



Visitor Survey Results for the Souris River Loop National Wildlife Refuges: Completion Report

By Natalie R. Sexton, Lynne Koontz, and Susan C. Stewart



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Introduction

The National Wildlife Refuge System, managed by the U.S. Fish and Wildlife Service (FWS), is the largest system of lands in the world dedicated for the conservation of wildlife. There are over 545 refuges nationwide, encompassing 95 million acres. The mission of the National Wildlife 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 of fostering “...an understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use.” Such use includes hunting, fishing, wildlife observation and photography, and environmental education and interpretation. About 98% of the system is open to the public, attracting more than 40 million visitors annually. More than 25 million people per year visit refuges to observe and photograph wildlife, 7 million to hunt and fish and more than half a million to participate in educational programs (The Citizen’s Wildlife Refuge Planning Handbook).

The National Wildlife Refuge Improvement Act of 1997 (Public Law 105-57, USC668dd) is the guiding legislation for the management of these lands. The law identifies these six wildlife-dependent recreational uses that should be given priority and provides a process for ensuring that these and other activities do not conflict with the management purpose and goals of the refuge. The Act also requires the FWS to develop a Comprehensive Conservation Plan (CCP) for every refuge by the year 2012. A refuge CCP outlines goals, objectives, and management strategies for the refuge for the next 15 years. It provides a vision and describes desired future conditions for the refuge. These goals and objectives have focused largely on habitat and wildlife management. Increasingly, however, refuges are placing more emphasis on visitor services goals and objectives in their CCP to ensure that visitor appreciation and support for fish and wildlife conservation is a part of the refuge’s long-term plan.

Regardless of specific CCP goals and objectives, the National Environmental Policy Act (NEPA; Public Law 91-190:852-859.42, U.S.C. and as Amended (P.L. 94-52 and P.L. 94-83) 42 U.S.C. 4321-4347) mandates that the CCP planning documents (e.g., environmental assessment or environmental impact statement) for each refuge must contain an analysis of social and economic conditions (the affected environment) and evaluate social and economic results from likely management scenarios. In addition, public review and comment on alternatives for future management is required by NEPA and is a formal part of the CCP process. There are many reasons to obtain public input, besides legal mandates, however. Doing so can provide baseline data on public/visitor use, experience, preferences, and expectations. It can also provide managers with a better understanding of public acceptability of alternatives/future changes that may be proposed in the CCP. This public participation process also facilitates the engagement of a variety of stakeholders in the refuge planning process.

There is some evidence that planning processes that include a broad array of stakeholders produce more comprehensive plans that are more likely to be implemented (Burby, 2003). The challenge is structuring public involvement in ways that are meaningful and productive for agencies and the public.

Studies of public involvement processes in environmental decision making have shown that participants evaluate these processes in terms of both process and outcome. Thus, stakeholders seek qualities such as accessibility and the quality of deliberation (process components), and the extent to which their participation is satisfying (outcome) (Halvorsen, 2003). An accessible process is one that provides a comfortable and convenient setting and is respectful of participants' time. Deliberative processes include open discussion and a forum for respectful exchange of opinions; a deliberative process provides opportunities for learning. Finally, a satisfying process demonstrates that decision makers take public input seriously, and the results of citizen input are reflected in the final decision. Other process-focused measures of success in public involvement include the presence of learning opportunities, the development of relationships among group members, and a sense of efficacy (McCool and Guthrie, 2001).

Carr and Halvorsen (2001) drew on criteria proposed by Poisner (1996) to evaluate the effectiveness of public participation in environmental decision making. One interesting finding of their research was that local participants in land use decisions were not representative of the community. Women, young people, and those with lower income and education levels participated at a lower rate than their distribution in the community. The lesson is that public managers and planners must make special efforts to promote participation by a broad range of stakeholders.

In the CCP process, the public meeting is the forum primarily used to collect citizen input. This is especially problematic for visitors to a refuge. Attendance at public meetings is often inconvenient or impossible for occasional visitors to refuges who frequently live long distances from the relevant FWS offices. In addition, those visitors who most often attend meetings of this type may represent a vocal minority group that is usually not representative of the full range of visitors to a given refuge. Also, there is a limit in the type of scientific baseline data that can be collected through this forum.

