



National Wildlife Refuge Visitor Survey 2012: Individual Refuge Results for Don Edwards San Francisco Bay National Wildlife Refuge

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

Their stated mission of conservation and restoration of wildlife and the environment makes refuges unique. As an avid environmentalist and birdwatcher, it gives me hope and makes me feel good to visit National Wildlife Refuges. It's the best use of my tax dollars that I know of.

— *Survey comment from a visitor to Don Edwards San Francisco Bay*



Don Edwards San Francisco Bay NWR. Photo credit: U.S. Fish and Wildlife Service.

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Introduction

The National Wildlife Refuge System (Refuge System), established in 1903 and managed by the U.S. Fish and Wildlife Service (Service), is the leading network of protected lands and waters in the world specifically dedicated to the conservation of fish, wildlife, and their habitats. There are 560 national wildlife refuges (refuges) and 38 wetland management districts nationwide, including possessions and territories in the Pacific and Caribbean, encompassing more than 150 million acres (U.S. Fish and Wildlife Service, 2013). As stated in the National Wildlife Refuge Improvement Act of 1997, the mission of the Refuge System is “to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” Part of achieving this mission is the goal “to foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants, and their habitats” and the goal “to provide and enhance opportunities to participate in compatible wildlife-dependent recreation” (U.S. Fish and Wildlife Service, 2006, p. 2). The Refuge System attracts nearly 45 million visitors annually, including 34.8 million people who observe and photograph wildlife, 9.6 million who hunt and fish, and nearly 675,000 teachers and students who use refuges as “outdoor classrooms” (U.S. Fish and Wildlife Service, 2012). Understanding visitor perceptions of refuges and characterizing their experiences on refuges are critical elements of managing these lands and meeting the goals of the Refuge System.

The Service contracted with the U.S. Geological Survey (USGS) to conduct a national survey of visitors regarding their experiences on refuges. The purpose of the survey was to better understand visitor experiences and trip characteristics, to gauge visitors’ levels of satisfaction with existing recreational opportunities, and to garner feedback to inform the design of programs and facilities. The survey results will inform performance, planning, budget, and communications goals. Results will also inform Comprehensive Conservation Plans (CCPs), visitor services, and transportation planning processes.

Organization of Results

These results are specific to visitors who were contacted at Don Edwards San Francisco Bay National Wildlife Refuge (NWR) (this refuge) during the specified sampling periods and are part of USGS Data Series 754. All refuges participating in the 2012 survey effort will receive individual refuge results specific to the visitors to that refuge. Each set of results is organized by the following categories:

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

Methods

Selecting Participating Refuges

The national visitor survey was conducted from January–December 2012 on 25 refuges across the Refuge System (table 1). Each refuge was selected for participation by the Refuge Transportation Program National Coordinator in conjunction with regional office Visitor Services Chiefs. Selection was based on the need to inform transportation planning processes at the national level and to address refuge planning and transportation needs at the individual refuge level.

Developing the Survey Instrument

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

Contacting Visitors

Refuge staff identified two separate 15-day sampling periods, and one or more locations at which to sample, that best reflected the diversity of use and specific visitation patterns of each participating refuge. Sampling periods and locations were identified by refuge staff and submitted to the USGS via an internal website that included a customized mapping tool. A standardized sampling schedule was created for all refuges that included eight randomly selected sampling shifts during each of the two sampling periods. Sampling shifts were 3–5 hour (hr) time bands, stratified across AM and PM as well as weekend and weekdays. In coordination with refuge staff, any necessary customizations were made to the standardized schedule to accommodate the identified sampling locations and to address specific spatial and temporal patterns of visitation.

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

Table 1. Refuges participating in the 2012 national wildlife refuge visitor survey.

Pacific Region (R1)
Ridgefield National Wildlife Refuge (WA)
Southwest Region (R2)
Balcones Canyonlands National Wildlife Refuge (TX)
Hagerman National Wildlife Refuge (TX)
Kofa National Wildlife Refuge (AZ)
Santa Ana National Wildlife Refuge (TX)
Tishomingo National Wildlife Refuge (OK)
Great Lakes-Big Rivers Region (R3)
La Crosse District, Upper Mississippi River National Wildlife and Fish Refuge (WI)
Minnesota Valley National Wildlife Refuge (MN)
Southeast Region (R4)
Crystal River National Wildlife Refuge (FL)
Eufaula National Wildlife Refuge (AL)
Felsenthal National Wildlife Refuge (AR)
Lacassine National Wildlife Refuge (LA)
National Key Deer Refuge (FL)
Savannah National Wildlife Refuge (GA/SC)
Northeast Region (R5)
Assabet River National Wildlife Refuge (MA)
Back Bay National Wildlife Refuge (VA)
Chincoteague National Wildlife Refuge (VA)
Edwin B. Forsythe National Wildlife Refuge (NJ)
Rachel Carson National Wildlife Refuge (ME)
Mountain-Prairie Region (R6)
Bear River Migratory Bird Refuge (UT)
Lee Metcalf National Wildlife Refuge (MT)
Rocky Mountain Arsenal National Wildlife Refuge (CO)
National Bison Range (MT)
California and Nevada Region (R8)
Don Edwards San Francisco Bay National Wildlife Refuge (CA)
San Luis National Wildlife Refuge (CA)

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

All visitors that agreed onsite to fill out a survey received the same sequence of correspondence regardless of their preference for survey mode. This approach allowed for an assessment of visitors' likelihood of completing the survey by their preferred survey mode (see Sexton and others, 2011). Researchers at the USGS sent the following materials to all visitors agreeing to participate who had not yet completed a survey at the time of each mailing (Dillman, 2007):

- A postcard mailed within 10 days of the initial onsite contact thanking visitors for agreeing to participate in the survey and inviting them to complete the survey online.
- A packet mailed 9 days later consisting of a cover letter, survey, and postage paid envelope for returning a completed paper survey.
- A reminder postcard mailed 7 days later.
- A second packet mailed 14 days later consisting of another cover letter, survey, and postage paid envelope for returning a completed paper survey.

Each mailing included instructions for completing the survey online, so visitors had an opportunity to complete an online survey with each mailing. Those visitors indicating a preference for Spanish were sent Spanish versions of all correspondence (including the survey). Finally, a short survey of six questions was sent to nonrespondents four weeks after the second survey packet to determine any differences between respondents and nonrespondents at the aggregate level. Online survey data were exported and paper survey data were entered into Microsoft Excel using a standardized survey codebook and data entry procedure. All survey data were analyzed using *Statistical Package for the Social Sciences* (SPSS, v.20) software¹.

Interpreting the Results

The extent to which these results accurately represent the total population of visitors to this refuge is dependent on the number of visitors who completed the survey (sample size) and the ability of the variation

¹ Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

resulting from that sample to reflect the beliefs and interests of different visitor user groups (Scheaffer and others, 1996). The composition of the sample is dependent on the ability of the standardized sampling protocol for this study to account for the spatial and temporal patterns of visitor use unique to each refuge. Spatially, the geographical layout and public-use infrastructure varies widely across refuges. Some refuges can be accessed only through a single entrance, while others have multiple unmonitored access points across large expanses of land and water. As a result, the degree to which sampling locations effectively captured spatial patterns of visitor use will vary from refuge to refuge. Temporally, the two 15-day sampling periods may not have effectively captured all of the predominant visitor uses/activities on some refuges during the course of a year, which may result in certain survey measures such as visitors' self-reported "primary activity during their visit" reflecting a seasonality bias. Results contained within this report may not apply to visitors during all times of the year or to visitors who did not visit the survey locations.

In this report, visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for Don Edwards San Francisco Bay NWR, any potential spatial and temporal sampling limitation specific to this refuge needs to be considered when generalizing the results to the total population of visitors. For example, a refuge that sampled during a special event (for example, birding festival) held during the spring may have contacted a higher percentage of visitors who traveled greater than 50 miles (mi) to get to the refuge than the actual number of these people who would have visited throughout the calendar year (that is, oversampling of nonlocals). Another refuge may not have enough nonlocal visitors in the sample to adequately represent the beliefs and opinions of that group type. If the sample for a specific group type (for example, nonlocals, hunters) is too low ($n < 30$), a warning is included in the text. Finally, the term "this visit" is used to reference the visit during which people were contacted to participate in the survey.

Refuge Description for Don Edwards San Francisco Bay National Wildlife Refuge

The Don Edwards San Francisco Bay National Wildlife Refuge is located in the San Francisco Bay just outside of Fremont, CA. Established in 1974 by local community grassroot efforts, the refuge was the first urban national wildlife refuge in the nation. The refuge was named after Congressman Don Edwards who worked with local citizens and congress to create the refuge. Because nearly 85% of the bay's original marshes and shorelines have been altered, refuge lands provide critical habitat for indigenous wildlife in the bay area.

The refuge covers 30,000 acres of mostly aquatic habitat including marsh (38%), salt ponds (48%), mudflats (12%), vernal pools (2%) and uplands (2%). Uplands habitat provides the only home for land animals such as coyotes, rabbits, foxes, and lizards. Salt marsh habitat, which makes up 37% of the refuge, is one of the most productive habitats on earth and is vital in supporting two endangered species found on the refuge: the California Clapper Rail and the Salt Marsh Harvest Mouse. Salt ponds, constructed to harvest salt, are currently being restored back to tidal influence. Fish and birds dominate the primarily aquatic habitat including numerous species of waterfowl, shorebirds, wading birds, raptors, and more. The refuge provides safe grounds for migrating birds in the spring and fall, while millions of birds winter at the refuge.

Each year, just over 860,000 individuals visit the refuge (2011 Refuge Annual Performance Plan measures; Rob Miller, U.S. Fish and Wildlife Service, 2012, written commun.). Visitor activities include boating, fishing, hunting, wildlife observation, bird watching, photography, and the opportunity to use the trail system (containing over 30 miles of hiking and/or biking trails), Visitor Center, and interpretation and environmental education programs. Figure 1 displays a map of the refuge. For more information please visit http://www.fws.gov/refuge/Don_Edwards_San_Francisco_Bay/.

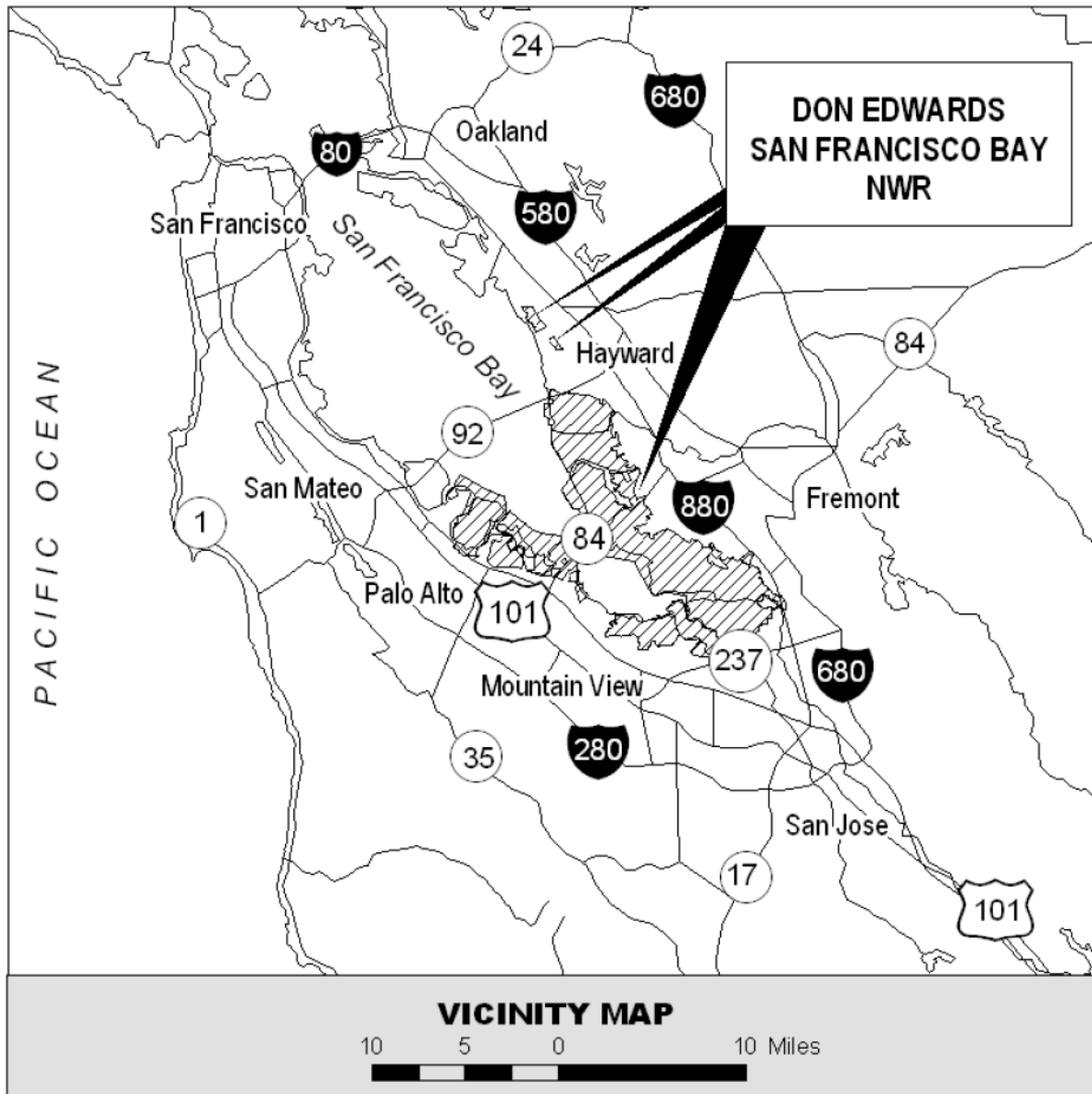


Figure 1. Map of Don Edwards San Francisco Bay NWR, courtesy of U.S. Fish and Wildlife Service.

