



# National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for Parker River National Wildlife Refuge

By Natalie R. Sexton, Alia M. Dietsch, Andrew W. Don Carlos, Lynne Koontz, Adam N. Solomon and Holly M. Miller

*Parker River National Wildlife Refuge is a great resource, and a good example of well-spent tax dollars. It preserves and defends important natural resources for future generations. My experiences with the staff have been great!*—Survey comment from visitor to Parker River National Wildlife Refuge.



Parker River 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.	Opinions about fees at this refuge. ....	16
11.	Importance-satisfaction ratings of services and facilities provided at this refuge. ....	17
12.	Importance-satisfaction ratings of recreational opportunities provided at this refuge.....	18
13.	Importance-satisfaction ratings of transportation-related features at this refuge.....	19
14.	Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future. ....	21
15.	Visitors' personal involvement with climate change related to fish, wildlife and their habitats.....	22
16.	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

## Acknowledgments

This study was commissioned by the U.S. Fish and Wildlife Service Division of Visitor Services and Communications Headquarters Office, Arlington, Virginia. The study design and survey instrument were developed collaboratively with representatives from U.S. Fish and Wildlife Service and researchers from the PASA Branch, U.S. Geological Survey. For their support and input to the study, we would like to thank Kevin Kilcullen, Chief of Visitor Services; Steve Suder, National Transportation Coordinator; Regional Office Visitor Services Chiefs and Transportation Coordinators; and the staff and any volunteers at Parker River NWR who assisted with the implementation of this surveying effort. The success of this effort is largely a result of their dedication to the refuge and its resources as well as to the people who come to explore these unique lands. We also would like to thank the following PASA team members for their hard work throughout the surveying effort, which has included (among *many* things) the arduous tasks of stuffing more than 20,000 envelopes, managing multiple databases, and preparing numerous reports: Shannon Conk, Halle Musfeldt, Phadrea Ponds, Gale Rastall, Margaret Swann, Emily Walenza, and Katie Walters.

## 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 Parker River 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):** A copy of 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.

<b>Pacific Region (R1)</b>	
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)	
<b>Southwest Region (R2)</b>	
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)	
<b>Great Lakes-Big Rivers Region (R3)</b>	
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)
<b>Southeast Region (R4)</b>	
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)
<b>Northeast Region (R5)</b>	
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)
<b>Mountain-Prairie Region (R6)</b>	
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)	
<b>Alaska Region (R7)</b>	
Alaska Maritime National Wildlife Refuge (AK)	Kenai National Wildlife Refuge (AK)
<b>California and Nevada Region (R8)</b>	
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  $n^{\text{th}}$  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 Parker River 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 Parker River National Wildlife Refuge

Parker River NWR was established in 1942 to provide feeding, resting and nesting habitat for migratory birds. The refuge is situated on Plum Island, a barrier island on the northeast coast of Massachusetts. Covering 4,662 acres, Parker River is home, temporary or permanent, to over 350 species of birds. In addition to the vast population of migratory birds, a variety of mammals, insects, fish, reptiles and amphibians also make a life at Parker River. Over 3,000 acres of refuge land are salt marsh, one of the most productive ecosystems on the planet.

Parker River focuses on achieving its wildlife conservation goals, while providing meaningful wildlife-dependent recreational activities. Wildlife observation, photography, guided nature programs, surf-fishing, waterfowl and deer hunting all draw visitors looking to enjoy what the refuge has to offer. Around 245,000 visitors travel to Parker River annually (based on 2008 RAPP database, U.S. Fish and Wildlife Service, 2011, written comm.). The refuge celebrates National Wildlife Refuge week in October, and hosts its own “Go Fish” event—a surf-fishing day for kids and parents. The refuge provides free interpretation programs and environmental education for families, groups or individuals to gain some knowledge of the area. Figure 1 below displays a map of the refuge. For more information, please visit <http://www.fws.gov/northeast/parkerriver/>.



**Figure 1.** Map of Parker River NWR, courtesy of U.S. Fish and Wildlife Service.

## Sampling at Parker River National Wildlife Refuge

A total of 303 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Parker River NWR (table 2). In all, 211 visitors completed the survey for a 71% response rate and  $\pm 5\%$  margin of error at the 95% confidence level.<sup>1</sup>

**Table 2.** Sampling and response rate summary for Parker River NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	4/16/11 to 4/30/11	Plum Island Gatehouse/Fee Station on Sunset Drive	139	5	101	75%
2	8/20/11 to 9/03/11	Plum Island Gatehouse/Fee Station on Sunset Drive	164	1	110	67%
<b>Total</b>			<b>303</b>	<b>6</b>	<b>211</b>	<b>71%</b>

## 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 Parker River 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 (87%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants and their habitat (90%). 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

<sup>1</sup> 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).

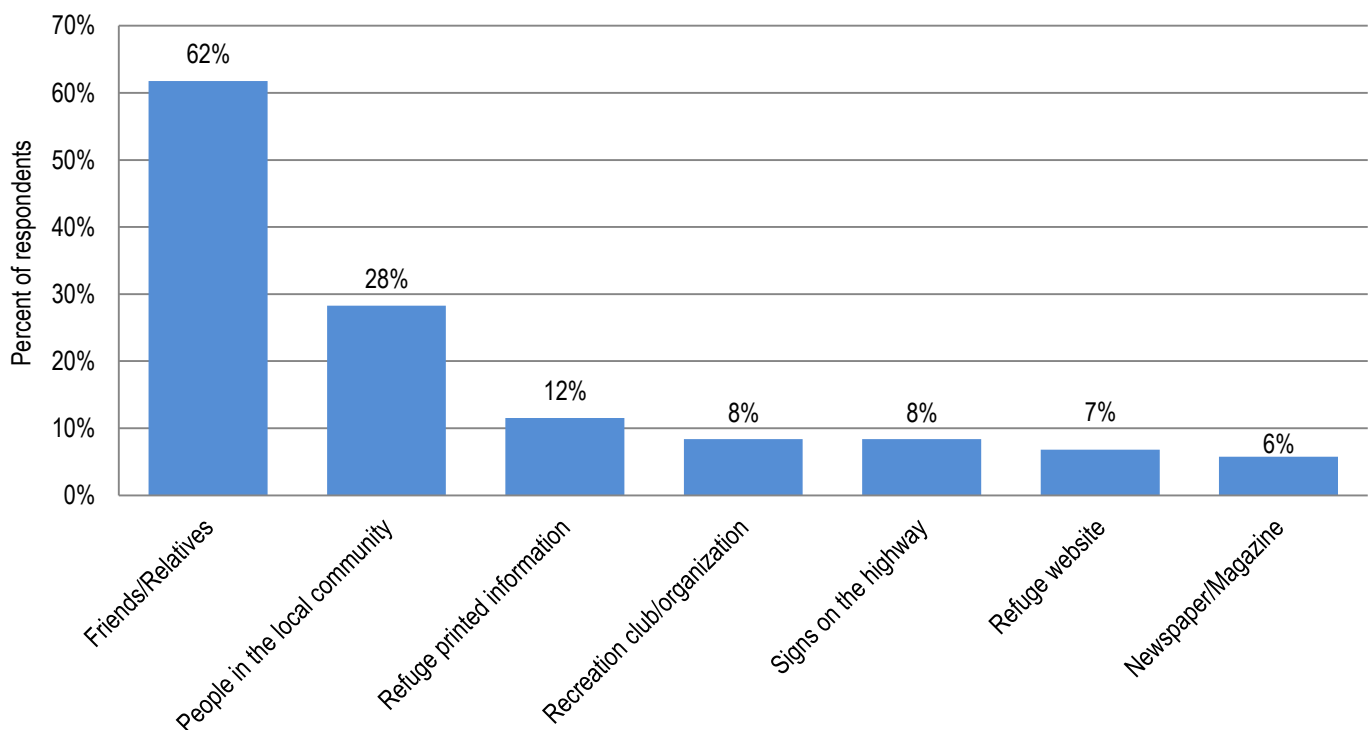
recreation experience (89%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. More than half of visitors to Parker River NWR had been to at least one other National Wildlife Refuge in the past year (56%), with an average of 5 visits to other refuges during the past 12 months.

### Visiting This Refuge

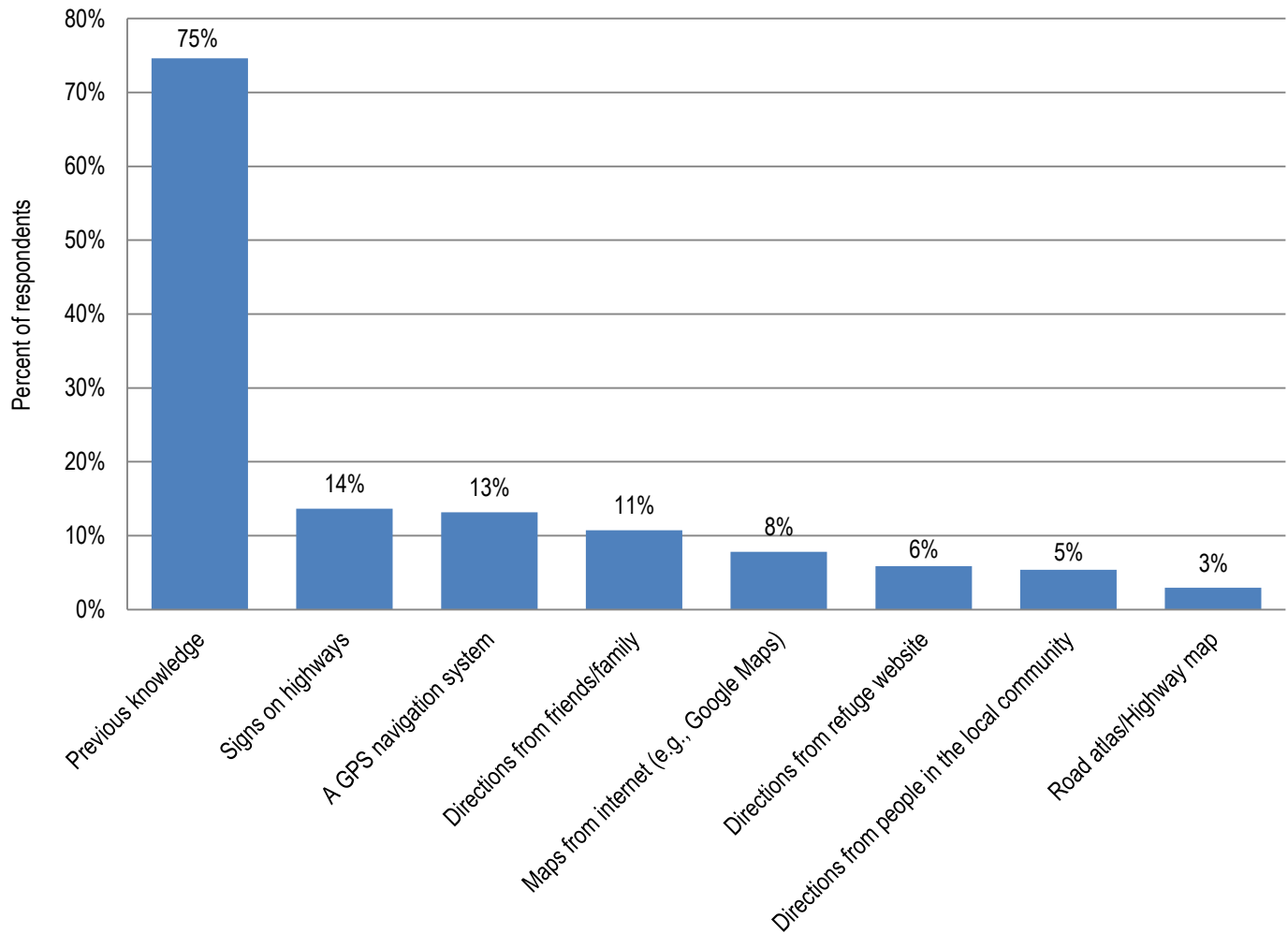
Some surveyed visitors (10%) had only been to Parker River NWR once in the past 12 months, while most had been multiple times (90%). These repeat visitors went to the refuge an average of 30 times during that same 12-month period. Visitors used the refuge during only one season (18%), during multiple seasons (30%), and year-round (51%).

Most visitors first learned about the refuge from friends/relatives (62%), people in the local community (28%), or refuge printed information (12%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (75%), signs on highways (14%), or a GPS navigation system (13%; fig. 3).

Most visitors (83%) lived in the local area (within 50 miles of the refuge), whereas 17% were nonlocal visitors. For most local visitors, Parker River NWR was the primary purpose or sole destination of their trip (85%; table 3). For most nonlocal visitors, the refuge was also the primary purpose or sole destination of their trip (59%). Local visitors reported that they traveled an average of 19 miles to get to the refuge, while nonlocal visitors traveled an average of 134 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 80% of visitors travelling to Parker River NWR were from Massachusetts.



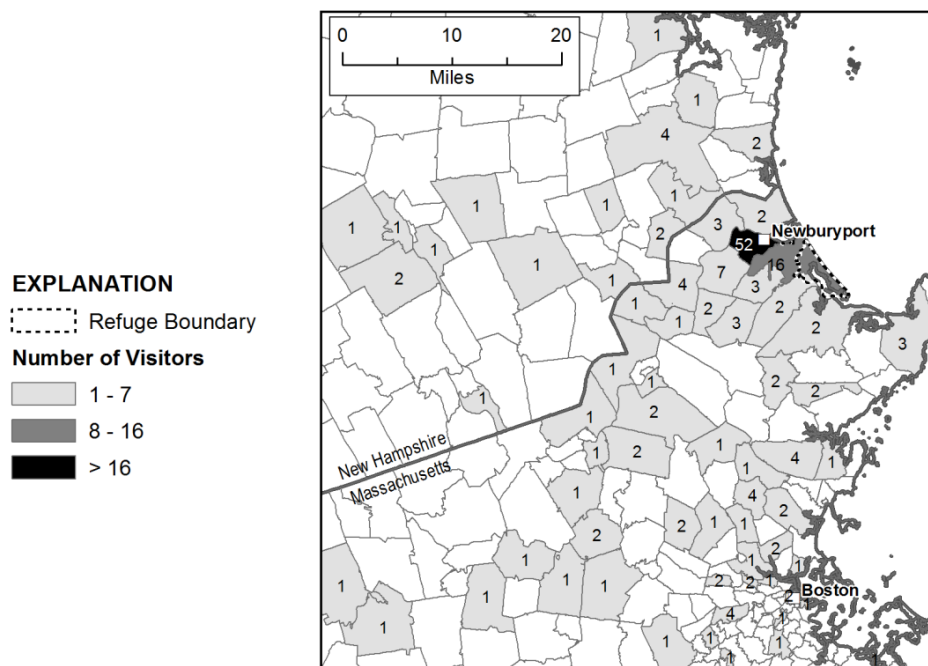
**Figure 2.** How visitors first learned or heard about Parker River NWR (n = 191).



