



National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for Horicon National Wildlife Refuge

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Horicon Marsh is a jewel! It offers an amazing natural experience. It satisfies one's aesthetic, spiritual, and intellectual needs. Thank you to all who have created and maintained Horicon Marsh.—Survey comment from visitor to Horicon National Wildlife Refuge.



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

Contents

Acknowledgments	iv
Introduction	1
Organization of Results	1
Methods	2
Selecting Participating Refuges.....	2
Developing the Survey Instrument	2
Contacting Visitors	2
Interpreting the Results	4
Refuge Description.....	5
Sampling at This Refuge	7
Selected Survey Results	7
Visitor and Trip Characteristics.....	7
Visitor Spending in Local Communities	14
Visitor Opinions about This Refuge	15
Visitor Opinions about National Wildlife Refuge System Topics.....	20
Conclusion	24
References.....	24
Appendix A: Survey Frequencies for This Refuge.....	A-1
Appendix B: Visitor Comments for This Refuge	B-1

Figures

1.	Map of this refuge.....	6
2.	How visitors first learned or heard about this refuge.....	8
3.	Resources used by visitors to find their way to this refuge during this visit.....	9
4.	Number of visitors travelling to this refuge by residence.....	10
5.	Modes of transportation used by visitors to this refuge during this visit.	11
6.	Activities in which visitors participated during the past 12 months at this refuge.	12
7.	The primary activity in which visitors participated during this visit.....	13
8.	Use of the visitor center at this refuge..	13
9.	Overall satisfaction with this refuge during this visit.....	15
10.	Importance-satisfaction ratings of services and facilities provided at this refuge.....	17
11.	Importance-satisfaction ratings of recreational opportunities provided at this refuge.....	18
12.	Importance-satisfaction ratings of transportation-related features at this refuge.....	19
13.	Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future.....	21
14.	Visitors' personal involvement with climate change related to fish, wildlife and their habitats.....	22
15.	Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats.....	23

Tables

1.	Participating refuges in the 2010/2011 national wildlife refuge visitor survey.	3
2.	Sampling and response rate summary for this refuge.	7
3.	Influence of this refuge on visitors' decision to take this trip.	9
4.	Type and size of groups visiting this refuge.....	11
5.	Total visitor expenditures for this refuge expressed in dollars per person per day.	14

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Introduction

The National Wildlife Refuge System (Refuge System), established in 1903 and managed by the U.S. Fish and Wildlife Service (Service), is the leading network of protected lands and waters in the world dedicated to the conservation of fish, wildlife and their habitats. There are 556 national wildlife refuges (NWRs) and 38 wetland management districts nationwide, including possessions and territories in the Pacific and Caribbean, encompassing more than 150 million acres. The mission of the Refuge System is to “administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” Part of achieving this mission is the goal “to foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use” (Clark, 2001). The Refuge System attracts more than 45 million visitors annually, including 25 million people per year to observe and photograph wildlife, over 9 million to hunt and fish, and more than 10 million to participate in educational and interpretation programs (Uniack, 1999; U.S. Fish and Wildlife Service, 2007). Understanding visitors and characterizing their experiences on national wildlife refuges are critical elements of managing these lands and meeting the goals of the Refuge System.

The Service contracted with the U.S. Geological Survey (USGS) to conduct a national survey of visitors regarding their experiences on national wildlife refuges. The survey was conducted to better understand visitor needs and experiences and to design programs and facilities that respond to those needs. The survey results will inform Service performance planning, budget, and communications goals. Results will also inform Comprehensive Conservation Plan (CCPs), Visitor Services, and Transportation Planning processes.

Organization of Results

These results are for Horicon NWR (this refuge) and are part of USGS Data Series 643 (Sexton and others, 2011). All refuges participating in the 2010/2011 surveying effort will receive individual refuge results specific to the visitors to that refuge. Each set of results is organized by the following categories:

- **Introduction:** An overview of the Refuge System and the goals of the national surveying effort.
- **Methods:** The procedures for the national surveying effort, including selecting refuges, developing the survey instrument, contacting visitors, and guidance for interpreting the results.
- **Refuge Description:** A brief description of the refuge location, acreage, purpose, recreational activities, and visitation statistics, including a map (where available) and refuge website link.
- **Sampling at This Refuge:** The sampling periods, locations, and response rate for this refuge.
- **Selected Survey Results:** Key findings for this refuge, including:
 - Visitor and Trip Characteristics
 - Visitor Spending in the Local Communities
 - Visitors Opinions about This Refuge
 - Visitor Opinions about National Wildlife Refuge System Topics
- **Conclusion**
- **References**
- **Survey Frequencies (Appendix A):** The survey instrument with the frequency results for this refuge.
- **Visitor Comments (Appendix B):** The verbatim responses to the open-ended survey questions for this refuge.

Methods

Selecting Participating Refuges

The national visitor survey was conducted from July 2010 – November 2011 on 53 refuges across the Refuge System (table 1). Based on the Refuge System’s 2008 Refuge Annual Performance Plan (RAPP; U.S. Fish and Wildlife Service, 2011, written comm.), 192 refuges with a minimum visitation of 25,000 were considered. This criterion was the median visitation across the Refuge System and the minimum visitation necessary to ensure that the surveying would be logistically feasible onsite. Visitors were sampled on 35 randomly selected refuges and 18 other refuges that were selected by Service Regional Offices to respond to priority refuge planning processes.

Developing the Survey Instrument

USGS researchers developed the survey in consultation with the Service Headquarters Office, managers, planners, and visitor services professionals. The survey was peer-reviewed by academic and government researchers and was further pre-tested with eight Refuge System Friends Group representatives from each region to ensure readability and overall clarity. The survey and associated methodology were approved by the Office of Management and Budget (OMB control #: 1018-0145; expiration date: 6/30/2013).

Contacting Visitors

Refuge staff identified two separate 15-day sampling periods and one or more locations that best reflected the diversity of use and specific visitation patterns of each participating refuge. Sampling periods and locations were identified by refuge staff and submitted to USGS via an internal website that included a customized mapping tool. A standardized sampling schedule was created for all refuges that included eight randomly selected sampling shifts during each of the two sampling periods. Sampling shifts were three- to five-hour randomly selected time bands that were stratified across AM and PM, as well as weekend and weekdays. Any necessary customizations were made, in coordination with refuge staff, to the standardized schedule to accommodate the identified sampling locations and to address specific spatial and temporal patterns of visitation.

Twenty visitors (18 years or older) per sampling shift were systematically selected, for a total of 320 willing participants per refuge—160 per sampling period—to ensure an adequate sample of completed surveys. When necessary, shifts were moved, added, or extended to alleviate logistical limitations (for example, weather or low visitation at a particular site) in an effort to reach target numbers.

Table 1. Participating refuges in the 2010/2011 national wildlife refuge visitor survey.

Pacific Region (R1)	
Kilauea Point National Wildlife Refuge (HI)	William L. Finley National Wildlife Refuge (OR)
Deer Flat National Wildlife Refuge (ID)	McNary National Wildlife Refuge (WA)
Cape Meares National Wildlife Refuge (OR)	Turnbull National Wildlife Refuge (WA)
Malheur National Wildlife Refuge (OR)	
Southwest Region (R2)	
Bitter Lake National Wildlife Refuge (NM)	Aransas National Wildlife Refuge (TX)
Bosque del Apache National Wildlife Refuge (NM)	San Bernard/ Brazoria National Wildlife Refuge (TX)
Wichita Mountains Wildlife Refuge (OK)	
Great Lakes-Big Rivers Region (R3)	
DeSoto National Wildlife Refuge (IA)	McGregor District, Upper Mississippi River National Wildlife and Fish Refuge – (IA/WI)
Neal Smith National Wildlife Refuge (IA)	
Muscatatuck National Wildlife Refuge (IN)	Big Muddy National Fish and Wildlife Refuge (MO)
Rice Lake National Wildlife Refuge (MN)	Horicon National Wildlife Refuge (WI)
Tamarac National Wildlife Refuge (MN)	Necedah National Wildlife Refuge (WI)
Southeast Region (R4)	
Wheeler National Wildlife Refuge (AL)	Banks Lake National Wildlife Refuge (GA)
Big Lake National Wildlife Refuge (AR)	Noxubee National Wildlife Refuge (MS)
Pond Creek National Wildlife Refuge (AR)	Cabo Rojo National Wildlife Refuge (Puerto Rico)
Merritt Island National Wildlife Refuge (FL)	Pea Island National Wildlife Refuge (NC)
St. Marks National Wildlife Refuge (FL)	Cape Romain National Wildlife Refuge (SC)
Ten Thousand Islands National Wildlife Refuge (FL)	Reelfoot National Wildlife Refuge (TN)
Northeast Region (R5)	
Stewart B. McKinney National Wildlife Refuge (CT)	Moosehorn National Wildlife Refuge (ME)
Bombay Hook National Wildlife Refuge (DE)	Great Swamp National Wildlife Refuge (NJ)
Monomoy National Wildlife Refuge (MA)	Montezuma National Wildlife Refuge (NY)
Parker River National Wildlife Refuge (MA)	Wertheim National Wildlife Refuge (NY)
Patuxent Research Refuge (MD)	Occoquan Bay/ Elizabeth Hartwell Mason Neck National Wildlife Refuge (VA)
Mountain-Prairie Region (R6)	
Monte Vista National Wildlife Refuge (CO)	Sand Lake National Wildlife Refuge (SD)
Quivira National Wildlife Refuge (KS)	National Elk Refuge (WY)
Charles M. Russell National Wildlife Refuge (MT)	
Alaska Region (R7)	
Alaska Maritime National Wildlife Refuge (AK)	Kenai National Wildlife Refuge (AK)
California and Nevada Region (R8)	
Lower Klamath/Tule Lake National Wildlife Refuge (CA)	Ruby Lake National Wildlife Refuge (NV)
Sonny Bono Salton Sea National Wildlife Refuge (CA)	

Refuge staff and/or volunteers (survey recruiters) contacted visitors on-site following a protocol provided by USGS to ensure a diverse sample. Instructions included contacting visitors across the entire sampling shift (for example, every n^{th} visitor for dense visitation, as often as possible for sparse visitation), and only one person per group. Visitors were informed of the survey effort, given a token incentive (for example, a small magnet, temporary tattoo), and asked to participate. Willing participants provided their name, mailing address, and preference for language (English or Spanish) and survey mode (mail or online). Survey recruiters also were instructed to record any refusals and then proceed with the sampling protocol.

Visitors were mailed a postcard within 10 days of the initial on-site contact thanking them for agreeing to participate in the survey and inviting them to complete the survey online. Those visitors choosing not to complete the survey online were sent a paper copy a week later. Two additional contacts were made by mail during the next seven weeks following a modified Tailored Design Method (Dillman, 2007): 1) a reminder postcard one week after the first survey, and 2) a second paper survey two weeks after the reminder postcard. Each mailing included instructions for completing the survey online and a postage paid envelope for returning the paper version of the survey. Those visitors indicating a preference for Spanish were sent Spanish versions of all correspondence (including the survey). Finally, a short survey of six questions was sent to nonrespondents four weeks after the second survey mailing to determine any differences between respondents and nonrespondents at the national level. Online survey data were exported and paper survey data were entered using a standardized survey codebook and data entry procedure. All survey data were analyzed by using SPSS v.18 statistical analysis software.

Interpreting the Results

The extent to which these results accurately represent the total population of visitors to this refuge is dependent on 1) an adequate sample size of those visitors and 2) the representativeness of that sample. The adequacy of the sample size for this refuge is quantified as the margin of error. The composition of the sample is dependent on the ability of the standardized sampling protocol for this study to account for the spatial and temporal patterns of visitor use specific to each refuge. Spatially, the geographical layout and public use infrastructure varies widely across refuges. Some refuges only can be accessed through a single entrance, while others have multiple unmonitored access points across large expanses of land and water. As a result, the degree to which sampling locations effectively captured spatial patterns of visitor use will likely vary from refuge to refuge. Temporally, the two 15-day sampling periods may not have effectively captured all of the predominant visitor uses/activities on some refuges during the course of a year. Therefore, certain survey measures such as visitors' self-reported "primary activity during their visit" may reflect a seasonality bias.

Herein, the sample of visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for Horicon NWR, any potential spatial and temporal sampling limitations specific to this refuge need to be considered when generalizing the results to the total population of visitors. For example, a refuge that sampled during a special event (for example, birding festival) held during the spring may have contacted a higher percentage of visitors who traveled greater than 50 miles to get to the refuge than the actual number of these people who would have visited throughout the calendar year (that is, oversampling of nonlocals). In contrast, another refuge may not have enough nonlocal visitors in the sample to adequately represent the beliefs and opinions of that group type. If the sample for a specific group type (for example, nonlocals, hunters, those visitors who paid a fee) is too low ($n < 30$), a warning is included. Additionally, the term "*this* visit" is used to reference the visit on which people were contacted to participate in the survey, which may or may not have been their most recent refuge visit.

Refuge Description for Horicon National Wildlife Refuge

Over 33,000 acres in size, Horicon Marsh is the largest freshwater cattail marsh in the United States. Two thirds of the marsh, around 22,000 acres, is managed by the U.S. Fish and Wildlife Service as the Horicon NWR. The southern one-third is administered by the Wisconsin Department of Natural Resources as the Horicon Marsh State Wildlife Area. The refuge was established in 1941 for the protection and conservation of thousands of migrating ducks and Canada geese.

Horicon NWR attracts over 377,000 visitors annually (U.S. Fish and Wildlife Service, 2011, written comm.). One of the main draws of the refuge is the vast number of birds that use Horicon as a resting place during spring and fall migrations. The refuge boasts hundreds of thousands of Canada geese, in addition to another 300 species of birds, white-tailed deer, red fox, river otters, muskrats, snapping turtles, garter snakes, and more. Visitors to Horicon NWR enjoy the auto-tour route, hiking, hunting, fishing, wildlife observation and environmental education. Figure 1 displays a map of Horicon NWR. For more information, visit <http://www.fws.gov/midwest/horicon/index.htm>.

Sampling at Horicon National Wildlife Refuge

A total of 334 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Horicon NWR (table 2). In all, 252 visitors completed the survey for a 76% response rate and $\pm 5\%$ margin of error at the 95% confidence level.¹

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

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	10/09/10 to 10/23/10	Horicon NWR Office/Visitor Center Main Dike Road Peachy Access Auto Tour Route and Hiking Trails Ledge Road	168	1	135	81%
2	04/30/11 to 05/14/11	Horicon NWR Office/Visitor Center Main Dike Road Peachy Access Auto Tour Route and Hiking Trails Ledge Road	166	3	117	72%
Total			334	4	252	76%

Selected Survey Results

Visitor and Trip Characteristics

A solid understanding of refuge visitors and details about their trips to refuges can inform communication outreach efforts, inform visitor services and transportation planning, forecast use, and gauge demand for services and facilities.

Familiarity with the Refuge System

While we did not ask visitors to identify the mission of the National Wildlife Refuge System or the U.S. Fish and Wildlife Service, visitors to Horicon NWR reported that before participating in the survey, they were aware of the role of the U.S. Fish and Wildlife Service in managing national wildlife refuges (91%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife,

¹ The margin of error (or confidence interval) is the error associated with the results related to the sample and population size. A margin of error of $\pm 5\%$, for example, means if 55% of the sample answered a survey question in a certain way, then 50–60% of the entire population would have answered that way. The margin of error is calculated with an 80/20 response distribution, assuming that for any given dichotomous choice question, approximately 80% of respondents selected one choice and 20% selected the other (Salant and Dillman, 1994).

plants and their habitat (94%). Positive responses to these questions concerning the management and mission of the Refuge System do not indicate the degree to which these visitors understand the day-to-day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why. Compared to other public lands, many visitors feel that refuges provide a unique recreation experience (94%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. More than half of visitors to Horicon NWR had been to at least one other National Wildlife Refuge in the past year (59%), with an average of 4 visits to other refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (39%) had only been to Horicon NWR once in the past 12 months, while most had been multiple times (61%). These repeat visitors went to the refuge an average of 15 times during that same 12-month period. Visitors used the refuge during only one season (52%), during multiple seasons (31%), and year-round (17%).

Most visitors first learned about the refuge from friends/relatives (57%), signs on the highway (20%), or refuge printed information (18%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (60%), signs on highways (49%), or a road atlas/highway map (30%; fig. 3).

About half of visitors (47%) lived in the local area (within 50 miles of the refuge), whereas the other half (53%) were nonlocal visitors. For most local visitors, Horicon NWR was the primary purpose or sole destination of trip (75%; table 3). For most nonlocal visitors, the refuge was the primary purpose or sole destination of trip (65%). Local visitors reported that they traveled an average of 25 miles to get to the refuge, while nonlocal visitors traveled an average of 162 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 75% of visitors travelling to Horicon NWR were from Wisconsin.