Another tool that can be used to collect baseline information and input is a visitor, community, or stakeholder survey. Conducting a survey is one way that the CCP planning team can reach out to the public and collect baseline data in support of their CCP. It is an effective supplement to a public meeting when detailed information on visitors or stakeholders is needed. Survey research applied to refuge planning can help managers characterize current visitor services and experiences. It can also help managers understand how current and proposed management activities affect individuals in terms of their preference for services and experiences and potential changes in visitation patterns. Finally, high quality public involvement processes may increase trust in government (Burby, 2003) and provide satisfaction in terms of both process and outcome.

Study Objectives

In support of the CCP planning effort for the Souris River Loop Refuges, the Policy Analysis and Science Assistance Branch/Fort Collins Science Center (PASA) of the U.S. Geological Survey conducted visitor surveys at three refuges in North Dakota: Des Lacs, J. Clark Salyer, and Upper Souris National Wildlife Refuges. This research was conducted in order to assess visitor experience, perceptions, and preferences and visitor spending related to recreation on these public lands. This baseline information and input is needed by the refuges to inform their CCP process. Specifically, this survey research assesses the characteristics of visitors and their trips, the activities in which visitors engage while on the refuge, details regarding their trip experience, as well as their preferences and attitudes about various management features, including existing and future conditions.

Overview of Souris River Loop Refuges

Des Lacs, J. Clark Salyer, and Upper Souris National Wildlife Refuges lie along the Souris River or its tributary, the Des Lacs River in north central North Dakota. Collectively, these long, narrow riverine refuges represent a comprehensive collection of biological communities of the northern Great Plains region, including over 300 species of migratory birds. The refuges are also critical areas of the Central Flyway, important for migratory and breeding habitat for birds. They are also important research areas for grassland birds. In addition, the refuges provide important sediment trapping functions for the Hudson Bay drainage. Culturally, the Souris River basin has a

deep history of Native American tradition, exploration, and settlement. As a result of these rich biological and cultural resources, these refuges experience moderate public use. All three refuges are highlighted in internationally recognized birding magazines as “must see” birding destinations. Upper Souris National Wildlife Refuge (NWR) is known for its outstanding fishing opportunities, and J. Clark Salyer NWR is known for quality hunting opportunities. Economically, the refuges contribute millions of dollars of economic benefit to the local communities. Specifically, Upper Souris NWR provides 100-year flood control for the City of Minot as part of the Souris River Flood Control Project.

Some of the public use management concerns facing the refuges outlined in their planning process documents include 1) providing quality recreational opportunities for visitors, 2) public desire for more environmental education programs at the refuges, 3) public desire to increase hunting and fishing programs, and 4) increased demand for all uses on the refuges.

Though each refuge offers unique features, they also form a network of important lands. Historically, these refuges have had common management and resource issues. All three refuges were established in 1935 to provide breeding grounds for migratory birds and other wildlife. As a result, the CCP process for these refuges was embarked upon collectively.

Des Lacs Refuge

Des Lacs NWR was established to provide resting and breeding habitat for migratory birds and other wildlife. Around 250 bird species use the diverse habitats on its 19,500 acres created around the three natural water bodies on the refuge. A 14-mile auto tour route along the north lake shore provides numerous wildlife observation opportunities, as it winds through the refuge and the local town of Kenmare. There are also public use facilities at Tasker’s Coulee, an area built by the Civilian Conservation Corps in the 1930’s, and hiking trails. Hunting is available for late season upland game birds, spring and fall wild turkey, and white-tailed deer (North Dakota Outdoors, March 2003).

J. Clark Salyer Refuge

J. Clark Salyer NWR was established as a refuge and breeding ground for migratory birds and other wildlife. J. Clark Salyer is North Dakota’s largest refuge, at nearly 59,000 acres in size. More than 250 bird species inhabit or visit the refuge. It was one of the American Bird Conservancy’s first “Globally Important Bird Areas” and is a regional site in the Western Hemisphere Shorebird Reserve Network. The refuge includes a 22-mile auto tour route through marshlands, grasslands, and forested areas. It also offers a 5-mile grassland auto trail and a 13-mile stretch of canoe trail (North Dakota Outdoors, March 2003).

Upper Souris Refuge

Upper Souris NWR was also established as a refuge and breeding ground for migratory birds and other wildlife. The refuge is approximately 32,000 acres in size. There are several water impoundments on the refuge, the largest of which is Lake Darling. Upper Souris Refuge is also designated as a “Globally Important Bird Area” and is home to thousands of waterfowl and the threatened piping plover. Lake Darling and the Souris River offer year-round fishing opportunities for northern pike, walleye, yellow perch, and smallmouth bass. The refuge also draws waterfowl, deer, and upland game hunters. There is a 3.5 mile scenic drive and five nature trails on the refuge that provide wildlife observation, birding, and photography opportunities (North Dakota Outdoors, 2003).