**Figure 3.** Resources used by visitors to find their way to Parker River NWR during *this* visit (n = 205).

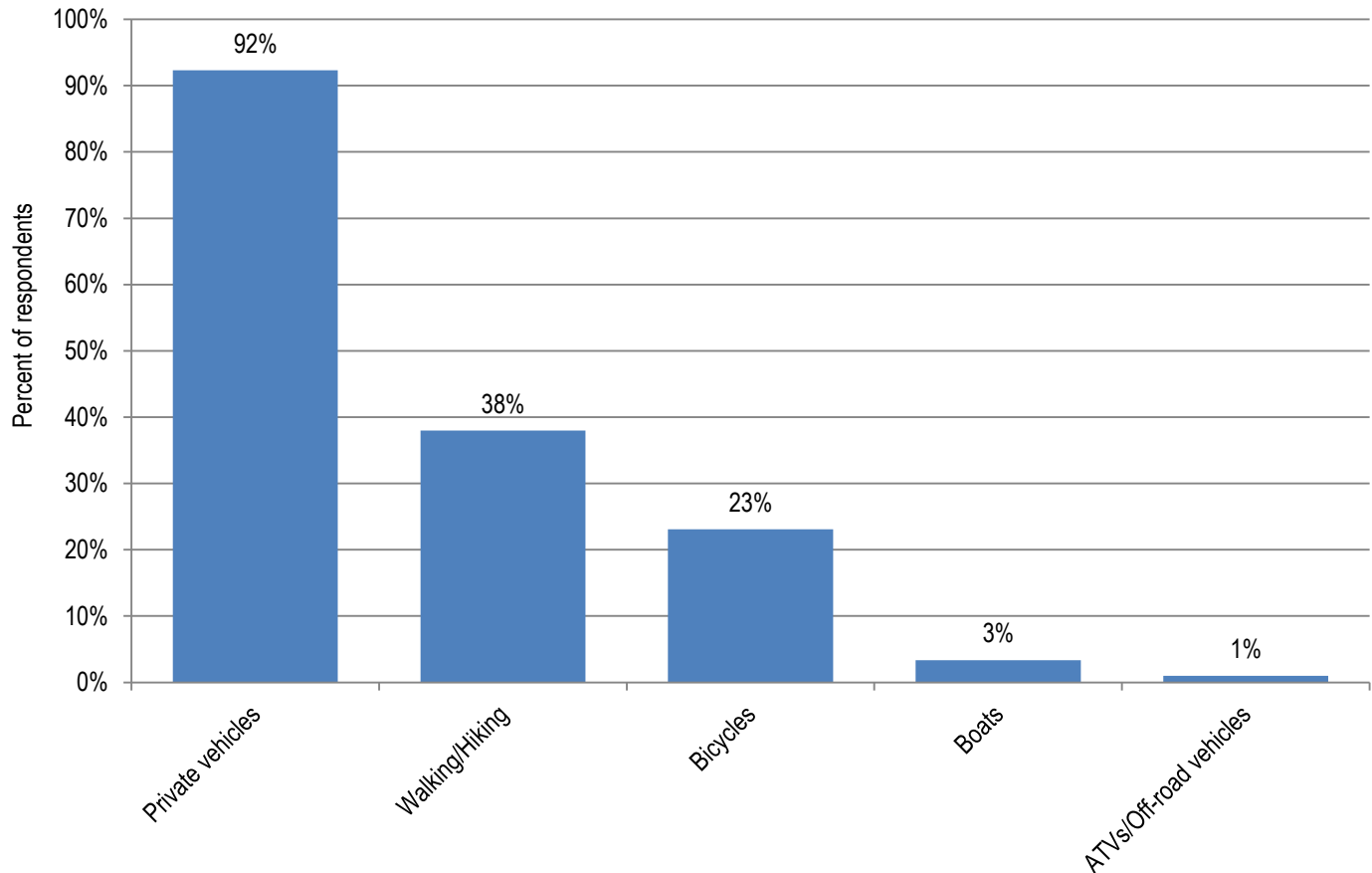
**Table 3.** Influence of Parker River NWR on visitors' decision to take *this* trip.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	59%	35%	6%
Local	85%	10%	5%
Total	81%	14%	5%



**Figure 4.** Number of visitors travelling to Parker River NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 211).

Surveyed visitors reported that they spent an average of 4 hours at Parker River 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 3 hours (21%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (92%), walking/hiking (38%), and bicycle (23%; fig. 5). More than half of visitors indicated they were part of a group on their visit to this refuge (55%), travelling primarily with family and friends (table 4).

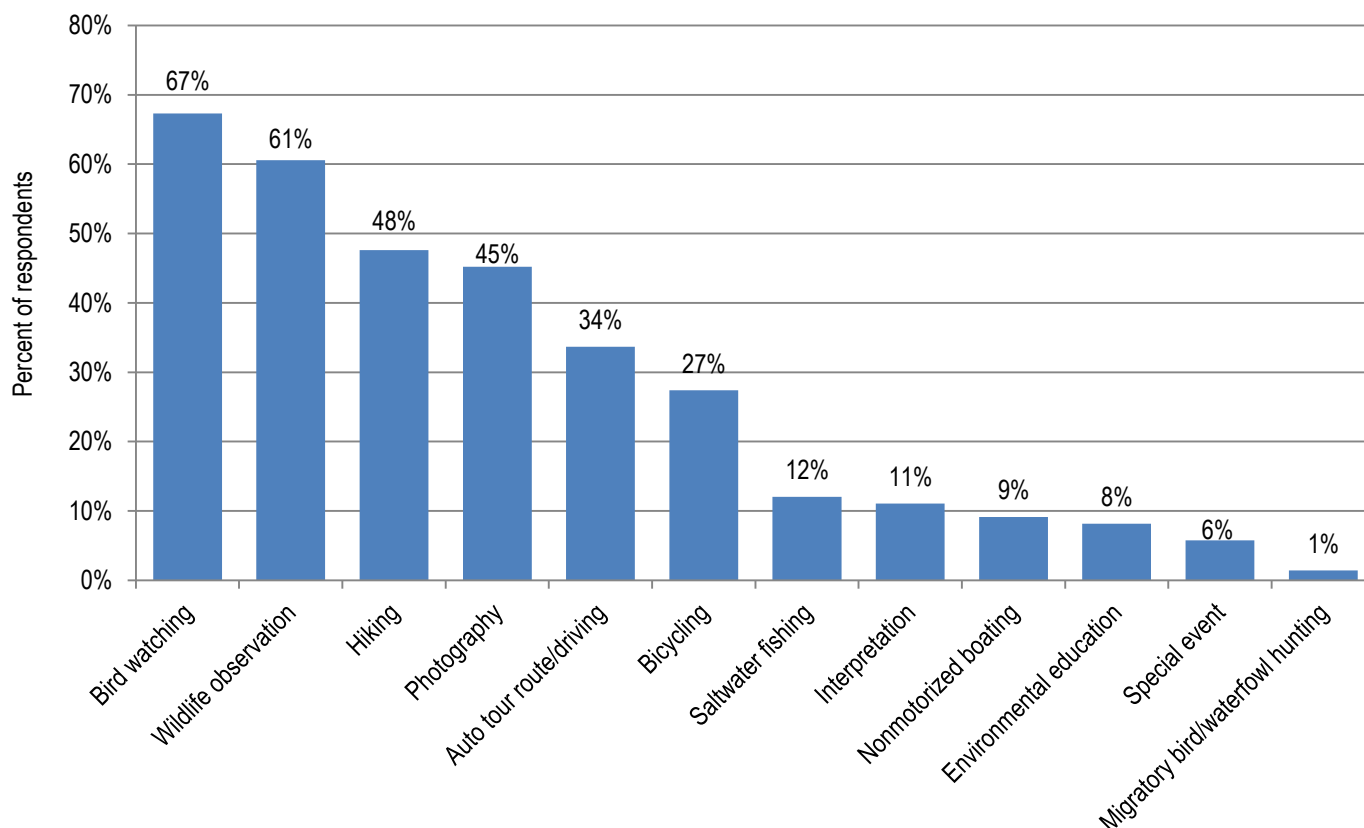


**Figure 5.** Modes of transportation used by visitors to Parker River NWR during *this* visit (n = 208).

**Table 4.** Type and size of groups visiting Parker River NWR (for those who indicated they were part of a group, n = 114).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	91%	3	1	4
Commercial tour group	1%	8	0	8
Organized club/School group	4%	6	3	9
Other group type	4%	11	0	11

Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top activities reported were bird watching (67%), wildlife observation (61%), hiking (48%), and photography (45%). The primary reasons for their most recent visit included beach activity (24%), bird watching (23%), and hiking (16%; fig. 7). The visitor center was used by 40% of visitors, mostly to stop to use the facilities (73%), view the exhibits (57%), and ask information of staff/volunteers (51%; fig. 8).

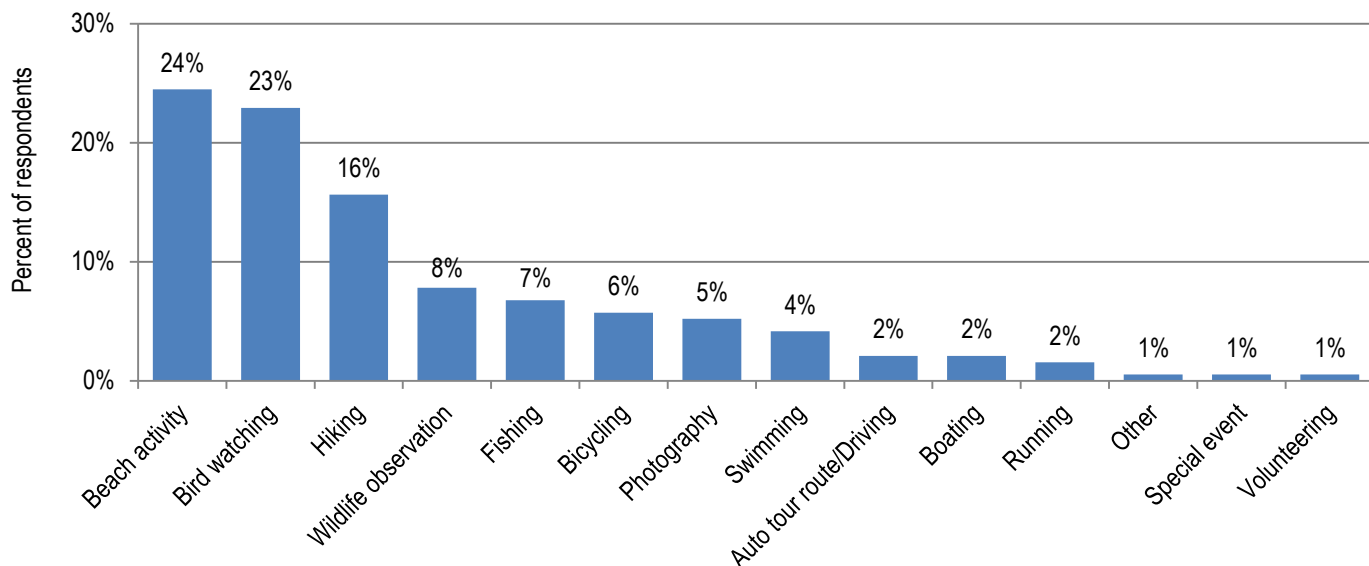


**Figure 6.** Activities in which visitors participated during the past 12 months at Parker River NWR (n = 208). See Appendix B for a listing of “other” activities.

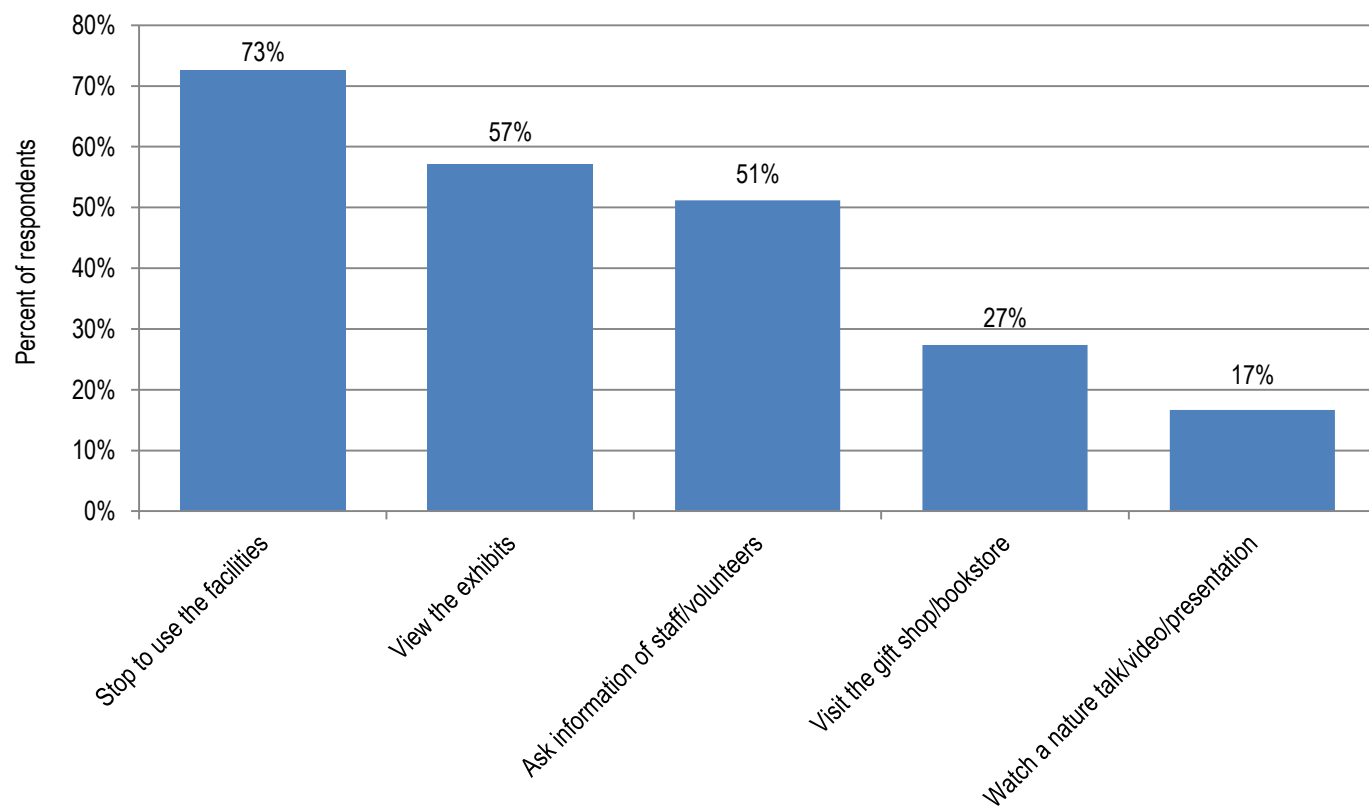
## Visitor Characteristics

Nearly all (98%) surveyed visitors to Parker River 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 51% male with an average age of 56 years and 49% female with an average age of 54 years. Visitors, on average, reported they had 16 years of formal education (college or technical school). The median level of income was \$75,000–\$99,000. 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 Parker River NWR (n = 192). See Appendix B for a listing of “other” activities.



**Figure 8.** Use of the visitor center at Parker River NWR (for those visitors who indicated they used the visitor center, n = 83).

## 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, 83% of surveyed visitors to Parker River NWR indicated that they live within the local area. Nonlocal visitors (17%) stayed in the local area, on average, for 3 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$54 per person per day and local visitors spent an average of \$41 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 at Parker River NWR expressed in dollars per person per day.

Visitors	n <sup>1</sup>	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	30	\$33	\$54	\$58	\$0	\$260
Local	139	\$25	\$41	\$50	\$0	\$255

<sup>1</sup>n = 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.