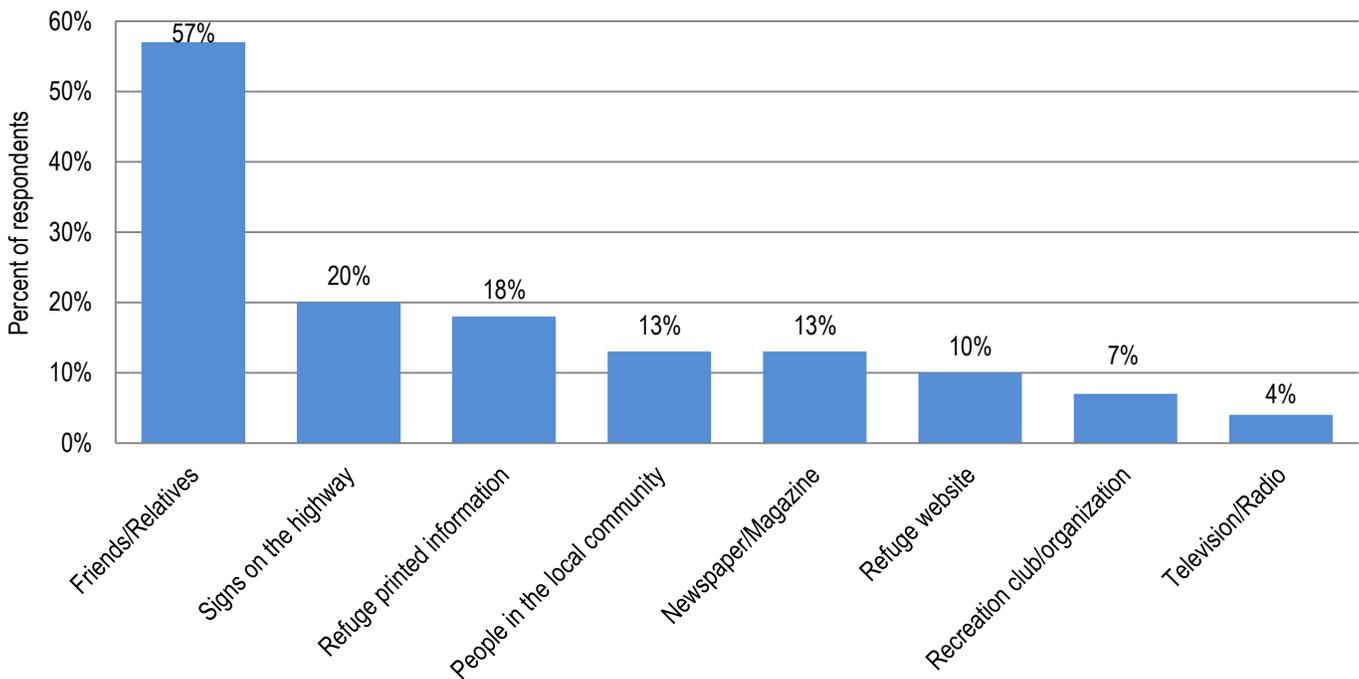


Figure 2. How visitors first learned or heard about Horicon NWR (n = 238).

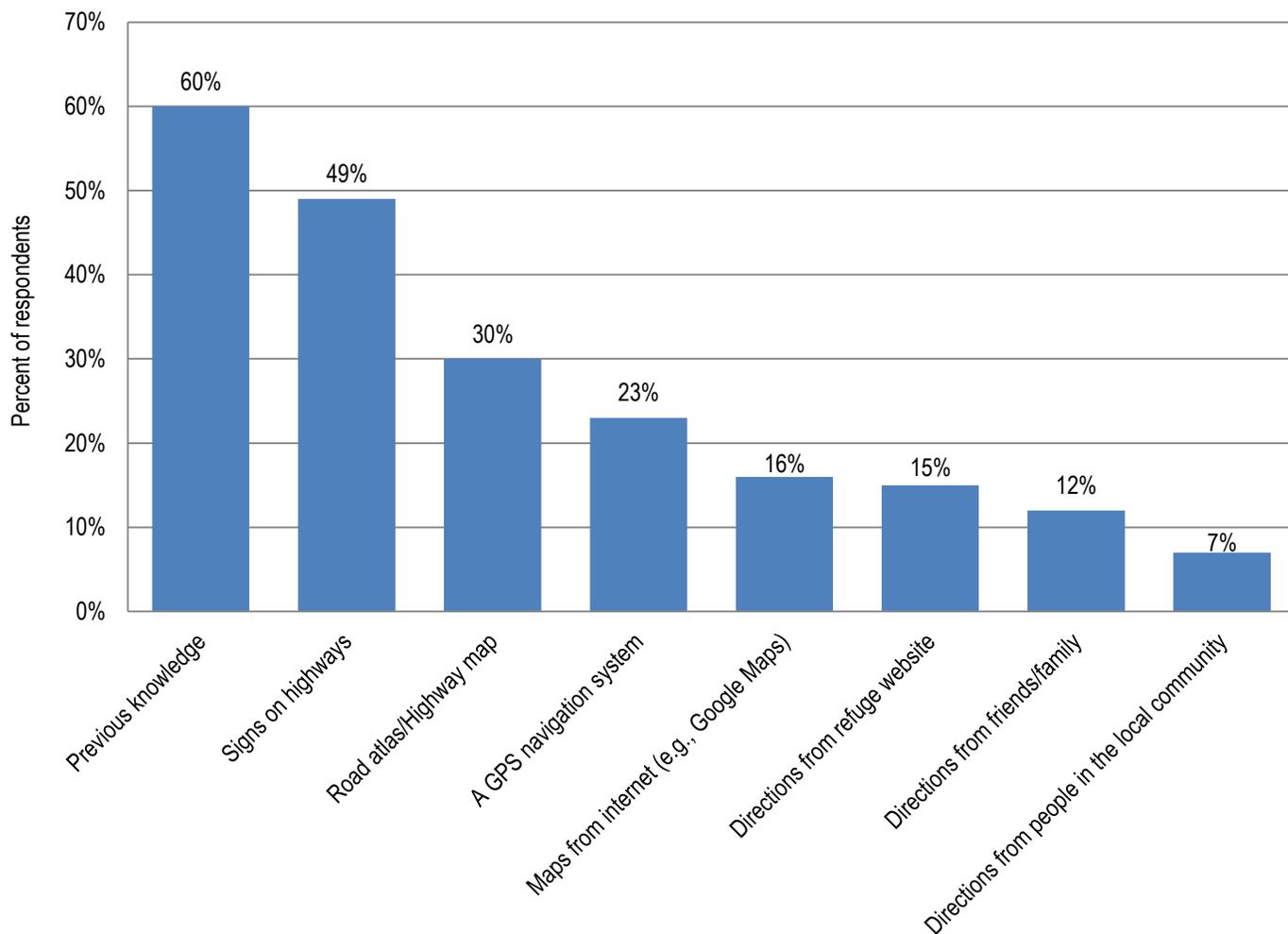


Figure 3. Resources used by visitors to find their way to Horicon NWR during *this* visit (n = 249).

Table 3. Influence of Horicon NWR on visitors' decision to take *this* trip.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	65%	26%	9%
Local	75%	17%	8%
Total	70%	22%	9%

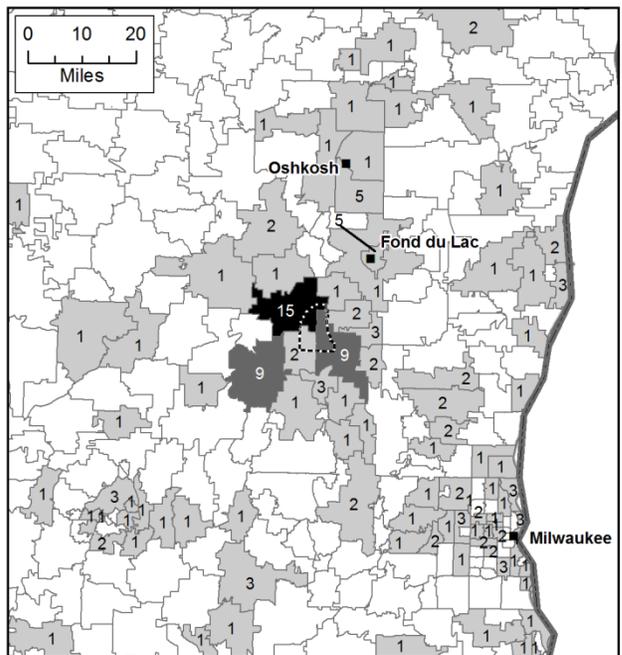
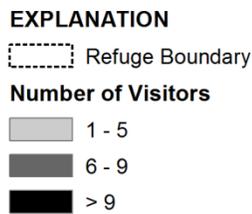
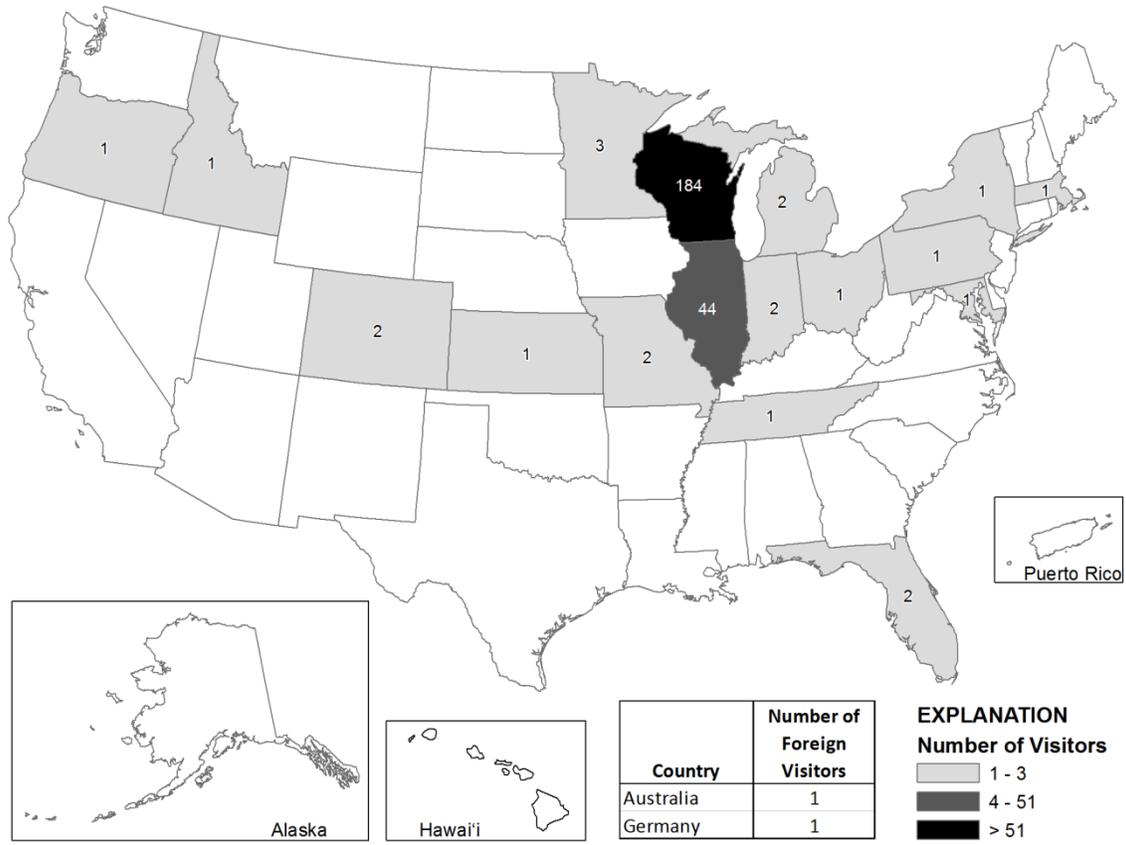


Figure 4. Number of visitors travelling to Horicon NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 252).

Surveyed visitors reported that they spent an average of 5 hours at Horicon NWR during one day there (a day visit is assumed to be 8 hours). However, the most frequently reported length of visit during one day was actually 8 hours (29%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (96%) and walking/hiking (44%; fig. 5). About half of visitors indicated they were part of a group on their visit to this refuge (53%), travelling primarily with family and friends (table 4).

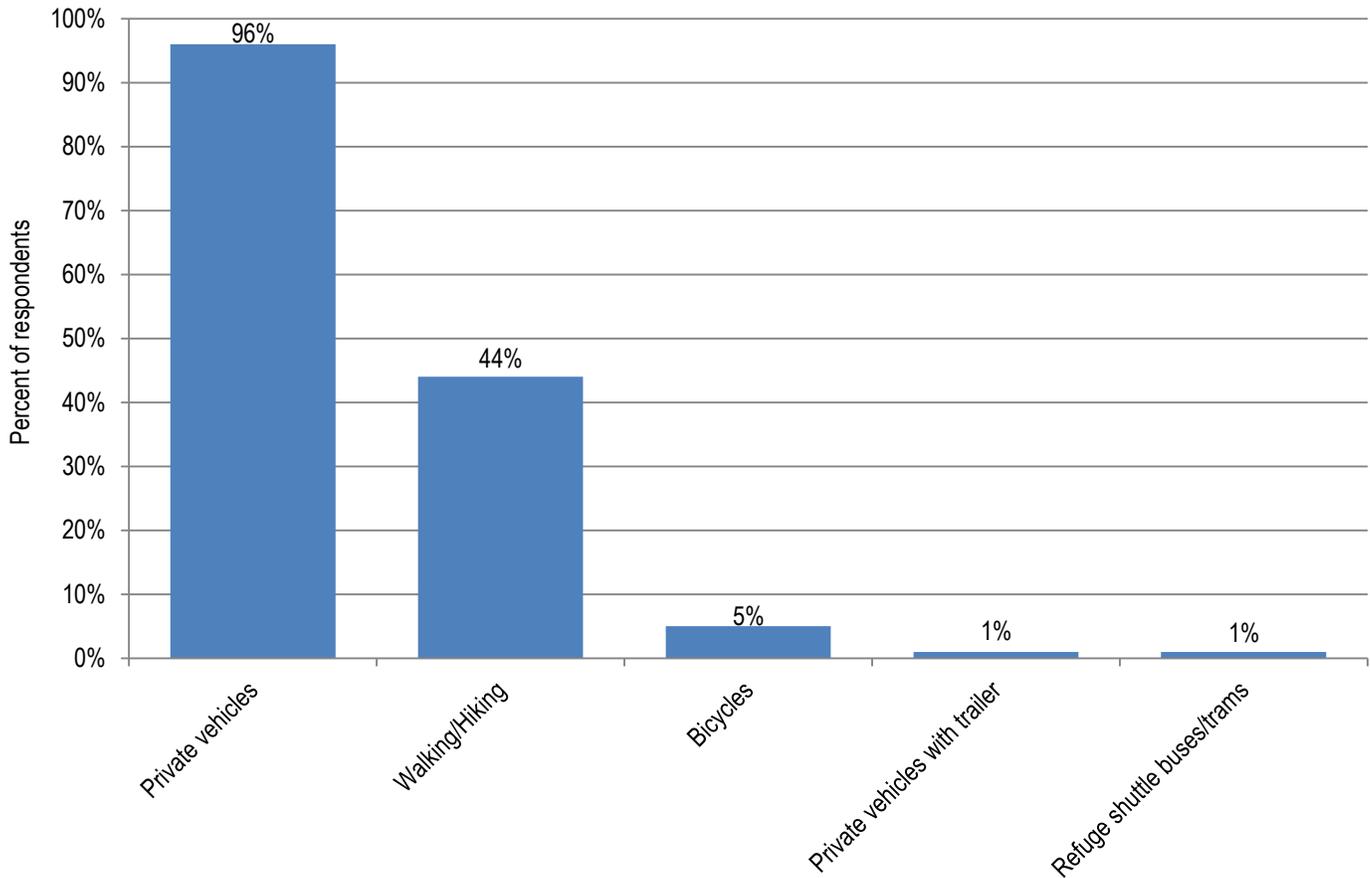


Figure 5. Modes of transportation used by visitors to Horicon NWR during *this* visit (n = 248).

Table 4. Type and size of groups visiting Horicon NWR (for those who indicated they were part of a group, n = 133).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	95%	2	0	2
Commercial tour group	2%	17	0	17
Organized club/School group	2%	7	0	7
Other group type	2%	2	0	2

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were bird watching (81%), wildlife observation (79%), and auto tour route/driving (66%). The primary reasons for their most recent visit included bird watching (41%), wildlife observation (20%), and photography (10%; fig. 7). The visitor center was used by 76% of visitors, mostly to view the exhibits (86%), visit the gift shop/bookstore (78%), and stop to use the facilities (75%; fig. 8).

