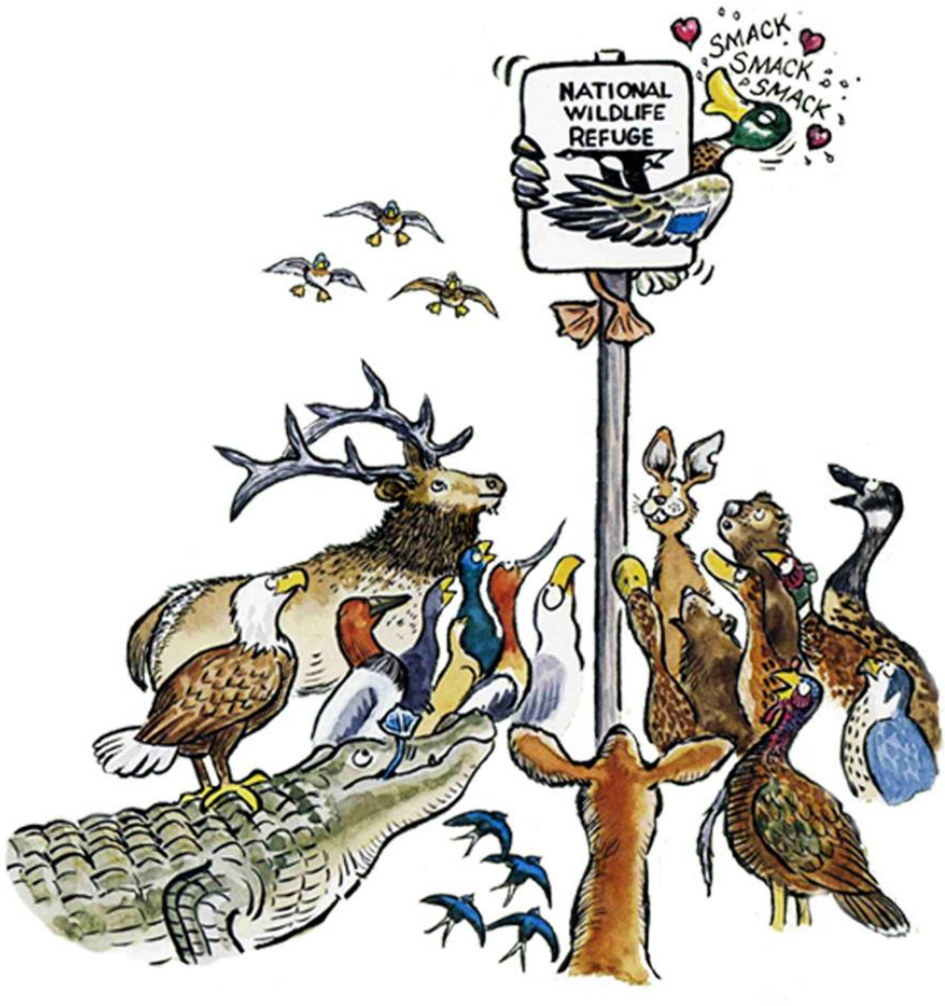
OMB: 0596-0236
Exp: 11/30/2020

National Wildlife Refuge Visitor Survey



Front cover of the 2019 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*.)

[67%] Wildlife observation	[69%] Hiking/Walking	[3%] Volunteering
[61%] Bird watching	[2%] Jogging/Running/Exercising	[0%] Environmental education program (classroom visits, labs)
[44%] Photography	[1%] Bicycling	
[0%] Big game hunting	[16%] Auto tour route/Driving	[8%] Interpretative program (bird walks, staff/volunteer-led talks)
[0%] Upland/Small game hunting	[7%] Motorized boating	
[0%] Waterfowl/Migratory bird hunting	[25%] Nonmotorized boating (canoeing, kayaking)	[1%] Refuge special event (*specify*) See Appendix C
[23%] Freshwater fishing	[0%] Foraging (berries, nuts, other)	[2%] Other (*specify*) See Appendix C
[0%] Saltwater fishing	[15%] 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.*)

   [38%] It was the primary purpose or sole destination of my trip.

   [30%] It was one of many equally important reasons or destinations for my trip.