Sampling at Don Edwards San Francisco Bay National Wildlife Refuge

A total of 322 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Don Edwards San Francisco Bay NWR (table 2). In all, 196 visitors completed the survey for a 65% response rate, and $\pm 5.6\%$ margin of error at the 95% confidence level.²

Table 2. Sampling and response rate summary for Don Edwards San Francisco Bay NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	5/5/2012 to 5/19/2012	Tidelands Trail				
		Stevens Creek Hunter Kiosk				
		Visitor Contact Station				
		Coyote Creek Lagoon				
		Environmental Education Center				
SP1 Totals			160	8	108	71%
2	12/1/2012 to 12/15/2012	Visitor Contact Station				
		Environmental Education Center				
		Fishing Pier				
		Stevens Creek Hunter Kiosk				
		Tidelands Trail				
SP2 Totals			162	13	88	59%
Combined Totals			322	21	196	65%

² A margin of error of $\pm 5\%$ at a 95% confidence level, for example, means that, if a reported percentage is 55%, then 95 out of 100 times, that sample estimate would fall between 50% and 60% if the same question was asked in the same way. The margin of error is calculated with an 80/20 response distribution, assuming that for a given dichotomous choice question, approximately 80% of respondents would select one choice and 20% would select the other choice (Salant and Dillman, 1994).

Selected Survey Results

Visitor and Trip Characteristics

A solid understanding of visitor characteristics and details about their trips to refuges can inform communication and outreach efforts, inform managers about desired types of visitor services and modes of transportation used on refuges, and help forecast use and gauge demand for services and facilities.

Familiarity with the Refuge System

Many visitors to Don Edwards San Francisco Bay NWR reported that before participating in the survey, they were aware of the role of the Service in managing refuges (73%) and that the Refuge System has the mission of conserving, managing, and restoring fish, wildlife, plants, and their habitats (85%). It is important to note that we did not ask visitors to identify the mission of the Refuge System or the Service, and positive responses to these questions concerning the management and mission of the Refuge System do not necessarily indicate that these visitors fully understand the day-to-day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why.

Most visitors (84%) feel that refuges, compared to other public lands, provide a unique recreation experience (see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System.

Many visitors to Don Edwards San Francisco Bay NWR had been to at least one *other* national wildlife refuge in the past year (76%), with an average of 7 visits to *other* refuges during the past 12 months.

Visiting This Refuge

Few surveyed visitors (19%) had only been to Don Edwards San Francisco Bay NWR once in the past 12 months, while most had been multiple times (81%). These repeat visitors went to the refuge an average of 29 times during that same 12-month period. Visitors used the refuge during only one season (27%), during multiple seasons (23%), and year-round (50%).

Most visitors first learned about the refuge from friends/relatives (41%), signs on the highway (24%), or refuge printed information (17%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (67%), maps from internet (e.g., Google Maps) (15%), or a GPS navigation system (13%; fig. 3).

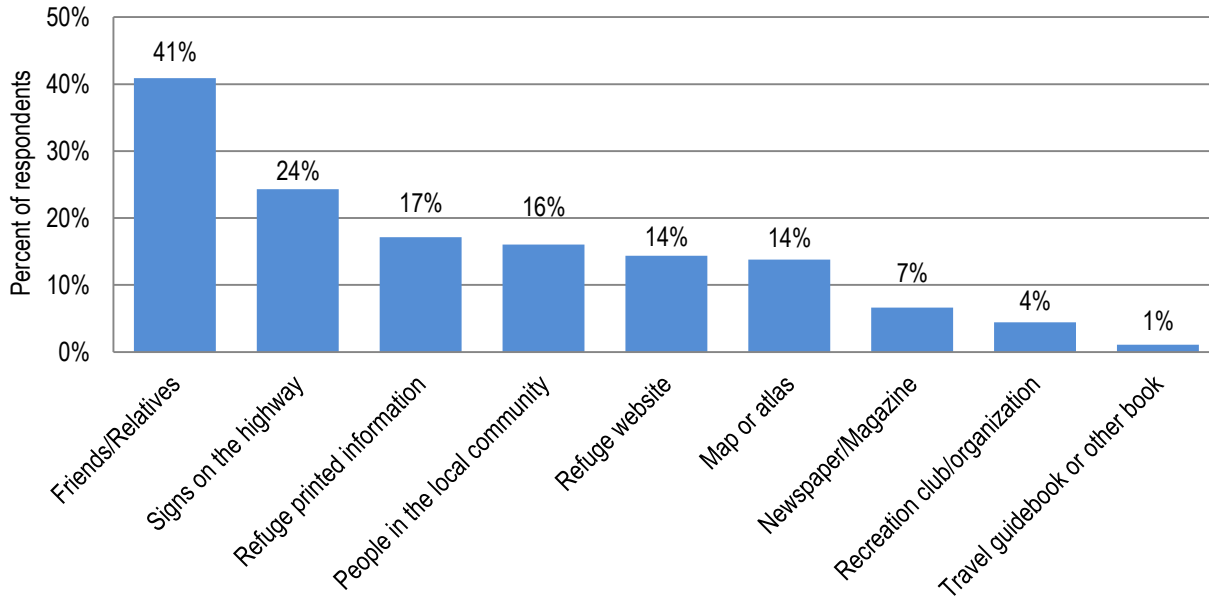


Figure 2. How visitors first learned or heard about Don Edwards San Francisco Bay NWR (n = 181).

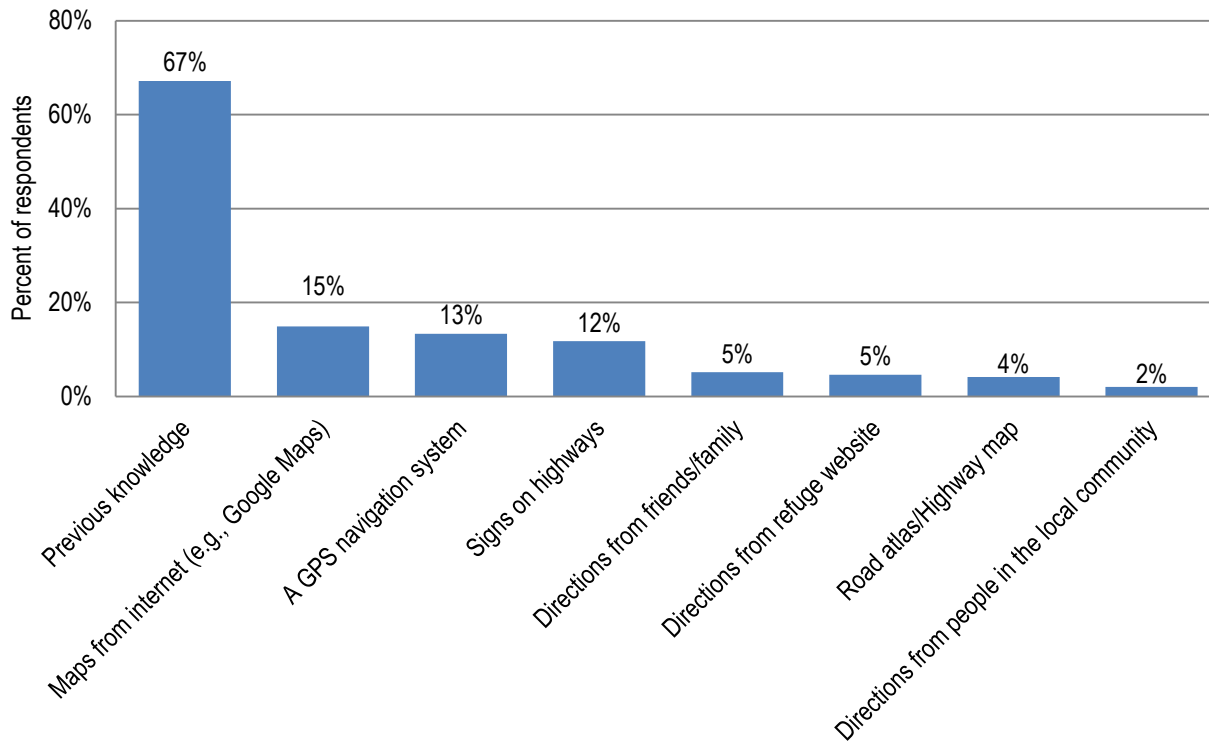


Figure 3. Resources used by visitors to find their way to Don Edwards San Francisco Bay NWR during this visit (n = 195).

Most visitors (95%) lived in the local area (within 50 mi of the refuge), whereas 5% were nonlocal visitors. For most local visitors, Don Edwards San Francisco Bay NWR was the primary purpose or sole destination of their trips (79%; table 3).

Local visitors reported that they traveled an average of 12 mi to get to the refuge. There were not enough nonlocal visitors (n = 9) to adequately estimate their travel distance. Figure 4 shows the residences of visitors traveling to this refuge. About 99% of visitors traveling to Don Edwards San Francisco Bay NWR were from California.

Table 3. Influence of Don Edwards San Francisco Bay NWR on visitors' decisions to take their trips.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	<i>The sample size of nonlocals was too low (n = 9) to adequately report these data.</i>		
Local	79%	11%	9%
All visitors	78%	11%	10%

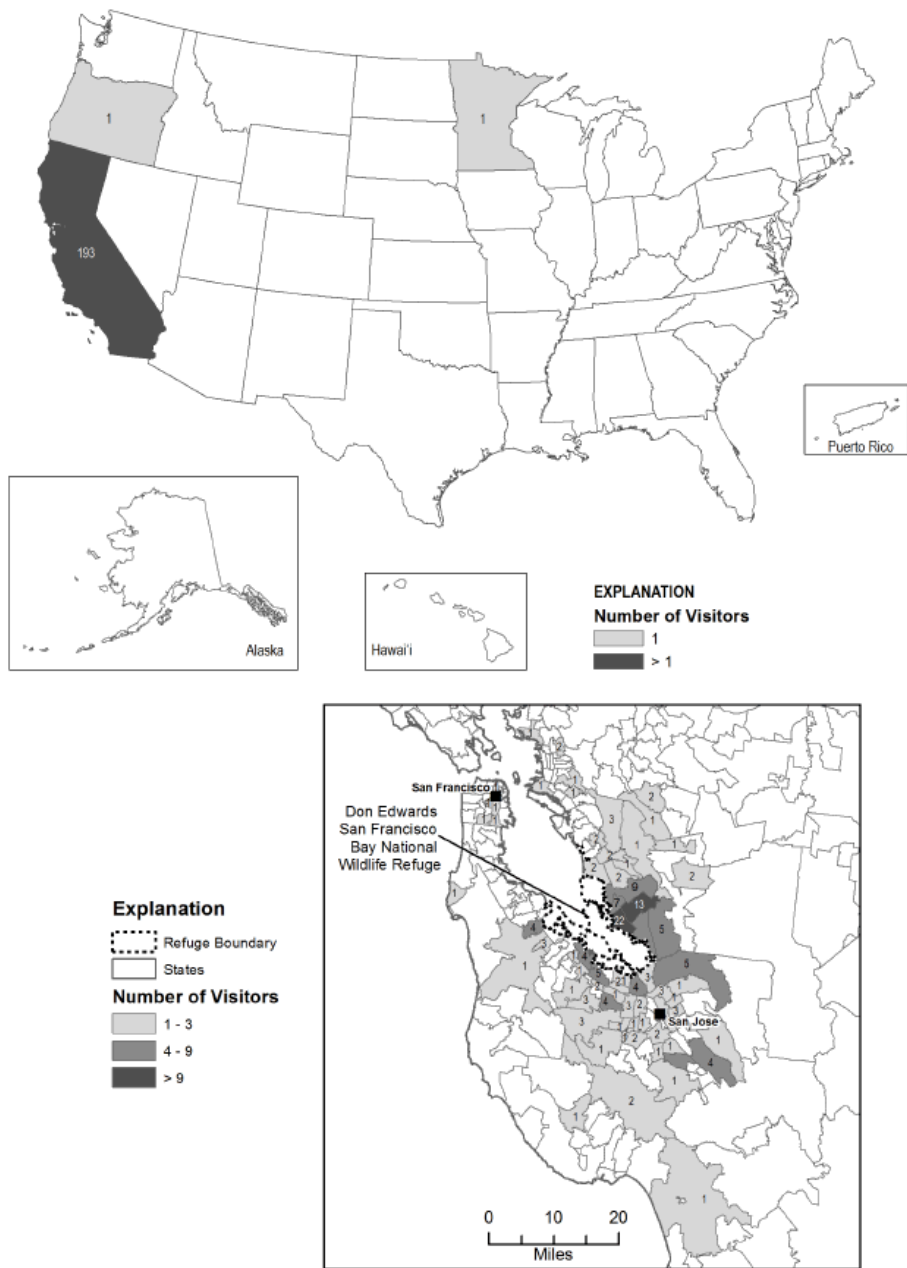


Figure 4. Number of visitors travelling to Don Edwards San Francisco Bay NWR by place of residence. The top map shows visitors residence by state and the bottom map shows residence by zip codes near the refuge (n = 195).

Surveyed visitors reported that they spent an average of 3 hr at the refuge during one day there, while the most frequently reported length of a day visit (the modal response) was 2 hr (29%). Most visitors indicated they were part of a group on their visit to this refuge (62%). Of those people who indicated they traveled with a group, visitors primarily traveled with family/friends (table 4).