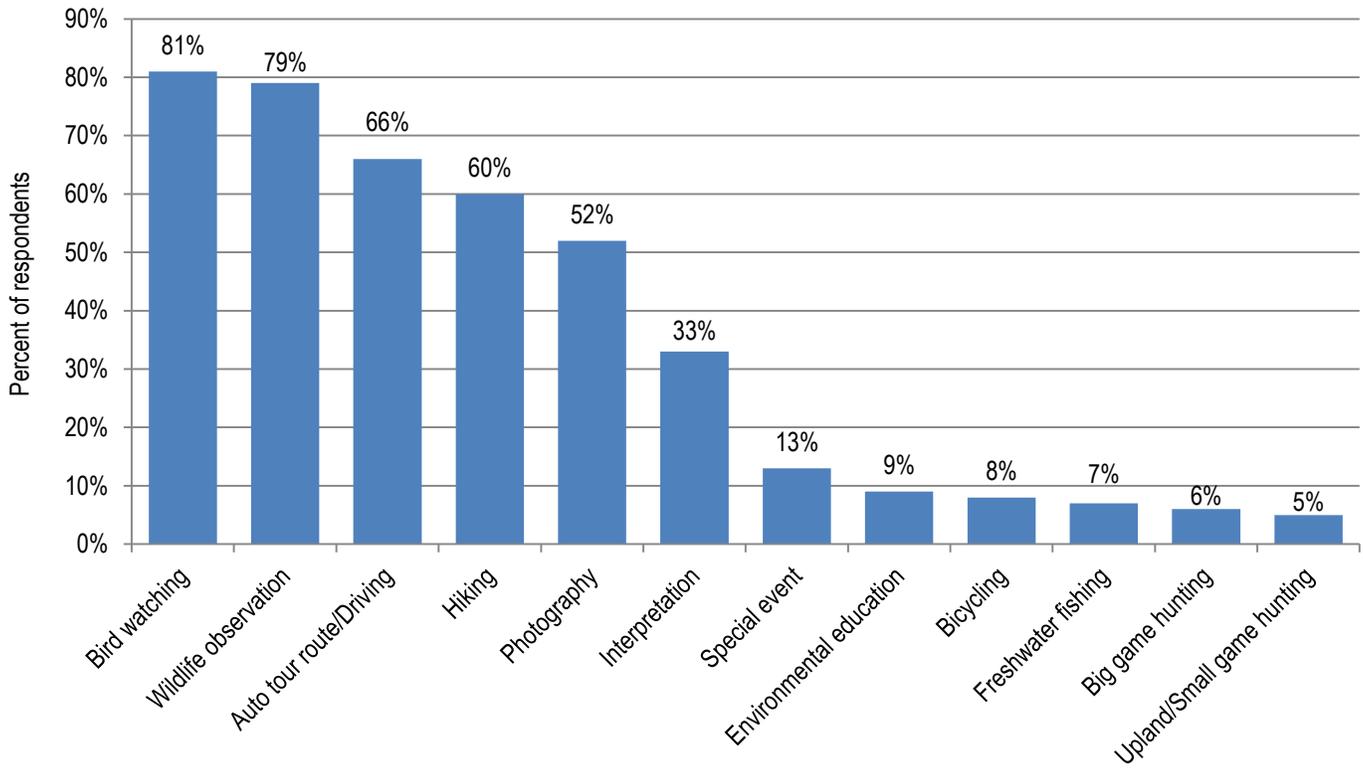


Figure 6. Activities in which visitors participated during the past 12 months at Horicon NWR (n = 247). See Appendix B for a listing of “other” activities.

Visitor Characteristics

Nearly all (99%) surveyed visitors to Horicon NWR indicated that they were citizens or permanent residents of the United States. Only those visitors 18 years or older were sampled. Visitors were a mix of 52% male with an average age of 57 years and 48% female with an average age of 56 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$50,000–\$74,999. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

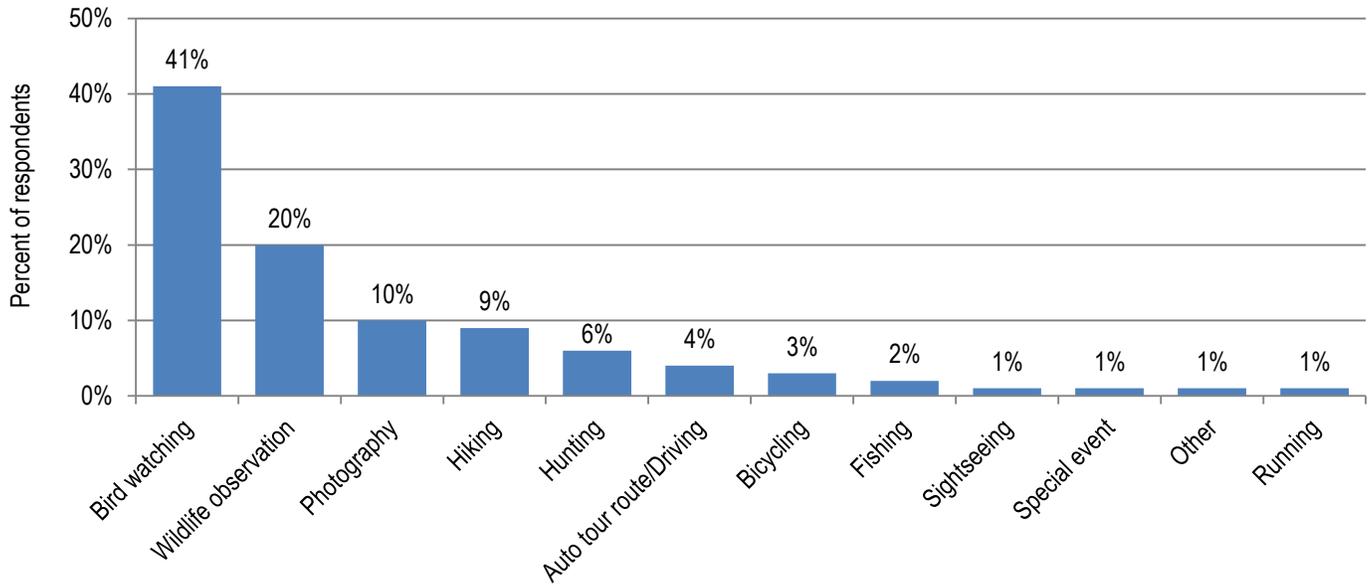


Figure 7. The primary activity in which visitors participated during *this* visit to Horicon NWR (n = 234). See Appendix B for a listing of “other” activities.

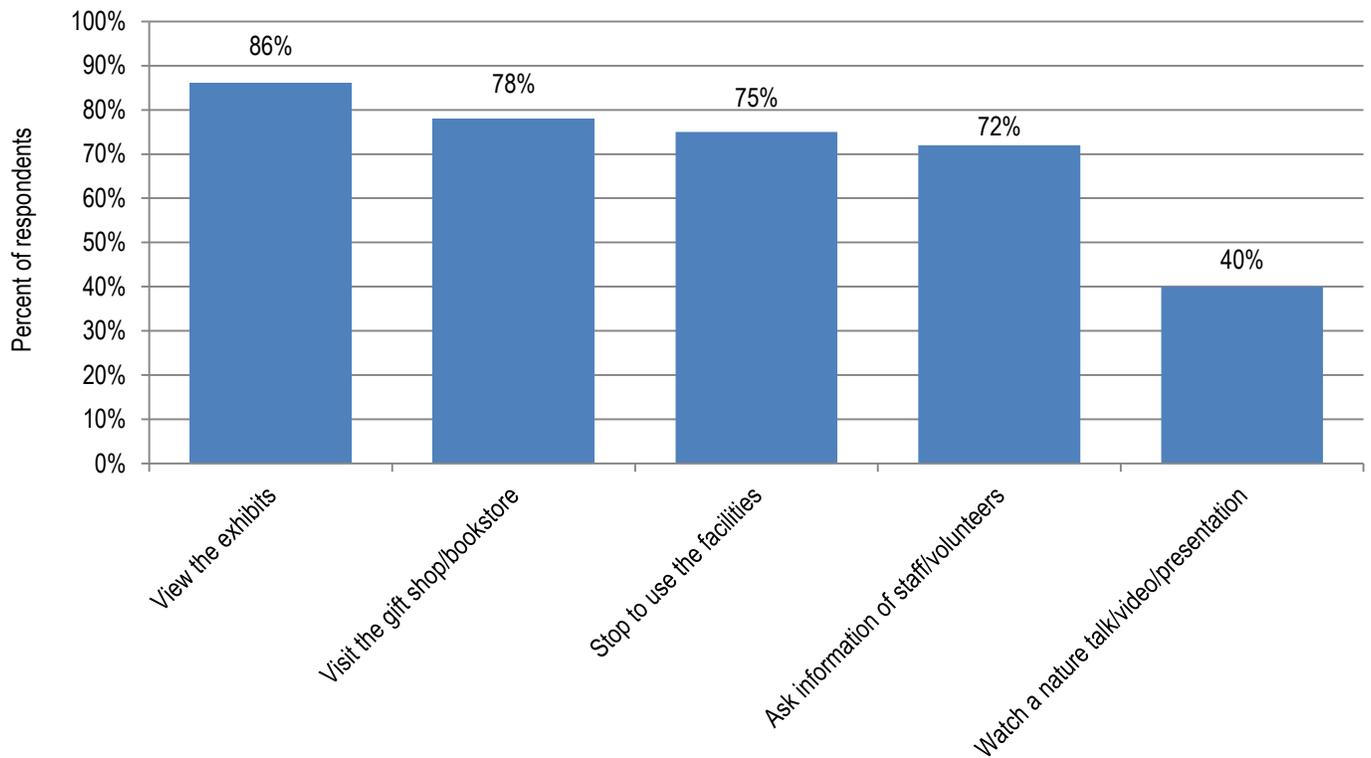


Figure 8. Use of the visitor center at Horicon NWR (for those visitors who indicated they used the visitor center, n = 190).

Visitor Spending in Local Communities

Tourists usually buy a wide range of goods and services while visiting an area. Major expenditure categories include lodging, food, supplies, and gasoline. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge. For example, more than 34.8 million visits were made to national wildlife refuges in fiscal year 2006; these visits generated \$1.7 billion in sales, almost 27,000 jobs, and \$542.8 million in employment income in regional economies (Carver and Caudill, 2007). Information on the amount and types of visitor expenditures can illustrate the economic importance of refuge visitor activities to local communities. Visitor expenditure information also can be used to analyze the economic impact of proposed refuge management alternatives.

A region (and its economy) is typically defined as all counties within 50 miles of a travel destination (Stynes, 2008). Visitors that live within the local 50-mile area of a refuge typically have different spending patterns than those that travel from longer distances. During the two sampling periods, 47% of surveyed visitors to Horicon NWR indicated that they live within the local area. Nonlocal visitors (53%) stayed in the local area, on average, for 1 day. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$53 per person per day and local visitors spent an average of \$33 per person per day in the local area. Several factors should be considered when estimating the economic importance of refuge visitor spending in the local communities. These include the amount of time spent at the refuge, influence of refuge on decision to take this trip, and the representativeness of primary activities of the sample of surveyed visitors compared to the general population. Controlling for these factors is beyond the scope of the summary statistics presented in this report. Detailed refuge-level visitor spending profiles which do consider these factors will be developed during the next phase of analysis.

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

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	126	\$48	\$53	\$45	\$0	\$260
Local	98	\$25	\$33	\$31	\$0	\$130

¹n = number of visitors who answered both locality *and* expenditure questions.

Note: For each respondent, reported expenditures were divided by the number of persons in their group that shared expenses in order to determine the spending per person per trip. This was then divided by the number of days spent in the local area to determine the spending per person per day for each respondent. For respondents who reported spending less than one full day, trip length was set equal to one day. These visitor spending estimates are appropriate for the sampling periods selected by refuge staff (see table 2 for sampling period dates and figure 7 for the primary visitor activities). They may not be representative of the total population of visitors to this refuge.

Visitor Opinions about This Refuge

National wildlife refuges provide visitors with a variety of services, facilities, and wildlife-dependent recreational opportunities. Understanding visitors' perceptions of their refuge experience is a key component of the Refuge System mission as it pertains to providing high-quality wildlife-dependent recreational opportunities. Having a baseline understanding of visitor experience can inform management decisions to better balance visitors' expectations with the Refuge System mission. Recent studies in outdoor recreation have included an emphasis on declining participation in traditional activities such as hunting and an increasing need to connect the next generation to nature and wildlife. These factors highlight the importance of current refuge visitors as a key constituency in wildlife conservation. A better understanding is increasingly needed to better manage the visitor experience and to address the challenges of the future.

Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at Horicon NWR were as follows (fig. 9):

- 93% were satisfied with the recreational activities and opportunities,
- 92% were satisfied with the information and education about the refuge and its resources,
- 95% were satisfied with the services provided by employees or volunteers, and
- 95% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 9% of visitors (n = 23) indicated that they paid a fee to enter the refuge, Horicon NWR does not currently charge a fee to enter the refuge. It is not known why some visitors thought they paid an entrance fee.

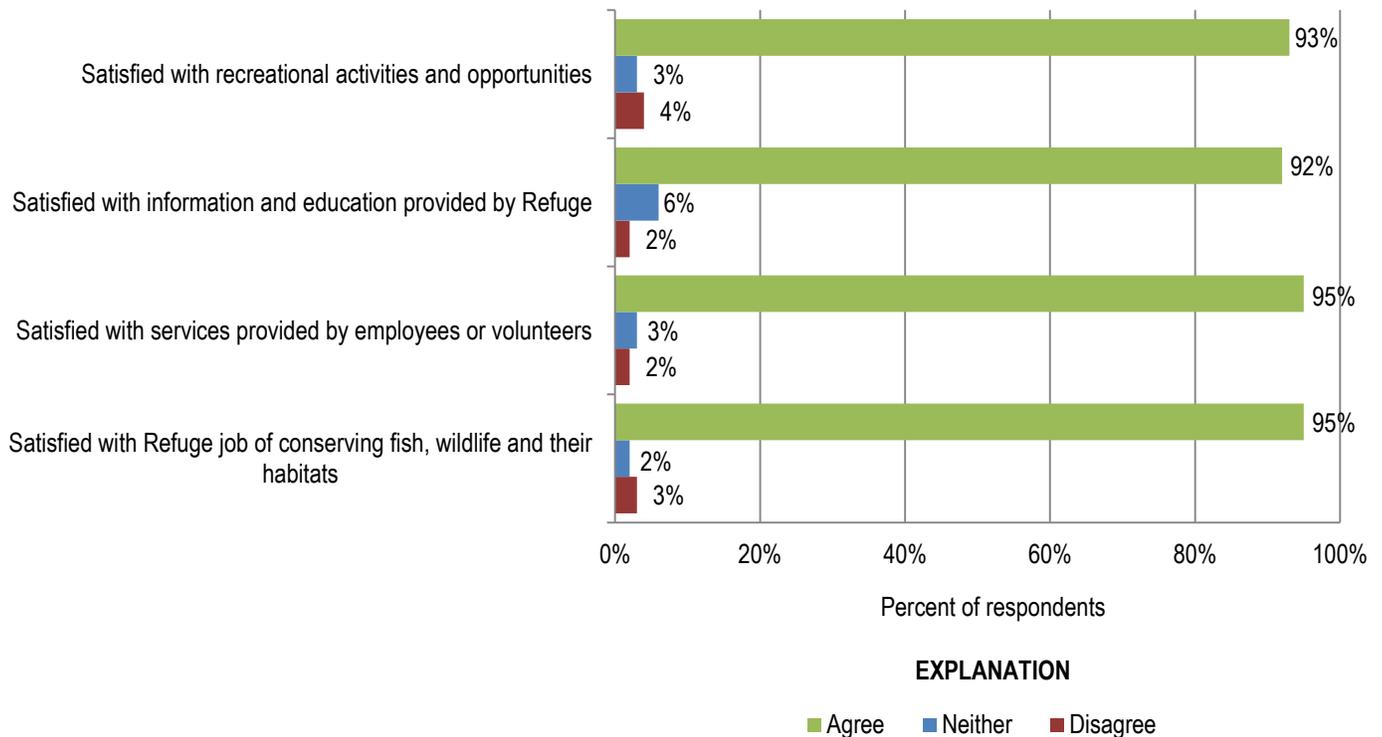


Figure 9. Overall satisfaction with Horicon NWR during *this* visit (n ≥ 246).