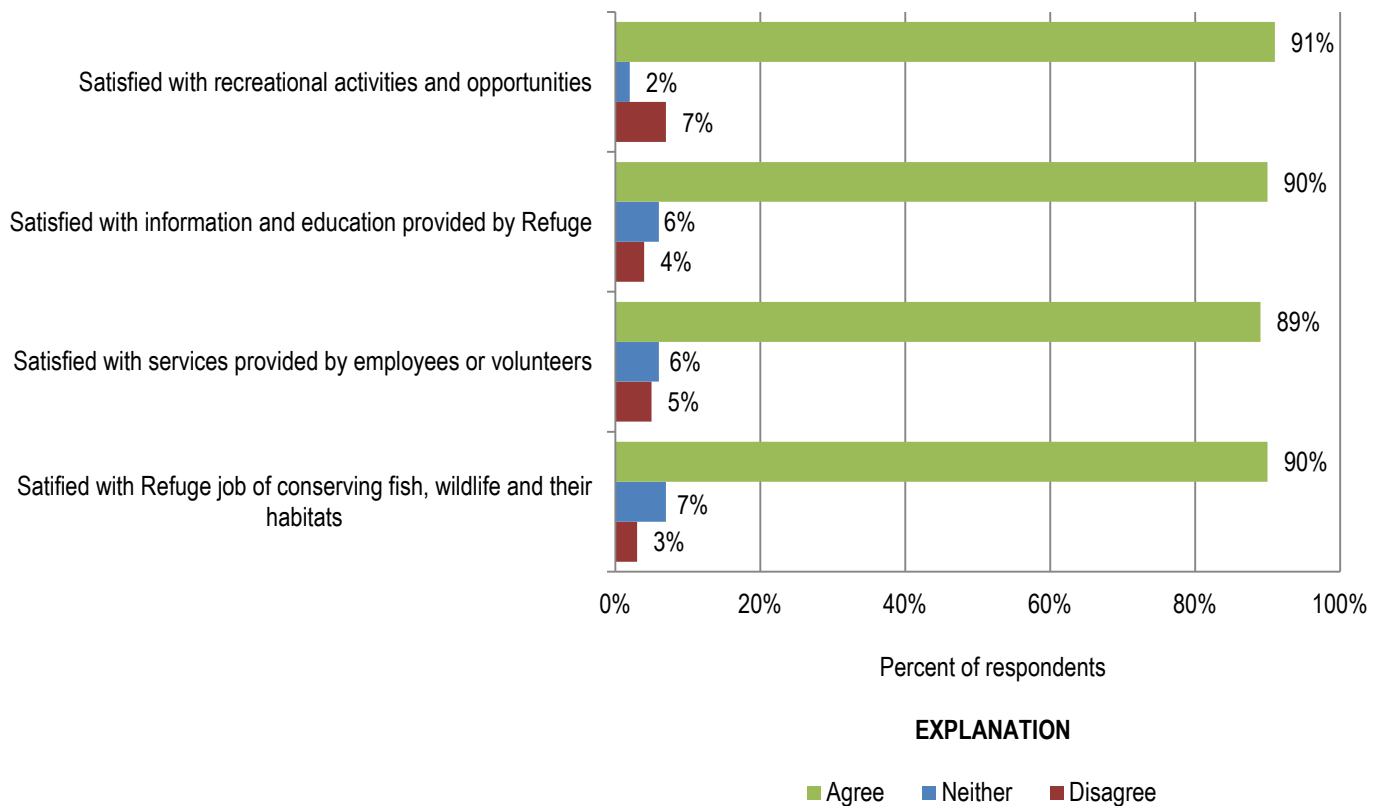
## Visitor Opinions about This Refuge

*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.*

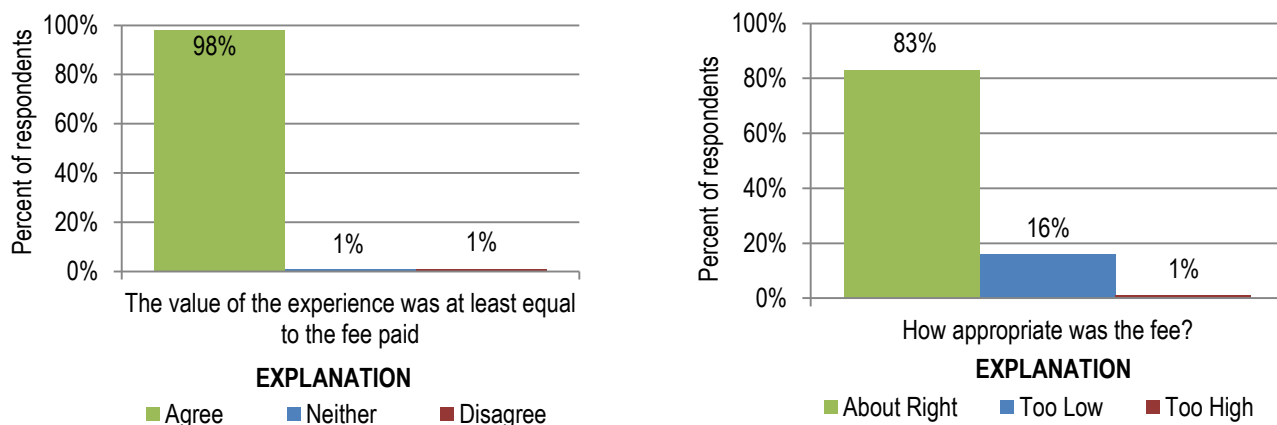
Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at Parker River NWR were as follows (fig. 9):

- 91% were satisfied with the recreational activities and opportunities,
- 90% were satisfied with the information and education about the refuge and its resources,
- 89% were satisfied with the services provided by employees or volunteers, and
- 90% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Of the 86% of visitors who indicated that they paid a fee to enter the refuge, 98% agreed that the opportunities and services were at least equal to the fee they paid; 83% felt the fee was about right, whereas 17% felt that the fee was too low or too high (fig. 10).



**Figure 9.** Overall satisfaction with Parker River NWR during this visit (n ≥ 197).



**Figure 10.** Opinions about fees at Parker River NWR (for those visitors who indicated they paid a fee, n = 178).

### Importance/Satisfaction Ratings

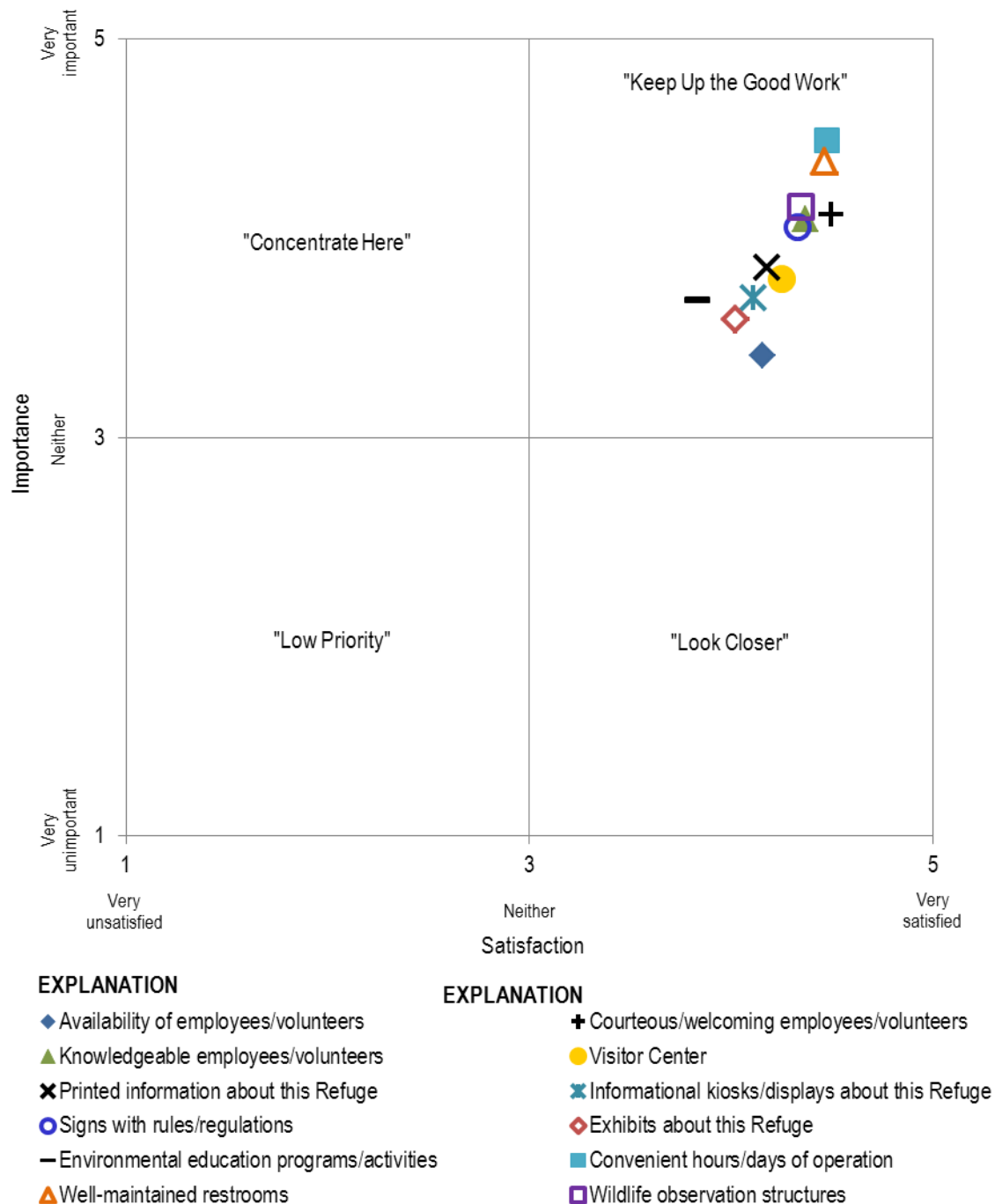
*Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in 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.

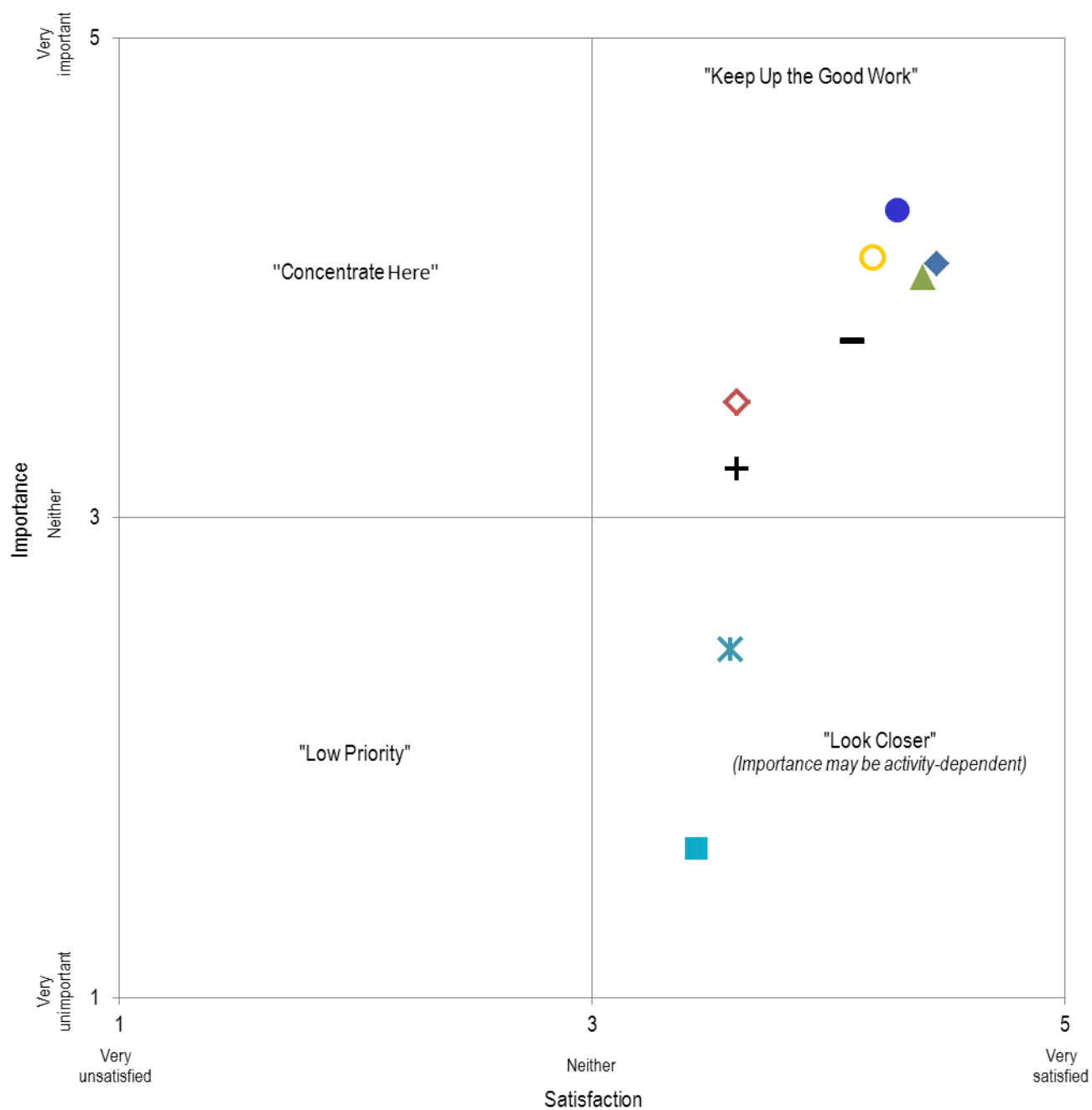
*Graphically plotting visitors' importance and satisfaction ratings for different services, facilities, and recreational opportunities provides a simple and intuitive visualization of these survey measures. However, this tool is not without its drawbacks. One is the potential for variation among visitors 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 Parker River 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 11-13 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Parker River NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 11). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except hunting and fishing

opportunities, which fell into the “Look Closer” quadrant (fig. 12). The average importance of hunting and fishing opportunities 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. Nearly all transportation-related features fell in the “Keep Up the Good Work” quadrant except directional signs on highways, which fell into the “Look Closer” quadrant (fig. 13).



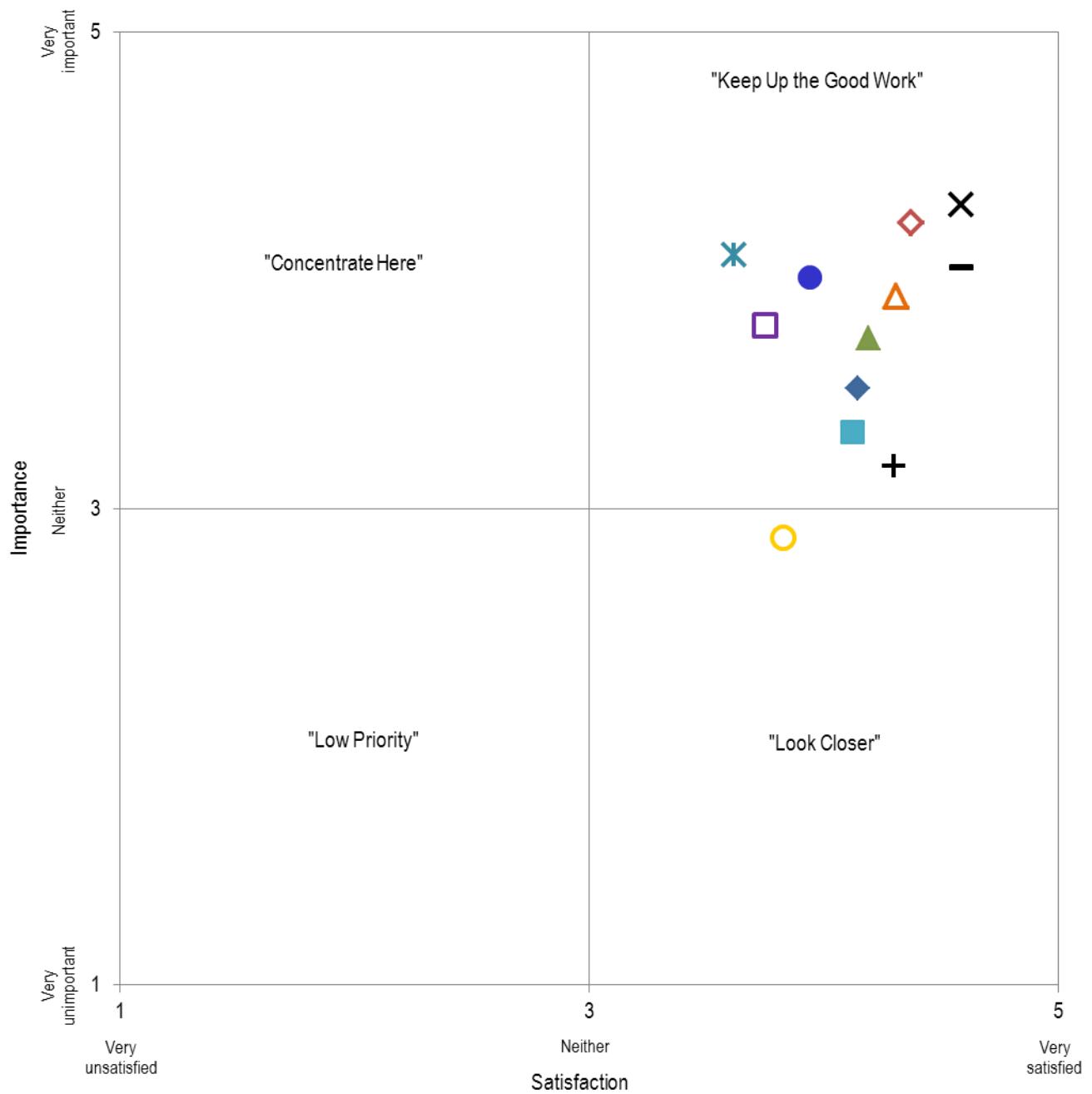
**Figure 11.** Importance-satisfaction ratings of services and facilities provided at Parker River NWR.