   [32%] 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?

72% No / Not Applicable

28% Yes → If yes, what did you do there? (*Mark all that apply*.)

- 33% Asked information of employees/volunteers
- 18% Attended a talk/video/presentation
- 64% Viewed the exhibits
- 0% Picked up/purchased a license, permit, or pass
- 18% Visited the gift shop or bookstore
- 27% Looked at list of recent bird/wildlife sightings
- 48% Stopped to use the facilities (for example, got water, used restroom)
- 0% Rented/borrowed equipment (for example, binoculars, fishing rod, snowshoes)
- 9% 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: 5 day(s)

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

34% Yes

66% 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: 4 hour(s)

If you spent one day or more in the local area, enter the number of days: 22 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: 25 minutes

If you travelled more than one hour, round to the nearest hour: 8 hours

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

- 56% Spring (March-May)
- 9% Summer (June-August)
- 53% Fall (September-November)
- 51% Winter (December-February)

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

…this refuge (including this visit)? 8 number of visits

…other national wildlife refuges? 3 number of visits

…other public lands (for example, national or state parks) to participate in the same primary activity as this visit? 9 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*.)

[28%] Facebook	[0%] Twitter	[0%] Personal blog (for example, Tumblr, Wordpress)
[0%] Flickr/SmugMug	[3%] eBird	[0%] Travel-related website (for example, Trip Advisor)
[5%] Instagram	[22%] Text message	[0%] Other (*specify*) See Appendix C
[2%] Snapchat	[14%] Email	[52%] I did not use social media to share my experience with others

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…					
	Not at all helpful	Slightly helpful	Moderately helpful	Very helpful	Extremely helpful	Did not use
Personal knowledge from previous visit(s)	[4%]	[4%]	[13%]	[27%]	[54%]	[43%]
Word of mouth (for example, a friend or relative)	[7%]	[11%]	[24%]	[39%]	[19%]	[46%]
People in the local community near the refuge	[21%]	[11%]	[26%]	[29%]	[13%]	[62%]
Refuge employees or volunteers	[6%]	[6%]	[14%]	[32%]	[42%]	[49%]
Printed map or atlas	[8%]	[10%]	[31%]	[21%]	[31%]	[59%]
Web-based map (for example, Google Maps, Waze)	[9%]	[7%]	[26%]	[28%]	[30%]	[53%]
Social media (for example, Facebook, Instagram)	[53%]	[5%]	[16%]	[16%]	[11%]	[80%]
eBird	[47%]	[0%]	[20%]	[20%]	[13%]	[84%]
Recreation club or organization	[53%]	[7%]	[13%]	[0%]	[27%]	[81%]
Refuge website	[16%]	[16%]	[3%]	[28%]	[38%]	[67%]
Travel website (for example, TripAdvisor)	[58%]	[17%]	[0%]	[17%]	[8%]	[88%]
Other website (*specify*) See Appendix C	[17%]	[0%]	[33%]	[17%]	[33%]	[93%]
Refuge printed information (for example, brochure)	[8%]	[8%]	[30%]	[27%]	[27%]	[61%]
Kiosks/displays/exhibits at the refuge	[5%]	[5%]	[23%]	[28%]	[39%]	[37%]
Travel guidebook or other book	[55%]	[9%]	[18%]	[9%]	[9%]	[89%]
Tourist information or welcome center	[29%]	[12%]	[18%]	[12%]	[29%]	[79%]
Other source (*specify*) See Appendix C	[33%]	[0%]	[0%]	[33%]	[33%]	[90%]

SECTION 3. Transportation and access at this refuge

1. Please rate how **satisfied** you are with the way this refuge is managing each of the following transportation-related features. *If this refuge does not have a specific feature or you did not experience it during this visit, please circle NA "Not Applicable" under the satisfaction column.*