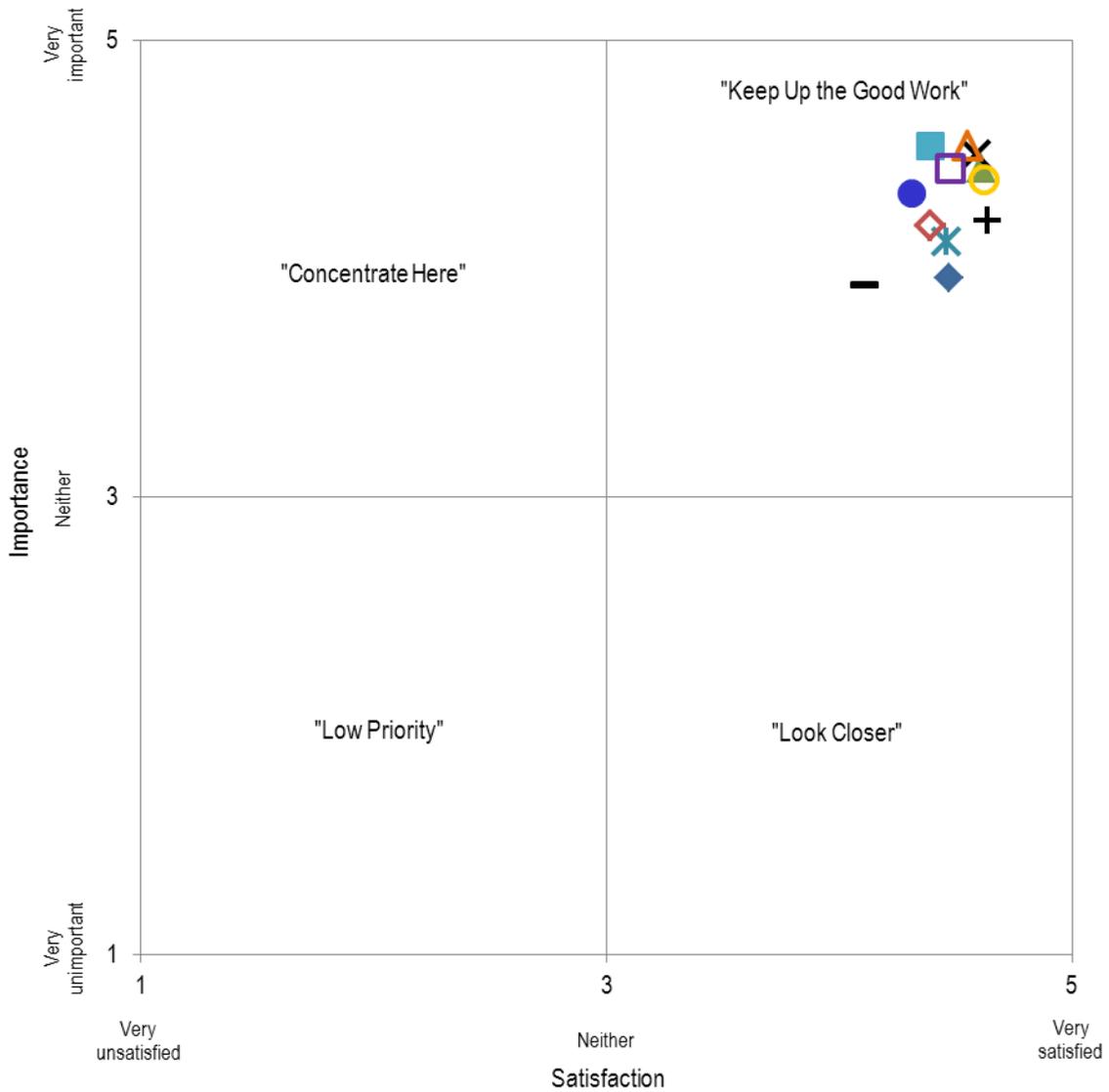
Importance/Satisfaction Ratings

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

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

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

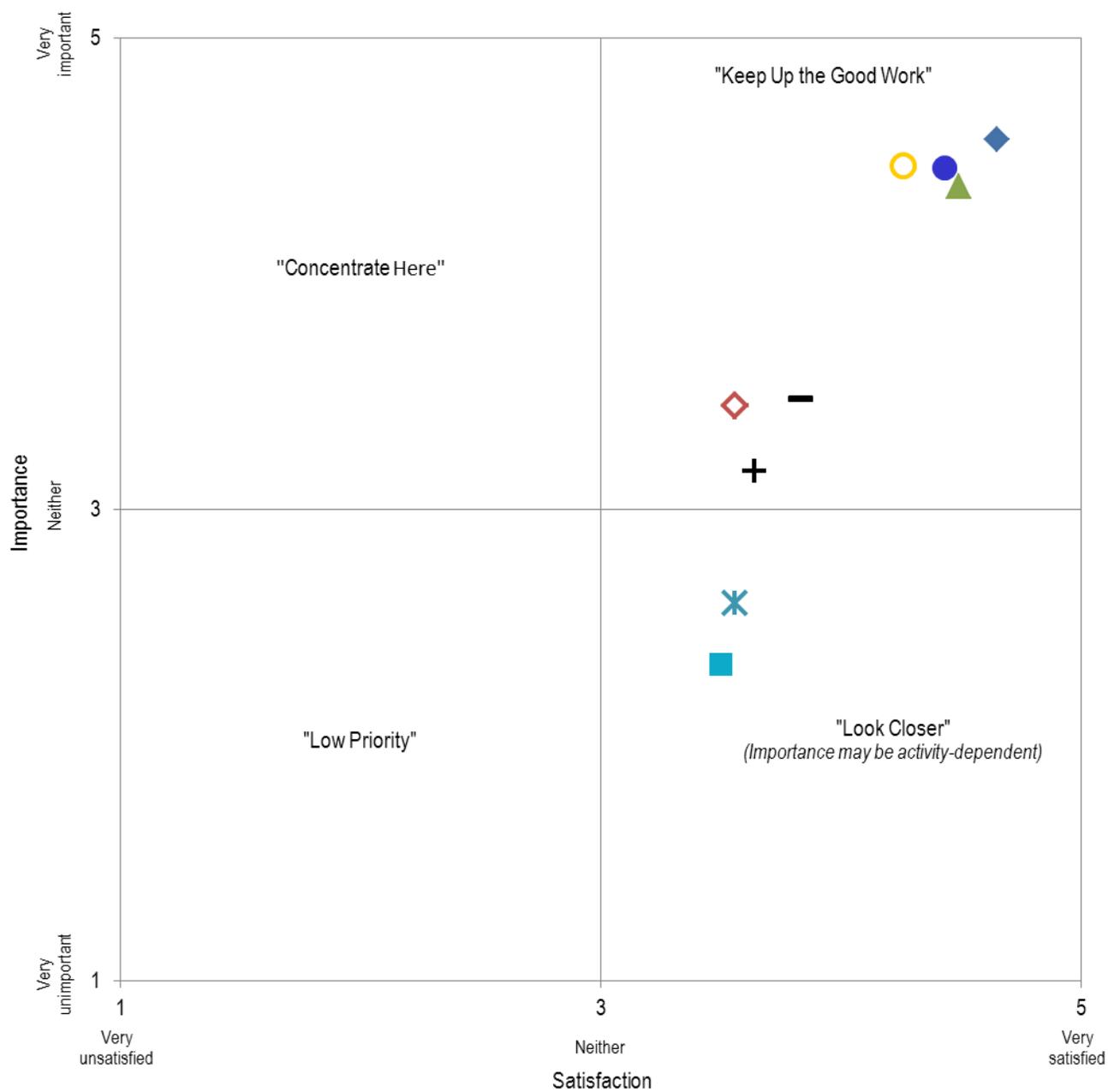
Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Horicon NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except fishing and hunting opportunities, which fell into the "Look Closer" quadrant (fig. 11). The average importance of these activities in the "Look Closer" quadrant may be higher among visitors who have participated in these activities during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants. All transportation-related features fell in the "Keep Up the Good Work" quadrant (fig. 12).



EXPLANATION

- ◆ Availability of employees/volunteers
- ▲ Knowledgeable employees/volunteers
- ✱ Informational kiosks/displays about this Refuge
- ◇ Exhibits about this Refuge
- Visitor Center
- ▲ Well-maintained restrooms
- ✚ Courteous/welcoming employees/volunteers
- ✕ Printed information about this Refuge
- Signs with rules/regulations
- Environmental education programs/activities
- Convenient hours/days of operation
- Wildlife observation structures

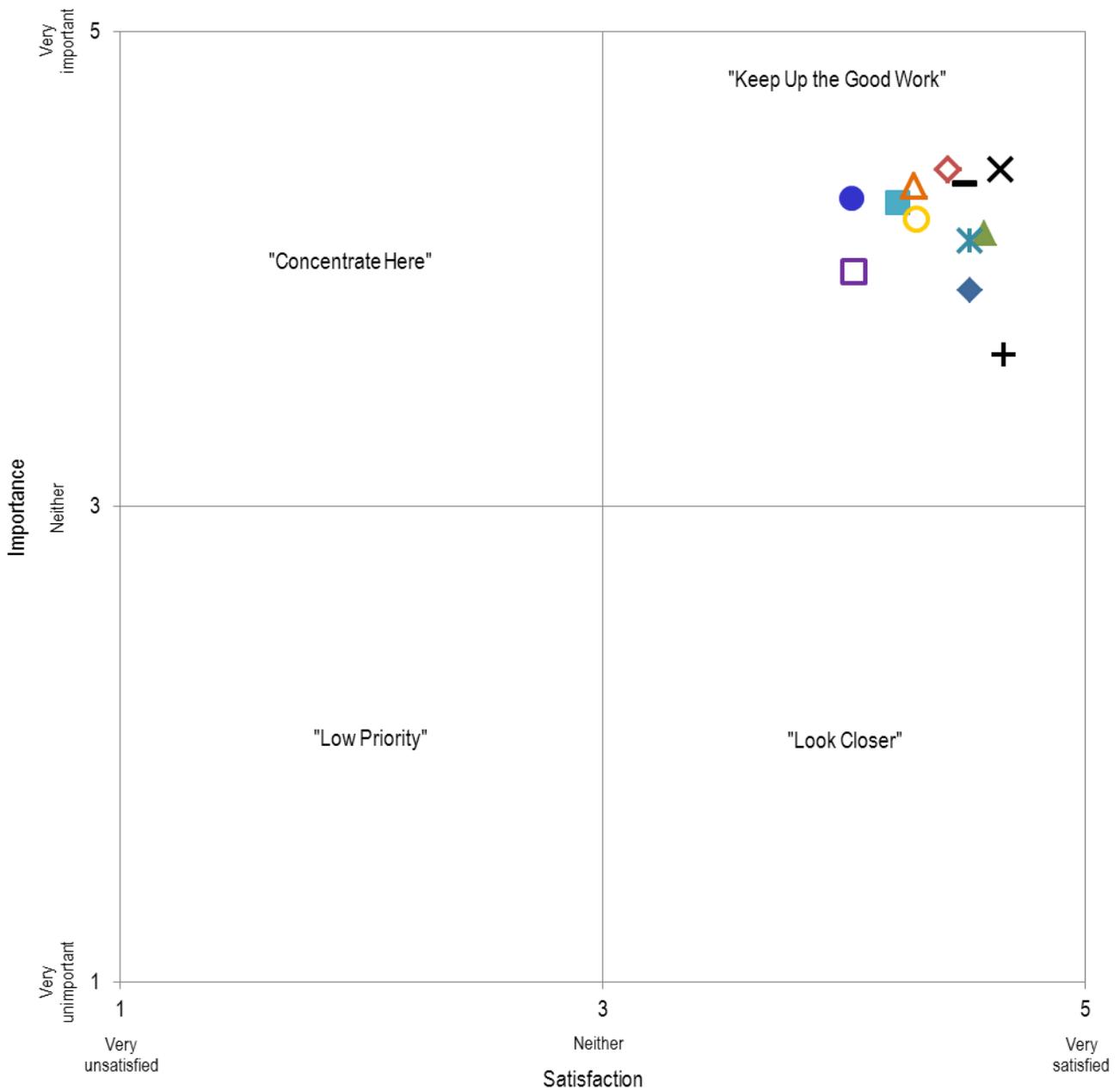
Figure 10. Importance-satisfaction ratings of services and facilities provided at Horicon NWR.



EXPLANATION

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

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



EXPLANATION

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

Figure 12. Importance-satisfaction ratings of transportation-related features at Horicon NWR.

Visitor Opinions about National Wildlife Refuge System Topics

One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results to these questions will be most meaningful when they are evaluated in aggregate (data from all participating refuges together). However, basic results for Horicon NWR are reported here.

Alternative Transportation and the National Wildlife Refuge System

Visitors use a variety of transportation means to access and enjoy national wildlife refuges. While many visitors arrive at the refuge in a private vehicle, alternatives such as buses, trams, watercraft, and bicycles are increasingly becoming a part of the visitor experience. Previous research has identified a growing need for transportation alternatives within the Refuge System (Krechmer et al., 2001); however, less is known about how visitors perceive and use these new transportation options. An understanding of visitors' likelihood of using certain alternative transportation options can help in future planning efforts. Visitors were asked their likelihood of using alternative transportation options at national wildlife refuges in the future.

Of the six Refuge System-wide alternative transportation options listed on the survey, the majority of Horicon NWR visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 13):

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

The majority of visitors were *not* likely to use a bike share program, or a bus/tram that takes passengers to different points on national wildlife refuges in the future (fig. 13).

When asked about using alternative transportation at Horicon NWR specifically, 44% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (35%) and others thought it would not (21%).

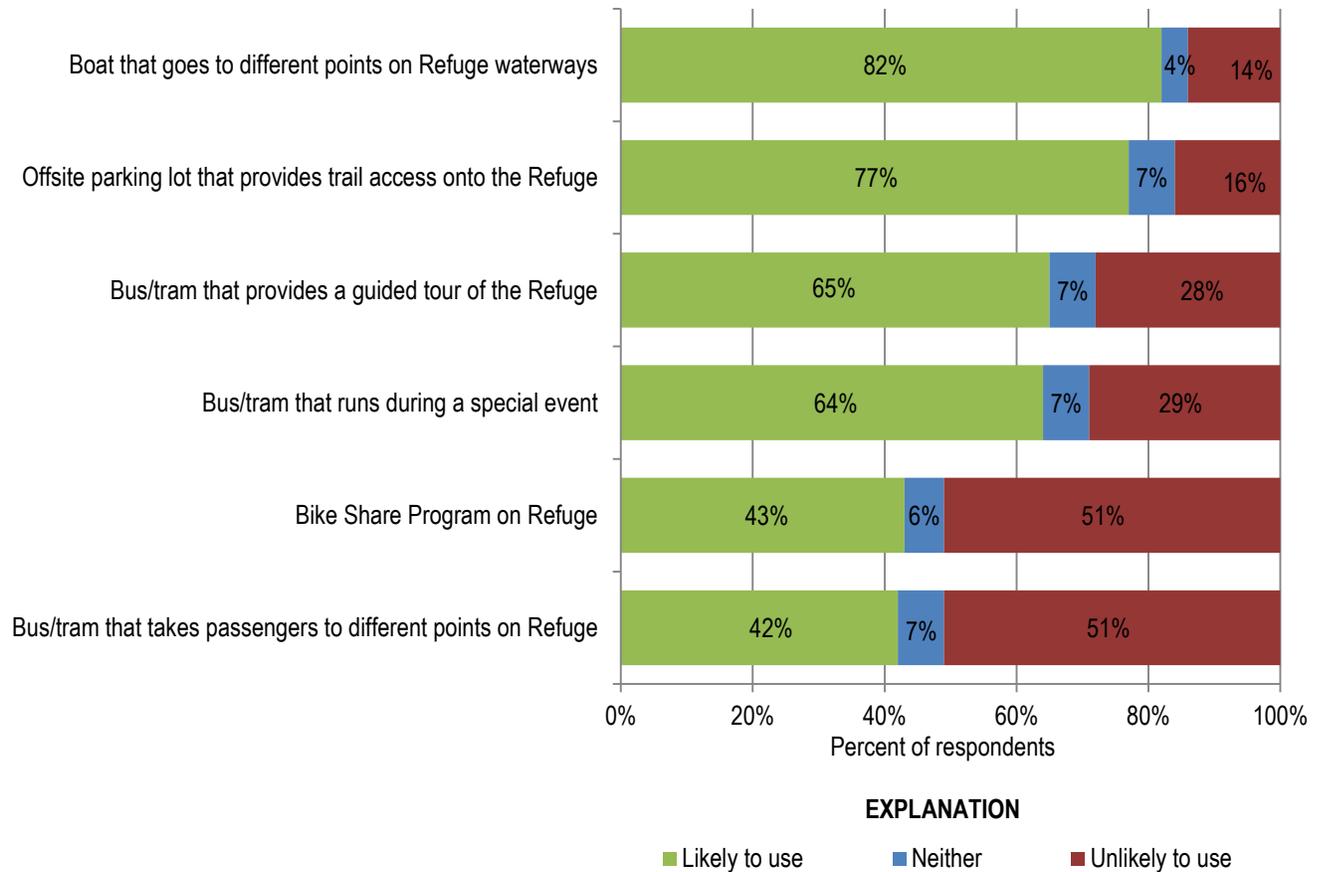


Figure 13. Visitors’ likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 236).