Table 4. Type and size of groups visiting Don Edwards San Francisco Bay NWR (for those who indicated they were part of a group, n = 119).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	84%	2	1	3
Commercial tour group	0%	0	0	0
Organized club/School group	13%	12	2	14
Other group type	3%	5	0	5

The key mode of transportation used by visitors to travel around the refuge was private vehicles (76%), and to a lesser degree, bicycles (26%) and walking/hiking (18%; fig. 5).

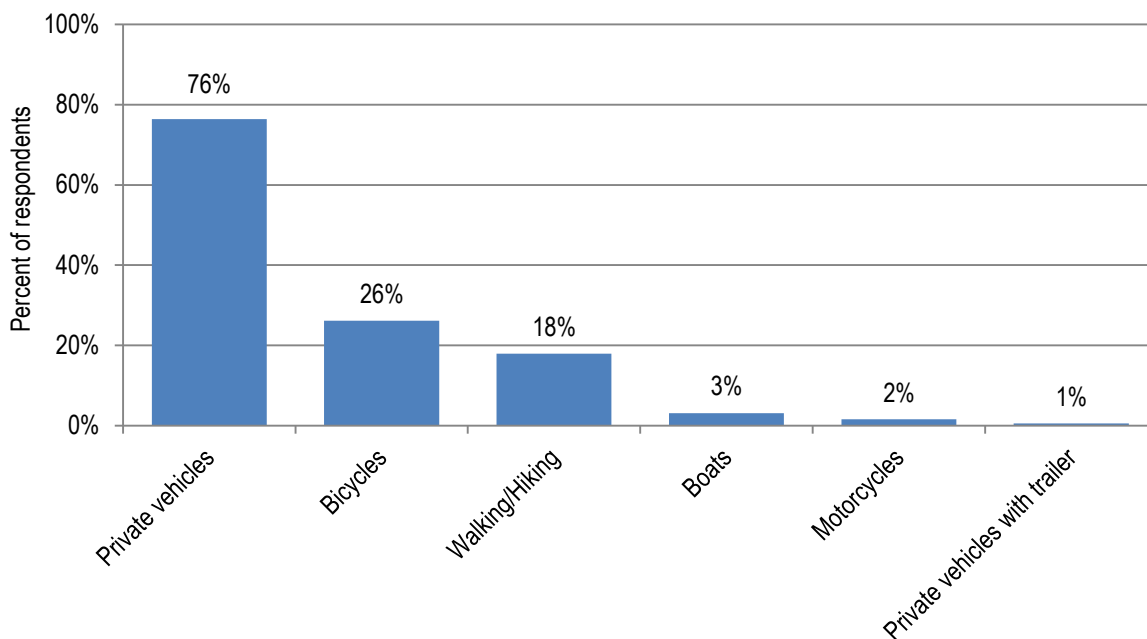


Figure 5. Modes of transportation used by visitors to Don Edwards San Francisco Bay NWR during this visit (n = 195).

Surveyed visitors participated in a variety of refuge activities during the 12 months prior to completing the survey (fig. 6); the top three activities in which people reported participating were hiking (68%), bird watching (62%), and wildlife observation (56%). The primary reasons for visitors' most recent visits included hiking (37%), bicycling (18%), and bird watching (11%; fig. 7). More than half of visitors also used the Visitor Center³ during their trips (56%), mostly to view the exhibits (70%), stop to use the facilities (54%), and ask information of staff or volunteers (50%; fig. 8).

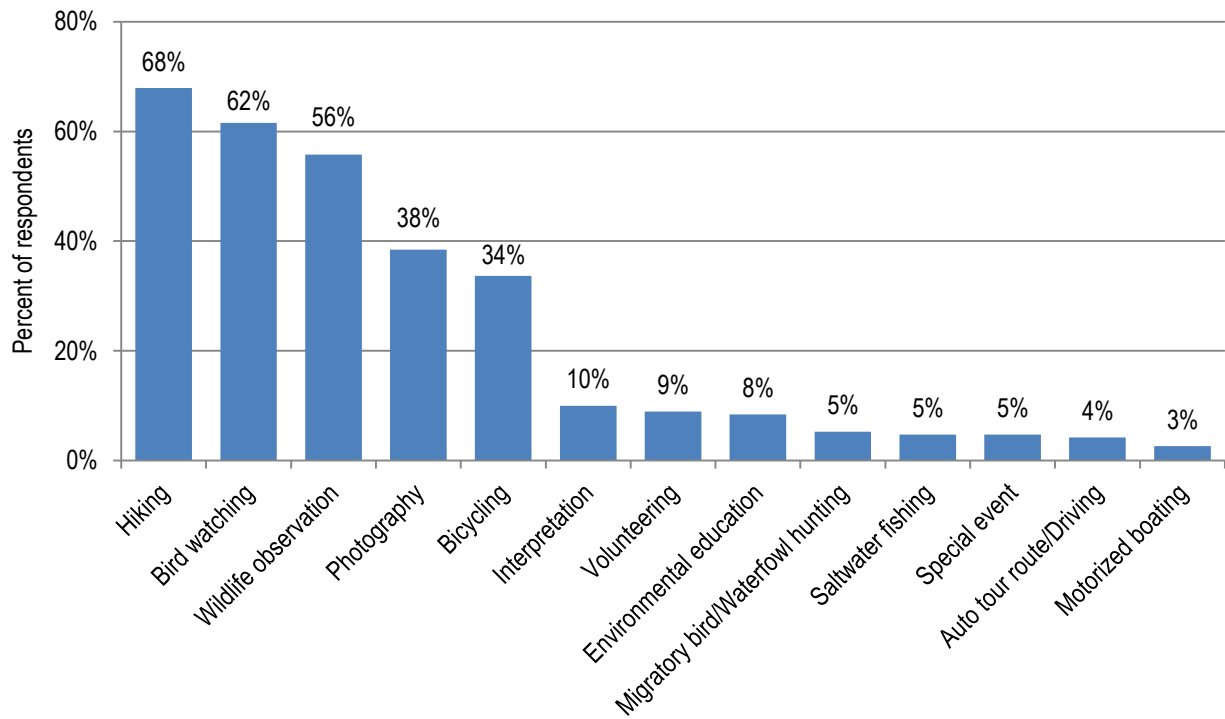


Figure 6. Activities in which visitors participated during the past 12 months at Don Edwards San Francisco Bay NWR (n = 190). See Appendix B for a listing of “other” activities.

³ Responses to this question may reflect activities in which visitors participated at either the Refuge Headquarters Visitor Contact Station or the Don Edwards San Francisco Bay NWR Environmental Educational Facility in Alviso.

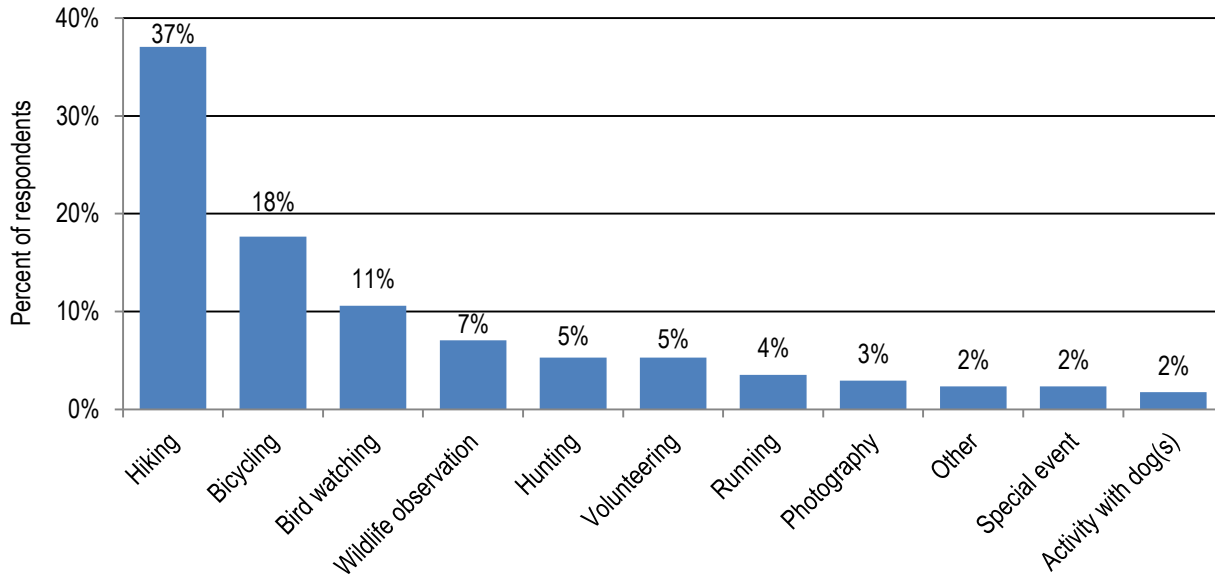


Figure 7. The **primary** activity in which visitors participated during this visit to Don Edwards San Francisco Bay NWR (n = 170). See Appendix B for a listing of “other” activities.

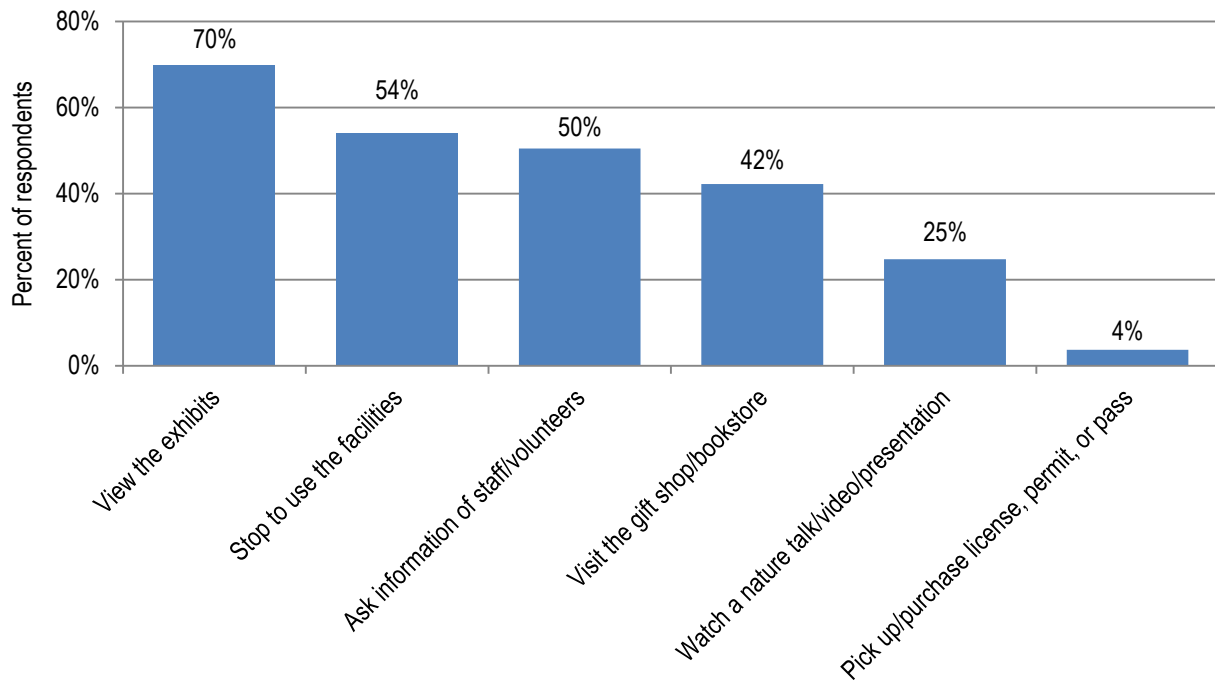


Figure 8. Visitor Center activities in which visitors participated at Don Edwards San Francisco Bay NWR (n = 109).

Visitor Characteristics

Nearly all (97%) visitors who participated in the survey at Don Edwards San Francisco Bay NWR indicated that they were citizens or permanent residents of the United States. These visitors were a mix of 67% male (with an average age of 53 years) and 33% female (with an average age of 51 years). Visitors, on average, reported they had 16 years of formal education (equivalent to four years of college or technical school). The median level of income was \$100,000-\$149,000. See Appendix A for more demographic information.

In comparison to these results, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (U.S. Fish and Wildlife Service, 2007) found that participants in wildlife watching and hunting on public lands were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (equivalent to an associate degree or two years of college), and a median income of \$50,000–74,999 (Anna Harris, U.S. Fish and Wildlife Service, 2011, written commun.). Compared to the U.S. population, participants in wildlife-related recreation are more likely to be male, and tend to be older with higher education and income levels (U.S. Fish and Wildlife Service and U.S. Census Bureau, 2007).

Visitor Spending in Local Communities

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

Visitors that live within the local 50-mi area of a refuge typically have different spending patterns than those that travel from longer distances. During the two sampling periods, 95% of surveyed visitors to Don Edwards San Francisco Bay NWR indicated that they live within the local 50-mi area while nonlocal visitors (5%) stayed in the local area, on average, for 2 days. Due to the very low numbers of nonlocals visitors (n = 5), economic data for this visitor group are not reported. Table 5 shows summary statistics for local visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, local visitors spent an average of \$21 per person per day in the local area. Several factors should be considered when estimating the economic importance of refuge-visitor spending in the local communities. These factors include the amount of time spent at the refuge, influence of the refuge on the visitors' decision to take this trip, and the representativeness of primary activities of the sample of surveyed visitors compared to the general population. Controlling for these factors is beyond the scope of the summary statistics presented in this report.