Transportation-Related Features	Of visitors who found the feature applicable, the % who were…					Not Applicable
	Not at all Satisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied	Extremely Satisfied	
Surface conditions of refuge roads	0%	9%	22%	52%	17%	9%
Surface conditions of parking areas	0%	2%	25%	48%	25%	4%
Condition of bridges on roadways	0%	2%	9%	57%	32%	47%
Condition of trails and boardwalks	0%	5%	10%	44%	41%	13%
Condition of boat launches	4%	9%	13%	44%	29%	55%
Number of places for parking	0%	5%	15%	48%	32%	1%
Number of places to pull over on refuge roads	4%	15%	24%	41%	15%	54%
Safety of refuge road entrances/exits	3%	6%	25%	39%	27%	4%
Safety of roads/trails for nonmotorized users (for example, bicyclists and hikers)	2%	3%	19%	40%	37%	35%
Signs on highways directing you to this refuge	3%	19%	20%	29%	29%	1%
Signs directing you around refuge roads	3%	22%	24%	31%	20%	40%
Signs directing you on trails	3%	12%	24%	35%	26%	31%
Access for people with physical disabilities or who have difficulty walking	5%	7%	14%	39%	36%	56%

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%	34%
Private/rental vehicle with a trailer (for boat, camper, or other)	8%	0%
Refuge shuttle bus/tram	0%	1%
Public transportation	0%	0%
Bicycle	1%	0%
Foot (for example, walking/hiking)	6%	41%
Boat	5%	10%
Other (*specify*): See Appendix C	0%	0%
Other (*specify*): See Appendix C	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)	74%	3%	7%	5%	10%
Bus or tram that provides a guided tour of the refuge with information about this refuge and its resources	62%	7%	11%	10%	11%
Refuge-sponsored shuttle with a dedicated stop in the local community for picking up people at set times	74%	7%	8%	4%	8%
Public transit system that stops at or near this refuge	79%	8%	4%	3%	5%
Bike-share program that offers bicycles for rent on or near this refuge	82%	4%	6%	4%	3%
Pedestrian paths for access to this refuge from the local community	63%	8%	5%	9%	14%

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 <u>local area/communities & at this refuge</u> *(within 50 miles of this refuge)*
Hotel, bed & breakfast, cabin, etc.	See report for summary of visitor expenditures
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)	
Guides and tour fees	
Equipment rental (for example, bicycle, canoe, kayak)	
Sporting goods (for example, bait, binoculars)	
Souvenirs/clothing and other retail	
Other (*specify*) ___See Appendix C___	

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 <u>maximum extra amount</u> you would pay and still visit this refuge? (*Mark the dollar amount that represents your response.*)

☐ 15% $0	☐ 6% $30	☐ 18% $100	☐ 4% $250
☐ 7% $5	☐ 2% $45	☐ 0% $125	☐ 2% $350
☐ 11% $10	☐ 4% $60	☐ 6% $150	☐ 6% $500
☐ 15% $20	☐ 1% $75	☐ 1% $200	☐ 1% $750

SECTION 5. Your experience at this refuge

1. Please rate how **satisfied** you are with the way this refuge is managing each of the following services, facilities, and opportunities. *If this refuge does not offer a specific item or you did not experience it on this visit, please circle NA "Not Applicable" under the satisfaction column.*

Refuge Services, Facilities, and Opportunities	Of visitors who found the feature applicable, the % who were…					Not Applicable
	Not at all Satisfied	Slightly Satisfied	Moderately satisfied	Very Satisfied	Extremely Satisfied	
Convenient hours/days of operation for this refuge	2%	1%	7%	44%	46%	13%
Availability of employees or volunteers	5%	11%	20%	34%	30%	38%
Courteous and welcoming employees or volunteers	1%	6%	18%	31%	43%	32%
Signs with rules/regulations for this refuge	1%	3%	22%	42%	32%	8%
Visitor center	11%	2%	19%	32%	36%	46%
Well-maintained restrooms	0%	1%	11%	32%	55%	24%
Recreational structures (decks, blinds, platforms)	1%	0%	11%	32%	57%	22%
Bird-watching opportunities	1%	1%	14%	35%	49%	18%
Opportunities to observe wildlife other than birds	3%	4%	25%	33%	36%	23%
Opportunities to photograph wildlife and scenery	3%	1%	13%	36%	48%	20%
Environmental education opportunities	5%	2%	29%	38%	26%	57%
Hunting opportunities	25%	38%	25%	0%	13%	92%
Fishing opportunities	3%	0%	8%	34%	55%	62%
Trail hiking opportunities	3%	1%	21%	42%	33%	27%
Bicycling opportunities	17%	0%	25%	42%	17%	88%
Water trail opportunities for canoeing or kayaking	2%	0%	8%	35%	55%	51%
Volunteer opportunities	0%	7%	21%	36%	36%	85%
Wilderness experience opportunities	3%	3%	17%	39%	39%	61%