Climate Change and the National Wildlife Refuge System

Climate change represents a growing concern for the management of national wildlife refuges. The Service’s climate change strategy, titled “Rising to the Urgent Challenge,” establishes a basic framework for the agency to work within a larger conservation community to help ensure wildlife, plant, and habitat sustainability (U.S. Fish and Wildlife Service, 2010). To support the guiding principles of the strategy, refuges will be exploring options for more effective engagement with visitors on this topic. The national visitor survey collected information about visitors’ level of personal involvement in climate change related to fish, wildlife and their habitats and visitors’ beliefs regarding this topic. Items draw from the “Six Americas” framework for understanding public sentiment toward climate change (Leiserowitz, Maibach, and Roser-Renouf, 2008) and from literature on climate change message frames (e.g., Nisbet, 2009). Such information provides a baseline for understanding visitor perceptions of climate change in the context of fish and wildlife conservation that can further inform related communication and outreach strategies.

Factors that influence how individuals think about climate change include their basic beliefs, levels of involvement, policy preferences, and behaviors related to this topic. Results presented below provide baseline information on visitors’ levels of involvement with the topic of climate change related to fish,

wildlife and their habitats. The majority of surveyed visitors to Horicon NWR agreed with the following statements (fig. 14):

- “I am personally concerned about the effects of climate change on fish, wildlife and habitats;”
- “I stay well-informed about the effects of climate change;”
- “I take actions to alleviate the effects of climate change;” and
- “My experience would be enhanced if the Refuge provides information about how I can help address climate change effects.”

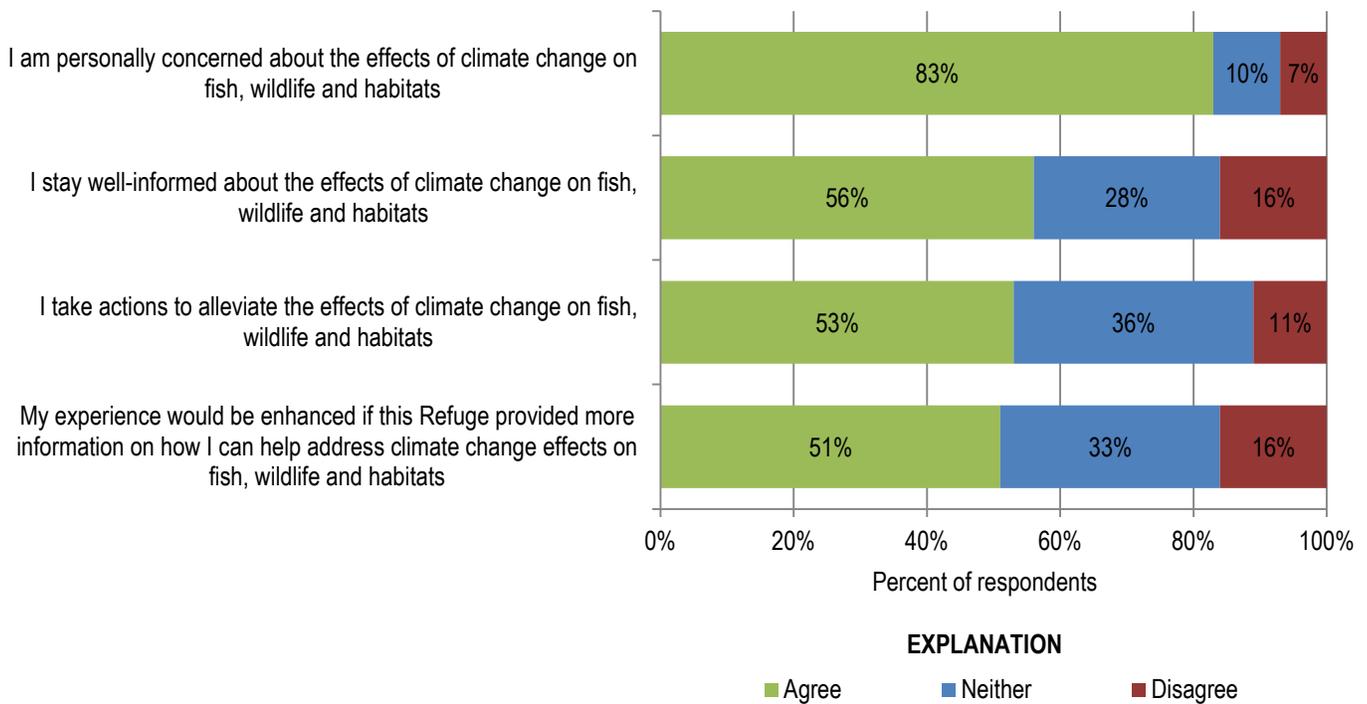


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 239).

These results are most useful when coupled with responses to belief statements about the effects of climate change on fish, wildlife and their habitats, because such beliefs may be used to develop message frames (or ways to communicate) about climate change with a broad coalition of visitors. Framing science-based findings will not alter the overall message, but rather place the issue in a context in which different audience groupings can relate. The need to mitigate impacts of climate change on Refuges could be framed as a quality-of-life issue (for example, preserving the ability to enjoy fish, wildlife, plants, and their habitat) or an economic issue (for example, maintaining tourist revenues, supporting economic growth through new jobs/technology).

For Horicon NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 15):

- “Future generations will benefit if we address climate change effects;”
- “We can improve our quality of life if we address the effects of climate change;” and
- “It is important to consider the economic costs and benefits to local communities when addressing climate change effects.”

The majority of visitors did *not* believe “There has been too much emphasis on the catastrophic effects of climate change.”

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because the majority of visitors (51%) indicated that their experience would be enhanced if Horicon NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 14), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.

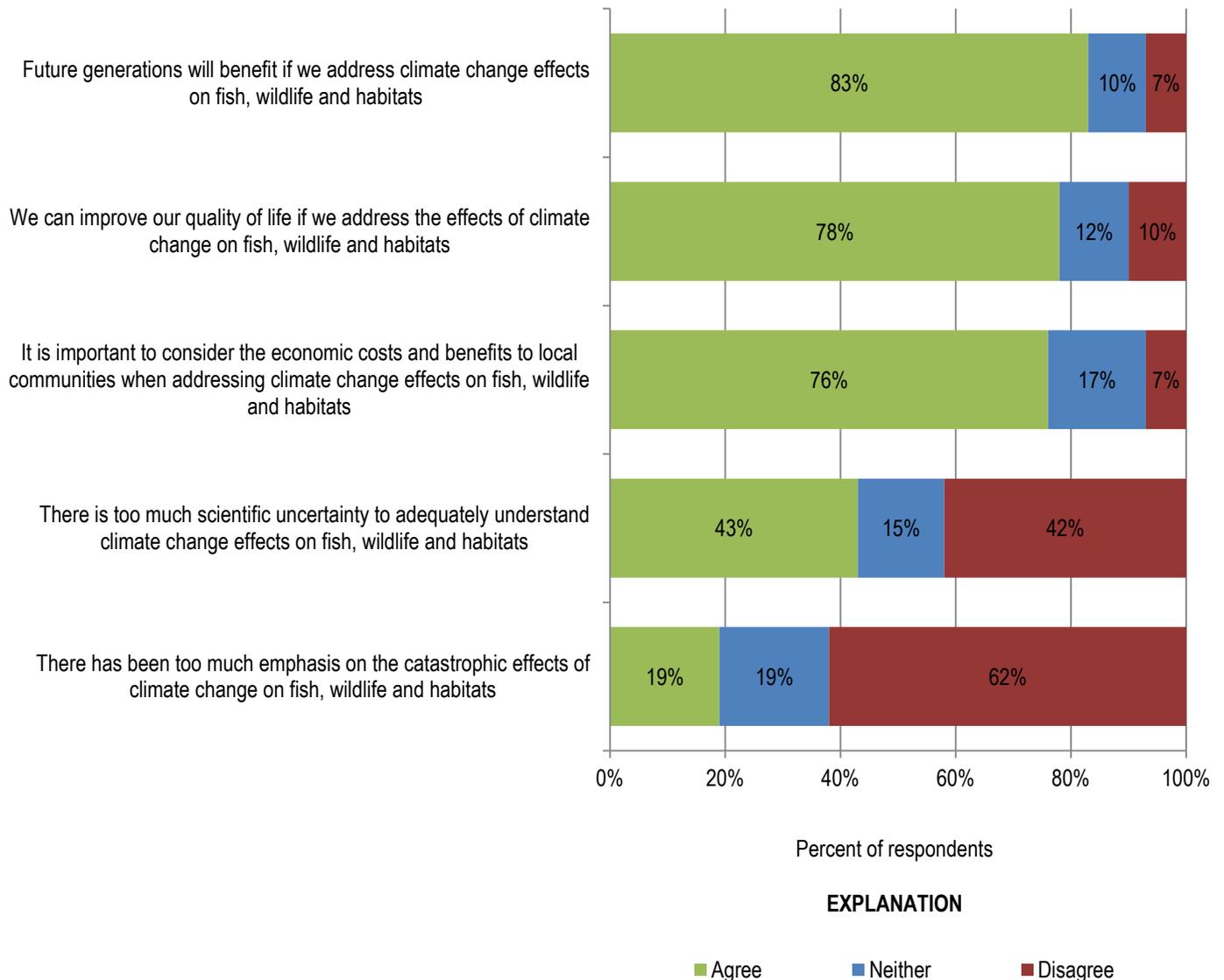


Figure 15. Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 242).

Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Horicon NWR during 2010–2011. These data can be used to inform decision-making efforts related to the refuge, such as Comprehensive Conservation Plan implementation, visitor services management, and transportation planning and management. For example, when modifying (either minimizing or enhancing) visitor facilities, services, or recreational opportunities, a solid understanding of visitors' trip and activity characteristics, their satisfaction with existing offerings, and opinions regarding refuge fees is helpful. This information can help to gauge demand for refuge opportunities and inform both implementation and communication strategies. Similarly, an awareness of visitors' satisfaction ratings with refuge offerings can help determine if any potential areas of concern need to be investigated further. As another example of the utility of these results, community relations may be improved or bolstered through an understanding of the value of the refuge to visitors, whether that value is attributed to an appreciation of the refuge's uniqueness, enjoyment of its recreational opportunities, or spending contributions of nonlocal visitors to the local economy. Such data about visitors and their experiences, in conjunction with an understanding of biophysical data on the refuge, can ensure that management decisions are consistent with the Refuge System mission while fostering a continued public interest in these special places.

Individual refuge results are available for downloading at <http://pubs.usgs.gov/ds/643/> as part of USGS Data Series 643 (Sexton and others, 2011). For additional information about this project, contact the USGS researchers at national_visitor_survey@usgs.gov or 970.226.9205.

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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

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

If you have recently visited more than one National Wildlife Refuge or made more than one visit to the same Refuge, please respond regarding only the Refuge and the visit when you were asked to participate in this survey. Any question that uses the phrase “this Refuge” refers to the Refuge and visit when you were contacted.

SECTION 1. Your visit to this Refuge

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

- | | | |
|--|---|---|
| <input type="checkbox"/> 6% Big game hunting | <input type="checkbox"/> 60% Hiking | <input type="checkbox"/> 9% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 5% Upland/Small-game hunting | <input type="checkbox"/> 8% Bicycling | |
| <input type="checkbox"/> 0% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 66% Auto tour route/Driving | <input type="checkbox"/> 13% Special event (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 79% Wildlife observation | <input type="checkbox"/> 0% Motorized boating | |
| <input type="checkbox"/> 81% Bird watching | <input type="checkbox"/> 0% Nonmotorized boating (including canoes/kayaks) | <input type="checkbox"/> 4% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 7% Freshwater fishing | | |
| <input type="checkbox"/> 0% Saltwater fishing | <input type="checkbox"/> 33% Interpretation (for example, exhibits, kiosks, videos) | <input type="checkbox"/> 0% Other (<i>please specify</i>)
<u>See Appendix B</u> |
| <input type="checkbox"/> 52% Photography | | |

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

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

- 24% No
- 76% Yes → If yes, what did you do there? (Please mark **all that apply.**)
- | | |
|--|---|
| <input type="checkbox"/> 78% Visit the gift shop or bookstore | <input type="checkbox"/> 40% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 86% View the exhibits | <input type="checkbox"/> 75% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 72% Ask information of staff/volunteers | <input type="checkbox"/> 7% Other (<i>please specify</i>) <u>See Appendix B</u> |

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

Nonlocal	Local	Total	
65%	75%	70%	It was the primary purpose or sole destination of my trip.
26%	17%	22%	It was one of many equally important reasons or destinations for my trip.
9%	8%	8%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many **miles** did you travel to get to this Refuge?

Nonlocal 162 number of miles

Local 25 number of miles

6. How much time did you spend at this Refuge on your visit?

See Report for Results

7. Were you part of a group on your visit to this Refuge?

47% No (*skip to question #9*)

53% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

95% Family and/or friends

2% Organized club or school group

2% Commercial tour group

2% Other (*please specify*) See Appendix B

8. How many people were in your group, including yourself? (*Please answer each category.*)

2 number 18 years and over

0 number 17 years and under

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

57% Friends or relatives

10% Refuge website

20% Signs on highway

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

7% Recreation club or organization

4% Television or radio

13% People in the local community

13% Newspaper or magazine

18% Refuge printed information (brochure, map)

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

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

63% Spring
(March-May)

39% Summer
(June-August)

79% Fall
(September-November)

19% Winter
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 9 number of visits

...other National Wildlife Refuges in the last 12 months? 2 number of visits

SECTION 2. Transportation and access at this Refuge

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

- | | | | | | |
|------------------------------|---|-----------------------------|----------------------------------|------------------------------|---------------------------------------|
| <input type="checkbox"/> 96% | Private vehicle without a trailer | <input type="checkbox"/> 1% | Refuge shuttle bus or tram | <input type="checkbox"/> 5% | Bicycle |
| <input type="checkbox"/> 1% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 0% | Motorcycle | <input type="checkbox"/> 44% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 2% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 0% | Recreational vehicle (RV) | <input type="checkbox"/> 0% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 0% | Wheelchair or other mobility aid | | |

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

- | | | | |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 49% | Signs on highways | <input type="checkbox"/> 15% | Directions from Refuge website |
| <input type="checkbox"/> 23% | A GPS navigation system | <input type="checkbox"/> 7% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 30% | A road atlas or highway map | <input type="checkbox"/> 12% | Directions from friends or family |
| <input type="checkbox"/> 16% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 60% | Previous knowledge/I have been to this Refuge before |
| | | <input type="checkbox"/> 1% | Other (<i>please specify</i>) <u>See Appendix B</u> |

3. Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future. Considering the different Refuges you may have visited, please tell us **how likely you would be to use each transportation option.** (*Please circle one number for each statement.*)

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 35%	<input type="checkbox"/> 15%	<input type="checkbox"/> 7%	<input type="checkbox"/> 30%	<input type="checkbox"/> 12%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 36%	<input type="checkbox"/> 15%	<input type="checkbox"/> 6%	<input type="checkbox"/> 28%	<input type="checkbox"/> 14%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 21%	<input type="checkbox"/> 8%	<input type="checkbox"/> 7%	<input type="checkbox"/> 40%	<input type="checkbox"/> 24%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 9%	<input type="checkbox"/> 5%	<input type="checkbox"/> 4%	<input type="checkbox"/> 37%	<input type="checkbox"/> 46%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 21%	<input type="checkbox"/> 8%	<input type="checkbox"/> 8%	<input type="checkbox"/> 33%	<input type="checkbox"/> 31%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 11%	<input type="checkbox"/> 5%	<input type="checkbox"/> 7%	<input type="checkbox"/> 37%	<input type="checkbox"/> 40%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 7%	<input type="checkbox"/> 0%	<input type="checkbox"/> 7%	<input type="checkbox"/> 21%	<input type="checkbox"/> 64%

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

- 35% Yes 21% No 44% Not Sure

5. For each of the following transportation-related features, first, **rate how important** each feature is to you when visiting this Refuge; then **rate how satisfied** you are with the way this Refuge is managing each feature. *If this Refuge does not offer a specific transportation-related feature, please rate how important it is to you and then circle NA "Not Applicable" under the Satisfaction column.*

Importance						Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
3%	11%	8%	50%	29%	Surface conditions of roads	2%	5%	4%	18%	72%	NA
4%	15%	14%	47%	20%	Surface conditions of parking areas	3%	2%	4%	12%	80%	NA
3%	3%	12%	40%	42%	Condition of bridges	2%	1%	9%	13%	75%	NA
3%	2%	3%	31%	60%	Condition of trails and boardwalks	2%	0%	4%	17%	77%	NA
3%	3%	7%	50%	36%	Number of places for parking	2%	5%	4%	19%	71%	NA
3%	3%	5%	36%	52%	Number of places to pull over along Refuge roads	2%	12%	7%	38%	40%	NA
1%	2%	6%	36%	55%	Safety of driving conditions on Refuge roads	1%	4%	6%	28%	60%	NA
2%	2%	7%	36%	53%	Safety of Refuge road entrances/exits	2%	2%	7%	23%	66%	NA
4%	4%	5%	40%	46%	Signs on highways directing you to the Refuge	2%	7%	7%	29%	55%	NA
3%	2%	7%	41%	47%	Signs directing you around the Refuge roads	2%	8%	10%	27%	53%	NA
2%	2%	8%	37%	52%	Signs directing you on trails	1%	5%	9%	35%	50%	NA
3%	6%	18%	34%	38%	Access for people with physical disabilities or who have difficulty walking	1%	7%	24%	24%	45%	NA

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

See Appendix B

SECTION 3. Your expenses related to your Refuge visit

1. Do you live in the local area (within approximately 50 miles of this Refuge)?

47% Yes

53% No → How much time did you spend **in local communities** on this trip?
 2 number of hours OR 3 number of days

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

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

See Report for Results

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

 2 number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
4%	16%	22%	11%	21%	3%	14%	2%	2%	2%	4%

5. If you or a member of your group paid a fee or used a pass to enter this Refuge, how appropriate was the fee? (*Please mark **only one.***)

4%	Far too low	4%	Too low	91%	About right	0%	Too high	0%	Far too high	91%	Did not pay a fee (skip to Section 4)
----	-------------	----	---------	-----	-------------	----	----------	----	--------------	-----	--

6. Please indicate whether you disagree or agree with the following statement. (*Please mark **only one.***)

The value of the recreation opportunities and services I experienced at this Refuge was at least equal to the fee I paid.