Table 5. Total visitor expenditures in local communities and at Don Edwards San Francisco Bay NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	<i>The sample size of nonlocals (n=5) was too low to adequately represent this visitor group.</i>					
Local	125	\$6	\$21	\$35	\$0	\$205

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

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

Visitor Opinions about this Refuge

Refuges provide visitors with a variety of services, facilities, and wildlife-dependent recreational opportunities. Understanding visitors' perceptions of refuge offerings is a key component of the Refuge System's mission. In particular, a baseline understanding of visitor experiences provides a framework from which the Refuge System can monitor trends in visitor experiences overtime, which is increasingly useful in the face of changing demographics and wildlife-related interests. Some studies on wildlife-related recreation trends have indicated declines in participation over the latter part of the 20th century in traditional activities such as hunting (for example, U.S. Department of the Interior and others, 2007), while others highlight a need to connect the next generation of people to nature and wildlife (for example, Charles and Louv, 2009). These types of factors highlight a need to better understand visitors' opinions of their refuge experiences and to monitor trends in these opinions over time.

Surveyed visitors' overall satisfaction ratings with the services, facilities, and recreational opportunities provided at Don Edwards San Francisco Bay NWR were as follows (fig. 9):

- 91% of visitors were satisfied with the recreational activities and opportunities,
- 85% of visitors were satisfied with the information and education about the refuge and its resources,
- 87% of visitors were satisfied with the services provided by employees or volunteers, and
- 93% of visitors were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

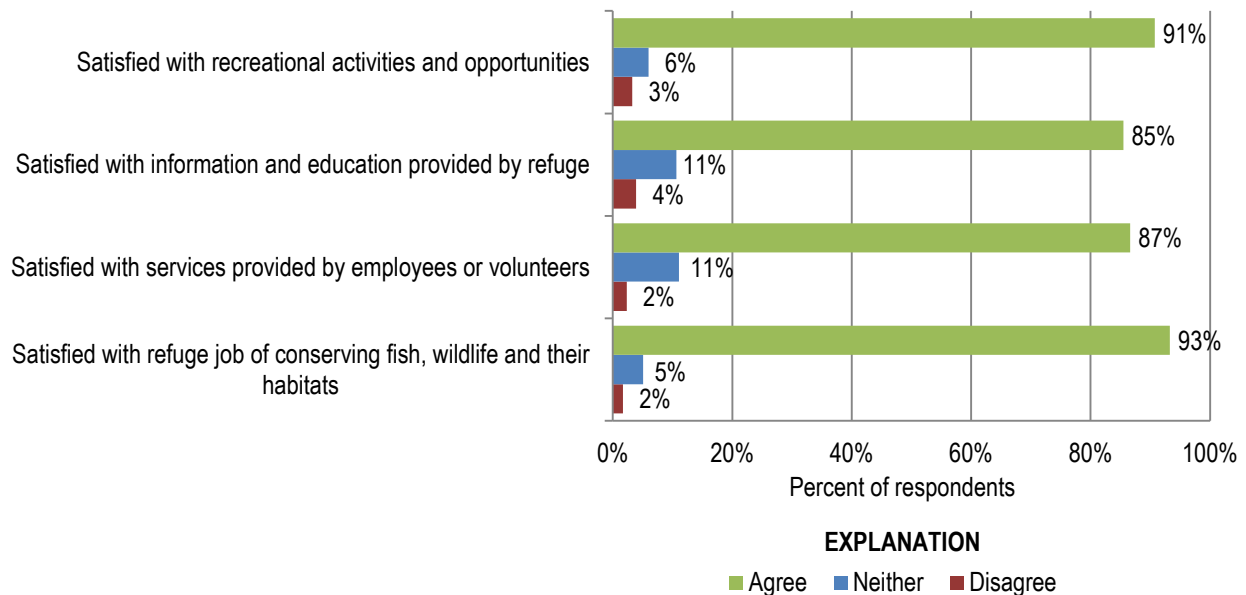


Figure 9. Overall satisfaction with Don Edwards San Francisco Bay NWR during this visit (n ≥ 172).

Importance/Satisfaction Ratings

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

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

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

Figures 10–12 depict surveyed visitors' importance-satisfaction ratings for refuge services and facilities, recreational opportunities, and transportation-related features at Don Edwards San Francisco Bay NWR. Results are summarized as follows:

- All refuge *services and facilities* fell in the "Keep Up the Good Work" quadrant (fig. 10).
- 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. 11). The average importance of these activities is likely higher among visitors to Don Edwards San Francisco Bay NWR who actually participated in the activity during the 12 months prior to taking the survey than

the score reported here. For example, hunters, as part of the 2010–2011 national visitor survey, had an average importance score of 4.6 for this recreational opportunity, while the average importance score of hunting opportunities across all visitors was lower.

- All *transportation-related features* fell in the “Keep Up the Good Work” quadrant (fig. 12).

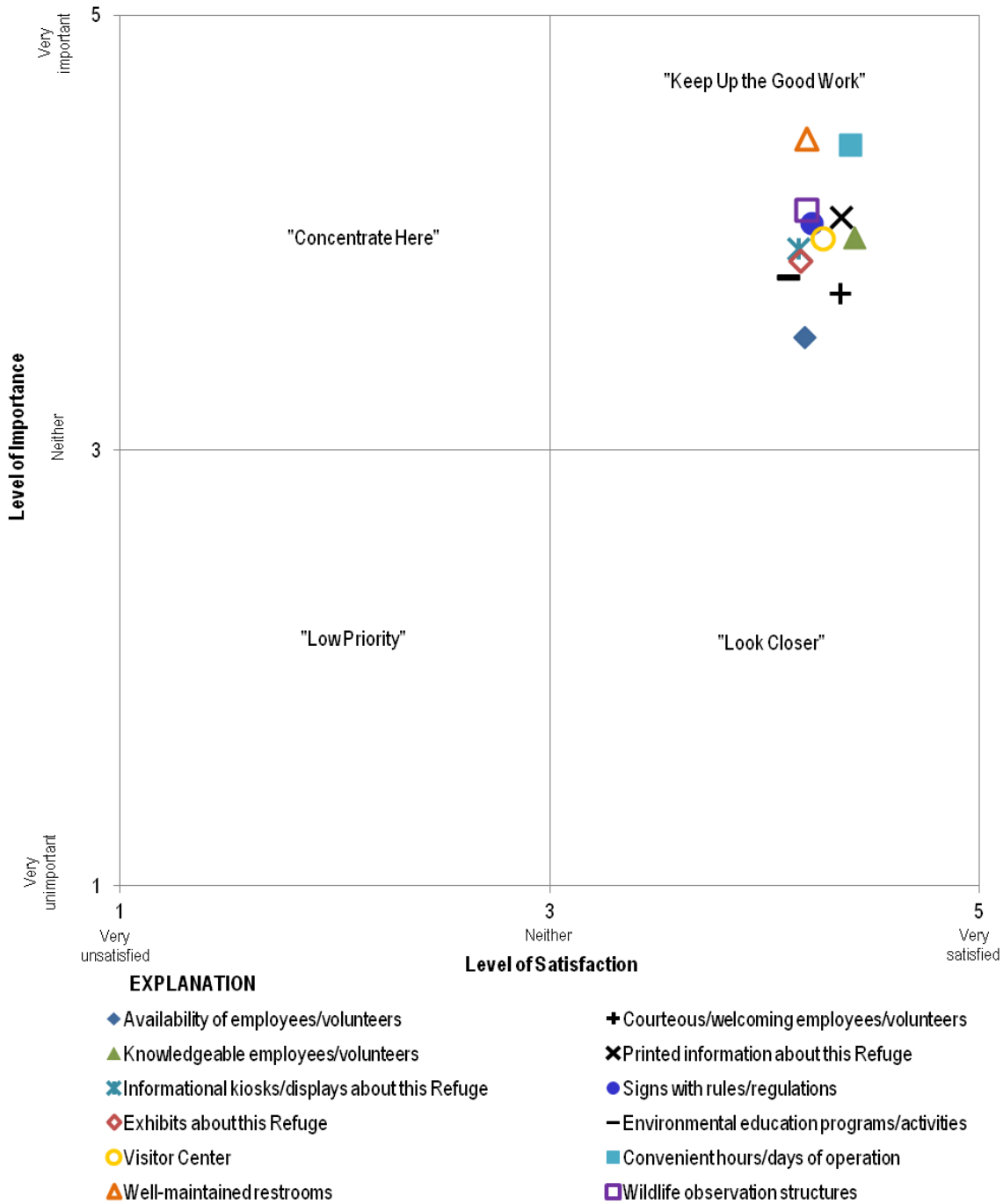
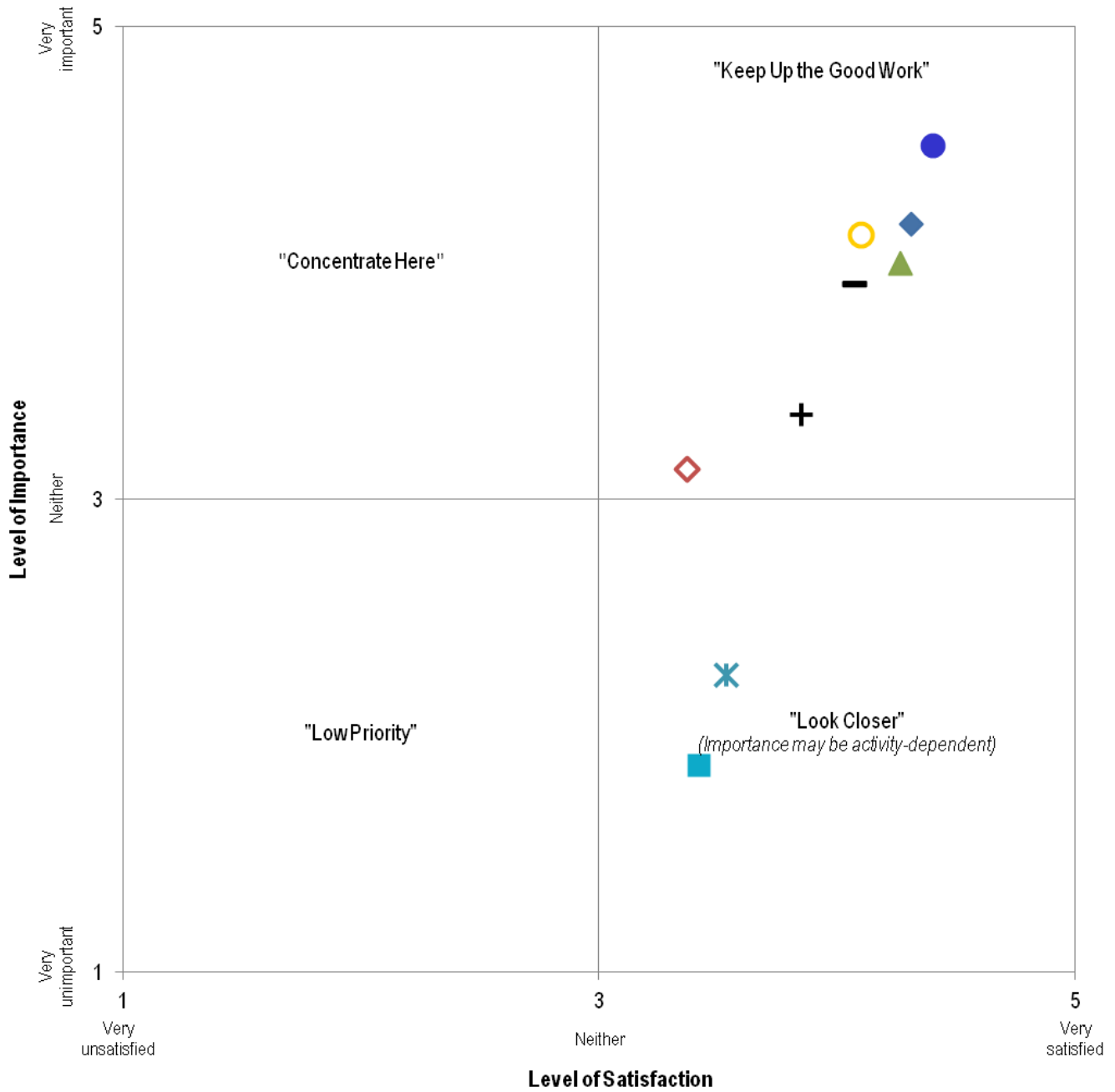