Methods

In order to develop a survey that reflected the policy-relevant public use management issues to be addressed in the CCP planning process, we met with each refuge in April of 2003. Detailed discussions were held

with FWS refuge personnel. The purpose of the site visit was to better understand each refuge, its visitation, and the planning process so that we could design a visitor survey that was best suited to the Souris River Loop Refuges.

Based on these meetings, we developed a preliminary visitor survey instrument for all three refuges. Then we customized the survey instrument for each refuge. Although the majority of the instrument was the same for all three refuges, there were specific questions for each refuge that were included in the individual surveys (e.g., asking about bison grazing on the Des Lacs Survey). In addition, some questions were the same, but the choices differed for each refuge (e.g., for importance of activities or services, the specific activities or services differed for each refuge, though the question construct was the same and there were some items that appeared on all three surveys). These survey instruments were reviewed by FWS personnel and comments and suggestions were incorporated. The survey instruments were then peer-reviewed and pre-tested for readability, clarity, and conciseness before being sent through the Office of Management and Budget (OMB) for information collection approval. Comments were reviewed and suggestions incorporated when appropriate. The visitor surveys were approved by the DOI Generic Clearance for Customer Satisfaction Surveys for OMB approval (OMB#1028-0077). The surveys included the following components:

- **Section 1.** Questions regarding respondent visitation to the refuge (e.g., activities participated in, travel time, information sources, etc.)
- **Section 2.** Questions regarding the amount of money visitors spent in the local and regional area on their most recent trip.
- **Section 3.** Questions about visitor experience at the refuge. This asked about the importance of different visitor activities, satisfaction with refuge services, and place attachment.
- **Section 4.** Questions regarding participation in natural resource issues.
- **Section 5.** Questions about preferences for different management issues on the refuge.
- **Section 6.** Demographic information.

In order to capture the differences in seasonal usage, the survey was administered to refuge visitors throughout all seasons, from late summer 2003 until early summer 2004. A visitor intercept protocol was developed by USGS based on a stratified random sample by activity type (nonconsumptive and consumptive) using visitor number estimates from refuge staff (Table 1). For each activity type, in each season, peak time frames were identified for sampling. For example, summer nonconsumptive users were targeted during a 5-week period in May and July. These were dates identified as peak for early and late-summer birding (a primary nonconsumptive activity of the refuges). Similar time frames were identified for other user types, such as fall hunters, fall anglers, winter anglers, etc.

The survey distribution was administered by refuge personnel. Surveys were randomly handed out to visitors who stopped at the refuge headquarters, attended special refuge event activities, and were intercepted by refuge staff during refuge patrols. Because of the hunting permitting system for J. Clark Salyer and Upper Souris NWR's, the opportunity existed to send surveys out to rifle deer hunters via mail for those refuges. Attempts were made to distribute surveys relative to weekend/weekday visitation patterns, however, headquarters of the refuges are open normal working hours Monday through Friday which posed limitations to this protocol. Due to time and financial constraints, no follow-up contacts were made with nonrespondents.

Table 1. 2004 visitor number estimates for Souris River Loop Refuges.¹

National Wildlife Refuge	Consumptive users	Nonconsumptive users	Total number of visitors
Des Lacs NWR	1,275 (12%)	9,400 (88%)	10,675
J. Clark Salyer NWR	4,800 (32%)	10,030 (68%)	14,830
Upper Souris NWR ²	55,250 (82%)	12,462 (18%)	67,712

¹Numbers are based on estimates by refuge staff as reported in the FWS Refuge Management Information System (RMIS). Visitation numbers for Upper Souris are modifications to 2004 visitation data recorded in the FWS Refuge Management Information System (RMIS). The refuge believes the numbers in this table more correctly estimate use.

²Visitation of 2,200 more correctly estimates big game hunting use instead of the published figure of 520 found in the 2004 visitation data recorded in the FWS Refuge Management Information System (RMIS).

Surveys were distributed to 74 Des Lacs NWR visitors, 448 to J. Clark Salyer NWR visitors, and 932 to Upper Souris NWR visitors. Of those, 296 were mailed deer rifle permittees for J. Clark Salyer and 375 for Upper Souris NWR (Tables 2 and 3).