0%	Strongly disagree	0%	Disagree	5%	Neither agree or disagree	36%	Agree	59%	Strongly agree
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SECTION 4. Your experience at this Refuge

1. Considering your visit to this Refuge, please indicate the extent to which you disagree or agree with each statement. (*Please circle one number for each statement.*)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	1%	3%	4%	29%	64%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	1%	2%	6%	35%	57%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	1%	1%	3%	31%	64%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	2%	2%	23%	72%	NA

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

Importance					Refuge Services, Facilities, and Activities	Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
3%	8%	12%	44%	33%	Availability of employees or volunteers	2%	2%	10%	21%	66%	NA
3%	5%	9%	38%	46%	Courteous and welcoming employees or volunteers	1%	0%	7%	15%	76%	NA
2%	3%	3%	33%	59%	Knowledgeable employees or volunteers	1%	1%	5%	21%	72%	NA
0%	4%	2%	33%	61%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	2%	6%	21%	71%	NA
2%	5%	11%	43%	39%	Informational kiosks/displays about this Refuge and its resources	0%	1%	12%	24%	62%	NA
0%	2%	11%	38%	49%	Signs with rules/regulations for this Refuge	2%	3%	10%	29%	55%	NA
1%	5%	6%	49%	39%	Exhibits about this Refuge and its resources	0%	3%	10%	30%	57%	NA
2%	6%	19%	42%	31%	Environmental education programs or activities	1%	3%	25%	27%	44%	NA
1%	5%	5%	32%	58%	Visitor Center	1%	0%	7%	18%	73%	NA
2%	0%	4%	30%	64%	Convenient hours and days of operation	1%	7%	4%	28%	60%	NA
1%	0%	4%	32%	63%	Well-maintained restrooms	1%	2%	5%	24%	67%	NA
2%	3%	4%	32%	60%	Wildlife observation structures (decks, blinds)	1%	1%	7%	29%	62%	NA
2%	2%	5%	20%	71%	Bird-watching opportunities	0%	2%	4%	19%	74%	NA
1%	2%	6%	34%	58%	Opportunities to observe wildlife other than birds	0%	8%	7%	33%	51%	NA
3%	3%	7%	31%	57%	Opportunities to photograph wildlife and scenery	0%	3%	10%	24%	64%	NA
49%	5%	24%	6%	15%	Hunting opportunities	6%	3%	50%	19%	23%	NA
37%	10%	22%	17%	13%	Fishing opportunities	3%	5%	46%	25%	21%	NA
3%	1%	5%	32%	60%	Trail hiking opportunities	1%	3%	7%	27%	61%	NA
12%	9%	25%	33%	22%	Water trail opportunities for canoeing or kayaking	6%	6%	39%	22%	27%	NA
12%	7%	27%	32%	23%	Bicycling opportunities	1%	4%	38%	26%	31%	NA
14%	7%	43%	22%	14%	Volunteer opportunities	0%	2%	56%	16%	25%	NA

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

See Appendix B

SECTION 5. Your opinions regarding National Wildlife Refuges and the resources they conserve

1. Before you were contacted to participate in this survey, were you aware that National Wildlife Refuges...

...are managed by the U. S. Fish and Wildlife Service?

91%

Yes

9%

No

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

94%

Yes

6%

No

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

94%

Yes

6%

No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	4%	2%	10%	43%	41%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	5%	5%	12%	38%	41%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	19%	24%	15%	28%	14%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	1%	15%	29%	41%	14%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	1%	5%	17%	62%	14%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	2%	9%	36%	40%	13%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	26%	36%	19%	11%	8%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	5%	2%	10%	38%	45%
My experience at this Refuge would be enhanced if this Refuge provided more information about how I can help address the effects of climate change on fish, wildlife and their habitats.	7%	9%	33%	39%	12%

SECTION 6. A Little about You

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

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

99% Yes 1% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 52% Male 48% Female

3. In what year were you born? 1955 (YYYY)

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					0%			19%				53%				27%			

5. What ethnicity do you consider yourself? 0% Hispanic or Latino 100% Not Hispanic or Latino

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

- 2% American Indian or Alaska Native 0% Black or African American 99% White
 0% Asian 0% Native Hawaiian or Pacific Islander

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

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

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> 1% Less than \$10,000 | <input type="checkbox"/> 17% \$35,000 - \$49,999 | <input type="checkbox"/> 15% \$100,000 - \$149,999 |
| <input type="checkbox"/> 5% \$10,000 - \$24,999 | <input type="checkbox"/> 26% \$50,000 - \$74,999 | <input type="checkbox"/> 4% \$150,000 - \$199,999 |
| <input type="checkbox"/> 11% \$25,000 - \$34,999 | <input type="checkbox"/> 17% \$75,000 - \$99,999 | <input type="checkbox"/> 3% \$200,000 or more |

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

19 number of trips

Thank you for completing the survey.

There is space on the next page for any additional comments you may have regarding your visit to this Refuge.

See Appendix B for Comments

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

Survey Section 1

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

Special Event	Frequency
5K Run/Walk	1
Biodiversity Walking Tour	1
Bird Festival	9
Birding Boat Ride	1
Boat Tour of refuge	1
Disabled Deer Hunt	1
Duck Stamp Awards	1
Fall Color Observation	1
Horicon Bird Club	1
Horicon Birding Festival	1
Horicon Marsh Bird Festival	5
Horicon Marsh Boat Tour - Blue Heron Landing	1
Marsh History	1
Marsh Tour	1
Mother's Day Festival	1
Pontoon Tour Boat Ride	1
The boat tour form Horicon.	1
Waterfowl Migration	1
Wild Goose Run	1

Total	31
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Other Activity	Frequency
Bird Monitoring	1
I run daily here.	1
Just to sit on the pier and watch the sunset.	1
Picnicked at Horicon last summer during our visit.	1
Pontoon Boats	1
See Northern Harriers	1
To walk the floating boardwalk	1
Trail Running	1
Trapping	1
Waterfowl Youth Hunt	1
Total	10

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

Other Miscellaneous Primary Activities	Frequency
Enjoy nature in general.	1
Scenery	1
Simply being out in nature and enjoying autumn in a beautiful and interesting place.	1
Special activity to bring my 88 year old mother to see the beauty.	1
To see the Marsh for the first time/geese watching	1
Total	5

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

Other Visitor Center Activity	Frequency
Art Exhibit	1
Bird photography	1
Bird watching from deck.	1
Chat with staff.	1
Got a trapping permit.	1
Interviewed refuge biologist for article in birding magazine article.	1
Meeting with some people.	1
People watching; people grabbing free wildlife cards.	1
Pick up regulations and maps.	1
Picked up brochures.	1
Special Education Events	1
Trapping Auction	1
Video tapes birds using extreme telephone w/tripod.	1
View cliff swallows and other birds.	1
Total	14

Question 7: “Were you part of a group on your visit to this Refuge?; If Yes, “What type of group were you with on your visit?”

Other Group Type	Frequency
Horicon Birding Festival	1
Horicon Marsh Bird Festival	1
Total	2

Question 9: "How did you first learn or hear about this Refuge?"

Other Website	Frequency
Bird Lists On-Line	1
I searched for things to do in that area.	1
Total	2

Other Ways Heard about This Refuge	Frequency
Bird watching book	1
College	1
Horicon Marsh Bird Club	1
Hot spot book	1
I found it on WI state highway map.	1
I noticed the location of the marsh on a Wisconsin state map.	1
I saw it on a road map.	1
Map	1
Professor at UW	1
Road map	1
Sherry Schwoch, who is a worker at the refuge.	1
Sierra club	1
State issued map	1
Through the Mayville Inn	1
Traveling the north border	1
Wisconsin road map	2
Total	17

Survey Section 2

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

Other Forms of Transportation	Frequency
Guided Boat Tour	1
Paid for boat tour	1
School bus used by Horicon Bird Festival	1
Short bus	1
Total	4

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

Other Ways Found This Refuge	Frequency
Directions from onsite volunteer	1
Info from DNR- John	1
Info from Horicon Bird Festival	1
Total	3

Question 5: "Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future...please tell us how likely you would be to use each transportation option."

Other Transportation Option Likely to Use	Frequency
Boat tours	1
Canoe	1
Canoe access	1
Canoe rental, boat cruise, snow shoeing	1
Canoes	1
Cross Country Skis	1

Cycling	1
Electric vehicle	1
Fall hay ride	1
Golf cart rental provided by Refuge	1
Hike	1
Horse drawn carriage	1
Interested only in boat tour at this point	1
Modified truck, or hovercraft, 6 wheeler or snow sled	1
My car and feet are fine.	1
My own boat or canoe.	1
Personal tours. One on one in a smaller vehicle	1
Wheelchair access	1
Total	18

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

Comments on Transportation-related Items at This Refuge (n = 45)

Access to boat areas by foot would be ideal.

Actually, our son took my husband and me around the refuge near Mayfield, Wisconsin. He lives nearby and knew the way around the area. He hunts there and near the refuge.

Adding the pullouts and crossovers last year on Main Dyke Road was very much appreciated. Without them it was nearly impossible to watch wildlife on a busy day.

Conditions along Hwy-49 for bird watching are dangerous.

Difficult access to Dyke Road on West side of marsh, Island Road, and the parking lot to Dyke Road.

Horicon Marsh-Dyke Rd. They added turnoffs and pull-offs in several locations on Dyke Rd. Fantastic!! It makes it easier to pull over to allow faster cars to pass as I putter along bird watching.

Hwy 49 -- I feel it is dangerous for humans and wildlife. There is so much road kill it is like driving on a bumpy road. Does a human have to be hit by an 18 wheeler for the speed limit to be reduced? The

conditions here are shocking!

Hwy-49 crosses part of the marsh. There is lots of wildlife viewing, but the highway is busy. It would be nice for visitors and save lots of wildlife lives if the highway could be rerouted around the marsh and just use the present highway for viewing. Wind towers are a great idea, but not so close to such an important wildlife refuge.

I enjoy taking my family to the refuge because it is easy to wheel them around in strollers. My son is in a wheelchair and we've had no problems getting him around.

I know 24hr surveillance of the auto tour route would be impossible, but you get some people who seem to think the speed limit is 55mph.

I know 49 is a state highway, but can the speed limit be lowered especially when the goslings are present? When slowing down to let geese cross the highway, a car passed and hit them. I've seen people passing quite a few times. I guess they should slow down in their busy life and enjoy nature.

I ride the bike trail often; it's a pea-gravel trail. There's a lot of growth coming up through the gravel. It would be nice if the trail was graded and had new gravel put on.

I was a little confused entering Dike Road as it was a one lane road at the start. It is hard to pull over to let others pass on parts of that road.

I was traveling with parent with physical disability. We were unable to access some areas due to lack of handicap accessibility.

I would like to be able to drive on the road known as "old Hwy-49."

I would like to see the speed limits on Hwy-49 along the marsh to come down to maybe 40mph.

I would love to see something done with Hwy 49 running through the north side of Horicon before someone gets killed. Countless numbers of wildlife are killed each year as well. Either lower the speed limit or consider rerouting Hwy 49 to the north. It just makes no sense to have a fairly major highway running through the middle of a major wildlife area.

I'd like to see more trails for the disabled who have problems walking.

If it weren't for the rangers at the visitor center directing us where to go we would have not found the roads. They were not marked and we had to rely solely on a map. Other than that we did love the viewing areas.

In some areas it is not possible to pass vehicles.

It would be nice to have a sign on the bike trail as to where to exit to get to the driving tour parking lot.

Many vehicles are pulled over on Hwy-49 through the marsh, and there are also many killed animals. Is there any chance to lower the speed limit on Hwy-49? We drive this part of the refuge often. Once we were slowed down, 45mph or so, for geese and goslings crossing. An unaware driver passed us killing the goose family. How sad for my kiddos to witness.

More trails please.

My one big complaint is the high speed limit allowed on Highway 49, which divides Horicon Marsh and

from which there are entrances to the marsh. There are wide shoulders along the highway for stopping to view wildlife, however traffic is dangerously fast (theoretically 55 mph, but people go much faster), and it is sometimes difficult to slow down and pull to the side because of impatient, tailgating drivers. Also, hundreds of animals get killed each year by speeding vehicles.

My only concern is that the roads leading to the refuge have too high a speed limit, which discourages roadside pull-offs and increases road kills.

Overall I'm satisfied, no need to spend extra dollars to upgrade current conditions.

Overall very good.

Please open up more refuge roads to hiking in the spring and summer, particularly the dead end roads off of Dike and Ledge Roads. Also please open Old Marsh Road for hiking.

Road, bridges, and parking lots should blend into the landscape so they are not obtrusive. These features should be made using local materials to enhance "sense of place" and to make each refuge unique. Roads, bridges, and parking lots should not be located where they would detract from any vistas or views from prominent locations. Roads should be designed to minimum specifications and not be 'highways' through the refuge. More casual bike trails should be incorporated and make trails connect to other state and national park, trails, and refuges.

Signage and directions were poor. Some interior roads were in poor shape. Most roads were fine.

Signs need to be placed so you have time and distance to react to them, like before the turn instead of right at it.

Some visitors drive too fast on the auto tour trails.

The additional pull off points on Dike Road have been a great addition. However, there are still a lot of times that you have to move on to let other people pass and you miss out on what you were trying to see. If the roads were a bit wider so people could pass safely that would be great. The same goes for the auto tour, especially when there are steep drop-offs. It can get a little scary. A few additional places to pull off and park along the auto tour would be a great addition.

The Board Walk trail over the marsh was exceptionally wonderful (and accessible to those with disabilities, we observed).

The boardwalks on the ponds were extensive and impressive. There was much pedestrian traffic there. We visited here with my 83 year old aunt so it was important to have easy access. She really enjoyed the tour too.

The directions to get to the dike could be more clear. Posting of signs would be nice.

The signs on the public highways were hard to see. I was not sure how to enter the marsh. Once inside, everything was well marked.

There are a lot of dogs on trails, particularly unleashed ones, and people don't pick up after them.

There are not enough signs in the right places.

There is poor access in winter months due to snow.

Traffic is terrible on Hwy-49. It is dangerous to stop and look, and is also dangerous for wildlife. There are too few pullovers on the auto tour route. Dike Road is much improved, but not bike-able. We'd love to canoe the main ditch, but that's prohibited.

We haven't yet taken any hiking trail walks and do not have disabilities. That is why I rated these last 2 items as "3."

We only went to the visitor's center.

We would like to have access to more of the refuge on foot. Road access is enough already. Could put in a lake path.

You must find a way to slow traffic on Highway 49; speeding cars and trucks endanger visitors and take a terrible toll on wildlife. You have many potential allies for this fight but FWS needs to take the lead here.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 77)

A garbage can by the main auto tour parking lot would be nice.

A great experience for all of us. My parents really enjoyed the bird banding.

Allow water access by boat and canoe and allow people to fish. Clean out the ditches as they once were and allow people to bank fish as in the past, not just from the little piers at the ends of the roads.

Always great. People who work there or volunteer are always friendly, and informative.