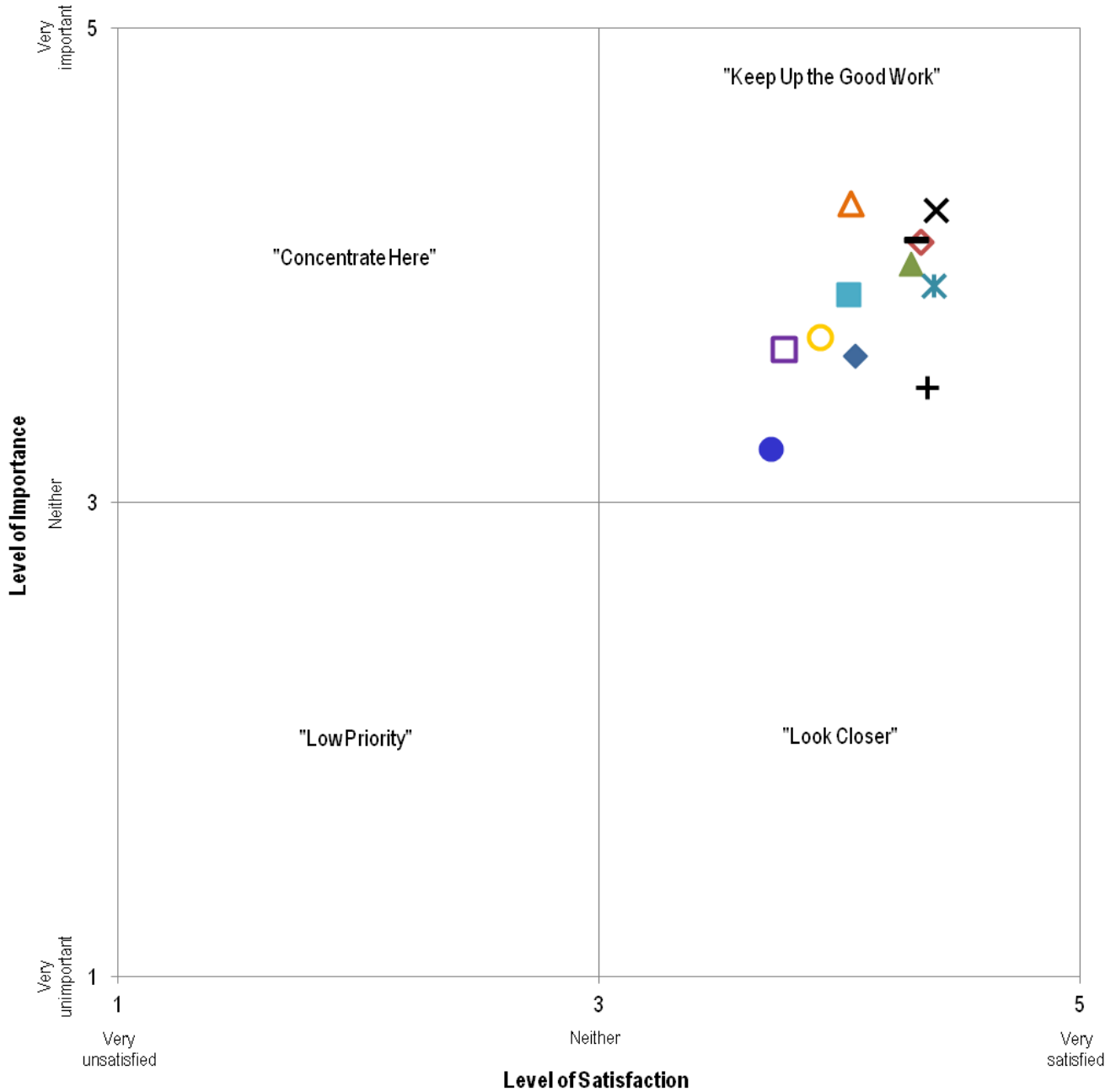
Figure 10. Importance-satisfaction ratings of services and facilities provided at Don Edwards San Francisco Bay NWR.



EXPLANATION

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

Figure 11. Importance-satisfaction ratings of recreational opportunities provided at Don Edwards San Francisco Bay 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 12. Importance-satisfaction ratings of transportation-related features at Don Edwards San Francisco Bay NWR.

Visitor Opinions about National Wildlife Refuge System Topics

One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results of these questions will be evaluated in aggregate form (data from all participating refuges together) to better address national-level goals. Basic results for Don Edwards San Francisco Bay NWR are reported here.

Alternative Transportation and the Refuge System

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

Of six alternative transportation options listed on the survey, a majority of Don Edwards San Francisco Bay NWR visitors were likely to use the following at refuges in the future (fig. 13):

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

A majority of visitors indicated they were *not* likely to use a bus/tram that takes passengers to different points on the refuge or a bus/tram that provides a guided tour.

When asked specifically about using alternative transportation at Don Edwards San Francisco Bay NWR, some visitors thought alternative transportation would enhance their experience (23%) while others thought it would not (40%). An additional 37% of surveyed visitors indicated they were unsure whether alternative transportation would enhance their experiences.

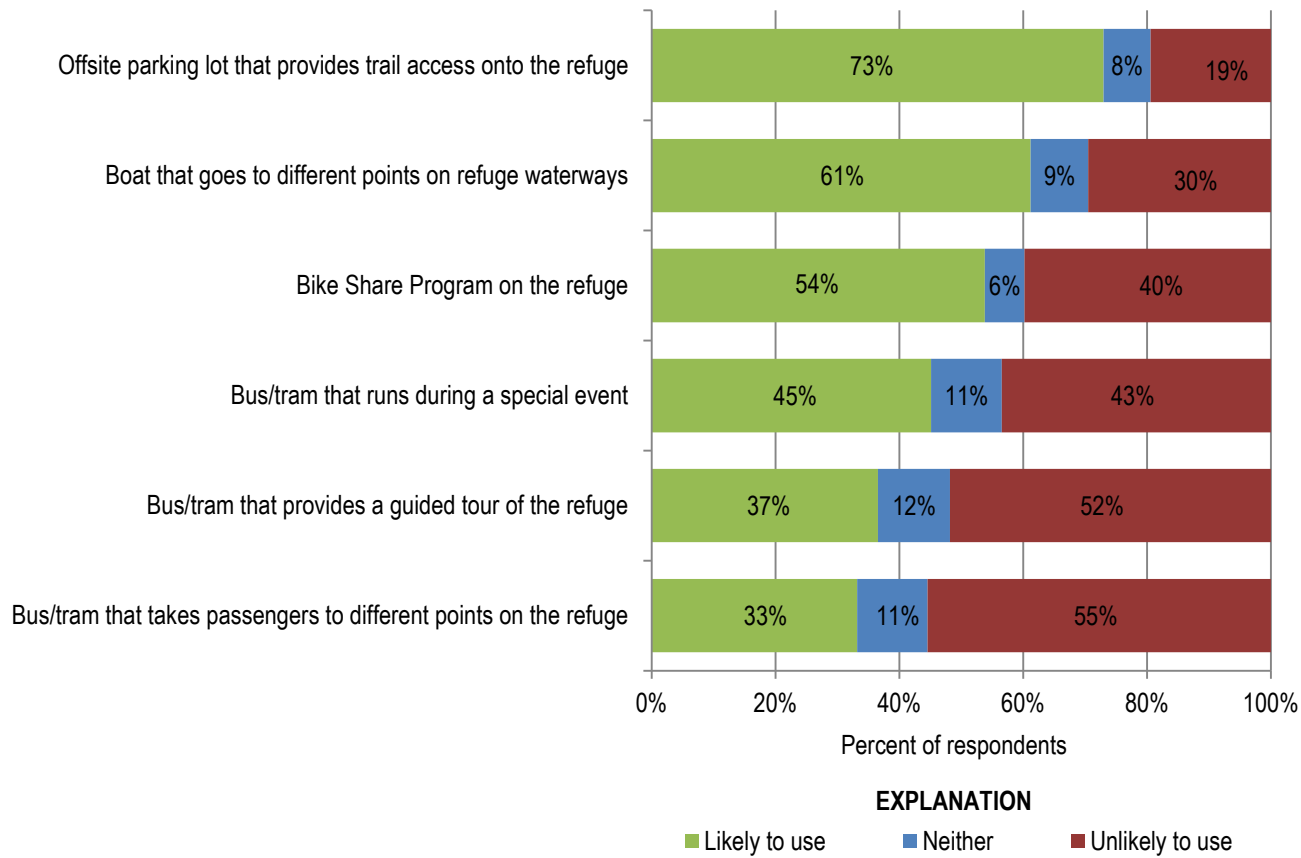


Figure 13. Visitors' likelihood of using alternative transportation options at refuges in the future (n ≥ 183).

Climate Change and the National Wildlife Refuge System

Climate change represents a growing concern for refuge management. The Service's climate-change strategy, titled "Rising to the Urgent Challenge," establishes a basic context for the agency to work within a larger conservation community to ensure wildlife, plant, and habitat sustainability (U.S. Fish and Wildlife Service, 2010). To support the guiding principles of the strategy, refuges will be exploring options for more effective engagement with visitors on the topic of climate change. Previous research suggests that human thought about climate change is influenced by individuals' levels of concern, levels of involvement, preferences for policies, and associated behaviors (Maibach and others, 2009). The results presented below provide baseline information on these factors in relation to the effects of climate change on fish, wildlife, and their habitats.

These results are most useful when coupled with responses to belief statements, because such beliefs may be used to develop message frames (or ways to communicate) about climate change with a broad coalition of visitors. Framing science-based findings does not alter the overall message, but rather places the issue in a context in which different audience groupings can relate (Nisbet, 2009). The need to mitigate impacts of climate change on refuges could be framed as a quality-of-life issue (for example, preserving the ability to enjoy fish, wildlife, plants, and their habitat) or an economic issue (for example, maintaining tourist revenues or supporting economic growth through new jobs/technology). Framing information in ways that resonate with visitors' beliefs may result in more engaged audiences who support strategies aimed at alleviating climate-change pressures. Data will be analyzed further at the national level to inform the development of a comprehensive climate change communication and engagement strategy.

The majority of visitors to Don Edwards San Francisco Bay NWR agreed with the following statements related to their own *personal involvement* with the topic of climate change as it relates to fish, wildlife, and habitats (fig. 14):

- 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;
- My experience would be enhanced if the refuge provides information about how I can help address climate change effects; and
- I stay well-informed about the effects of climate change.

The majority of visitors also agreed with the following *belief statements* regarding climate change effects on fish, wildlife and their habitats (fig. 15):

- Future generations will benefit if we address climate change effects;
- We can improve our quality of life if we address the effects of climate change; and

- It is important to consider the economic costs and benefits to local communities when addressing climate change effects.

Results regarding such beliefs are important to consider when communicating with visitors about this topic, since more than half of visitors (57%) indicated their experiences would be enhanced if Don Edwards San Francisco Bay NWR provided information about how visitors can help to address climate change impacts on fish, wildlife, and their habitats (fig. 14).

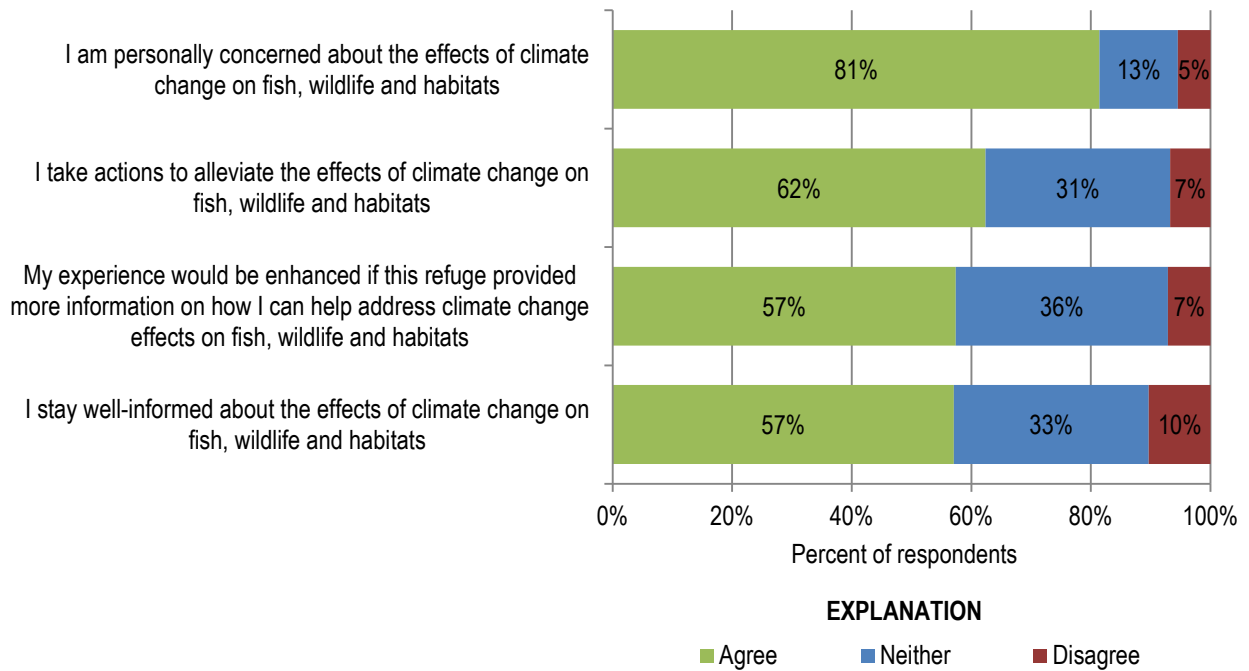


Figure 14. Visitors’ personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 178).