#### EXPLANATION

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

**Figure 12.** Importance-satisfaction ratings of recreational opportunities provided at Parker River NWR.



#### EXPLANATION

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

**Figure 13.** Importance-satisfaction ratings of transportation-related features at Parker River 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 Parker River 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.*

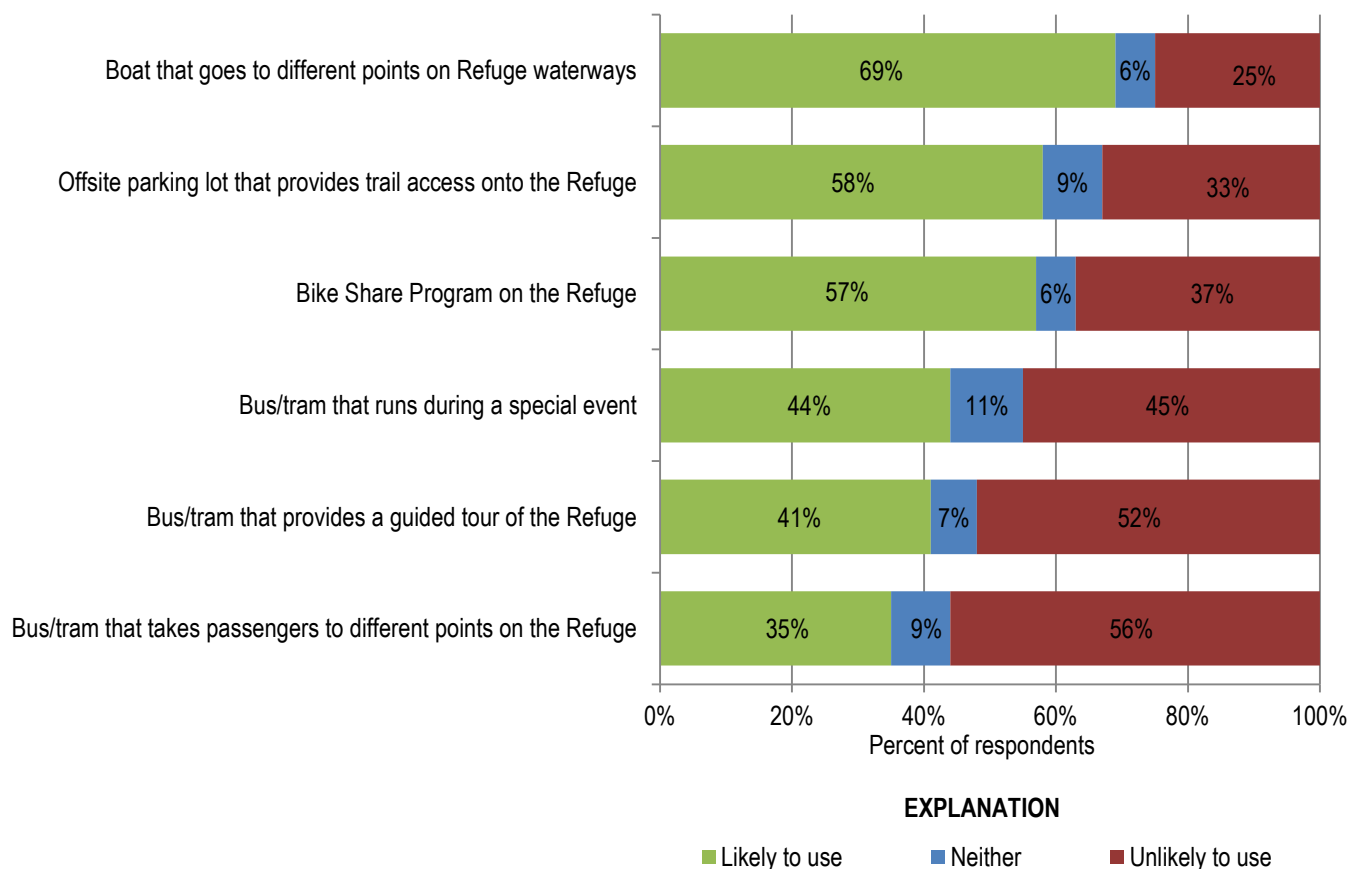
Of the six Refuge System-wide alternative transportation options listed on the survey, the majority of Parker River NWR visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 14):

- a boat that goes to different points on Refuge waterways;
- an offsite parking lot that provides trail access; and
- a bike share program.

The majority of visitors were *not* likely to use a bus/tram that takes passengers to different points or a bus/tram that provides a guided tour at national wildlife refuges in the future (fig. 14).

When asked about using alternative transportation at Parker River NWR specifically, 40% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (23%) and others thought it would not (37%).





**Figure 14.** Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 199).

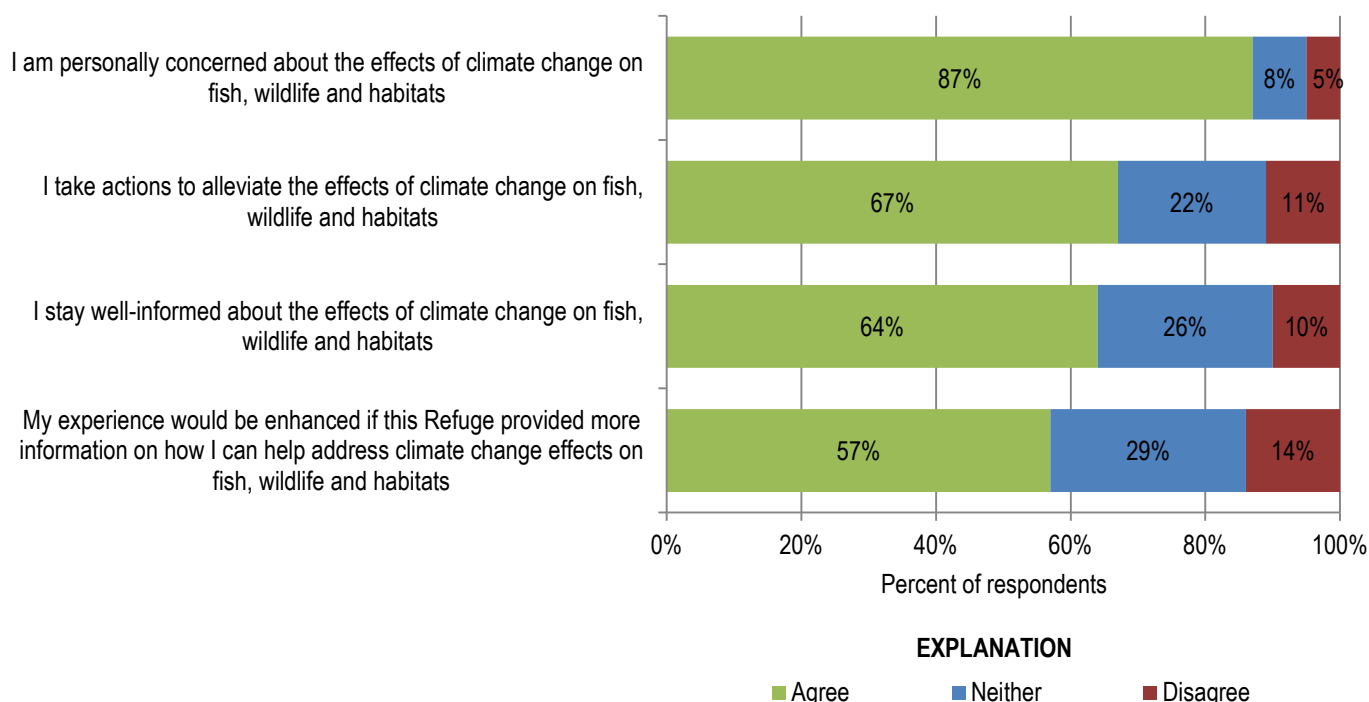
## Climate Change and the National Wildlife Refuge System

*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 Parker River NWR agreed with the following statements (fig. 15):

- “I am personally concerned about the effects of climate change on fish, wildlife and habitats;”
- “I take actions to alleviate the effects of climate change;”
- “I stay well-informed about 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 15.** Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 199).

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).

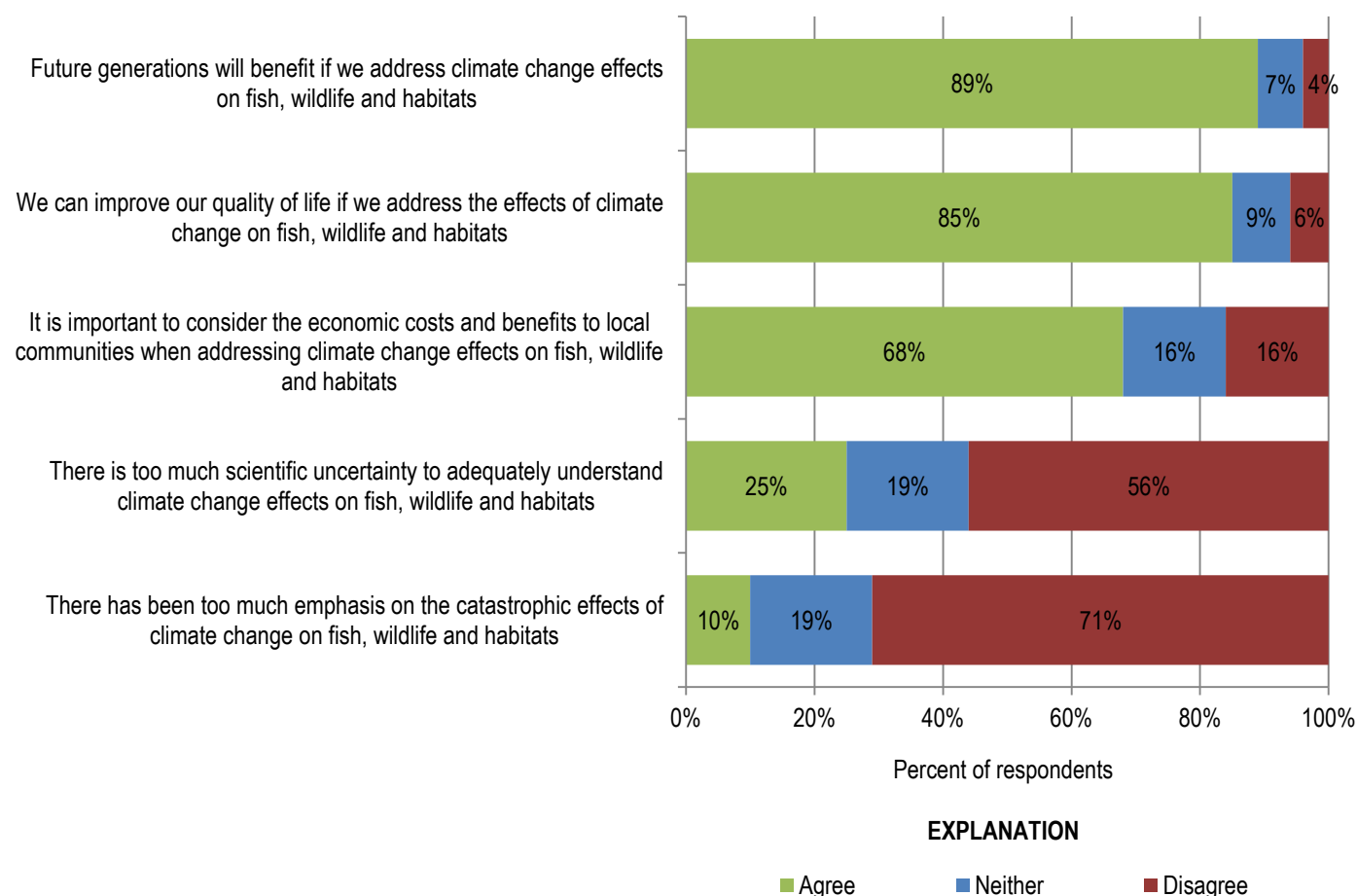
For Parker River NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 16):

- “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;” and
- “There is too much scientific uncertainty to adequately understand climate change effects.”

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because more than half of visitors (57%) indicated that their experience would be enhanced if Parker River NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 15), 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 16.** Visitors’ beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 198).

## Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Parker River 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](mailto:national_visitor_survey@usgs.gov) or 970.226.9205.

## References

- Bruyere, B.L., Rodriguez, D.A., and Vaske, J.J., 2002, Enhancing importance-performance analysis through segmentation: *Journal of Travel and Tourism Marketing*, v. 12, no. 1, p. 81-95.
- Carver, E., and Caudill, J., 2007, Banking on nature 2006: The economic benefits to local communities of National Wildlife Refuge visitation: U.S. Fish and Wildlife Service, Division of Economics, Washington, D.C., 372 p., accessed September 30, 2011, at [http://www.fws.gov/refuges/about/msWord/BankingOnNature\\_2006\\_11-23.doc](http://www.fws.gov/refuges/about/msWord/BankingOnNature_2006_11-23.doc).
- Clark, J.R., 2001, Mission and Goals (National Fish and Wildlife Service Director's Order #132–601 FW1), accessed November 18, 2011 at [http://www.fws.gov/refuges/policiesandbudget/HR1420\\_missionGoals.html](http://www.fws.gov/refuges/policiesandbudget/HR1420_missionGoals.html).
- Dillman, D.A., 2007, Mail and Internet surveys: The tailored design method. (2nd ed.): Hoboken, N.J., John Wiley and Sons, Inc., 523 p.
- Krechmer, D., Grimm, L., Hodge, D., Mendes, D., and Goetzke, F., 2001, Federal lands alternative transportation systems study – Volume 3 – Summary of national ATS needs: prepared for Federal Highway Administration, and Federal Transit Administration in association with National Park Service, Bureau of Land Management, and U.S. Fish and Wildlife Service, 80 p. (Also available at [http://www.fta.dot.gov/documents/3039\\_study.pdf](http://www.fta.dot.gov/documents/3039_study.pdf).)
- Leiserowitz, A., Maibach, E., and Roser-Renouf, C., 2008, Global warming's six Americas: An audience segmentation: New Haven, Conn., Yale University.
- Martilla, J.A., and James, J.C., 1977, Importance-performance analysis: *Journal of Marketing*, v. 41, p. 77–79.
- Nisbet, M.C., 2009, Communicating climate change: Why frames matter for public engagement: *Environment*, v. 51, p. 12-23.