As an avid birdwatcher and photographer I have been very happy with the increasing diversity of wildlife on the marsh the past number of years. Carp and water management have made a big difference in my opinion. I appreciate the work done on Dike Rd as far as pullouts for viewing wildlife. Maybe considering more options for passive use of the marsh such as photo blinds placed in strategic spots would be nice.

Awesome!!!

Beautiful place. A highlight. Well done.

Carp control is still a difficult problem, especially with the high spring water levels the last few years. Another attempt at chemical eradication would probably involve expenses better channeled to other programs. An increased emphasis on aquatic plant diversity (bulrushes, wild rice, Sagittaria spp., Pickerelweed, etc.) would be attractive. Reed Canary Grass is a difficult pest to deal with in the shallow marsh zones where other species often propagate. A restroom at the west end of Main Dike Rd. would be wonderful. I am given to understand that vandalism of such facilities is a concern. Canoeing and kayaking down the west branch of the Rock River or along the main ditch would be nice, but I suppose difficult to "police". (There is ample boating opportunity on the state owned portion of the Horicon Marsh.) Here's my really big dream: I hope to live long enough to see Highway 49 routed north around the north periphery of the refuge and the current right-of-way

converted to a 10 M.P.H. national scenic by-way. Funding such a mammoth financial undertaking is of course a huge obstacle.

Don't charge any type of fees for entry.

Expand the auto tour. Open up Old Marsh Road to hiking and biking every weekend mid-May to mid-September.

For the visitor center to be closed on weekends, when it gets the most visitors, is not a good idea.

Good and plentiful restrooms, great trail and amazing visitor center!

Good facilities, employees, and volunteers.

Great group at Horicon. Wisconsin is lucky to have them.

Having the Horicon Marsh nearby is very important to me. I love being able to get out on Dyke Road and bird watch and photograph and then doing STH49, then the auto tour. That is what I call my "marsh hop" and I spend 6-7 hours doing it.

Horicon Marsh, Wisconsin has much improved facilities since last visit 10 years ago.

I am very unhappy about all the logging that is going on at the Horicon Refuge. We are supposed to be conserving our wildlife and forest, not cutting down all the trees and killing 70% of the whitetail deer population. The refuge is so overrun by turkey, but yet there is no opportunity to control the population. I am very sad by this destruction.

I don't like it when all the hunters are out there. They scold me for running out there with my dog when they are hunting. I am wearing my blaze orange.

I especially enjoyed the photo opportunities with the geese and goslings; the park was not too crowded, which was beneficial for me.

I felt Horicon was extremely well maintained and staffed. Enjoyed it very much.

I fish the Peachy Rd public fishing site. I'd like to see a porta potty or restroom by the parking site.

I found the Horicon staff to be most helpful and courteous. The Nature Centers are outstanding!

I have always been very impressed with this Refuge and the staff there. Great learning opportunities for me and my family.

I love speaking with the volunteers; they were very knowledgeable and friendly.

I think the offices should be open on weekends when most people are trying to get information.

I think we could have taken better advantage of the facilities if we had not taken our dog along, but that is ok, he is old.

I was surprisingly overwhelmed with the excellent visit.

I wish we could be out in the marshes, a walkway or drive thru would be terrific, but we do understand it would disrupt the wildlife too.

I would appreciate a port-a-potty at the end of Dike Road, Ledge Road, and similar locations. As a bird watcher, I spend a lot of time in these locations and would rather use a portable bathroom than use the outdoors.

I would probably not come if there was a fee involved. Otherwise, it is a wonderful, free opportunity for everyone to observe wildlife.

Interpretive Services could stand an overhaul. Trail and roadside interpretive facilities are unsatisfactory for the most part for such an important refuge. Trapping and special youth waterfowl hunts should not be allowed within the refuge. That's why it's called a 'Refuge' don't you know?

It is understaffed. The warden is an idiot.

It is very clean, set up well, and very welcoming. We'll be back.

It would be nice if the service centers were open more and if there could be more people to guide you around.

It would be nice to get a better sense of the best times to see large numbers of migrating birds and the best places to view wildlife at sunrise or sunset--great times for photography.

It would be nice to get deeper into the refuge without having to worry about hunters.

It would be nice to have more photography blinds.

It would seem that some management, i.e., killing cattails, has been detrimental to bird life at Horicon.

Keep up the good work of maintaining and staffing these refuges so that wildlife has a good home in which to live.

More hiking on biking trails would be nice.

More port-a-potties.

More walking and biking trails to access more of the park.

Nature tacks and hikes.

Need to return to a typical trapping season as was done during the 1980's. It is sad to look at literally hundreds of muskrats lying dead on the road that have crossed the marsh. I also would like to see them add new hunting seasons, such as for turkey, that are open in all surrounding areas.

Needs a canoe trail.

On or near Dike Road there is a need for some type of restroom, especially if you're there very early, like before sunrise.

Overall, they do a pretty good job. Maybe would like to see more fishing and boating opportunities.

Please post signs indicating frogs, snakes, and other wildlife have the "right of way" on ALL refuge roads. Particularly on the "auto tour" route.

Staff at the visitor center was very courteous and knowledgeable. The boardwalk was great for observing waterfowl in spring.

The cat tail floating boardwalk trail is no longer surrounded by cat tails. Why is the refuge water level so high and why are the cat tails all gone along the boardwalk? It is currently like a small lake with very few ducks.

The centers. People who work and volunteer are very helpful. They answer questions and give good advice.

The day we visited the staff (volunteers) were very courteous and knowledgeable. We had a great day there. Thanks to all for making the refuge available to the public.

The employees were very knowledgeable.

The fewer mowed and paved trails, the better the experience.

The first place we pulled over said it had info displays, but it did not.

The free gift for participating in the survey was kind of lame.

The hiking and biking access to Old Marsh Road is a tremendous asset as it provides an alternative to the noisy, somewhat dangerous STH49. If additional access would not impact wildlife, perhaps you would consider adding additional time. Example: weekdays (for retirees) and additional months (April - October) for hiking and biking.

The only concern is that the visitor center is not opened on weekends.

The port-o-potties were not kept up well.

The ranger was very informative. He was able to provide us with great amounts of information.

The restroom was very clean. Thank You.

The Visitor Center is closed very early on weekends. It would be nice if they extended their hours. More benches along trails and boardwalks would be nice.

The volunteers were extremely knowledgeable, courteous, and friendly.

There were lots of flies inside the building and there could have been more exhibits in the center.

Things are fine as they are. Do not need throngs of people; this is migratory bird territory. I hope too many people there won't scare them away.

We enjoyed our visit very much. Thank you!

We enjoyed the floating boardwalks into the marsh.

We have loved Horicon all our lives and are grateful for the fine staff.

We LOVE the boardwalk and also the drive through the waterway on highway 49! It's a beautiful refuge. We plan to make many more visits in the coming years. I've so enjoyed photographing the birds we've seen there. Even in January my sister and I saw red-tailed and rough-legged hawks. Thank you for all of your efforts to make this a wonderful experience for your visitors. I haven't made it to the visitor's center yet so I could not rate it, but I'm sure I'd give it a "5" rating when we come tomorrow.

We were a bit concerned about all the shooting around us. We didn't know where the hunters were or the chances of a stray bullet reaching us. It was also very disturbing to the peace of the place to hear constant gunfire, a bit like being in a war zone. We go to places like this to get away from the chaos of the city and found it very disturbing that we had to be worried about our safety even here.

We were just stopping by on our way home. We've been there before other years. Many of these questions aren't applicable to our visit.

We were very satisfied with our visit.

We were very satisfied.

We would like Marsh Road opened more, especially some time other than weekends when the refuge can get crowded. We'd also love the opportunity to canoe in the refuge.

We would like to see the water level maintained at a constant level throughout the year. We would like to see the trapping stopped.

Wonderfully knowledgeable guides/speakers at workshops!

Would like to have been able to get farther into the marsh; however in the time we had we weren't able to check out all the trails.

Survey Section 5

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

Comments on What Makes Refuges Unique? (n = 204)

A chance to hike and see wildlife in its natural habitat.

A very diverse habitat. Excellent migratory viewing. Very accessible location.

Abundant birds.

All the places to view the wildlife, especially the boardwalks.

Allowing access to nature.

Allowing visitors to experience the unique features of the refuge.

Allows wildlife a respite from other areas that may be more impacted by human contact. I love the refuges, but I disagree over the allowing of hunting on these sites. The animals and birds believe they are relatively safe places so they congregate and then to allow hunters in violates the nature of the reserve. I know it's a

balancing of interests and money, but ethically there seems something wrong encouraging wildlife to come and visit and then during certain times of the year we get to shoot them.

An opportunity to be in the wild without all the creature comforts, noise, crowds, and to experience God's beautiful world.

An opportunity to have access to our oceans, rivers, and wildlife areas.

An up close observation of wildlife and the protection of waterfowl.

Animal and plant communities can be observed naturally. They provide homes and protection for our wildlife. With so much development in our world, protected areas become increasingly important to preserve habitat and insure wild areas for future generations.

As a photographer, I find many different species of ducks and other wildlife I didn't see on my previous trips. I love the sounds of the marsh.

At a refuge I don't get the feeling that I am at a tourist facility, it is more a feeling that I am on the edge of true nature and just peeking in.

Beautiful vastness, well maintained, and great customer service.

Because their purpose is to conserve wildlife, they offer more opportunities to observe wild creatures. Other public lands (parks) are not as much about the wildlife. We need to preserve these refuges and perhaps create more as land becomes more urbanized.

Being able to view birds and wildlife in natural habitat is very enjoyable, educational, and entertaining. We enjoy hiking in beautiful, peaceful refuges.

Being up close to the geese.

Besides preserving the habitat, they provide the educational and access opportunities which might otherwise not be available.

Bird watching is good for the soul and refuges provide this experience for all.

Bird watching opportunities.

Bird watching, although very few were there due to the unusual weather.

Birding, marshes, auto trails.

Boardwalk, wildlife, surface, friendly volunteers.

Close up wildlife viewing from a car is a benefit for photography. Wildlife are used to cars, so the car serves as a good blind.

Conservation, education, beauty, and peacefulness.

Diversity.

Eagles, Pelicans, Whooping Cranes, etc.

Educational resources.

Egret Trail Boardwalk, auto tour, hiking, marsh, bird watching.

Experiencing wildlife in their natural habitat--excellent photo opportunities. Great bird watching.

For me it provided a unique experience to see a huge amount of migrating birds, which wouldn't be possible in a different park or nature area. In the refuge, there is enough isolation and protection for wildlife to feel safe in congregating there, which provides a great opportunity for visitors to see wildlife they wouldn't normally see.

Horicon is a beautiful place during migration times. It allows visitors to see birds from all over the country in a natural setting.

Horicon is where I have my primary experience. It encompasses a huge area which can "house" a huge population of varied wildlife. Nicely maintained for their welfare and also for viewing and photographing.

Horicon Marsh has some easily accessible areas, others are poorly marked with no or minimal highway signs. It is relatively convenient for me, about 30-40 miles for me to visit. I have a limited budget and have some limiting physical problems making long hikes impossible. I can visit areas of this marsh where I will still be able to enjoy it.

Horicon Marsh offers such a diverse outdoor experience. My young boys love the boardwalk, prairie hikes, finding snakes, tadpoles, woolly bears, etc. It's awesome to have right in our own backyard; more folks should take advantage of it.

Horicon is a beautiful refuge with great visitor centers, good parking, and nicely managed space to view birds and wildlife.

I appreciate the primary purpose of the refuges being for wildlife management. I appreciate access for passive use, but I don't care to see areas opened up for four wheeling, mountain biking, etc.

I believe they are more natural or wild than private nature centers or state parks.

I enjoy seeing the larger migratory birds in the air and up close in the water or a chance to see several birds of prey diving down to feed on another bird or a snake. I'm a crane man myself. You have to like a bird that can stand up and look you in the eye.

I find refuges to have more wildlife watching opportunities than other public lands.

I just love to take my boys out there to catch some fish and enjoy all the wildlife that the refuge has.

I liked the opportunity to see birds I have not seen before. Horicon Marsh was an awesome area to view birds. I'm so glad they preserved the area. It is important to wildlife and I'm happy to have the opportunity to visit. Thank you for your service.

I love that they are quiet, offering our wildlife a habitat that is relatively free of noisy human interference, that way quiet visitors can observe them and enjoy what would otherwise be impossible for many of us to experience.

I really enjoyed walking on the floating walk. It's very nice to see the ducks and geese swimming up so close.

I think the size of the area and the number of different species found within a refuge makes it unique.

I used to walk public lands up north years ago. People always tell me to go north to see wildlife and birds. I live in Horicon. When my two grandsons come to visit (17 and 12) the number one thing to do is walk the trail to the DNR on Hwy-28 and drive the marsh area on Dike Road just off county TW. The boys stay with me for a week at a time during the summer off and on. We travel Dike Road at least three times a week when they come to visit. I grew up in the county and I never get bored with the ever changing things. My grandsons live in Appleton, Wisconsin. They are city boys--always have been. They can't get enough of the country, especially the marsh. This year we will have to stop our walks on the trails leading the DNR on Hwy-28. My legs are not good anymore and even though it's an awesome trail, you can't go by wheelchair. Can you pave the path so it's wheelchair ready? I know it costs money, but I'm not the only handicapped visitor.

It allows me the chance to get up close and to view some of the unique wildlife that visits the refuge.

It gives a person a chance to view and possibly interact with nature.

It gives people an opportunity to view wildlife in their natural surroundings.

It is a place for the migration of the geese, which is why everyone is visiting. We came too early.

It is more informative than most other categories of public lands.

It is one of the largest preserved marshes in the country and provides excellent habitat for birds and wildlife.

It is so large and well maintained.

It protects unusual habitat and is managed for specific species. If the NWR system did not exist, they would, in many cases, be subdivisions that would eliminate or drastically reduce important habitat types, especially grasslands.

It provides people with an opportunity to view wildlife in its natural setting, which is not always available elsewhere.

It was my first experience. I loved it.

It was very well managed, there were people available to answer my questions, and in the state of Wisconsin the 'free' admission is very much appreciated. P.S. This is the only national refuge I've been able to visit so far.

It's a great place to visit.

It's a great way to see things in a natural setting.

It's always changing, helping nature to be able to return to its natural state. Our earth needs help, and Horicon is helping.

It's being kept very natural! That's lovely!

It's nice to see wildlife in its natural setting without human intervention.

It's remote and not overly busy. Great park!

Its size, uniqueness, and waterfowl variety.

It's the Horicon Marsh.

It's the only one around for miles and quite beautiful in its own way.

It's unlike any other outing we've been on. It was a new experience. It feels wonderful to be out among the goings on of nature and to learn about it. It makes you realize how important awareness and participation in preservation of our environment are! THANK YOU!!

Just being able to view all those different migratory birds in such a quiet setting is wonderful. The auto tour and boardwalks are so well kept and clean.

Just having it so close to home.

Just the fact that it is a huge natural cat tail marsh.

Large areas are well maintained.

Fewer ads. More natural environment. Exploring nature is more fun than doing thrill rides. It's less expensive than other recreational experiences e.g. The Wisconsin Dells--over commercialized. Horicon is natural.

Lots of places the public can go to enjoy nature. Very well maintained.

Marsh habitat.

More natural environment for birds and other animals.

More natural habitat and larger size. It seems to be less utilized than other recreational areas.

More natural, not as commercial.

Most are great places to view local wildlife, particularly birds in which I'm most interested.

Multiple migrating waterfowl.

My wife and I are serious songbird watchers and listeners, and we find refuges good habitat and quiet. Also, the visitor center gives good info on where we should look to hopefully find certain target songbirds.

No or controlled hunting, the large and diverse amount of wildlife, and amazing geology, plant life, habitat, etc.

No scouting allowed. I'm a bow hunter and I am sick of hunting other areas in the state that are overly crowded. It is not crowded here and you see deer when you hunt because of the lack of pressure. The rules are actually enforced; there are wardens around all the time. I like to see that.

Not commercialized.

On a refuge your chances of seeing larger amounts of wildlife and more variety are much greater.

Opportunity to view wildlife and talk to ranger.

Our family had a fantastic experience. We all learned a lot on our trip. We plan on going back in the winter.

Preservation of the wildlife habitat and migration stopovers.

Protected, educational.

Quality hiking trails with plenty of nature and wildlife to see. Great family activity.

Quality of the experience is key.

Quantity and quality of people.

Refuge and wetlands.

Refuge covers it. Fewer and fewer places for the non-human world to thrive presently in the US.

Refuges are primarily committed to protecting natural resources, while also accommodating visitors with a wide variety of interests (hiking, birding, photography, canoeing, etc.). They keep disturbances (e.g. roads, buildings) to a minimum--unlike parks, which function mainly as big playgrounds for people (featuring play equipment, concession stands, picnic areas, snowmobile/horse trails, etc.) and which place little value on conservation.