The data were analyzed using SPSS 13.0. Descriptive statistics were first run, followed by parametric, non parametric, and cross tabulations to identify any major differences or similarities in the response to survey questions by activity type. Respondents were placed in an activity type, based on Question 2a of the survey: "Which of the activities that you checked above was the most important reason for your most recent visit?"

The IMPLAN modeling software was used to analyze the economic impacts associated with visitor spending. IMPLAN is a computerized database and modeling system that provides a regional input-output analysis of economic activity in terms of 10 industrial groups involving as many as 528 sectors (Olson and Lindall, 1996).

Results

Appendix A of this report includes the survey instrument for each refuge. Appendix B includes the summary data for all of the questions for Des Lacs NWR, Appendix C for J. Clark Salyer NWR, and Appendix D for Upper Souris NWR. For the most part, that information is not repeated in the body of the report, which focuses on the meaning of more in-depth analyses of the survey data. It may be useful to reference these Appendices in conjunction with the report.

Sampling and Response Rate

A total of 40 visitors responded for Des Lacs, 158 for J. Clark Salyer, and 362 for Upper Souris NWR, yielding response rates of 54%, 35%, and 39%, respectively (Table 2). Although individual response rates were quite similar, the confidence intervals varied, especially for Des Lacs NWR. For this refuge, the number of respondents is low compared to the number of refuge visitors. Given the estimates of yearly visitation on the refuge (see Table 1) results from this refuge have an error rate of +/-15.5% at a 95% confidence interval. A margin of error of ± 5 (at a 95% CI) is acceptable for social research (Bartlett II, Kotrlik, and Higgins 2001). Ideally, a margin of error of less than 5% is targeted. **Caution should be exercised when interpreting the results for Des Lacs NWR.** These results can be used to gain some understanding of the recreational experiences of some visitors to Des Lacs NWR and the importance of areas, services, or features of the refuge to those recreational experiences; however the results of this study cannot be generalized to all visitors to Des Lacs NWR.

For J. Clark Salyer NWR, the error rate was +/-7.8%. Although this number was higher than targeted, some generalizations can still be made, noting this margin of error. A note of caution for J. Clark Salyer NWR involves the proportion of consumptive and nonconsumptive users sampled (Table 3). The proportion in the sample was 22% nonconsumptive and 76% consumptive. This is different than the actual proportions as given by the refuge for visitation (68% for nonconsumptive and 32% for consumptive users; see Table 1). This difference is likely due to the fact that of the 448 surveys distributed, 66% (296) were sent to deer hunters. As a result, 71% of the sample is comprised of the permit deer hunters. These data may not be representative of the nonconsumptive users' opinions at J. Clark Salyer, and therefore **caution should be exercised when interpreting the results for J. Clark Salyer NWR for nonconsumptive users.**

For Upper Souris NWR, the response rate and sample size are at an acceptable level of +/- 5.1% (Table 2). The proportion of consumptive and nonconsumptive users in the sample (Table 3) is almost identical to the actual proportions for visitation (see Table 1). It should be noted, though, that the Upper Souris sample has a somewhat disproportionate number of deer hunters as compared to visitation (27% in sample vs. 3% reported for visitation by refuge), however, the sample size is large enough for each user group (nonconsumptive, hunter, and angler) that this should not affect interpretation of results significantly.

Table 2. Response rate for Souris River Loop Refuges visitor surveys.

	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Surveys distributed	74	448	932
Respondents	40	158	362
Response rate (%)	54	35	39
Confidence interval (\pm) ¹	15.5	7.8	5.1

¹The confidence interval is the plus-or-minus error figure related to the sample size and population size and is associated with the results. For example, with a CI of ± 5 , if 55% of the sample picks an answer, you can be "sure" that if you had asked the question of the entire relevant population between 50% (55-5) and 60% (55+5) would have picked that answer..

Table 3. Respondents representing consumptive or nonconsumptive user types.

User groups	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Nonconsumptive visitors	33 (85%)	36 (23%)	62 (18%)
Waterfowl hunters	3	7	0
Upland game hunters	1	2	0
Big game hunters	2	112	92
Anglers	NA	1	190
Consumptive visitors	6 (15%)	122 (77%)	282 (82%)
Total	39¹	158	344¹

¹Total number is different than respondent number in Table 2 because not all individuals responded to the question used to determine user type.

Results are displayed for each refuge separately and where there are similarities in the data among refuges, they are noted. Differences between consumptive and nonconsumptive users are only reported for Upper Souris NWR. The sample numbers for Des Lacs and J. Clark Salyer were too small to report.