- Salant, P., and Dillman, D.A., 1994, How to conduct your own study: New York, N.Y., John Wiley and Sons, Inc.
- Sexton, N.R., Dietsch, A.M., Don Carlos, A.W., Koontz, L., Solomon, A. and Miller, H., 2011, National wildlife refuge visitor survey 2010/2011: Individual refuge results: U.S. Geological Survey Data Series 643.
- Stynes, D.J., 2008, National Park visitor spending and payroll impacts, 2007: East Lansing, Mich., Michigan State University, Department of Community, Agriculture, Recreation and Resource Studies.
- Tarrant, M.A., and Smith, E.K., 2002, The use of a modified importance-performance framework to examine visitor satisfaction with attributes of outdoor recreation settings: *Managing Leisure*, v. 7, no. 2, p. 69–82.
- Uniack, T., 1999, The citizen's wildlife refuge planning handbook: Charting the future of conservation on the National Wildlife Refuge near you: Defenders of Wildlife, Washington, D.C., accessed April 2010 at [http://www.defenders.org/resources/publications/programs\\_and\\_policy/habitat\\_conservation/federal\\_lands/citizen's\\_wildlife\\_refuge\\_planning\\_handbook.pdf](http://www.defenders.org/resources/publications/programs_and_policy/habitat_conservation/federal_lands/citizen's_wildlife_refuge_planning_handbook.pdf).
- U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau, 2007, 2006 National survey of fishing, hunting, and wildlife-associated recreation: U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C., 168 p.
- U.S. Fish and Wildlife Service, 2007, America's national wildlife refuges, Fact Sheet, last updated July 31, 2007.
- U.S. Fish and Wildlife Service, 2010, Rising to the urgent challenge: Strategic plan for responding to accelerating climate change: U.S. Fish and Wildlife Service, Division of Refuges, Washington, D.C., 32 p., accessed April 2011 at <http://www.fws.gov/home/climatechange/pdf/CCStrategicPlan.pdf>.
- Vaske, J.J., Beaman, J., Stanley R., and Grenier, M., 1996, Importance-performance and segmentation: Where do we go from here?: *in* Fesenmaier, D.R., O'Leary, J.T., and Uysal, M., eds., *Recent advances in tourism marketing research*: New York, The Haworth Press, Inc., p. 225-240.
- Wade, D.J. and Eagles, P.F.J., 2003, The use of importance-performance analysis and market segmentation for tourism management in parks and protected areas: An application to Tanzania's National Parks: *Journal of Ecotourism*, v. 2, no. 3, p. 196-212.

This page left intentionally blank.

# 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"/> 0% Big game hunting	<input type="checkbox"/> 48% Hiking	<input type="checkbox"/> 8% Environmental education (for example, classrooms or labs, tours)
<input type="checkbox"/> 0% Upland/Small-game hunting	<input type="checkbox"/> 27% Bicycling	
<input type="checkbox"/> 1% Migratory bird/Waterfowl hunting	<input type="checkbox"/> 34% Auto tour route/Driving	<input type="checkbox"/> 6% Special event ( <i>please specify</i> ) <u>See Appendix B</u>
<input type="checkbox"/> 61% Wildlife observation	<input type="checkbox"/> 0% Motorized boating	
<input type="checkbox"/> 67% Bird watching	<input type="checkbox"/> 9% Nonmotorized boating (including canoes/kayaks)	<input type="checkbox"/> 34% Other ( <i>please specify</i> ) <u>See Appendix B</u>
<input type="checkbox"/> 0% Freshwater fishing		
<input type="checkbox"/> 12% Saltwater fishing	<input type="checkbox"/> 11% Interpretation (for example, exhibits, kiosks, videos)	<input type="checkbox"/> 8% Other ( <i>please specify</i> ) <u>See Appendix B</u>
<input type="checkbox"/> 45% 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?

<input type="checkbox"/> 60% No	
<input type="checkbox"/> 40% Yes → If yes, what did you do there? (Please mark <b><u>all that apply.</u></b> )	
<input type="checkbox"/> 27% Visit the gift shop or bookstore	<input type="checkbox"/> 17% Watch a nature talk/video/presentation
<input type="checkbox"/> 57% View the exhibits	<input type="checkbox"/> 73% Stopped to use the facilities (for example, get water, use restroom)
<input type="checkbox"/> 51% Ask information of staff/volunteers	<input type="checkbox"/> 6% 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
59%	85%	81%
35%	10%	14%
6%	5%	5%

It was the primary purpose or sole destination of my trip.

It was one of many equally important reasons or destinations for my trip.

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** 134 number of miles

**Local** 19 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?

45% No (*skip to question #9*)

55% Yes → What **type of group** were you with on your visit? (*Please mark **only one.***)

91% Family and/or friends

4% Organized club or school group

1% Commercial tour group

4% Other (*please specify*) See Appendix B

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

3 number 18 years and over

1 number 17 years and under

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

62% Friends or relatives

7% Refuge website

8% Signs on highway

3% Other website (*please specify*) See Appendix B

8% Recreation club or organization

0% Television or radio

28% People in the local community

6% Newspaper or magazine

12% Refuge printed information (brochure, map)

8% 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.***)

84% Spring  
(March-May)

87% Summer  
(June-August)

75% Fall  
(September-November)

56% Winter  
(December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 27 number of visits

...other National Wildlife Refuges in the last 12 months? 3 number of visits

## SECTION 2. Transportation and access at this Refuge

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

<input type="checkbox"/> 92%	Private vehicle without a trailer	<input type="checkbox"/> 0%	Refuge shuttle bus or tram	<input type="checkbox"/> 23%	Bicycle
<input type="checkbox"/> 0%	Private vehicle with a trailer (for boat, camper or other)	<input type="checkbox"/> 0%	Motorcycle	<input type="checkbox"/> 38%	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"/> 3%	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"/> 14%	Signs on highways	<input type="checkbox"/> 6%	Directions from Refuge website
<input type="checkbox"/> 13%	A GPS navigation system	<input type="checkbox"/> 5%	Directions from people in community near this Refuge
<input type="checkbox"/> 3%	A road atlas or highway map	<input type="checkbox"/> 11%	Directions from friends or family
<input type="checkbox"/> 8%	Maps from the Internet (for example, MapQuest or Google Maps)	<input type="checkbox"/> 75%	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"/> 44%	<input type="checkbox"/> 13%	<input type="checkbox"/> 9%	<input type="checkbox"/> 25%	<input type="checkbox"/> 10%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 27%	<input type="checkbox"/> 10%	<input type="checkbox"/> 6%	<input type="checkbox"/> 33%	<input type="checkbox"/> 24%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 39%	<input type="checkbox"/> 14%	<input type="checkbox"/> 8%	<input type="checkbox"/> 29%	<input type="checkbox"/> 12%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 18%	<input type="checkbox"/> 7%	<input type="checkbox"/> 7%	<input type="checkbox"/> 39%	<input type="checkbox"/> 31%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 31%	<input type="checkbox"/> 14%	<input type="checkbox"/> 11%	<input type="checkbox"/> 28%	<input type="checkbox"/> 16%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 22%	<input type="checkbox"/> 11%	<input type="checkbox"/> 9%	<input type="checkbox"/> 26%	<input type="checkbox"/> 32%
...some other alternative transportation option? ( <i>please specify</i> ) <u>See Appendix B</u>	<input type="checkbox"/> 15%	<input type="checkbox"/> 5%	<input type="checkbox"/> 15%	<input type="checkbox"/> 30%	<input type="checkbox"/> 35%

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

☐ 23% Yes      ☐ 37% No      ☐ 40% 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
9%	15%	10%	47%	18%	Surface conditions of roads	4%	12%	6%	25%	54%	NA
13%	21%	16%	35%	15%	Surface conditions of parking areas	4%	5%	10%	17%	63%	NA
6%	4%	35%	24%	32%	Condition of bridges	1%	1%	31%	11%	56%	NA
4%	5%	2%	37%	52%	Condition of trails and boardwalks	3%	1%	2%	21%	72%	NA
8%	5%	5%	32%	48%	Number of places for parking	8%	21%	8%	28%	36%	NA
6%	7%	7%	43%	37%	Number of places to pull over along Refuge roads	3%	12%	11%	36%	38%	NA
7%	4%	3%	35%	52%	Safety of driving conditions on Refuge roads	3%	5%	6%	23%	62%	NA
7%	6%	10%	35%	43%	Safety of Refuge road entrances/exits	3%	0%	7%	18%	73%	NA
26%	14%	21%	23%	16%	Signs on highways directing you to the Refuge	4%	5%	30%	25%	36%	NA
16%	11%	14%	45%	15%	Signs directing you around the Refuge roads	2%	1%	22%	30%	44%	NA
6%	8%	10%	44%	32%	Signs directing you on trails	1%	1%	15%	32%	51%	NA
9%	7%	19%	30%	35%	Access for people with physical disabilities or who have difficulty walking	3%	7%	34%	27%	30%	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)?

☐ 83% Yes

☐ 17% No → How much time did you spend **in local communities** on this trip?

  2   number of hours      OR        6   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	Amount Spent in Local Communities & at this Refuge <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
<input type="checkbox"/> 9%	<input type="checkbox"/> 27%	<input type="checkbox"/> 26%	<input type="checkbox"/> 8%	<input type="checkbox"/> 15%	<input type="checkbox"/> 1%	<input type="checkbox"/> 7%	<input type="checkbox"/> 1%	<input type="checkbox"/> 2%	<input type="checkbox"/> 0%	<input type="checkbox"/> 5%

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.***)

☐ 2% Far too low   ☐ 15% Too low   ☐ 83% About right   ☐ 1% Too high   ☐ 0% Far too high   ☐ 14% 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   ☐ 1% Disagree   ☐ 2% Neither agree or disagree   ☐ 32% Agree   ☐ 66% Strongly agree

---

#### SECTION 4. Your experience at this Refuge

---

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	<input type="checkbox"/> 2%	<input type="checkbox"/> 5%	<input type="checkbox"/> 1%	<input type="checkbox"/> 33%	<input type="checkbox"/> 58%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 3%	<input type="checkbox"/> 2%	<input type="checkbox"/> 6%	<input type="checkbox"/> 45%	<input type="checkbox"/> 45%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 2%	<input type="checkbox"/> 3%	<input type="checkbox"/> 7%	<input type="checkbox"/> 36%	<input type="checkbox"/> 53%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 2%	<input type="checkbox"/> 0%	<input type="checkbox"/> 7%	<input type="checkbox"/> 23%	<input type="checkbox"/> 67%	NA

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

Importance <i>Circle one for each item.</i>					Refuge Services, Facilities, and Activities	Satisfaction <i>Circle one for each item.</i>					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
5%	19%	20%	41%	15%	Availability of employees or volunteers	1%	7%	14%	33%	46%	NA
5%	5%	5%	43%	42%	Courteous and welcoming employees or volunteers	2%	3%	5%	24%	66%	NA
5%	6%	6%	42%	41%	Knowledgeable employees or volunteers	1%	2%	11%	30%	55%	NA
5%	7%	11%	53%	24%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	4%	17%	33%	45%	NA
4%	9%	19%	51%	18%	Informational kiosks/displays about this Refuge and its resources	1%	4%	18%	37%	40%	NA
3%	3%	10%	52%	32%	Signs with rules/regulations for this Refuge	2%	4%	10%	29%	55%	NA
4%	9%	26%	47%	15%	Exhibits about this Refuge and its resources	1%	4%	26%	34%	36%	NA
6%	8%	26%	32%	28%	Environmental education programs or activities	1%	5%	31%	35%	27%	NA
4%	11%	15%	41%	29%	Visitor Center	1%	3%	17%	28%	52%	NA
3%	1%	6%	26%	65%	Convenient hours and days of operation	1%	3%	7%	26%	63%	NA
4%	2%	4%	31%	59%	Well-maintained restrooms	2%	3%	7%	24%	65%	NA
3%	3%	13%	35%	45%	Wildlife observation structures (decks, blinds)	2%	2%	12%	29%	56%	NA
6%	7%	11%	24%	51%	Bird-watching opportunities	2%	2%	11%	19%	66%	NA
4%	5%	11%	39%	41%	Opportunities to observe wildlife other than birds	1%	5%	15%	33%	46%	NA
7%	7%	11%	30%	45%	Opportunities to photograph wildlife and scenery	2%	2%	11%	26%	60%	NA
72%	5%	15%	4%	4%	Hunting opportunities	2%	1%	67%	10%	20%	NA
47%	7%	17%	13%	16%	Fishing opportunities	5%	4%	47%	18%	27%	NA
2%	4%	7%	40%	48%	Trail hiking opportunities	2%	3%	9%	35%	50%	NA
13%	10%	19%	32%	26%	Water trail opportunities for canoeing or kayaking	1%	8%	41%	25%	24%	NA
12%	7%	13%	33%	36%	Bicycling opportunities	1%	3%	24%	27%	44%	NA
12%	9%	40%	25%	14%	Volunteer opportunities	1%	3%	57%	12%	27%	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?

87%

Yes

13%

No

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

90%

Yes

10%

No

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

89%

Yes

11%

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.	2%	3%	8%	33%	54%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	3%	3%	10%	35%	50%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	27%	29%	19%	18%	8%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	1%	9%	26%	47%	17%
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.	6%	10%	16%	52%	16%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	3%	8%	22%	45%	22%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	36%	35%	19%	5%	4%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	2%	3%	7%	31%	58%
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.	5%	10%	29%	38%	19%

## 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?

98% Yes 2% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 51% Male 49% Female

3. In what year were you born? 1956 (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%			7%				41%				52%			

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

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

<input type="checkbox"/> 2% American Indian or Alaska Native	<input type="checkbox"/> 1% Black or African American	<input type="checkbox"/> 99% White
<input type="checkbox"/> 2% Asian	<input type="checkbox"/> 1% 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 type="checkbox"/> 1% Less than \$10,000	<input type="checkbox"/> 9% \$35,000 - \$49,999	<input type="checkbox"/> 27% \$100,000 - \$149,999
<input type="checkbox"/> 3% \$10,000 - \$24,999	<input type="checkbox"/> 18% \$50,000 - \$74,999	<input type="checkbox"/> 13% \$150,000 - \$199,999
<input type="checkbox"/> 5% \$25,000 - \$34,999	<input type="checkbox"/> 16% \$75,000 - \$99,999	<input type="checkbox"/> 10% \$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.)?

29 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

This page left intentionally blank.

## Appendix B: Visitor Comments to Open-Ended Survey Questions for Parker River 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
"Bird-a-thon" - competitive bird spotting to raise money for conservation.	1
Art show and sales	1
Audubon Programs	1
Beach cleanup	2
Bird Banding	1
Eastern Mass Hawk watch during Spring Migration	1
Litter removal to help save lives of wildlife	1
Movie Series	1
Showing USA to friends from Europe	1
Trash removal	1
Volunteer as plover warden and for information desk.	1
Total	12

Other Activity	Frequency
Beach	12
Beach - swimming	1
Beach going	1
Beach walking	1
Beach/swimming	1
Beachcombing	1
Bird banding station	2
Day at the beach	2

Enjoying the beach	2
Explore the beach	1
Jogged up & down for 13 miles, jogging with friends.	1
Jogging	1
Jogging/walking	1
Making sandcastles	1
Mostly swimming and looking for shells	1
Plein air painting	1
Relaxing on the beach	1
Resting on the beach	1
Running	3
Sandy Point Beach	1
Sitting on beach	1
Swimming	14
Swimming at the beach	1
Swimming in the ocean; observing tide pools.	1
Visit Members of Audubon Society	1
Visiting the beach	2
Volunteer	1
Volunteer plover warden	1
Volunteering at the Joppa Flats Bird Banding Station on the Refuge	1
Walking on the beach	2
Walking on the beach with family to celebrate a birthday.	1
Walking the shoreline	1
Walking/swimming	3
Total	66

2 <sup>nd</sup> Other Activity	Frequency
Beach walking	1
Bring foreign visitors to see beautiful, wild landscape	1
Day at the beach with the kids	1
Family spent day on the beach/in ocean.	1
Hurricane watching	1
Information desk volunteer	1
Meditation	1
Ocean swimming	1
Playing on the beach with grandchildren	1
Reading in my car	1
Refuge Visitor Center	1
Relaxing	1
Sightseeing	1
Swimming in the ocean	1
Wading in the surf	1
Walking the beach	1
Total	16

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
Plein air painting	1
Sea watching	1
Training jog	1
Total	3

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

Other Visitor Center Activity	Frequency
Bird watching class	1
Brought a group of children to see a raptor demonstration.	1
View park maps	1
Visit art show	1
Volunteer	1
Total	5

Question 7: "Where 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
MA Audubon group	1
Other volunteers and the leader at the Bird Banding station	1
Small group and then alone	1
Walk alone and did one bird group	1
Total	4

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

Other Website	Frequency
Birding listserv	1
Friends of Parker Island NWR	1
Google Earth	1
Google Maps	1
Home away	1
massbird.org	1
Total	6

Other Ways Heard about This Refuge	Frequency
AAA book	1
Audubon group	1
Bird Watching Club	1
Birding community/bird sightings posts	1
Brookline Bird Club when I first started birding.	1
Fishing Related Literature	1
Guide book	1
Map	1
Mass Audubon	3
On the map of Massachusetts	1
Saw it on a map	1
Travel book	1
Used to attend polio camp there when I was a child	1
Volunteer	1
Total	16

## Survey Section 2

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

Other Forms of Transportation	Frequency
Audubon van	1
Canoe	1
Kayak	1
Swimming	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
First time. It was not planned; a pleasant surprise.	1
Joppa Flats bird leader	1
Total	2

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
Car	1
Electric Golf Carts	1
Helicopter tour over the refuge from nearby local airfield	1
Horseback	1
Horses/carriages	1
I am handicapped and use only my own chair.	1
Kayak	2
Kayak tour	1
Moped	1
Private car	1
Ski lift, perhaps, depending on the locale	1
Snow shoes/cross country skis	1
Tram	1
We prefer hiking, biking, or kayaking, but a solar, wind, or alternative energy power vehicle, depending on the distance, might be interesting.	1
Total	15



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 = 55)

---

A bike path would enhance cyclists' experience and improve safety.