Refuges are unique because they offer people the opportunity to view wildlife in their natural habitat, and refuges help preserve and restore wildlife habitat.

Refuges seem to be as nature is meant to be. Some experiences are almost spiritual.

Sanctuary for wildlife and a great place to view the wildlife in a natural, non-harassed environment.

Seeing wildlife in its various activities.

Specific areas to enjoy activities that are marked well and taken care of nicely.

The ability to showcase critical habitat, unique or rare species,

The abundance of life and the appearance that the area is untouched by humans.

The abundance of wildlife.

The accessibility to the wildlife and nature through trails, auto tours, and hiking trails is an experience that cannot be duplicated.

The amazing amount of animals and birds, and the land itself is very beautiful. It is easily accessible and has a well-designed visitor center! Thanks again for caring for our environment and wildlife.

The availability to see and photograph wildlife and birds.

The birds!

The bluebird monitoring. The walks through the marsh.

The boardwalk over the water; I love that!

The Canadian goose habitat and secluded grounds.

The chance to see wildlife up close and personal.

The chances to photograph wildlife.

The conservation of resources and natural habitat.

The different kinds of birds, butterflies and other wildlife. Also different kinds of flowers etc.

The diverse use of the land while still preserving its natural state.

The diversity of the refuge. The opportunity to go inside the refuge by different means instead of being on the outside looking in.

The drive along Main Dike Rd. is especially pleasing as it is devoid of the roar of other roads and highways. There are lots of avian species and considerable opportunities to photograph birds (I was very lucky with Black-necked Stilts, Great Blue Herons and Sand hill Cranes the last two years and White-faced Ibis this year).

The environment, good interpretation centers. Friendly, knowledgeable staff.

The flyway experience is unique in that there is an abundant variety of waterfowl to view. We love it. Please don't flood the waterways. The "puddle" ducks are nowhere to be seen from any of the auto tour roads.

The geese and other birds.

The geography of the marsh itself was new to me. We had never seen something like this before.

The history, the vastness, and the wildlife it houses.

The Horicon marsh is a rare beauty that is underappreciated and needs protection given the history.

The information provided at the centers. The knowledge of protecting wildlife and how important we need to take this matter.

The limited public access and emphasis on maintaining good wildlife habitat.

The location I fish at. I've had a lot of wildlife viewing opportunities along with great fishing.

The many miles that you are able to explore and view wildlife.

The marshlands--a very different environment.

The natural setting of the Horicon NWR is unique.

The non-hunting areas increase the close encounters with the wildlife.

The observance of wildlife, great scenes, and clean paths that are well kept.

The opportunity to enjoy nature and see wildlife habitat that may not otherwise be in area (rare, endangered.) You can see protected landscapes and enjoy them at the same time. They offer areas to relax and enjoy that may be less populated than state and national parks. Refuges promote protecting our wildlife, landscape, and environment.

The opportunity to observe, learn about, and support wildlife. Additionally, the opportunity to photograph such wildlife in its habitat!

The opportunity to see such a wide range of bird species in a fairly small, easy to access area is absolutely wonderful, especially for me since I have limited mobility. I'll look forward to this trip every year and I've been there so many times it feels almost like coming home now.

The opportunity to view resident and migratory wildlife.

The opportunity to view wildlife in their habitat.

The opportunity to view wildlife up close and personal in a wild setting.

The preservation of natural habitats for wildlife.

The reason it is there is to conserve. There is a dedication and understanding of the importance of maintaining correct habitat and efforts are undertaken to correct habitat where possible.

The recreational activities and the beauty of wildlife. To me it was the greatest time of my life. I spent the day there with my brother. The employees were the best. They were ready to help in any way they were needed.

The remoteness and number of acres.

The restored marsh habitat and the diligent work on recovering and maintaining by refuge employees.

The size and nature of the habitat.

The size and opportunity to view so much.

The size of the marsh and the variety of birds is priceless!

The staff can answer more questions and are more available. This refuge provides an important habitat to migrating and nesting birds.

The trails are well maintained.

The unique opportunity to photograph birds and animals and simply enjoy watching the birds and animals in the wild--an opportunity in our own back yard to enjoy the beauty of nature.

The US Government gets the prime locations to develop so everyone gets to enjoy it.

The variety and amount of wildlife, especially the birds to see.

The variety of animals.

The variety of water birds that come there during their migration and the chance to see unusual species up

close. It was a beautiful place, but again, its beauty was constantly disturbed by gunfire and the worries that it brings.

The variety of wildlife that changes with the season makes Horicon a special place. We especially like the ability to hike through the different wildlife habitats: marshes, upland meadows, and woods.

The vast expanses that are undisturbed and truly belong to the wildlife.

The waterfowl and wildlife.

The wildlife refuges are engineered to increase the number and variety of wildlife on the refuge, in the surrounding area, and serve as great staging areas for many migrants. As a bird watcher and one who in general appreciates nature, I value these wild places and wish there were more of them. Keep up the good work.

The wonderful habitat diversity attracts so many species and numbers of birds. It is one of my favorite sites for bird photography and observation. Since my hobby is mainly solitary, it is important for me to feel safe and to have the refuge staff present. The hours are great for photographers--sunrise to sunset.

Their focus on habitat restoration and management, and on educating people about the uniqueness of the particular area and its wonderful wildlife. I always walk away knowing a lot more than when I came. I really appreciate this.

There are great recreational opportunities.

There are thousands of acres to be seen that are not polluted by auto trails. They are not the easiest to access and that makes them unique.

There aren't many areas left in America to see this variety of waterfowl. Horicon offers this kind of experience.

There is no other comparable alternative available besides those provided by state and federal entities.

There seems to be more wildlife and native plant communities on the properties.

They aim to balance public usage and wildlife conservation.

They allow me to introduce my children to wildlife in a natural setting and give me an opportunity to teach them valuable life lessons on issues like conservation and sustaining natural resources.

They are as close to being 'undisturbed' as possible compared to parks.

They are beautiful. Wildlife is just out there in their natural environment. You're not just in a "park," you're out there next to nature.

They are for the most part open to the public. It opens up the opportunity for all visitors to experience the wildlife and nature as if it was before human intrusion.

They are great in the sense that they offer so much information.

They are important in maintaining and conserving a wide variety of wildlife and are meant to do so for many years to come. They also provide a wide variety of habitats for a wide variety of wildlife.

They are not commercial.

They are open to the public and are a learning tool for both adults and youth.

They are saved from development, conserve both land and water, and give wildlife a safe and natural place in which to live.

They are set up for minimal impact on nature.

They are specific to the area and their conservation efforts. It is important to keep some areas protected with limited access.

They are specifically managed for particular types of wildlife, ensuring that these species have a chance of survival, buffered from development and the continuous loss of natural landscapes. The size of Horicon protects large numbers of certain species that would be at peril if environmental destruction impacted smaller marsh land remnants in the state. Additionally, management techniques such as drawdowns for shorebirds, habitat enhancement, carp reduction, water level control to mitigate the edicts of overly wet or dry years, and controlled burns to perpetuate grasslands, can more easily be implemented here than at most other public lands.

They are the best kind of "zoos."

They are unique because they are maintained very well by professionals and are more educational than public lands.

They combine recreation with the information about wildlife and the necessity to provide nature for our birds and other wildlife.

They have displays that some people could never see other than at a refuge and areas to observe wildlife.

They open the refuge up over winter for the hikers, skiers, etc. (Dyke Rd.)

They protect wetlands along with their aquatic resources as their primary mission. The unique recreational experience would be the field interpretation of this resource.

They provide a place for us to visit in a place where there are no national parks close by.

They provide an area of many animals, birds, etc. as the area is protected and provides a natural habitat for the wildlife.

They provide publicly owned places for wildlife viewing and unusual scenery.

They seem somewhat less traveled than national parks so it's easier to feel more alone with nature. There are usually a lot of birding opportunities at refuges.

This refuge is unique because of the vast numbers of Canadian geese that stop at the marsh on their migration south. You can get very close to these geese and other ducks on the trails.

Thousands of geese, hundreds of sand hill cranes, white egrets. I have seen 12 whooping cranes.

Typically have better maintained habitats for wildlife viewing.

Usually has better bird watching and wildlife viewing than at national parks. Often, but not always, they are less crowded, and are usually less developed.

We are going to return for hunting, fishing, trail hiking, and bird watching.

We live on a marsh with a prairie.

We loved the telescope on the deck. We were able to see animals and birds we didn't know were there.

We've visited 74 times. It's less crowded, there are no ATVs, snowmobiles, camping, loud music, or drinking. It's wilder, off the beaten path. We usually feel safe.

Well maintained facilities. The area is well preserved and managed. The officers we met with were friendly and very knowledgeable. They were helpful on fishing area and telling us the new rules on sinking.

When you hike or bike on the refuge you're with the birds and the animals. You're in the wilderness and that's what I love about it.

Where else in Wisconsin can you experience a marsh wilderness?

Wildlife available, importance to providing habitat and providing an enjoyable experience.

Worthwhile and important recreation and conservation experiences, but not unique. National Parks and other sites do much the same, I think.

Yes. It makes available the different type of ecosystems that may be in a certain area. This is a hands-on visual way to teach other people.

You are able to view wildlife in a natural setting. Zoos are OK, but nature is much better!

You can see wildlife in natural settings.

You have a chance to turkey hunt on the refuge.

You have access to roads that take you close to the water ways and tree lines to see birds and open meadows.

Additional Comments (n = 44)

All I would change is I would like to continue my walks with my grandsons to the DNR on HWY-28. My 17 year old grandson is 6'2" and is very strong, but the path to the DNR is hilly and rough. It's mostly grass and maybe a few smooth spots. I need to push my mom and dad around in a wheelchair. I'm only 5'1", but even on a level grassy or gravel surface it was hard. When we took our last walk (in a wheelchair) my grandson had problems pushing me. We had to stop our walks. He said it was ok, but I could see it was hard for him. All I need is a smooth, hard surface for my wheelchair so I can enjoy my special walks with my grandsons.

At Horicon, what idiot schedules a controlled burn after the gates have been opened for the spring?

Horicon is a great community. The people are always so friendly and helpful. We love coming up here every year.

Horicon is a premier wildlife refuge in the area and I love to visit during various times of the year to see the changes in habitat and species that inhabit the area.

Horicon Marsh is a jewel! It offers an amazing natural experience. It satisfies one's aesthetic, spiritual, and intellectual needs. Thank you to all who have created and maintained Horicon Marsh.

Horicon Marsh is a treasure to the state of Wisconsin.

Horicon Marsh is one of my favorite places to visit, especially in early mornings, but I wish it were possible to remain in the marsh beyond sunset to listen to the beautiful night sounds and see the night sky. Unfortunately, gates close automatically at dusk (according to the signs--I've never tested them to see if this is true!).

I am concerned about the speed limit through the marsh area. We need to be more protective of our wildlife when it comes to a wildlife preserve with highways running through them.

I find something new every time I visit Horicon National Wildlife Refuge. I love it. Thank you for doing a great job.

I go on a bird walk almost weekly, which accounts for most of the "trips."

I grew up near Waupun and have enjoyed the marsh since I was young. I recently moved to Ohio, but I still go back to Wisconsin often and make a point to go back to the marsh every time I am up here. I appreciate all the hard work you guys do. The amount and diversity of wildlife, especially birds, is incredible and has only been getting better the past number of years.

I have been visiting the Horicon Refuge every September for the past 10 years. I thoroughly enjoy it every time.

I have lived next to this marsh all my life and do appreciate the opportunities I have to hunt and trap within its boundaries. My observations are though that current managers have not done anything that has resulted in improved waterfowl numbers and have reduced some opportunities such as trapping with the excuse of not wanting to disturb wildlife, and yet anybody with half a brain knows that trapping out predators would significantly aid in improving nesting success, and yet I see them doing controlled burns of huge areas right during nesting season. I think the current managers view dealing with the hunters and trappers as a nuisance they would prefer not to have to allow.

I look forward to visiting again. Horicon Marsh is my happy place!

I love Horicon Marsh and the wildlife viewing opportunities it presents. Keep up the good work and add more restroom facilities in the remote locations. Cheers!

I love this refuge. It is beautiful and the number of species it attracts is amazing. I wish they had not built the windmills so close, but I appreciate the efforts and the progress is returning Horicon to the type of marsh it really was. The personnel, especially Wendy, are knowledgeable and wonderful to talk with. Their love for this place is evident.

I loved it! I got to see white pelicans and tree swallows, which I have never seen before. We had only one problem, the people in surrounding towns did not know where the visitor center was. We stayed at Country Inn & Suites in Fond du Lac and the person at the front desk had never heard of Horicon Marsh. The town's visitor center didn't have a lot of information either, but none the less we persisted and found the refuge Visitor Center. All in all, our visit was excellent. Thank you.

I spend a great deal of time at the refuge. My father hunted and fished there since we lived in Waupun. I used to hike the trails and now I just drive through, but I love the boardwalks!

I trap 5 months a year on the refuge. This year I paid \$1800 for my area to trap. I feel one of the best ways to fight climate change is by using more natural products and less synthetics.

I truly cherish the refuge. I have hunted deer and pheasants here for many years. Having grown up in the area, I love it and it is a part of me. I love the history of the area: the old farmsteads, the old oaks, and of course the wild geese. I am alarmed by the global warming portion of the survey and the possibility that the refuge may be in some way used as a pawn in the bogus manmade global warming agenda that threatens our liberties and standard of living. Since you started it, please look to the east and see the many whirling shrines to the radical environmentalist movement polluting the beautiful view while they generate a paltry amount of highly subsidized, politically correct electricity. In case you have never been to the Horicon Marsh, I am talking about all of the wind turbines on the Niagara Escarpment directly adjacent to the refuge. What an eyesore. Thanks for listening.

I wonder what the potential would be to extend the current Main Dike auto tour across the main ditch outlet structure and west (one way) to an exit on the west border of the refuge.

I would like to have had more warning about the fact that it is like walking in a war zone, and that I'd be exposed to so much gun play. It would be a good thing to do, especially for people from the Chicago area who are not used to constant hunting. I was also unaware prior to stopping that it was water fowl hunting season, or if there is a season for that. I was hoping they weren't hunting the herons and cranes.

I would like to see hunting allowed in the refuge until the end of December. I would like to have more availability to the interior of the refuge.

If there was one thing I could change about Horicon it would be a reroute of STH-49 to outside the refuge boundaries. The present STH-49 would be converted to a 15mph auto tour as an addition to the Horicon "turnpike." I realize this is economically and politically unfeasible under present conditions in our country, but it may be for future generations.

Keep up the good work!

My daughter and I really enjoyed the hiking trails and the boardwalk observation platform. We will return again.

Our children enjoyed the activities at the visitor's center during the bird festival.

Please consider our suggestion to allow cattails to grow along the floating boardwalk trail.

Please, please, continue to protect the creatures.

See attachment of why I love Horicon Marsh. Please see images, a very small random sample of Horicon Marsh. [Included 11 photos he took himself of Horicon as a testament to how much he loves Horicon.]

See you next year!!

Thank you! Nature is it. We all wouldn't be here without it!

The 4 trips above were extended trips of hundreds of miles. We took many local birding trips. I did not count the cost of air fare in the expenses given earlier. That was \$660.

The employees at the refuge were very helpful and courteous to us.

The Horicon Marsh is a great place.

The Horicon Refuge is one of my 7 wonders of the world. We must protect it, not destroy it. It used to be the best fishing and hunting around. The refuge concentrates 80% of its efforts to the geese and ducks and 20% to everything else. There is more to life than geese and ducks. Sorry for the messy writing, I did this in 10 minutes not 25. [signed and addressed and phone number]

The sites I have been to are all poorly managed because of low funding and low numbers of employees. I am an ecologist by training and know the problems. Horicon has degraded over the years. There is not enough exploration to what is being done under the guise of management, and some may be misguided.

This was a side trip that took so long we cancelled our original destination this day.

What can I say except, we love Horicon! Three of the trips we took in the last 12 months were to visit the Horicon Wildlife Refuge. My husband is retired so traveling is a luxury we can't afford, unless it's to a nearby wildlife refuge!

When we stop killing people all over the world for phony and immoral purposes, giving money and cover to the Zionist state and other brutal regimes (Saudi Arabia, Columbia, etc.), perverting out democracy by allowing the corporations and the rich to own more of everything (including the government itself,) then we can admit out guilt (genocide, slavery, terrorism, domestic and foreign exploitation, and destruction of the environment), change our ways, educate and care for all the people, renew the environment, and give the earth and its creatures a chance to survive. Of course by that time there will be plenty of money and commitment to places like Horicon.

Why do you think Greenland is named that? We are in a cycle. Too much emphasis on "green".

You do a very good job at Horicon Marsh, especially in these days of economic uncertainty.

Your habitat manipulation through burning is great! Also your water level manipulation to promote habitat for different species is good!