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

See Appendix C

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

See Appendix C

4. 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%	14%	46%	41%
I felt safe during my visit to this refuge.	0%	0%	3%	44%	53%
Crime is a problem at this refuge.	65%	19%	13%	1%	1%
I feel comfortable being in nature.	0%	0%	1%	37%	62%
I do not like being in nature by myself.	70%	19%	6%	4%	1%
People closest to me enjoy participating in nature-based recreation.	0%	3%	5%	42%	50%
Generally, people who look like me are treated differently when they participate in nature-based recreation.	67%	15%	14%	2%	2%

5. 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.	0%	4%	18%	49%	28%
The quality of the overall experience when visiting this refuge.	0%	3%	16%	49%	33%

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	48%	49%	2%
More acreage open to hunting and fishing	21%	64%	15%
More infrastructure (for example, bathrooms, observation decks)	1%	72%	27%
Recreation equipment available for rent (for example, fishing rods, binoculars, snowshoes)	9%	71%	20%
Less regulations on fishing	11%	86%	3%
Less regulations on hunting	15%	84%	1%
A greater diversity of species	1%	60%	39%
Fewer numbers of a single, preferred species	11%	84%	5%
More people participating in my primary activity	27%	66%	7%
An improvement in the quality of wetlands	1%	59%	40%
An improvement in the quality of wildlife habitat other than wetlands	0%	62%	38%

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

58% Yes 14% No 28% 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*.)

61% I do not typically participate in refuge programs

The following represent what % of visitors who do typically participate in programs indicated they would be encouraged to return if the program was offered:

14% Programs that engage youth

19% Programs that focus on family/multiple-generations

39% Programs that teach skills to visitors

67% Programs that highlight unique local culture

11% Programs that focus on creative pursuits (for example, art, writing, meditation)

14% Programs that support people with accessibility concerns (for example, difficulty walking, in a wheelchair)

11% Other (*specify*) See Appendix C

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, and allow us to compare who visits refuges with other known public data sources. Answers will <u>not</u> be linked to any individual taking this survey. *****

1. Are you? [61%] Male [39%] Female

2. In what year were you born? 1954 (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)			
				[0%]						[13%]				[58%]				[29%]	

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

- [97%] White
- [1%] Hispanic, Latino, or Spanish
- [0%] Black or African American
- [2%] Asian
- [0%] American Indian or Alaska Native
- [0%] Middle Eastern or North African
- [0%] Native Hawaiian or Other Pacific Islander
- [2%] 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.*)

- [1%] Less than $10,000
- [1%] $10,000 - $24,999
- [6%] $25,000 - $34,999
- [14%] $35,000 - $49,999
- [31%] $50,000 - $74,999
- [22%] $75,000 - $99,999
- [15%] $100,000 - $149,999
- [3%] $150,000 - $199,999
- [6%] $200,000 or more

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

- [20%] Employed full-time
- [4%] Employed part-time
- [13%] Self-employed
- [0%] Unemployed
- [0%] Homemaker/caregiver
- [0%] Student
- [62%] Retired
- [0%] Disabled/unable to work
- [0%] Other (*specify*): See Appendix C

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
Christmas Bird Count	1

Other Activity	Frequency
Sightseeing	1
Wildflower identification	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	6
Bird watching	13
Fishing	15
Hiking	25
Interpretation	4
Nonmotorized boating	15
Other	1
Photography	3
Picnicking	4
Sightseeing	2
Wildlife observation	10

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
Picked up brochures.	1
Visitor center was closed.	2

Survey Section 2

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

Other Websites	Frequency
golakehavasu.com	1
Hikes link	1
NOAA	1
YouTube	1

Other Information Sources	Frequency
Havasu newspaper	1
Newspaper	1
Signage along road	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	1
Exercise-related activities	1
Fishing-related activities	1
Water-based activities	1