A large part of this Refuge is closed during the spring and summer to protect the breeding Piping Plovers. This means that I usually stay at the entrance part and walk the beach there. I love the idea of providing bikes for transportation to the other end of the refuge. However, the narrowness of the road and the unpaved portion would create unsafe and unhealthy (dust breathing) conditions in my opinion. I would love to see a separate bike trail!

Alternative transportation within the Refuge may reduce traffic in the busy months - this is important for the wildlife. However, I would be wary of turning it into a showground with too much of other things going on.

Although it is sometimes inconvenient, I have occasionally been turned away when the refuge lots are filled. I nevertheless think that parking is adequate and should not be expanded. I also regard the facility primarily as a wildlife refuge and believe that function is more important than recreational use and ease of transportation.

Any alternative transportation options would eliminate the freedom to move about, which would eliminate the original intent of the refuge. We need the flexibility to use, view, and enjoy without unnecessary restrictions.

At the Parker River National Wildlife Refuge, the major transportation issue is numerous vehicles exceeding the posted speed limit, especially the paved portion of the road, which potentially endangers wildlife, pedestrians, bicyclists and other motorists. I think that this is primarily because the refuge has magnificent beaches, and the parking for these beaches is limited and on a first come, first serve basis, they forget (or don't want to be reminded that after all they are on a Wildlife Refuge) and because many people these days just don't believe the rules apply to them. FWS tries to enforce speed limits, but at this refuge I believe those resources are limited; I know they are doing the best job they can. Because of this problem, one local suggestion has been to curtail all private motor vehicles from traveling through the refuge, and instead run a shuttle bus to the various parking areas and beach entrances. (Bicycles would be permitted.) We would favor this approach, as, again, it is a wildlife refuge.

#### Beach Access

Believe that limited parking at refuge could be mitigated by adding a tram service that would allow for more remote access to other points in the refuge with minimal disturbance to the refuge itself. Parking limitations were an inconvenience at times during the summer.

Clearly marked maps would work. I sometimes travel with someone who needs good access because walking a long time is hard. Therefore hikes in our condition make it difficult. People with gear like telescopes and cameras have a hard time. We were able to go to a different spot with a car to see the white-faced ibis.

Federal Officer gave us a ticket on State property. He was very arrogant & reminded me of a bully. My small (14lbs) puppy was in the car. She had come from the Vet. I could have sworn his actions were same as Barney Fife!

Good private auto experience.

Gravel roads should be graded once a year to avoid washboards.

Half of road paved, half unpaved; need to pave all on the road.

---

---

Having a place to park at the entrance and taking a trolley bus up and down the island would be great. No private transport. This would minimize intrusion for the wildlife and preserve the roads.

I am solidly behind protection of habitat for piping plovers, but see no need to block off entire parking areas because of it. Simply block off the beach access, but allow vehicle parking for observation of the marsh & river areas.

I don't understand how some fishermen can drive on the beaches while staff hassle bird watchers for stopping to view wildlife. Off road driving seems more hazardous to wildlife.

I rather drive my own car when possible.

I walk every day in the Parker River National Wildlife Refuge. There are times when cars have come very close to me, driving too fast. I would love to see the Refuge have vans to drop people off and pick them up and ban private cars.

I wish they would pave the entire road to Sandy Point so it could be open all the time. The gravel and potholes are hazardous.

I'm undecided about parking. If there were more parking then the refuge would be more crowded, which I wouldn't like. Waiting for a parking place can be a pain. I think I like it the way it is.

It distresses us whenever we perceive nature preserves to be overly accommodating to drivers of private vehicles, or the demands of comfort/convenience-oriented visitors. We would prefer the priority to be the needs of the wildlife, plants and animals. We understand the importance of public accessibility to promote public support, but also like to see emphasis put on the visitors needing to accommodate nature on its terms in such sites, whenever and however they can or must.

It would a great improvement to the refuge if the entire roadway was paved.

It would enhance going the full distance of the Parker River National Wildlife Refuge if the second half of the road were paved. I generally don't drive the second half because of the extreme dust when driving.

It's such a small refuge that this wasn't an issue for us, on bike. A little tough at the end of the paved trail, due to car traffic kicking up dust, but with fat-tire bikes, it wasn't dangerous or difficult.

Lower road at PR NWR is a speeder's way during the beach season. Visitors to Sandy Point State Park travel too fast and wildlife are killed. I'm afraid that a walker, birder, or biker will be struck. Speeding is a huge problem. I've spoken with the management about this.

Lower speed limits to 20 mph.

More access and events? Especially for elderly and handicapped (such as my parents) would be nice.

More parking in other beach access lots are needed.

No - this is a small refuge; we like to go there for a relaxing, slow drive.

Not nearly enough available parking for any lot other than lot number one!!

Paved road extends half the length of the refuge. The rest is unpaved. During winter, they are unable or don't always plow the unpaved section and it is closed to traffic. Paving would improve access during inclement weather.

People are speeding through refuge and killing birds and posing a hazard to bicyclist, pedestrians and other drivers.

Please eliminate or decrease the cost to cyclists entering the preserve. You can carry 8 people in a car and it costs \$5 but the same 8 people on bikes would cost \$16!!! Need more parking.

---

---

Safety of driving conditions is compromised by speeding cars. In the winter, parts of the refuge road are often closed for days or weeks after storms. Parking is sometimes an issue; perhaps offer short term parking spots for wildlife observation and birding and other spaces for all day uses. A shuttle which brought visitors to the southern part of the refuge (Sandy Point State Park) might alleviate some of the speeding and parking issues.

See back page. (1. From April 1 to Late-Summer at the Parker River Refuge on Plum Island, MA, management shuts down and ropes off all the parking spaces along the refuge road. I would like to see them leave 3 or 4 open at the end of these lots with a 90 minute time limit so us walkers and birders can park off the road without fear of being ticketed or towed. 2. Install hand sanitizers lotion in restrooms at Wardens and Hellcat. It is not sanitary to use these facilities and not be able to wash hands afterward.)

Since I developed physical disabilities, my use of the refuge has gone down 95% and my satisfaction with accessibility has gone down about 95%, too. My guess is that people in wheelchairs have a much easier time than people who don't need a wheelchair but could use other accommodations or modifications. For instance, a weak and ill person like me cannot walk the distance and slope of the parking lot and the boardwalk at parking lot #1. The handicapped boardwalk at the far end of the refuge (I think it's lot #6) for some reason is much easier for a handicapped person to walk. Yet, during plover nesting season it is closed, so I don't get to even look at the beach and ocean during the entire late spring and summer because I have no access. A ranger told me that the boardwalk on lot #1 is no longer than the other boardwalk, but there is \*something\* about #1 that makes it much harder to walk than on #6. The slope to climb, perhaps? I don't see any accommodations for my disabilities: difficulty walking distances or on sand. There is a mobile sand chair for fishing people; I vote that the refuge provide some sort of sand chair for non-fishers, for people like me who would like to ride it from the parking lot to the sand, where I would walk enough to put my feet in the water. Something that does not require an attendant as the existing sand chair requires.

Southern end of road unpaved and very dusty in dry times and sometimes closed in icy conditions.

Speeding is a huge issue. Law enforcement has done little to curb this. I am so pissed off at this uncontrolled problem. I have many friends that stay away in warmer times as the beach people fly down the road - It is out of control!

The explanations at the entrance were not clear enough. We got two maps and it took us a while to figure out where we wanted to go.

The issue is access for too many people that will overwhelm the habitat. Need to limit visitation to the WILDLIFE REFUGE.

The lack of parking can be troublesome, but more parking means more people. I'd rather limit the access to the refuge for a better natural experience. The main lot (lot #1) could be larger. Keep the others as they are.

The limited beach access during plover nesting season is ridiculous. On beach vehicles should be restricted, but closing off miles of beach to foot traffic and beach goers is ridiculous. This facility has poor birth results because the predators rule! Roping off the nest areas is protection enough.

The parking here is a problem, so bus or other transportation from the Visitor Center would have been great.

The parking lot at Sandy Point needs improvement.

The refuge road is the only access to a public beach at south end of refuge. Beach-goers drive way too fast through the refuge to get to the beach. Not safe for the wildlife!!

The road along Parker River National Wildlife Refuge is quite long. There can be serious backups due to the 2 lane road and sightseers. I strongly recommend increasing the speed limit by 10 mph.

---

The road from Hellcat to the State Beach should be paved. The dust is hazardous to bikers and hikers.

The road should be paved all the way to Sandy Point.

There is no sign on Plum Island Turnpike directing visitors to turn right for the Refuge. Having one would decrease the unsafe turn-arounds visitors make in adjoining neighborhoods.

There is very limited parking in some areas on this refuge. However, adding more parking will detract from the area, and an influx of people will make the area less desirable. Therefore the limited parking is tolerated.

This refuge has 7 1/2mi of roads; 1/2 is paved and 1/2 is unpaved. The road should be paved for its length.

Too many speeders! Drivers who exceed the refuge speed limit are dangers to pedestrians as well as bicycle riders.

We love Sandy Point, but sometimes the road and limited parking prevent us from going there.

Safety of driving conditions is compromised by speeding cars. In the winter, parts of the refuge road are often closed for days or weeks after storms. Parking is sometimes an issue; perhaps offer short term parking spots for wildlife observation and birding and other spaces for all day uses. A shuttle which brought visitors to the southern part of the refuge (Sandy Point State Park) might alleviate some of the speeding and parking issues.

See back page. (1. From April 1 to Late-Summer at the Parker River Refuge on Plum Island, MA, management shuts down and ropes off all the parking spaces along the refuge road. I would like to see them leave 3 or 4 open at the end of these lots with a 90 minute time limit so us walkers and birders can park off the road without fear of being ticketed or towed. 2. Install hand sanitizers lotion in restrooms at Wardens and Hellcat. It is not sanitary to use these facilities and not be able to wash hands afterward.)

## 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 = 71)

A marked water-trail (floating buoys) would mean a better experience for paddlers (canoes and kayaks). A no-wake zone in the Refuge waters would not scare wildlife... and would increase water safety in the narrow channels.

A true jewel of the North Shore!

All of the employees at this Refuge have been very courteous and helpful.

As a drive on fisherman, the limit of permits, and two day on and two day rule appears unnecessary, arbitrary, and restrictive.

Beach Access.

Beaches are fantastic! I wish fewer smokers found their way onto the beach, but that's hard to regulate.

Bird watching used to be a wonderful activity at this refuge. Now, there is none! What a shame!

---

Close Sandy Point! It will stop most of the problems - and they know it!

Employee presence is very important for safety, emergency situations, but not needed during a normal visit. It would be good to have night birding passes (similar to the surf fishing passes). The new building at Lot 1 is good, I've never been to the near refuge Headquarters across from the Audubon build life, so I can't comment on that.

Facilities limited at refuge but in great shape. Staff personnel took care of these facilities and this was noticeable. Very satisfied.

Facilities, services and activities are very good and numerous.

I believe the refuge would greatly benefit from interpreters trained to help visitors understand the amazing and wonderful area this is.

I believe there should be no permission to drive on the beach for anyone other than a ranger or any reason other than genuine emergency or research/maintenance critical to the refuge mission.

I do not believe (based on results from other conservation areas in the area - i.e. Crane's Beach) that it is necessary to close off 5 miles of refuge beach from April 1st to September to protect the Piping Plovers. I think the experience from Crane's and Salisbury show that the number of people that are present increase the number of chicks that reach maturity, as it keeps predators (coyotes, foxes, gulls) to a minimum.

I don't like that a parking pass isn't transferrable to my wife. It should be a family pass.

I feel that most of the volunteers and programs I am aware of are offered by the Joppa Flats Audubon Center, as opposed to being offered by the refuge itself. I think the Refuge and Audubon have an excellent working relationship, but it may be helpful to have both places offer clear programs and volunteer opportunities.

I have always been pleased with the facilities and the staff.

I like that it is staffed, because they (the staff) ensure that visitors follow rules, such as speed limits and laws regarding wildlife (e.g., Stay away from Piping Plovers).

I love coming before the rush/crowds of the season. Either off-season or early in the day. It would be nice to have bathroom facilities available year-round (I am not sure whether they can do this).

I love Parker River Refuge.

I suggest installing hand sanitizer devices in the restrooms at the Hellcat and Wardens areas on Plum Island Refuge, Newberry, MA.

I think a bike, walk and running lane should be created on the main road. Many thanks to the hard working staff at this refuge.

I would like to see the refuge stay opened with staff on premises and bathrooms available year round; summer, spring, winter and fall. Maybe bike rentals available on refuge at certain times of year.

I'd like the refuge to be open later. Getting chased out at sunset is not a good experience.

If I am not mistaken, landing a kayak on the ocean side is forbidden, and I have always wondered why. For those interested in such a landing, as a stopping point on a trip, it is inconvenient. Also, why is diving forbidden? I think the Visitor Center was a spectacular waste of money and open space.

If possible, have some new trail building to have better access to the Refuge.

It seems well run. I have no need for them to change anything - I live nearby and simply take advantage of jogging and biking inside the refuge.

It's a lovely, small refuge, and I think it does well in walking the line between giving visitor access and protecting the denizens. Since we were familiar with it from visits years ago, ours was a self-guided tour on

---

---

bike, so much of the stuff above wasn't applicable to this visit, even though it might have mattered that it existed.

Latrines need to be powerwashed on a regular schedule. Lot #1 VSC need to sell water, bug spray, sunscreen, and snacks during the beach going months.

More needs to be done about the 25mph speed limit - people are going faster than the posted speed and one is left in the dust when bicycling. A thought would be more speed bumps. If the entire roadway could be paved, that would be a PLUS. A separate parking lot for those who are there just for bicycling. Lot #1 is the only lot open for pretty much the entire summer season for beachgoers due to the nesting of piping plovers and other birds - a GREAT number of these spaces are being taken up by those wishing to bicycle only. MORE space is needed for the beachgoer during June/July/August, as Lot #1 is generally full by 10 AM!!!! - When traveling a distance - it's disappointing to have to wait for the refuge to reopen when parking spaces become available.

More, better bathrooms.

Much of the refuge is inaccessible - no trails and no off-trail hiking. I am sympathetic to potential conservation concerns, but I suspect it is actually a question of resources (money) that prevents new trails from being constructed.