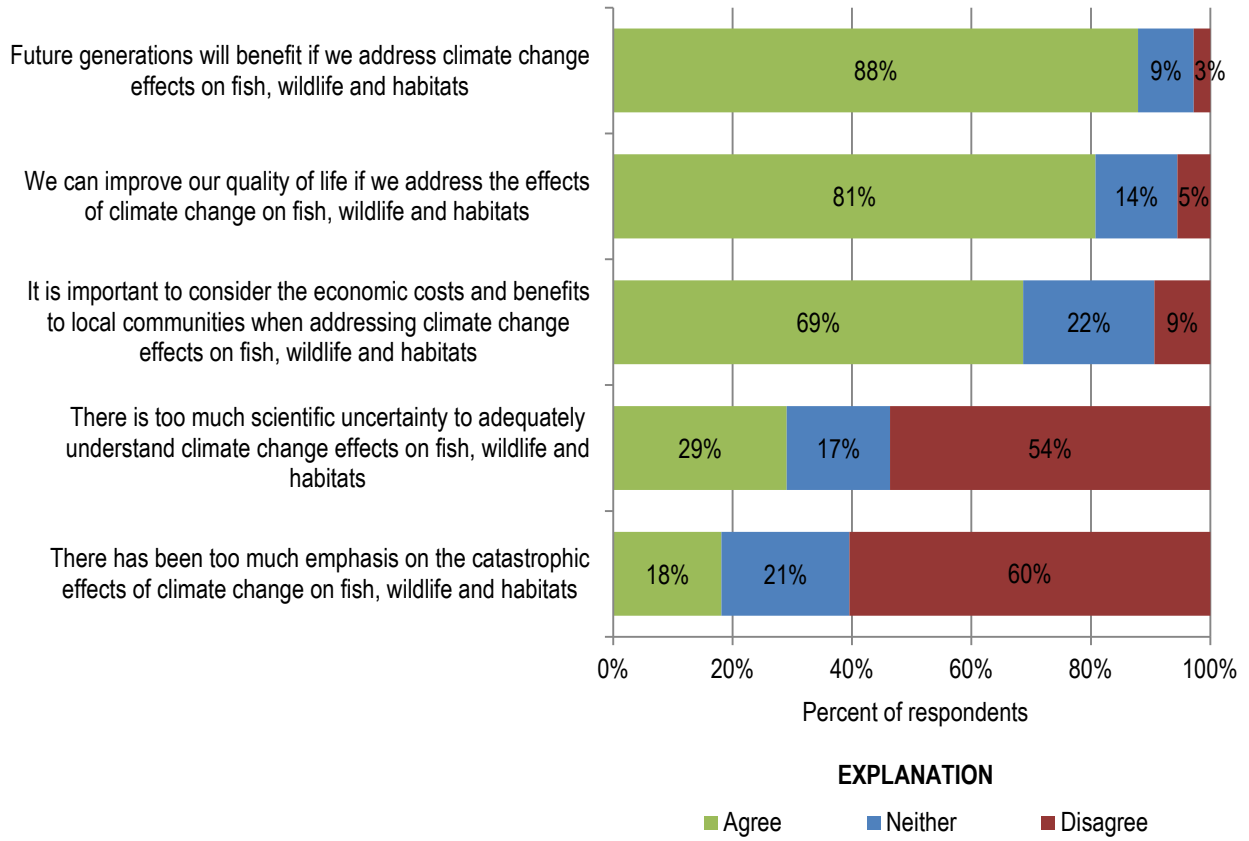


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 179).

Conclusion

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

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

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National Wildlife Refuge Visitor Survey



PLEASE READ THIS FIRST:

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

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

SECTION 1. Your visit to this Refuge

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

<input type="checkbox"/> 0% Big game hunting	<input type="checkbox"/> 68% Hiking	<input type="checkbox"/> 8% Environmental education (for example, classrooms or labs)
<input type="checkbox"/> 0% Upland/Small game hunting	<input type="checkbox"/> 34% Bicycling	
<input type="checkbox"/> 5% Migratory bird/Waterfowl hunting	<input type="checkbox"/> 4% Auto tour route/Driving	<input type="checkbox"/> 10% Interpretation (for example, exhibits, kiosks, videos)
<input type="checkbox"/> 56% Wildlife observation	<input type="checkbox"/> 3% Motorized boating	
<input type="checkbox"/> 62% Bird watching	<input type="checkbox"/> 2% Nonmotorized boating (including canoes/kayaks)	<input type="checkbox"/> 5% Refuge special event (<i>please specify</i>) <u>See Appendix B</u>
<input type="checkbox"/> * Freshwater fishing (<i>not offered</i>)		
<input type="checkbox"/> 5% Saltwater fishing	<input type="checkbox"/> 9% Volunteering	<input type="checkbox"/> 11% Other (<i>please specify</i>) <u>See Appendix B</u>
<input type="checkbox"/> 38% 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"/> 44% No	
<input type="checkbox"/> 56% Yes → If yes, what did you do there? (Please mark <u>all that apply</u> .)	
<input type="checkbox"/> 42% Visit the gift shop or bookstore	<input type="checkbox"/> 4% Pick up/purchase a license, permit, or pass
<input type="checkbox"/> 70% View the exhibits	<input type="checkbox"/> 54% Stop to use the facilities (for example, get water, use restroom)
<input type="checkbox"/> 50% Ask information of staff/volunteers	
<input type="checkbox"/> 25% Watch a nature talk/video/presentation	<input type="checkbox"/> 8% 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	All visitors	* There were too few nonlocal visitors to report these data.
<input type="checkbox"/> *	<input type="checkbox"/> 79%	<input type="checkbox"/> 78%	It was the primary purpose or sole destination of my trip.
<input type="checkbox"/> *	<input type="checkbox"/> 11%	<input type="checkbox"/> 11%	It was one of many equally important reasons or destinations for my trip.
<input type="checkbox"/> *	<input type="checkbox"/> 9%	<input type="checkbox"/> 10%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many **hours/minutes and miles** (one-way) did you travel from your home to this Refuge?

Nonlocal ***The sample size was too low (n=9) to adequately represent travel time and distance for nonlocals.***

Local 0 Hours 38 Minutes and 12 Miles

All visitors 0 Hours 38 Minutes and 13 Miles

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

38% None, I visited this Refuge alone

(of those visiting with a group)

84% Family and/or friends

13% Organized club or school group (for example, Boy/Girl Scouts, hiking club, bird watching group)

0% Commerical tour group

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

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

 3 number 18 years and over

 1 number 17 years and under

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

41% Family and/or friends

14% Refuge website

24% Signs on highway

10% Other website (*please specify*) See Appendix B

4% Recreation club or organization

0% Television or radio

16% People in the local community

7% Newspaper or magazine

17% Refuge printed information (brochure, map)

1% Travel guidebook or other book

14% Map or atlas

13% Other (*please specify*) See Appendix B

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

84% Spring
(March-May)

61% Summer
(June-August)

66% Fall
(September-November)

67% Winter
(December-February)

10. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 24 number of visits

...other National Wildlife Refuges in the last 12 months? 5 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"/> 76% | Private vehicle without a trailer | <input type="checkbox"/> * | Refuge shuttle bus or tram | <input type="checkbox"/> 26% | Bicycle |
| <input type="checkbox"/> 1% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 2% | Motorcycle | <input type="checkbox"/> 18% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 1% | Other (<i>please specify below</i>) |
| <input type="checkbox"/> 0% | Recreational vehicle (RV) | <input type="checkbox"/> 3% | Boat | <u>See Appendix B</u> | |
| | | <input type="checkbox"/> 0% | Wheelchair or other mobility aid | | |

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

- | | | | |
|------------------------------|--|------------------------------|---|
| <input type="checkbox"/> 67% | Previous knowledge/I have been to this Refuge before | <input type="checkbox"/> 15% | Maps from the Internet (for example, MapQuest or Google Maps) |
| <input type="checkbox"/> 12% | Signs on highways | <input type="checkbox"/> 5% | Directions from Refuge website |
| <input type="checkbox"/> 13% | A GPS navigation system | <input type="checkbox"/> 2% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 4% | A road atlas or highway map | <input type="checkbox"/> 5% | Directions from friends or family |
| | | <input type="checkbox"/> 5% | Other (<i>please specify</i>) <u>See Appendix B</u> |

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

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 40%	<input type="checkbox"/> 15%	<input type="checkbox"/> 11%	<input type="checkbox"/> 26%	<input type="checkbox"/> 8%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 26%	<input type="checkbox"/> 13%	<input type="checkbox"/> 6%	<input type="checkbox"/> 34%	<input type="checkbox"/> 19%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 31%	<input type="checkbox"/> 21%	<input type="checkbox"/> 12%	<input type="checkbox"/> 24%	<input type="checkbox"/> 12%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 25%	<input type="checkbox"/> 4%	<input type="checkbox"/> 9%	<input type="checkbox"/> 39%	<input type="checkbox"/> 22%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 30%	<input type="checkbox"/> 13%	<input type="checkbox"/> 11%	<input type="checkbox"/> 29%	<input type="checkbox"/> 16%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 15%	<input type="checkbox"/> 4%	<input type="checkbox"/> 8%	<input type="checkbox"/> 34%	<input type="checkbox"/> 39%
...some other alternative transportation option? (<i>please specify</i>) <u>See Appendix B</u>	<input type="checkbox"/> 0%	<input type="checkbox"/> 0%	<input type="checkbox"/> 10%	<input type="checkbox"/> 20%	<input type="checkbox"/> 70%

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

- 23% Yes 40% No 37% Not Sure

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

Importance						Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
7%	14%	13%	44%	23%	Surface conditions of roads	5%	11%	7%	25%	51%	NA
9%	15%	13%	46%	18%	Surface conditions of parking areas	2%	4%	9%	24%	60%	NA
4%	5%	13%	41%	36%	Condition of bridges	2%	1%	14%	30%	53%	NA
4%	3%	7%	38%	49%	Condition of trails and boardwalks	1%	3%	8%	31%	57%	NA
5%	6%	13%	45%	31%	Number of places for parking	1%	6%	9%	22%	63%	NA
14%	14%	22%	37%	13%	Number of places to pull over along Refuge roads	2%	9%	29%	35%	24%	NA
5%	4%	14%	31%	46%	Safety of driving conditions on Refuge roads	2%	2%	10%	34%	53%	NA
3%	3%	15%	37%	42%	Safety of Refuge road entrances/exits	2%	4%	8%	31%	55%	NA
9%	7%	18%	35%	30%	Signs on highways directing you to the Refuge	3%	11%	18%	31%	38%	NA
6%	6%	15%	41%	32%	Signs directing you around the Refuge roads	1%	6%	18%	37%	38%	NA
3%	3%	10%	35%	49%	Signs directing you on trails	2%	8%	12%	37%	40%	NA
9%	7%	23%	31%	29%	Access for people with physical disabilities or who have difficulty walking	2%	3%	34%	37%	24%	NA

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

See Appendix B

SECTION 3. Your expenses related to your Refuge visit

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

95% Yes

5% No → How much time did you spend **in the local area** on this trip?

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

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

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

If you spent one day or more at this Refuge, enter the number of days: _____³ day(s)

If you spent less than one day at this Refuge, enter the number of hours: _____³ hour(s)

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

Categories	Amount Spent in 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

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

_____ ² number of people sharing expenses

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

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
26%	35%	16%	7%	12%	2%	3%	0%	0%	1%	0%

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

100% Did not pay a fee (skip to Section 4)

Don Edwards San Francisco Bay NWR does not charge an entrance fee. This question does not apply.

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

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

Don Edwards San Francisco Bay NWR does not charge an entrance fee. This question does not apply.

SECTION 4. Your experience at this Refuge

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

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	<input type="checkbox"/> 0%	<input type="checkbox"/> 3%	<input type="checkbox"/> 6%	<input type="checkbox"/> 40%	<input type="checkbox"/> 51%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	<input type="checkbox"/> 1%	<input type="checkbox"/> 3%	<input type="checkbox"/> 11%	<input type="checkbox"/> 38%	<input type="checkbox"/> 47%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	<input type="checkbox"/> 2%	<input type="checkbox"/> 0%	<input type="checkbox"/> 11%	<input type="checkbox"/> 28%	<input type="checkbox"/> 58%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	<input type="checkbox"/> 1%	<input type="checkbox"/> 1%	<input type="checkbox"/> 5%	<input type="checkbox"/> 29%	<input type="checkbox"/> 64%	NA

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

Importance					Refuge Services, Facilities, and Activities	Satisfaction					
Circle one for each item.						Circle one for each item.					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
5%	12%	24%	42%	16%	Availability of employees or volunteers	2%	3%	22%	21%	52%	NA
7%	7%	18%	43%	25%	Courteous and welcoming employees or volunteers	2%	1%	20%	14%	63%	NA
5%	5%	13%	42%	35%	Knowledgeable employees or volunteers	0%	1%	18%	20%	62%	NA
2%	5%	11%	48%	34%	Printed information about this Refuge and its resources (for example, maps and brochures)	1%	3%	10%	29%	56%	NA
1%	4%	21%	50%	24%	Informational kiosks/displays about this Refuge and its resources	1%	3%	22%	27%	47%	NA
1%	5%	16%	46%	32%	Signs with rules/regulations for this Refuge	0%	5%	20%	24%	51%	NA
2%	6%	18%	50%	24%	Exhibits about this Refuge and its resources	1%	4%	19%	31%	45%	NA
5%	4%	24%	39%	27%	Environmental education programs or activities	0%	1%	28%	30%	41%	NA
4%	5%	17%	38%	36%	Visitor Center	1%	2%	16%	29%	51%	NA
1%	1%	12%	30%	57%	Convenient hours and days of operation	1%	2%	10%	30%	57%	NA
1%	2%	6%	35%	56%	Well-maintained restrooms	3%	8%	11%	24%	54%	NA
1%	5%	15%	43%	37%	Wildlife observation structures (decks, blinds)	1%	3%	14%	38%	43%	NA
2%	2%	17%	33%	45%	Bird-watching opportunities	0%	2%	17%	29%	52%	NA
1%	4%	15%	43%	37%	Opportunities to observe wildlife other than birds	1%	5%	20%	32%	42%	NA
4%	4%	19%	37%	37%	Opportunities to photograph wildlife and scenery	1%	3%	21%	21%	55%	NA
61%	8%	21%	4%	7%	Hunting opportunities	4%	5%	59%	9%	23%	NA
48%	7%	25%	11%	9%	Fishing opportunities	3%	2%	55%	16%	23%	NA
1%	2%	7%	26%	64%	Trail hiking opportunities	0%	3%	12%	28%	57%	NA
16%	9%	35%	23%	16%	Water trail opportunities for canoeing or kayaking	4%	10%	53%	11%	22%	NA
8%	4%	15%	33%	39%	Bicycling opportunities	1%	6%	19%	30%	43%	NA
12%	6%	32%	34%	16%	Volunteer opportunities	0%	3%	43%	21%	33%	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?

73% Yes

27% No

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

85% Yes

15% No

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

84% Yes

16% No

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

See Appendix B

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

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	2%	3%	13%	36%	45%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	2%	3%	14%	37%	44%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	27%	26%	17%	22%	7%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	1%	10%	33%	42%	15%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	4%	5%	22%	54%	14%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	1%	6%	31%	46%	16%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	36%	25%	21%	13%	5%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	2%	1%	9%	34%	54%
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.	3%	4%	36%	41%	16%

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?