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=21)
Better signage is needed for the entrance. We drove back and forth a couple of times before we saw the turn off.
Dirt road along old river could be graded more often to make it easier for those of us with rental cars. Sign could have been posted that road is a dead end (my GPS thought it went all the way through).
Dirt road up the refuge needs better maintenance.
Easy to find. Turn-off was well marked. Hiking trail was gorgeous!
Entrance sign too close to the entrance, on a curve in the road, don't have time to slow down and make the turn.
Hard to see the turn sign from the highway for Bill Williams NWR when northbound (don't know about southbound).
Hazard to cross traffic; signage too short on Highway 95.
I have never driven on the Planet Ranch Road, so my only concern was the main entry towards the lake and visitor center.
Need to open the road to Mineral Wash Road.
Needs a turn lane to enter.
Permanent speed bumps should be installed to slow down cars and trucks entering and exiting the parking lot and visitor center area. Volunteer housing area is constantly buried in dust!! Maybe cover the area in crushed stone to hold down the dust.
The main paths to the fishing areas were well maintained and accessible to people with mobility issues. The parking areas were well marked.
The paved paths are great. The walking tour should be clearer that you're going off the paved trail.
The road is in need of more gravel or paving. There is a lot of dust once you enter the reserve from the road.
There aren't many signs directing users to the various trails, and there aren't many hiking trails. The entrance from the highway to the visitor center was redone a few years ago and is great - easy, safe, and well-signed. Other highway pull offs are okay to sketchy. The entrance to Planet Ranch Road is poorly signed and can be downright dangerous. I don't know how much power the refuge actually has over any of the highway features, probably not much.
Wasn't visitor friendly.

We did not take the road that goes back into the Bill Williams Refuge, only the road that goes to the nonmotorized boat launch.
We like the peninsula trail at BWRNWR.
We live in Hillcrest Bay just adjacent to the refuge.
We only drove to the visitor center.
We were hoping this road still traveled to Planet, AZ, and were disappointed that they have gated it off. We could not access the river and, therefore, we did not see any of the usual wildlife - like javalinas and waterfowl. There are various videos of people being able to drive right to the water to see these things.

Survey Section 5

Question 2: “What, if any, opportunities do you think are currently missing at this refuge?”

Comments on Opportunities at This Refuge (n=17)
A clearly marked trail to Bill Williams River.
Bathrooms. Besides that, it was beautiful just the way it was.
Better maps of the Bill Williams River for kayaking with marked distance and points of interest.
Boat shoreline tours and paddling upriver.
Bookstore.
Group kayaking.
If I could give the refuge a huge chunk of money and staff, I would want them to use it to build and maintain hiking trails along and within the river basin for visitors. There are a few, but no established trails or interpretive signs along the river itself, and the refuge doesn't have the staff to keep up with flood damage (which, of course, is natural to a river system).
Improve boat launch.
It was a nice place to stop for lunch.
It was great as it was, simple.
Kayak rental onsite.
Kayak rental.
Lack of access to the best part of the refuge via car, truck, or SUV.
Maybe some guided day hikes within the refuge or an ATV tour for handicapped people.

Not being able to cross the dam with a small boat and truck. Cost us a lot more gas money going around through Parker.
Would be nice if the visitor center was open on weekends.
Would be nice to have an elevated platform near the cattail marsh on the east side of the highway.

Question 3: “If you have additional comments about the services, facilities, and opportunities at this refuge, please write them here.”