My personal belief is that hunting and fishing should not be allowed on refuges. I do however want to commend the refuge for protecting Piping Plover nesting habitats.

Need to develop more off-road cycling options. Kayaking was great, but very little support along the waterways.

Occasionally, the refuge closes significantly before sunset or doesn't open until well after sunrise, which hinders being able to bird at the best times. This may be due to automatic gates, but then timers need to be adjusted more frequently if so.

On our first visit in early spring, the staff was very helpful and knowledgeable.

Parker River National Wildlife Refuge is an amazing place and the staff are equally wonderful.

Parker River Refuge is heaven on Earth! The staff are always great! My 43rd year coming here.

Please remember this is about conservation and wildlife first, people second.

Parker River NWR is a great place to visit. The staff is always great to talk with. Thanks. (Name Signed)

Sandy Point is usually our destination in summer - would like to see more parking lots open through the summer.

Some services were not open.

Super bathroom - new and clean!

The bathroom could be better maintained.

The bicyclists on the road are a hazard, especially younger children with school groups. People are stopping and pull over right in the middle of the road to observe bird watching - very dangerous.

The new information center and bathrooms in parking lot #1 are an asset and are appreciated. Rangers are courteous and cooperative with the Birding Community.

The Parker River National Wildlife Refuge must maintain the Wildlife First mission and NOT become a recreational area. The pressure is on to provide recreation instead of a being a Refuge. Watch out.

---

---

The people at the gate are always very nice and helpful. The plover situation seems excessive in time and area.

The police staff have been discourteous at times. Refuge management doesn't seem to care about providing varied habitat for birds. In a vast salt marsh, the small freshwater areas are critical.

The restricted access to the beach during plover nesting season is way too ridiculous. 3 miles of beach closed for a few nests. People are restricted to one tiny beach. I feel I was ripped off having to pay for an annual pass when you really don't have access during May - August. Again - roping off the nesting areas is done in many locations and why not at Plum Island?

The restroom facilities are thoughtfully designed and use solar, which is great.

The staff leave the land and the patrons along to the point that we experience nature close up. Any more interference would be counterproductive.

There are many restrictions on areas available for public access. These could be expanded somewhat (such as the dike running along the western perimeter of the marsh area); however, the closing of the beaches during breeding season (for protection of endangered species) should definitely be continued.

There are still some dirt roads that are very dusty, which would improve things if it was paved.

There is only 1 facility for restrooms. The restrooms at Sandy Point are HORRIBLE and NOT serviced. It is dirty, smelly, and without toilet paper or hand sanitizer. DISGUSTING!!

There was limited beach access due to plover nesting season... We were able to visit some of the shoreline... which was just enough.

This is our family's favorite destination (parents & 3 older children). There is a MAJOR problem with shutting down almost the entire beach during prime season for plover breeding. The volunteers enforcing this are quite rude to newcomers. The far more sensible solution we've seen is at Cape Cod, where a fair balance is struck with limiting human access near the sand banks where the birds breed, and opening access for a pathway along the ocean to walk and swim. The regulars resent the radical approach of not even letting walkers along the beach. We would be far more supportive, including donating conservancy money, if we were allowed to walk along the beach during spring & summer! Presently, the draconian experience is lamentable.

Too much attention is given to the birds.

Too strict.

We live in Canada. We didn't know that the beach was closed off for bird nesting. Long ride to discover that.

We only spent a few hours at the Refuge so some of the questions I cannot honestly answer.

What the heck is Fish and Game law enforcement? There is someone there with a glock and a stun gun - is he going to shoot some mom and dad for digging up a clam? Get him out of here.

Winter activities are not covered. I love to cross country ski the Parker River NWR, but little is open except the road and the beach. Unfortunately, much of the very beautiful area is closed to access during this time of year when few people would travel in the dunes. It's often too cold and arctic-like, so only those who really love and appreciate this special environment would venture there. Last winter, many of the boardwalks were under snow. More access to the "back country" and trails for XC skiing or snowshoeing would be a big plus and in my view justify an increase to the yearlong access fee. I also like to fish the marshes on the seacoast and the Parker River and don't understand why clambers have permits to reach these areas in the Refuge, but fisherman are not able to. Also, I suggest a multi-year access fee or perhaps a life-time fee. I would be interested in this and I assume many other long time, "heavy" users of the Refuge would be willing to spend the money up front, something that I would think would be a significant benefit for the funding of the Refuge.

---

---

Wish the beach could be more available for people in the summer.

Wonderful folks and so very helpful. Thank you. I use to be able to get around much better, but still love coming down here as much as possible.

Wonderful refuge, especially for walking the beach or the roads.

Would be nice to have more information and refreshments/snacks in building at Lot 1. Tables and chair to enjoy deck would add to the experience. Restricted access during Plover season is too long - are they really endangered?

Would like the road paved to Sandy Point so it would be easier on the bike tires.

Would like the Visitor Center restroom to stay open during the winter.

Would like to see more areas of the refuge open to visitors. (Maybe not all the time, but occasionally.)

Would love more parking and a paved road to Sandy Point.

---

## 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 = 153)

---

A chance to view and be in a pristine environment.

A great and safe place to nature walk/observe. Love the land, ocean, trees , wildlife, etc.

A unique beach experience.

All rules and regulations are designed for the benefit of wildlife, not people. Most of the refuge is in its natural state; no buildings or other man-made structures.

Animal life. Wilderness trails. The importance of respecting and preserving wildlife.

As a birder, it is very important that the focus of the refuge is on protecting wildlife and wildlife habitat. The important word is "refuge" and I think some people (e.g. beachgoers) lose sight of this.

Barrier Island experience.

Barrier Island is pretty scarce on the eastern seaboard. Seeing one in very near its natural state is wonderful.

Beach and wildlife habitat.

Beach availability; wildlife observation, if desired; unique dunes.

Better maintained, more wildlife.

Certainly, this is a magnificent ecosystem.

Chance to see nature in the original state.

Compared to some, there is more focus on experiencing wildlife.

---



Conservation efforts with regards to the wildlife.

Conservation is the focus. I have no problem with the beaches being closed during shorebird nesting season.

Diversity of bird life.

Easy access to wildlife viewing without my disturbing the animals

Environmental awareness.

Excellent opportunity to see assorted birds types all year long.

Federal Agencies usually do a better job of protection and preservation than their state and municipal counterparts. This is primarily because of Federal Agencies' abilities to commit resources to a long-term management plan.

Focus not on recreation, but on wildlife.

For me, it is very convenient, so I can visit frequently and observe the birds, animals and the natural setting often during all four seasons. As a barrier island, located on the Great Marsh, and an important stop for birds on the flyway. Parker River National Wildlife Refuge is in a class by itself for me.

Gorgeous, peaceful, water, uncrowded.

Greater amounts of wildlife to see.

Habitat restrictions that limit dogs, vehicles, and bikes to areas with limited human impact. The preservation of these areas makes them unique.

Hiking options, and a trail and undeveloped resources to enjoy!

I appreciate having an unpopulated, undeveloped section of beach to visit.

I don't know what other public lands to compare with refuges except parks. The refuge is peaceful and quiet. I feel very safe here (important to me - as I'm a single woman and have had bad experiences on other public lands).

I have been coming here for over 50 years and have always enjoyed it.

I like the combination of accessibility and conservation efforts.

I like their focus on nature. Part of Parker River is closed for nesting in the summer. I think it's great to protect the birds and their habitat. I wouldn't want the refuge to expand recreational activities at the expense of wildlife.

I rather like that NWRs have some restrictions on where people can access - these should be refuges for wildlife after all. (As opposed to our national parks, which seem like you can wander just about anywhere, which I do believe has its advantages as well, I just like that there are places set aside for wildlife.)

I think it's the extra care and consideration that goes into preserving the area for wildlife, plants, etc.

I think the obvious care taken to protect the area makes the visitors likely to be careful and respectful as well.

I understand that the sole purpose of preserving and conserving wildlife is very different than the primary mission of most wildlife parks, state parks and national parks. Parks have more of an obligation to serve people who want to experience nature, while the refuge has more of an obligation to serve the wildlife that need to be preserved.

Interesting structure based on the wildlife, not on making people happy.

It gave me an opportunity and privilege to be in and/or a part of wildlife's world. We're just visitors into their homes... (respectively).

It is a beautiful place. They have done a great job of maintaining its natural beauty and protecting the animals. I love it there. I also love the limit on the number of people who can enter. It might be frustrating if I can't get in one day, but I know it will be protected and, therefore, will be there another day.

It is a quiet place, not over run with tourists, but enjoyed by others who are interested in enjoying the wildlife and solitude.

It is perhaps the last piece of America that crop land development can't steal.

It is unique because of its pristine beaches that are so close to a town. You can experience nature undisturbed, without travelling far from local communities.

It is well kept for birds and wildlife and humans without overdevelopment. Limited number of people at any one time.

It is wonderful to be able to enjoy wildlife and unspoiled beaches, and we are dedicated to protecting the harmonious environment of this refuge. However, shutting down almost the entire beach in spring & summer is far too radical. Managers should learn from the excellent example of Cape Cod beaches, which allow walking along the ocean while reserving the area near the sand banks for the plovers.

It makes for a quiet place to relax.

It makes people aware of conserving the wildlife, because you can't just do what you want and ruin the place. I've heard people complain about beach closures due to nesting terns and Plovers and I'd explain the reason for that. So it makes people think. It's not just about us and our own fun.

It provides a way to put stewardship of the Earth and nature into action and showcase it to this and future generations as a great example of what is possible.

It's a very beautiful, quiet place close to a major metropolitan area.

It's unique because so many of our lands have been damaged by misuse (draining waters for big business agricultural use for example), but Plum Island has been greatly preserved by U.S. Fish and Wildlife.

It's unique in that it is more protected than other state run conservation areas. It's important that people understand that this is primarily a wildlife refuge and not a place for recreation or fun. While we can enjoy ourselves here, it's important that human needs are secondary. Condition of roads and trails is a good way to protect areas from too much human interference. I believe the condition of the roads at the refuge I visit is too good in some areas.

It's water-related. Most others have uplands, mountains, etc. with water inside the parks, but Refuges to me are very unique.

Its beauty on the ocean, removed from the hectic activity of everyday life, make this refuge very special.

Its importance as wildlife & migratory bird habitat.

Its location and ocean accessibility.

Its mission.

Its open space, wetlands, and bird watching. Great main road. Great beach.

Its solitude, not over flowing with people.

---

Lack of developed areas, and taking advantage of natural surroundings for viewing and trails.

Limited access. Natural, undeveloped land. Preservation of wildlife habitat. Beauty.

Location.

Lots of birds. Unspoiled - trying to turn the tide of progress or development.

Maintaining pristine status of sites with just the right amount of facilities.

Major bird destination, distinct marsh landscape, and freshwater and sea bird life are very important.

Many private organizations have interests other than conservation that also have an impact on the way they manage their sites.

Migratory birds, non-commercial.

Most beautiful beaches around here, not a lot of people, great for grandchildren, just love it.

Multiple use - you allow hunting and fishing and other uses.

My interest is in the birds and wildlife being protected. That includes associated plant life, etc.

Natural habitat to enjoy. Peaceful coexistence with nature and wildlife. Great learning opportunities for children.

Nature close to nature with people.

Nice ride by car or bike checking out the different things going on, have to keep your eye out.

Nice scenery, quiet place.

No development.

No place like it.

Open ocean and salt marsh access, bird migration hub, peace, and undisturbed.

Opportunity to observe wildlife in a "somewhat undisturbed" environment.

Opportunity to view wildlife and birds is exceptional. Beautiful, unspoiled beaches. Good fishing. Opportunity to view "natural habitats." The best in our area.

Parker River National Wildlife Refuge is unique because it presents the relationship of the ocean and the marsh. I use the Refuge for exercise and it is a wonderful environment to run in.

Peaceful tranquility.

Plum Island is gorgeous. The combination of beautiful beaches and interesting wildlife on the wetlands is great. I didn't see paths, but will love to next time.

Precisely the protection they offer for various species, including those birds--in this case--that might be endangered. Although this might restrict human access somewhat, all US refuges we've visited over the years have seemed to strike a decent balance, permitting a "look in" while appropriately keeping our hands off.

Preserving the natural habitat while providing enjoyment of the beach.

Protection and management of wildlife, birds, etc.

---

---

Provide visitors with unparalleled opportunity to view the beauty and wonder of wildlife and nature.

Recreation is second to wildlife conservation! Please don't cave to public pressure!

Refuges are a mixed-use public resource that places an emphasis on wildlife and habitat conservation, as opposed to an emphasis on recreation that would be detrimental to wildlife and habitat conservation - no ATVs, no hiking on beaches with nesting shorebirds, no fully open hunting season (I think Parker River NWR is closed 1 day/yr for a deer cull), no dogs. This is all very important for the primary mission, even though some members of the public would like to see a loosening of these restrictions. Don't do it.

Refuges give me an opportunity to visit nature by the sea.

Retains land in its wild state as unchanged and natural as possible while still providing access.

Salt and fresh water marshes, beaches, great trails, and many types of birds.

Sandy Point is quite secluded. Very enjoyable to not be at a crowded mob scene beach. Clearly this area is highly utilized by migratory waterfowl, tree swallows and other birds.

Seeing local wildlife in a natural protected environment. Offers a unique look at some migratory birds.

The ability to drive the entire refuge to observe wildlife and also walk trails and beach.

The beauty and small amount of people there relative to the area of land.

The beauty of the setting (big sky) and the variety of flora, which changes by season! Being in the refuge is a constant pleasure and a relaxing visit. Thank you!

The combination of barrier island, tidal river, and freshwater/saltwater marsh provides an example of a symbiotic natural system of which people rarely have a chance to explore or examine. Visiting Parker River preserve must surely expand visitor's definition of beach beyond sand and saltwater.

The combination of beach, marshland and all of the trails are perfect for bird watching and they are not too crowded, which is important.

The combination of the ocean, sand, and ocean life. Preschoolers can enjoy it all. Sandy Point is the best beach in north MA and NH.

The diversity of habitat and the number of plant and bird species present.

The diversity of plants and animals.

The emphasis upon protection of indigenous and migrating species and the emphasis on protecting and even improving the distinctive environment, gives visitors the sense of experiencing a relatively wild place. Even though the refuge is close to a densely populated area, it offers the opportunity to be alone and observe the natural world. I am grateful for the efforts of the refuge's managers over the years to limit the impact of recreation while making it easy to visit.

The fact that the refuges are focused on conserving, managing, and preserving wildlife and wild habitat. The fact that having them as a natural resource keeps them open to all visitors, at a reasonable entry fee and, hopefully, will keep them free of exploitation by a small group of private interests.

The focus on preservation is critical. The refuge provides a means by which we can interact with nature without destroying it.

The information they provide and the commitment to protect these natural treasures.

The location between the ocean and the marsh and the varieties of birds.

The location is convenient for us and the beauty of the refuge offers peace.

---

---

The miles of undeveloped land make the experience unique. However, since the vast majority of that space is restricted, the public have no opportunity to experience the views and isolation that is available. I do not believe that you have to come to a place where you have identified the highest and best use of the resource.

The number and varieties of habitats make the refuge very unique. For birders, it's a year round treasure of a place. It's a place of astonishing beauty and peace. A very important place for bird migration. Thank you for maintaining it as you do. (Name Signed)

The opportunity to see a habitat that is for wildlife and not for humans - the ultimate invasive species!

The Parker River National Wildlife Refuge is a beautiful area that I have been consistently visiting for 17 years. It is a real gem, close to Boston, that enables me "to get away from it all," even if it is only for a few hours on a weekend.

The people, area, and each one is striving for - conserving, managing. That's it in a nutshell.

The preservation of the habitat is number one.

The pristine natural beauty the refuges preserve due to limited roads and no development, putting plants, animals and habitats before humans. Great job!