97% Yes 3% No → *If not, what is your home country?* See Figure 2 in Report

2. Are you? 67% Male 33% Female

3. In what year were you born? 1959 (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)			
					1%			8%				45%				46%			

5. What ethnicity do you consider yourself? 6% Hispanic or Latino 94% Not Hispanic or Latino

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

<input type="checkbox"/> 3%	American Indian or Alaska Native	<input type="checkbox"/> 2%	Black or African American	<input type="checkbox"/> 73%	White
<input type="checkbox"/> 25%	Asian	<input type="checkbox"/> 2%	Native Hawaiian or Pacific Islander		

7. How many members are in your household? 3 persons

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

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

<input type="checkbox"/> 1%	Less than \$10,000	<input type="checkbox"/> 8%	\$35,000 - \$49,999	<input type="checkbox"/> 21%	\$100,000 - \$149,999
<input type="checkbox"/> 3%	\$10,000 - \$24,999	<input type="checkbox"/> 15%	\$50,000 - \$74,999	<input type="checkbox"/> 16%	\$150,000 - \$199,999
<input type="checkbox"/> 4%	\$25,000 - \$34,999	<input type="checkbox"/> 13%	\$75,000 - \$99,999	<input type="checkbox"/> 19%	\$200,000 or more

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

32 number of trips

Thank you for completing the survey.

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

Comments?

See Appendix B for Comments

PAPERWORK REDUCTION ACT STATEMENT: The Paperwork Reduction Act requires us to tell you why we are collecting this information, how we will use it, and whether or not you have to respond. The information that we collect in this survey will help us understand visitor satisfaction with and use of National Wildlife Refuges and to make sound management and policy decisions. Your response is voluntary. An agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a valid OMB Control Number. We estimate it will take an average of 25 minutes to complete this survey. You may send comments concerning the burden estimate or any aspect of the survey to the Information Collection Clearance Officer, Fish and Wildlife Service, 4401 North Fairfax Drive, MS 222-ARLSQ, Arlington, VA 22203. OMB CONTROL #1018-0145 EXPIRATION DATE 6/30/2013

Appendix B: Visitor Comments to Open-Ended Survey Questions for Don Edwards San Francisco Bay 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 Fest	5
Birdwatching class and nighttime walks	1
Don Edwards Wildlife Refuge Open House	1
Junior Girl Scout wildlife badge	1
Native plant sale	1

Other Activity	Frequency
Dog walking	3
Geocaching	2
Looking at plant restoration	1
Lunch	2
Picnic	1
Restroom	1
Running	7
University Field Trip	1
Viewing of final space shuttle fly over	1
Walking with my two young daughters (2 and 3 years old)	1

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
Geocaching	2
Looking at plant restoration	1
Restroom	1

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

Other Visitor Center Activity	Frequency
Field Trip for first grade class.	1
Get maps.	1
I complained about being run off the road. Marshlands Road has a 35 mph speed limit, a narrow bridge, no sidewalks, potholes, and loose gravel.	1
I received a presentation for a university course.	1
I signed the geocache log.	1
I tried to justify it being there to no avail.	1
Secured bag in office.	1
Share information with staff.	1
View bird list.	1

Question 6: "Were you part of a group on your visit to this Refuge?"; If Yes, "What type of group were you with on your visit?"

Other Group Type	Frequency
Coworkers	1
I was with a model for photography.	1
Volunteer	1
With colleagues	1

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

Other Website	Frequency
bayhiker.com	1
Bay Area Hiker	1
Baytrail website	1
Google	4
Google Maps	1
Hiking/biking website	1
I am on mailing list to receive regular newsletters	1
kidmatter.com	1
Web	1

Other Ways Heard about This Refuge	Frequency
A couple of bicyclists told me about this refuge.	1
Been fishing here since the pier opened.	1
Chabot Community College	1
Colleagues	1
Elementary school field trips	1
Employer	1
I came across it biking.	1
I can see it (from where I work).	1
I found it when I was walking at Shoreline Park.	1
I found it while on a run.	1
I saw the refuge from the window of a plane on a flight out of San Jose and did some research to find out what it was.	1
I walked by.	1
It is close to home.	1
It just happens to be on my bike path.	1
It was incidental.	1
Randomly found the refuge while exploring the area.	1
San Francisco Bay Bird Observatory	1
San Jose State University	1
School teacher	2
Trail signs	2
Travel guide	1

Survey Section 2

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

Other Forms of Transportation	Frequency
Run	1
Truck	1

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

Other Ways Found This Refuge	Frequency
Bay Trail information	1
DFG	1
Directions from teacher.	1
Google	1
I came across it biking.	1
I stumbled on to it while visiting an adjacent park.	1
Signs near the entrance.	1
Walkable distance from my office.	1

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

Other Transportation Option Likely to Use	Frequency
A road access from east bay instead of from south.	1
Additional bicycle and foot trails	1
Aerial tour	1
Bicycle	1
Bus	1
Car	1
It is too small to need any.	1
Kayak - shared Use/ rental	1
Mule or Horseback	1
Personal bicycle	1
Personal watercraft rental	1
Segway	1

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 = 35)

Ability to borrow a bicycle would be great, so I could get way out on some of the levees that are too far for me to walk carrying my spotting scope.

Again, this refuge doesn't (to my knowledge) have roads within the refuge - so surface conditions of vehicle roads would not be important. Surface conditions of the trail through the refuge (dirt/gravel) are important to me. Not sure how to differentiate between those in the survey items. Also, we like a rough trail - so "condition" might mean something different to us vs. someone who would like a paved trail. Bridges should be safe, at a minimum.

Boat service would be cool!

Could use more parking outside the gate for when the refuge is closed. Also the surface should be kept smoother so rain does not accumulate in large amounts.

Currently a few people working in nearby area offices are using this for walking/running.

Don Edwards Refuge is highly dependent on partner agencies for access - i.e. Bay Trail, MROSD, City of Palo Alto, City of Menlo Park, EBRPD. The refuge is also very spread out.

Easy access to refuge although some of the drivers missed the signs near the entrance and drove past it. Signs not very obvious but adequate if you're looking for them. Very nice place and very satisfied with road conditions.

Estoy muy satisfecho con todo solo el estacionamiento es muy limitado. Apartir del estacionamiento seguir en bicicleta es mas natural y no contamina el refugio y sirve de ejercicio para la persona y asi se conserva lo natural y la salud. (I am very satisfied with everything except the parking is very limited. Bicycling is more natural and doesn't pollute the refuge and serves as exercise - good for the refuge and for health.)

Even though I have been to Don Edwards in Alviso many times, I always seem to get lost getting there. A few road signs from HWY 101 would be very helpful.

I assumed the parking lot at the entrance to Shoreline Park and the one by the lake were the parking lots and roads for this refuge.

I walk from work on my lunch break.

I was asked to participate in the survey at the Dumbarton Bridge. Parking is very limited, there is no Visitor Center, and people only go there to fish.

In the past few years bicyclist have taken over the road within the refuge. In fact, as the ride to and from the bridge they take up the entire roadway with no regards or respect to oncoming traffic. Based on the California vehicle code they are also supposed to follow the code as they are moving vehicles, but since there is no law enforcement they don't care. The situation is getting worse. In addition, people bringing their dogs and not picking up after their dogs have become even a bigger problem in the past two years. Again no law enforcement so frankly people don't care and the refuge is quickly becoming a third world type of refuge: poorly maintained, lots of bureaucracy and no accountability by the very people hired to take care of the refuge.

Inadequate for adults with physical limitations during the construction of the bridge.

It would be nice if public transportation went to this refuge.

Marshland Road is a terrible road. The surface is like cobblestone. It is very painful to ride a bicycle on it, but it is the only access to the fishing pier or the Dumbarton Bridge Bicycle Trail.

Overall conditions were very good.

Paved roads for bicyclists (recreational and commuters) would be fantastic! I would definitely consider biking to work more days of the week.

Please keep it clean.

Potholes are an ongoing problem. People driving too fast and swerving to miss potholes makes it unsafe for pedestrians on the main road to the refuge. I drive a hybrid to the refuge and would not use alternative transportation because I bring dogs.

Since there is currently work on the Dumbarton Bridge, I understand that the conditions of the roads and parking have been jeopardized.

Surfaces should be pervious, preferably natural/dirt. Disturb as little wildlife habitat as possible while still providing some public access.

The main access road has a very uneven surface and needs re-paving.

The road conditions are fine, but 4 times we have noticed some drivers speeding regardless of the bumps. We saw 7 geese on the side of the road dead. I am a bird lover and all animals too. There is also trash. My husband and I go every Sunday to just watch the sand pipers, all the geese, and the goslings also. We walk but not much due to arthritis. This is peaceful place , and sometimes we just listen to the wind. The water kind of stinks but 4 years of going there, you get used to it. As for the speeders, they don't even care with the signs. Thank you.

The road leading up to Don Edwards Refuge needs to be paved well.

The roads and trails are very well-maintained at Alviso Refuge. Unfortunately, during construction the access to the walking trails was severely limited.

The speed limit of Marshlands Road is 35 mph. Cars do 50 to 55. There is a bridge, gravel, no potholes, and I see at least two dead animals a week hit by cars. Someone is going to be killed and it may be me.

There is a lot of loose gravel and sharp stones on the main roads that make riding my bike very dangerous and hazardous on the bike lanes. Maybe resurfacing with asphalt would help.

There should be more excursions by DFG SUVs to remote areas, more often.

There was not enough parking spaces. However, turning the place into a parking place serves the wrong purpose. If it is better to keep the area with less visitors, provide more space for the normal inhabitants is critical. Funding for such facilities is essential.

This is a small refuge so I prefer it the way it is, with no motorized vehicles allowed.

This is an urban refuge. It's all about cars.

This refuge has been taken over by dog walkers. There is poop, and bags of poop everywhere. We have had encounters with aggressive dogs on several occasions. Also, the only time I have ever seen a fed employee on the trails was when I was asked to do this survey. Shut down the Visitor Center and get the rangers out on the trails.

This refuge is rather out of the way. Seeing how bad public transportation is in this area, cannot see how you will get public transportation to get to this refuge.

Transportation within the refuge doesn't seem relevant, which leaves transportation to the refuge, maybe something like offsite parking would be useful in the future if trailheads become very busy.

Survey Section 4

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

Comments on Services, Facilities, and Activities at This Refuge (n = 45)

1. Re-pave the road right after you get through the gate. 2. Put no smoking signs along the trail 3. Cite dog owners who let their dogs loose, bring them in no dogs area, or not pick up their dog's mess.

Again, I used the restroom only.

Allow small dogs on leash.

Bueno en mis visitas todo esta bien solo los banos portables no tienen lo suficiente papel sanitario lo de mas esta bien. (Everything has been good during my visits except the porta potties don't have sufficient toilet paper.)

Doesn't need any staffing or services. Just needs to be open so I can ride my bicycle through it along the levees.

Excellent working relationships with SFBBO, schools, and other institutions.

Hope that Salt Pond construction completes soon as it has closed trails.

I am very satisfied with the volunteers.

I enjoyed my visit.

I have a fond memory of this refuge. I used to bring my kids here a lot when they were younger. Now they are 22 and 18. I have not missed the annual Birdfest day since 2001. I collect and treasure all the free posters of migratory bird day. Thank you for making a special place in our hearts.

I have always been pleased with the Rangers maintaining the refuge. It is always clean and neat.

I have been to Don Edwards many times, but I was asked to complete this survey at the old Dumbarton Bridge where people come to fish. I was there just to pick up a couple of geocaches; I don't fish. I am filling out this survey for all of Don Edward; all in all, it's a terrific place.

I love this place! It is my refuge.

I love to walk Coyote Hills. It is the best place to see the whole bay area.

I very much enjoy visiting the Alviso Don Edwards Refuge. The personnel are very helpful and knowledgeable.

I would like to see the addition of bird blinds for photography.

I would like to see the refuge hours extended for pedestrians in the evening similar to the Coyote Hills hours. I sometimes run at night and would like to be to run on the trails especially after 6PM in the winter.

Interested in learning about volunteering/educational opportunities.

It is a wonderful thing to preserve this land and provide a refuge for wild animals.

It would be nice if the sink at the start of the pier worked or at least a water source. Porta potties need to be better maintained, there needs to be an intermediate trash can (half way down), and there are two hazardous holes through the deck towards the end of the pier that should be filled ASAP.

My car died and I needed a jump start and no one was able to help me and I had to call a tow truck.

Paved trails for bicyclists would be great!

Please finish working on the bridge!

Road to Dumbarton Bridge (bike route) needs improvement.

Soda vending machine would be useful. There is only water fountain, no bottled water/sodas.

Some rangers are very unfriendly if you don't look right to them. I'm a Chicano male and often ride my bike, but don't dress like most bike riders. I wear jeans and flannel shirts, and get asked if I'm a gang member or if I'm selling drugs, and that really bugs me. Maybe I should wear green pants and a khaki shirt. Ha-ha.

Thanks. Hurry and get construction/restoration done. Open a kayak launch.

The physically handicapped cannot access the Visitor Center on top of the hill.

The staff is knowledgeable, caring, and friendly.

The various special activities geared towards children, particularly the Bird Fest and Shark Day, are excellent resources for the south San Francisco Bay area. Our family absolutely loves these events.

The Visitor Center in Alviso and Newark are too far for someone on the peninsula to travel. The restoration work at Dumbarton Bridge is great!

The Visitor Center is so important and is so small. It should be 10X its size. As a returning visitor, the exhibits should change and be cleaned, the current one is so old, dreary and grey and more bird trips via van on the levies, led by docent/volunteer.

There is no wheelchair access on the deck down to the trails.