Comments on Services, Facilities, and Opportunities at This Refuge (n=23)
Hiking/walking destination that can be added with Planet Ranch Road to Mineral Wash Road open.
I don't think that fishing platforms enhance the refuge, nor is fishing an appropriate activity for a wildlife refuge.
I found out about this refuge on NOAA's weather site. Once I knew about it, there was online information readily available. There was a helpful Fish and Wildlife Service employee that I reached easily by phone; she gave excellent information. The birds and plants were interesting and the views spectacular.
I love the scenery here. It is one of my favorites in the area. Loved the hiking.
I worked at this refuge 25 years ago and the same education signs along the trail are still in place. They are faded and dated. It would be nice to see some new information and "stories" regarding the refuge.
It was a nice place to stop for lunch to see some water and some birds. We were not prepared to fish or boat.
It's a quiet secret, which should have more people aware of it.
Kayak rental would have been nice. Visited on a holiday, so visitor center was closed.
Open the visitor center on weekends, for even a limited time, if possible. Replace worn out signs and storyboards. Disgusting condition!!
Places to get out of the kayak back in the refuge are needed, either landings or docks. And a toilet of some kind would really be appreciated back up the river.
Simple, the way it should be, very quiet.
The existing benches and viewing platforms at the headquarters are nice, although some have tall vegetation growing up around them and obscuring the view. The restrooms are always super clean and well stocked.
The guided informational hike was well done and professional. Thank you.
The refuge cleanliness and trimming of walkway bushes and trees depends on the volunteers at the time. In winter/spring 2018 the restrooms, fishing docks, and walkways were immaculate. Fall 2018 through spring 2019, the volunteers appeared to have done the bare minimum. Plants have overgrown some of the pathways,

restrooms run out of toilet paper, docks are filthy, and at times the garbage cans stink so bad you don't want to open them.

The visitor center was not open during our trip, even though it was supposed to be. I have hiked the refuge on several occasions. When the Bill Williams River is flowing at a slow rate in the spring, it is a great place for a hike. It would be nice to be able to know if the river is flowing before making the drive to Lake Havasu City.

The visitor center was not open while I was there. I would have liked to see it.

Though not encountered on the most recent trip, volunteer camp hosts are always pleasant.

Vegetation around the boat ramp can get thick.

Very good fishing access area with platforms and some bank fishing areas.

Visitor center was closed, even though the hours posted were included the time we were there. Same the past 2 times we visited.

Visitor center was closed, but the refuge more than made up for it with interesting sites.

We had hiked at a nearby state park and wanted to spend a short time hiking. This refuge was nearby and convenient.

Would have been nice if the employees in the Bill Williams visitor center would have at least made an appearance and said hello, instead of shutting their office door on us. We spoke to no one and there were people there.

End of Survey

General Comments (n=13)

Beautiful, well-kept, and clean place to visit. I really enjoyed the peaceful walk and scenery. I very much appreciated all of the signs to remind me to watch for rattlesnakes, which kept me alert to my surroundings. Restroom was clean. I wish the visitor center had been open, but it did not impact my visit.

Bill Williams is an excellent, well-run resource.

Good luck. Love NWRs!

I wanted to note that this refuge is really fighting an uphill battle when it comes to conserving the river, and they do an amazing job with very few resources. Drought, OHV use, and invasive plants all put a lot of pressure on the ecosystem, and none of them are easy to manage (or even completely manageable).

I would like any information on local groups using or supporting this refuge.

It was an enjoyable journey through this refuge. Relaxing. Fun. Great photography!

Keep up the good work.

Overall, this was a satisfying visit. Saw some 35 species of birds, but were combining the bird watching with hiking, as preferred by my wife. We came from AK, thus the long travel time. Trailer camped in Parker to visit friends in Lake Havasu. They recommended the refuge as a birding/hiking opportunity.

Road access from Planet Ranch Road to Mineral Wash Road. I am 70 years old, and my wife is 76 years old. We jeep and hike all around Mohave and Lapaz Counties. By closing road access, you are discriminating against the elderly and disabled.

The Bill Williams River National Wildlife Refuge is one of our favorite places to visit for fishing. The volunteers have always been very friendly. We have met and talked to the Federal Wildlife Officers several times, and they are very nice and informative. We appreciate the Federal and Arizona Wildlife Officers checking to see if everyone is legal when fishing.

We are winter visitors to the area and enjoy the spectacular views, birds, flowers, and desert flora at Bill Williams River National Wildlife Refuge.

Wonderful wild place to hike, bird, and watch spring unfold. Only thing we can think of to improve it is to somehow add a turn lane to enter from 95 (busy road).

Would like to see refuges properly funded at the federal level. They provide an important interface for the general public with our wildlife and wildlife places.