The refuge is a nice place to walk or bike ride without fear of speeding cars or other hazards. We especially like to visit the refuge in the winter months. It's very quiet; no people-no bugs. We also like to view the various birds that frequent the Plum Island Refuge.

The refuge is unique because of the unspoiled land which has birds and other animals. It is well maintained and other visitors are respectful of the refuge.

The Refuge must always be a safety zone for wildlife. It is their only hope and a responsibility we must assume. One look at the other end of Plum Island is reason enough to see why this is so incredibly important. It is also very important for people to have a place near their homes, businesses, families and living environment to see what the real world is. It is not enough to watch a video or read about it. We must have a place to experience the incredible beauty and many different living things that exist in our world to realize that humans are far from being the most important living things. Many others should be able to exist without our interference. Unfortunately, the Refuge is unique because there are few places along the seacoast that offer such sanctuary. It is priceless and must always be protected. It is a privilege to visit the Refuge and use it in a way that does not interfere with its primary mission.

The refuges go out of their way to protect wildlife as opposed to a more laissez faire attitude in national forests and parks.

The uninhabited beach, the dunes, the wildlife, and an incredibly dedicated workforce.

The unspoiled beauty and accessibility.

The wildlife and variety.

The wildlife come first.

Their efforts towards protecting wildlife, particularly nesting sea birds. Also, complete lack of commercialism, which makes them a great escape.

Their location and ability to attract birds and animals, and also the beauty they provide and protect.

There are precious few ocean front refuges of this quality. Birding is great and this has a reasonable balance of access and experience.

There are several Refuge areas located close to us. I like them because they're a little more remote and/or they are not as well-known and therefore are used less. That's a good thing, because too many people can take away from the beauty and experience of nature.

---

They are a more useful educational tool.

They are generally smaller and offer the chance to explore a particular type of habitat in depth. I feel it is easier to "get to know" and bond with a refuge, as its smaller size allows one to explore and learn more about it. They are often the only places available for both bird watchers/nature lovers and hunters, and seem to focus on protecting specific important habitats.

They are often less 'traveled' or popular than some other destinations, so can offer more intimate and private enjoyment of nature.

They do have conservation as their primary focus and provide an opportunity to observe nature and a natural habitat. They are not intended to have human recreation as a primary focus; there are other places for that.

They have an emphasis on conservation. However, I find it curious that they also allow hunting of waterfowl. I find hunting reprehensible, and allowing it to take place on a property proclaiming itself a 'wildlife refuge' seems hypocritical.

They have the most amazing plants, birds and wildlife that you don't get to see in your own backyard.

They provide a rare opportunity to see birds & other wildlife in their natural setting, with little interference by man.

They seem to be set up for one specific type of wildlife.

They should be managed for optimal conditions for wildlife.

This one does - there is no beach like it around!

This one has a beautiful series of beaches that make our summers wonderful. We would not enjoy the season nearly as much without access like this!

This refuge sits on the Atlantic Ocean, so it possesses some of the best beaches on the East coast, and probably the world. It contains a number of ponds, streams and open water for waterfowl and other birds. It has woods, swamps, sand dunes, etc. It has deer, coyotes, foxes, beavers, etc. It is truly a spectacular treasure in a fairly populated area, and we enjoy and marvel at its beauty in all four seasons.

To observe the plants.

Undeveloped ocean dunes!

Unique waterfowl habitat in the area.

Unique, but somewhat hard to understand some of the need for regulations.

Untouched land.

Varied landscape.

Watching the animals in their natural surroundings.

Well managed and accessible. Migrating spring and fall warblers and other birds make this a great place for bird watching. Wildlife observation at all seasons make for a great destination.

Well managed for protection of wildlife. Limits on the number of visitors.

Well preserved natural settings (beach, dunes and salty marsh). Quiet, relaxing environment. Clean and uncrowded beach. Well-kept boardwalk and trails. Please keep it quiet!

Well run, informative, takes care of wildlife and resources. Better than most other Parks.

---

Well-maintained Refuge providing great habitat for all animals!

Well-managed and spotless.

When I visit a National Wildlife Refuge, I can expect a good quality level of touring. Roads, bridges, and boardwalks are well maintained and I can expect and count on a good level of safety. The grounds, while generally well-traveled, are in most cases pristine or near pristine and there are reasonably good opportunities to encounter wildlife. I can also trust maps and trail markers to be accurate. Generally, it is worry free and always an enjoyable experience.

Wildlife are more visible here. Early morning and dusk are quite active.

You must realize that many people use the beach all summer and spend the whole day swimming in the dangerous and unpredictable waters. If this needs an additional fee to supply lifeguards, then think about it.

You never know what kind of wildlife you will see. I once saw a bear in a marsh. It is a pleasure to be kept out so that the Pipers can reproduce and not be threatened. I remember a time that they were becoming fewer and fewer. We use to just walk through the dunes.

---

---

#### Additional Comments (n = 62)

1. From April 1 to Late-Summer at the Parker River Refuge on Plum Island, MA, management shuts down and ropes off all the parking spaces along the refuge road. I would like to see them leave 3 or 4 open at the end of these lots with a 90 minute time limit so us walkers and birders can park off the road without fear of being ticketed or towed. 2. Install hand sanitizers lotion in restrooms at Wardens and Hellcat. It is not sanitary to use these facilities and not be able to wash hands afterward.

1. Trucks should not be allowed to drive on the beach. 2. Only half of the main road is paved, and it would enhance the refuge experience if the other half was paved.

#### Beach Access

Climate Change - important, but it is part of the natural ecosystem. Trouble is: humans - the ultimate invasive species - are accelerating the rate of climate change. But climate change is also a natural phenomenon. As for Parker River: let's not be so people friendly that the wildlife suffer.

Great 10 mile beach walk in the water! All dunes, all natural.

Great Refuge! All (staff and volunteers) are knowledgeable and helpful!

I believe more access should be given to wildlife habitat. But the number or perhaps types of visitors should be limited. Only those who want to enjoy the visit quietly and do no harm to the environment.

I have been going to this refuge since before there was a front gate. I understand that there are more people visiting this area and, therefore, more pressure on the wildlife. But the head of this refuge is too heavy, and hard to work with. He may have to be nowadays, but I'm not sure.

I have been to a number of wildlife refuges from Florida to Maine, and Parker River seems to be one of the least friendly and least responsive to community input.

I love Plum Island.

I really enjoy the Refuge; it is within close proximity to my home. PARKING is a major problem when birds are nesting!!!! If the entire road were to be paved, it would be a great benefit to those bicycling - the dust from cars can choke you sometimes.

I use this wildlife refuge every weekend that I can for biking, birding and enjoying the beach.

---

I visit the refuge pretty much on a daily basis. I've grown up with Plum Island my whole life. Personally, I would like to see the whole island made into a wildlife refuge. While I know this seems impossible now, I believe humans need to scale back if birds and other wildlife are to survive. Increased government protection of areas is one step to address this issue. I would also like to see more rules about what materials can be brought into the refuge. No plastic bags, no plastic bottles, etc. Especially on beaches.

I wish there were more "teaching trails" on the refuge.

I would like to see a family season pass that allows both my spouse and me access to the refuge with our children.

I would like to see the OSV permits handled better. Offer a season pass at a price of \$100.00 (for those over 65 years old). Offer a weekly pass for \$25.00. Eliminate the two day on and two day off rule. Do not make drive ons wait until September. When the birds are gone, open the beach! Implement the plan that the Cape Cod National Wildlife Refuge uses.

I'd love to see kids and adults reconnect to nature because of an emphasis on the health benefits and joy that being in nature brings with it. Of course the enjoyment of nature needs to go hand in hand with responsible use and stewardship through education. From personal experience, I can say that if I worry too much, I lose sight of the fact that nature has an enormous capacity to rebalance and regenerate. If I let my balance slip into depression, I have no energy to take positive action, to chance that chance for nature to rebalance itself. Thank you for the good that you do!

In the past 12 months or so, have visited: Chincoteague, Mattamuskeet, Cedar Island, Currituck, Pearl Harbor, Kakahaia, Kilauea Point, Oahu Forest, and Arcadia. (VA, NC, HI, and ME).

It's a very good place to play in the surf, build sand castles, and look at the beach ecosystem. It's beautiful.

It's too bad that more of the beach can't be opened during Plover season. It's making the residents here very resentful of the refuge.... I believe a walking path on the beach side could be opened and the dunes forced halfway down, so people could walk the length of the refuge. It's such a pity that the beaches can barely be enjoyed for much of the summer.

Keep up the good work.

Keep up the good work. I hope the Refuge doesn't suffer from serious funding cutbacks; the short-sightedness of our government just staggers me. We don't own the earth; we're just passing through. If we do not take the time, effort and expense needed to monitor and protect the environment that we so drastically affect, we will have no truly important heritage to pass to our children and grandchildren.

Litter has become a problem in the grasses lining the roadway. Plastic discs were recently released accidentally from a sewage plant in Hooksett, NH and I witnessed several at the refuge. Is anyone out picking up litter that has moved into the area over the winter? It's heartbreaking.

Looking forward to many more years of enjoying the Refuge on Plum Island and what it has to offer.

Love the outdoors and hope it stays pristine.

Love to visit the refuge. Go on a weekly basis. Love nature and provides great opportunity to experience nature in a lovely form.

Members of my family care deeply and profoundly about the natural world, and we try to support the preservation and restoration of wild habitats in any way we can. We also believe it is important to be informed about environmental access. Ten years ago, when we still lived in coastal MA, I was involved in an ongoing local effort to inform people in our area and our government about the urgency and seriousness of climate change, and the vital importance of a healthy, functioning environment. I was surprised, and disheartened by the general unawareness on the topic of global warming, the general ignorance of its effects, and the general indifference to the role wildlands play in sustaining human society. The National Wildlife Refuges are well-known, visible, and cherished. I would be very happy to have them take a primary part in inspiring the public



to understand and take action at every level to address the frightening fact of climate change and other sources of environment deterioration. Thank you for existing and being such fine stewards!

My husband and I walk frequently in the Refuge. It is a wonderful place. The only thing that would make it even better would be to ban cars (except for people with disabilities and for fishermen at certain times) and to have trolleys - preferably hybrid or electric - to drop people off and pick them up anywhere along the road from the entrance to the end. That would save wear and tear on the road, decrease pollution, and make the road much safer for bicyclists and walkers.

My trips are short trips, an hour to 3 hours.

One of the main reasons my family and I chose to live in Newburyport was because of its proximity to the Parker River National Wildlife Refuge. We go there anywhere from one to 7 times a week.

One thing that concerns me is that because of the nesting habits of the piping plover (as well as other types of birds) certain portions of the beaches are off limits to beachgoers, and can be for a long period of time. These areas are generally roped off with snow fence and large signs are displayed. However, because they are on a beach, it is sometimes not possible to have signage close to the shore. Volunteer Plover Wardens will sometimes arrange sticks and other beach debris as an extension of the fence and will explain to beach walkers why they cannot proceed beyond the "barrier." (If a volunteer is not on-site, other beachgoers and fisherman who are familiar with the rules, will sometimes act as ad-hoc wardens). However, again there are those who don't think the rules apply to them, and will come walking down the beach, see an unpopulated beach ahead of them and proceed to walk that beach. I wish there was some way that portable signs could be placed so that at least people couldn't say that they didn't know the area was off limits. Perhaps, when entering the refuge, people could be given a notice informing them of the rules. (This may already be done - not sure). In any case, the Parker River National Wildlife Refuge is a great asset and keep up the great work!

Our family is grateful. So I like that we live in such proximity to Parker River Wildlife Refuge. No matter how many times we go, it never gets boring. A wonderful resource. We try to bring any visitors to see the refuge. Hopefully this wonderful place will be around for all generations to enjoy.

Our outdoor recreation is for hiking, cycling, and enjoying the ocean. We do NOT hunt or fish.

Overall, this is a great place. I have seen many improvements over the years and appreciate the efforts of refuge staff.

Parker River National Wildlife Refuge is a great resource, and a good example of well-spent tax dollars. It preserves and defends important natural resources for future generations. My experiences with the staff have been great!

Please develop more cycling, fishing and kayaking options.

Please do all you can to educate and promote wildlife conservation. Protect wildlife first! Limit access if necessary.

Please help preserve this place and bring back the birding opportunities.

Please keep up your good work!

Please see the prior comments. Overall, the staff is doing a good job. However, the radical approach to plovers is a huge disappointment.

Thank you for all you do to make the world a better place.

Thank you for collecting this information.

Thank you for doing such a great job!

Thank you for the wonderful work you do! Parker River National Wildlife Refuge does an excellent job of

---

preserving plants, animals and habitat while making 7 miles of pristine beauty accessible to thousands of people every year.

Thank you!

Thank you. I appreciate entering the refuge with my National Parks card. It's a great way to see National Wildlife Refuges.

The access to Sandy Point (state property) needs to be addressed and handled. The lower unpaved road to Sandy Point is a speedway. The fact that it is unpaved doesn't slow the beach goers down at all.

The employees at the refuge entrance alternated between nice, cordial and friendly to absolutely rude and cold. This was disturbing since we visited almost every day in summer. For example, I forgot my pass once and the man at the gate, who recognized me, allowed me in, but sternly cautioned me that this wouldn't happen again. I felt that was reasonable. My sister, also a local, forgot her pass a few days later and the same employee yelled at her and accused her of "trying to pull a fast one." She had a pass, but he not only made her pay, he was extremely rude and unprofessional. In addition, a female employee who works less at the gate was indifferent at being there. Otherwise, we love this refuge and are lucky to live here!

The number of parking spaces should be increased, especially at strategic lookouts and vistas.

The Parker River National Wildlife Refuge is a sacred place to me. Thank you.

The Parker River National Wildlife Refuge is a world renowned destination for birders. I hope decision makers continue to value its importance as a resource for migratory birds and other wildlife, as well as the people who lives are enriched by viewing the birds/wildlife.

The Parker River Wildlife Refuge is among the greatest assets the government owns on the east coast of the United States. I appreciate it every day, even if I am not there.

There has been an emphasis in recent years on restoring habitat to its original condition. This is, in general, an admirable objective. However, when it is applied in a bureaucratic manner without regard to local issues, it can be damaging. For example, Parker River NWR is in the center of a vast saltwater marsh that extends from Maine to Cape Ann, MA. Many years ago when Fish and Wildlife was primarily concerned with saving habitat from ducks for hunting purposes, they created fresh water impoundments that are not natural - quite the opposite, and probably expensive to maintain. However, the benefits have extended not only to ducks, but to many now locally-endangered freshwater marsh birds (bitterns, moorhens, etc.) and mammals (river otter) whose habitats elsewhere have been degraded by swamp-draining "improvements." It is very important that the refuge refrains from "restoring" this habitat to saltmarsh (there is a lot of this habitat outside the refuge) and maintain one of the last, albeit artificial, freshwater wetlands in the state.

This refuge is a crown jewel. Please don't do anything to alter this refuge in any negative manner.

This refuge is one of our favorite birding places.

Very enjoyable.

We absolutely love the Parker River National Wildlife Refuge. It's one of our favorite family destinations!

We are losing some of the refuge each year due to erosion. I don't know what can be done, if anything at all, but if we could prevent it somehow I would like to be informed of what it would take to stop it. Thank you.  
(Name Signed)

We think the Parker River staff are great. We wish the refuge was not open to "beach goers;" instead, only open to wildlife viewing, photography, etc. Or charge \$25.00 for parking in Lot#1 only for beach goers, leaving the other areas for birders, photographers, etc.

We were out for a drive.

---

When I was younger, before the board walks were so well maintained, the dunes were void of natural foliage and badly eroded. With the emphasis on keeping off the dunes, the island has recovered nicely. I would miss not being able to visit either Plum Island or Nelson Island off Stockyard Road, but I wouldn't object much if they were closed to all traffic and allowed to flourish.

Would like to see a trash bag station at every beach entrance, so that people who want to pick up the beach and make it a better place can do so. I walked those beaches two times a week all season. There is a lot of stuff that washes up on the sand, especially those little filters from up in New Hampshire.

---