There should be no road inside a wildlife refuge. You should not have a speed limit over 20 mph. Don Edwards National Wildlife Refuge has a speed limit of 35 mph. Cars go up to 50 miles per hour. There is dead wildlife always on Marshland Road. Soon it will be people.

There was restoration construction in progress so I didn't have a completely representative experience.

This park sucks. If you left it up to the volunteers, they would do a better job running this place.

This refuge could use more oversight to prevent people from bringing their dogs and dumping trash.

This refuge is truly a hidden gem in the bay area. It is a great place to hike, bird watch, and explore.

Us hunters could use a porta-potty at the main gate entrance like in years past. People are just taking care of their business in the bushes. This gives us hunters a bad name with the non-hunting community.

Very educational. Pat Daniel (volunteer) did an excellent job. She kept the 4th grade scouts interested and excited about learning. Just the right amount of indoor/outdoor education with a bit of arts/crafts thrown in as well. Fantastic job!

We use this refuge almost daily and love that it is so close to our home.

You need more structures like docks that overlook waterways.

You need water and bathrooms at the entrance area just south of Surmune Golf Course. This is about half way between the shoreline and the visitor center.

Your bathrooms are spotless and always have real covers and toilet paper. Every time we go there we notice something nice and different. Thank you for the peace and quiet your place brings.

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 = 118)

A lot of information is available at refuges about what is being protected.

A lot of information on the walls at the Visitor Center makes it unique.

Anyone can visit and it protects wildlife.

As answered in the last question, the range of special activities, especially fostering conservation to the next generation, really sets Don Edwards apart in my opinion.

Assuming that such refuge always includes water bodies and/or marshland, I would think that this makes it a unique type of nature.

Birds and the natural habitat makes it unique.

Birds.

Conserve the nature.

Definitely more ecologically oriented. Wildlife experiences (photography) superior to other local areas. Also refuge is not over-built.

Education programs.

Excellent information at Visitor Centers, excellent website- bird lists, and volunteer activities.

Fish and Game does a great job of making the Don Edwards National Wildlife Refuge open for hunting.

For me the refuge provides a peaceful biking experience without car traffic. It also allows to me observe the Bay Area's natural wildlife in a unique experience.

For me, it's a great place to be still, quiet, and filled with the sight and sound of the surrounding life.

Free

Gives an awesome view of the Calaveras Hills to the east, San Francisco Bay to the west, and the Coyote Hills to the north.

How much they care about wildlife and plenty of walkways to exercise enough makes it unique.

I am able to see wildlife 2 miles from where I live in the city.

I get to see wildlife right outside my jobsite.

I have visited Don Edwards and the Tule Lake NWR. The bird life at these refuges is stunning, as is the ease of viewing birds at those locations.

I like the idea of conserving nature, everything in it, and seeing the beauty of it.

I love the opportunity to bicycle off-road along the bay and see so many incredible birds!

I think the national refuges give scope to the habitat. That wildlife has boundaries bigger than a small local park.

In line with National Parks, it allows us to be in an outdoors environment, removed from excessive human interaction while managing the environment for wildlife to have some free space to roam.

In this instance, it's the location on and near the water.

It gives me the opportunity to interact with the wildlife up close and personal.

It has a good plan, good service, and is educational.

It is a good use of tax dollars.

It is a great natural setting in a very urban surrounding.

It is close to a populated area, yet offers a wildlife experience. It gives a chance to commune with nature without going far.

It is conveniently located near a populated area. The roads and trails are well-maintained. It is a very well preserved environment.

It is much more relaxing and educational. I walk daily before my swing shift to be in the right frame of mind and body for work.

It is natural land and water.

It is natural. You walk around knowing that you are a visitor and the wildlife and landscape are the owners. You are humbled while walking.

It is very well run and clean with information and volunteers.

It normally has wide, open spaces.

It offers boating and biking that is easy to access.

It restores and maintains a balanced outdoor and wildlife status.

It takes care of a resource near a very urban/suburban setting.

It's convenient for me. I work nearby.

It's great to have a pier so close to home. It's their only pier in the south of Oakland to the east and Oyster Point to the west.

It's near the bridge.

It's urban and it's working with salt marsh restoration.

It's where you can see changes in tidal conditions and wildlife in their habitat.

Keep things as natural as possible and educate the public on why that is important etc.

Large biodiversity in very close proximity to my living area.

Los hace unicos por la rason de que los avitantes y visitantes cercanos disfrutamos de lo que es muy dificil de conservar por la poblacion que se expande sin limites y sin respetar lo natural. (They are unique for the reason that the inhabitants and nearby visitors enjoy what is difficult to conserve due to a population expanding without limits and without respect to nature.)

Lovely open space with many opportunities for enjoying nature.

More realistic view of nature.

More resources and large areas.

National and State Parks are "destinations." They are, more often than not, trips which require at least two days, if not more, simply because they are few and far between. Refuges and regional (co) parks are much closer. They can be used simply for exercise, dog walking, picnicking, photography, and numerous other activities. In addition, they provide local educational opportunities for student field trips, as well as for adults. They enable one to view nature and wildlife. They are close enough so that one can do this during all seasons and therefore note the changes that occur during the year. Quite a few can be found just off or quite near major highways. This is wonderful for "road trips," to other destinations. They provide a place for just a break from driving, to have lunch, to view the local environment, or to get a little exercise before driving on or getting some rest before another day spent in the car.

National Wildlife Refuges have a better maintenance of the waterfowl habitat which some other public lands can't do. The observation for waterfowl is valuable.

Not a lot of people like you would find in parks. More natural, more educational. More apt to see wildlife in refuge than in other outdoor settings.

Offers an oasis/refuge from the surrounding urban setting. Conservation of the land and wildlife is integral to a balanced life for human and our co-inhabitants.

On duty rangers. Regular classes. Good brochures. Good nature walks.

Opportunity for a quiet walk near where I work, for exercise and to get out of the office.

Organized information and displays.

Preservation and education about the wildlife.

Preservation of the natural habitat makes the experience very unique.

Primarily looking for trails to bicycle on. This is very close to home, and gives a unique view of the area. From what I saw, it's well maintained and well managed.

Privation.

Protecting ecosystems.

Refuges are perfectly named, both for the wildlife they protect and the human visitors looking for nature, not camping sites and gift shops. I love them for their variety of geography and size, and focus on wildlife, especially birds.

Refuges mainly exist to protect wildlife. The wildlife is the attraction, not the tourist attractions.

Size, interpretive information.

The ability to keep refuges available for public use makes it unique.

The availability to hike, photograph, and bird watch in restored wetlands near an urban center and home makes it unique.

The chance to see wildlife much in its natural state, particularly birds.

The Don Edwards National Wildlife Refuge offers waterfowl hunting within the city of San Jose where within 10 minutes I can be stress free from the hectic life of San Jose.

The Don Edwards Wildlife Refuge has minimal facilities/improvements, and offers amazing views of birds/waterfowl. It feels different than a park, more natural. I am very glad that this area has been designated as a refuge and that we can pass through it on foot or bicycle.

The focus is on the wildlife and habitat, not so much toward the human.

The importance of preserving natural resources and maintaining for the public makes it unique.

The land is very unique. I liked the wooden trail over Salt Marsh.

The location and the ongoing restoration of bay wetlands.

The location off of the bay is great and not making it commercial, but rather quiet is very appreciated.

The main focus is on the preservation and conservation of wildlife and wildlife habitat instead of making money or creating more space for humans to construct buildings. We need more places that give wildlife more rights than humans.

The ones we visit have free access. The sign guides are well done. They are well maintained.

The opportunity to visit an undisturbed area close to urban development makes it unique.

The preservation of critical habitat for species other than humans.

The preservation of specific, local habitats makes it unique.

The primary mission to preserve wildlife and their habitat, including the focus on public education on the importance of habitat and wildlife preservation.

The refuge shows ecological change occurring with natural systems situated within an urban area.

The south bay is very limited when it comes to ATV access in close proximity of nature and bay waters.

The staff, the activities, and the knowledgeable volunteers makes it unique.

The various sites with signs to indicate information about the area makes it unique.

The wildlife refuges are well maintained compared to others.

The wildlife, great views, wonderful place, and everyday is different, which makes it unique.

Their stated mission of conservation and restoration of wildlife and the environment. As an avid environmentalist and birdwatcher, it gives me hope and makes me feel good to visit NWRs. It's the best use of my tax dollars that I know of.

There are more organized programs and a higher level of exhibits and interpretive resources available. Also better maintained, except for the main access road.

There is a focus on birds and it is small and accessible.

There is more wildlife to observe, different seasons, and different animal activities. It provides a sanctuary for animals.

There is something different each season and each week.

They are "all natural". This is a preserved area in its natural state. Gives pleasure to the hiker, to see and walk in an area meant to save and keep things as they once were for the wildlife.

They are more realistic. National Parks tend to be run like theme parks and are a bit sterile at times.

They are more unique and not as crowded.

They keep nature intact for us to admire and enjoy in our busy lives. They contribute to our health and well-being.

They offer a wilderness experience, although most of them are tainted by hunting club agreements. This results in the migratory waterfowl being especially wary and difficult to photograph.

They offer a wonderful natural, non commercialized opportunity to experience nature, often right next to urban environments.

They provide access to wildlife and habitat with minimum of disruption to the local environment.

This one just happens to be along San Francisco Bay where I ride my bike. Otherwise, I prefer to go to BLM lands because they are less restrictive. Occasionally, I'll go to one to hunt and I think they should be open for that.

This refuge offers opportunities to watch migratory birds that come to the San Francisco Bay Area.

To save this place in a highly populated area makes it a miracle!

Usually pristine and full of wildlife!

Very educational and interesting.

Very important department.

Very important educational vehicle for environmental protection and ensuring children- future generations learn to appreciate and honor the wildlife and land in its natural state and understand the importance of preserving native plants and animals. National refuges offer a spiritual connection with nature.

Very natural environment. Like the birdwatching available here, especially waterfowls. Wish there was no hunting allowed.

Very peaceful and enjoyed the wildlife.

Volunteers, the location, and the purpose makes it unique. We humans need to provide a chance for wildlife. This purpose is noble.

Walking Trails

Walkways and paths through the land are not found in BLM, National Forest or State Parks as exclusive as NWRs.

We can have the opportunity to experience the natural beauty.

We need as many wetlands in the bay as possible and I appreciate every effort to restore them.

When my daughter was a child (elementary school), she attended the summer program to explore the wildlife (i.e. environmental identification). Thanks for providing the natural programs.

Yes, because it is so close to the city.

You can pretty much do any activity you are into. There are so many refuges close to where I live.

You can walk at your leisure and enjoy being out in the clean, fresh air away from the pollution of automobiles.

You can watch birds and wildlife.

Additional Comments (n = 29)

Keep up your good work.

Do your jobs, get out on the trails and manage the refuge! The only place in the refuge you are guaranteed not to see any federal employee is out on the trails. What a joke.

Don Edwards is a special resource. Thank you for all you do!

Don Edwards refuge seems very well run and managed.

Estimated number of trips includes day trips, most of which were for hiking or mountain biking.

Great place. I go there weekly now.

I do a lot of walking and hiking.

I like it because it is conveniently located near my place of work. I come here on my lunch hour very often to take a walk and enjoy the peaceful surroundings. I have thought about volunteering as a docent, but not acted on that idea, mostly for lack of time.

I love Don Edwards NWR.

I love that it's right in my backyard!

I love visiting this refuge. It is peaceful and filled with magnificent birds.

I only entered the refuge to use the restroom. I'm an outside sales representative, and the refuge is adjacent to the highway.

I used to work at the local conservation center 28 years ago.

It is a cool place to visit, good hiking trails, and near historical sites.

It is currently undergoing wetland restoration and I am thrilled to watch the operations and the improvements. Anxious to see it restored!

It's truly a beautiful facility and refuge. Our community should be proud to have such a refuge here so close to cities.

It's wonderful to have a refuge so close to home. I just wish the rest of the Bay area knew what a treasure they have in their own backyard.

Keep it open for bicycling, hiking and hunting. It doesn't need any additional staffing or infrastructure.

Moving along the shoreline trails and viewing the bay, shoreline, and wildlife encourages recreation and exercise.

Please make sure they restore the parking lot nicely after the bridge work is complete.

Protect the refuge from development and preserve its natural beauty as is.

Refuge host was very friendly and inviting.

Thank you for giving me the opportunity to provide comments about Don Edwards. (Name Signed)

The volunteer who approached us to do this survey was courteous and informative. She was well suited for this task also taking the time and effort to answer our questions.

This whole refuge is awesome and I wish it to be protected.

This year I took a 12 week road trip through 18 states visiting local, state, and federal Parks. I was very pleased with the condition of this refuge. I was born and raised in Fremont so I have seen the wonderful changes that have occurred here. I personally would very much appreciate if you didn't advertise these locations. If you build it they will come. And they will destroy what you have accomplished. Most folks do not show proper respect, loud music, trash, walk off trails, throw rocks etc. at wildlife. I've seen this too many times. Please for the sake of the area, the wildlife, don't tell anyone it's here. This is one of the City of Fremont's best kept secrets, please let it remain so.

Todo me a gustado sobre este refugio. Lo disfruto al maximo en cada visita. Espero tener la suerte de seguir visitando no solo este sino mas refugios naturales. Aparte de sanos nos ensena a respetar la naturaleza. Gracias. *(I love everything about this refuge. I enjoy it as much as I can each visit. I hope to have the luck to continue visiting not only this, but other refuges. Apart from the health benefits, refuges teach us to respect nature. Thank you.)*

Wildlife conservation is more important than pushing technology or even medicine.

Would like to see less salt ponds and more habitat for native foxes, raccoons, skunks, and burrowing owls.