Visitor Profile

Of the visitors surveyed, the majority were male, although Des Lacs NWR had the highest number of female respondents (45%; Table 4). The average age of respondents was similar for J. Clark Salyer and Upper Souris (Table 4) at 46 and 43, respectively, and a bit higher at 60 years for Des Lacs NWR. Most visitors to J. Clark Salyer and Upper Souris NWR work full or part time (79 and 82%, respectively) with less than 20% being retired. These numbers were different for Des Lacs NWR, with approximately half working and half being retired. Respondents for all three refuges, on average, had at least some college or technical school. Mean household incomes were above the national mean, according to U.S. Census data, for all three refuges.

Table 4. Demographics of visitors to Souris River Loop Refuges.

	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Male	55%	85%	85%
Female	45%	15%	15%
Average age	60	46	43
Worked full or part time	45%	79%	82%
Retired	45%	18%	13%
Mean highest education level	Some college or technical school	Some college or technical school	Some college or technical school
Mean household income	65,303	62,310	56,541

Visitor Experience at the Refuges

We asked visitors a series of questions related to their experience while visiting the refuge. These questions were targeted at understanding these areas:

- their trip(s) to the refuge;
- recreation activities they participated in while visiting;
- hunting and fishing trips for those who participate in those activities;
- the importance of recreation activities to their decision to visit the refuge; and
- visitors' attachment and importance they put on the refuge as a place.

Trip Profile

By far, the majority of visitors to J. Clark Salyer and Upper Souris NWR are living in the state of North Dakota. A very small percentage of visitors are from neighboring states (Table 5). Respondents to the Des Lacs survey were more evenly split in their domicile location.

Table 5. Respondents' domicile categorized by location.

National Wildlife Refuge	In-state (%)	Nearby states/province (Minnesota, South Dakota, Montana, Canada)%	Other out-of-state (%)
Des Lacs	44	5	51
J. Clark Salyer	84	3	13
Upper Souris	93	1	6

Table 6 highlights the details regarding respondents' most recent trip to the refuge (at the time of the survey). Average travel distance was quite high and variable, however for Upper Souris, 89% of visitors traveled 60 miles or less to get to the refuge. For J. Clark Salyer, 47% traveled 60 miles or less. For Des Lacs, 60% of respondents traveled 60 miles or less.

In regards to the visitors' purpose for visiting the refuges, there was some variation (Table 6). For both J. Clark Salyer and Upper Souris NWR, an overwhelming majority of respondents said that the refuge was the primary or sole destination for their most recent trip. The average number of visits in the last 12 months ranged from 7 (J. Clark Salyer) to 14 (Upper Souris). The average time spent on the refuge ranged from 3 hours for Des Lacs to 14 hours for J. Clark Salyer NWR.

Table 6. Trip profile data for visitors to Souris River Loop Refuges.

	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Refuge was primary or sole destination	38%	79%	83%
Average # of visits in last 12 months	9 visits	7 visits	14 visits
Average time spent on refuge	3 hours	14 hours	7 hours

Visitor Participation In and Importance of Recreation Activities

We asked respondents to specify which activities they had participated in during the last 12 months at the refuge. We also asked them the importance of specific priority public use activities as identified by the Refuge Improvement Act—wildlife observation, photography, hunting, fishing, and interpretation, and environmental education—and other compatible activities available at the refuge. We also asked respondents about two motivations for visiting the refuge: “experiencing a serene environment” and “being in natural and undeveloped lands.” Certainly, the argument can be made that an activity such as wildlife observation can also be a motivation for other activities (such as hunting or photography). Consequently, it is best not to interpret these “importance of activity”

ratings as implying that some activities are more important than others, but that some activities are more important to a larger number of respondents than others.

At Des Lacs NWR

At Des Lacs NWR, over half of respondents had participated in wildlife observation activities and the scenic auto tour (Fig. 1). Far fewer respondents had participated in environmental education and hunting activities, and no respondents had participated in the nonmotorized activities listed.

When asked about importance, an overwhelming number of respondents find wildlife observation opportunities for prairie birds, waterfowl, and other wildlife, and the scenic auto tour important or very important (Fig. 2). Also important to about half of respondents are interpretive trails and hiking, environmental education opportunities, the Tasker's Coulee wooded area, and wildlife photography opportunities. Important to fewer respondents are hunting and nonmotorized activities such as cross country skiing, canoeing, and mountain biking.

The refuge was interested in specific information about the Canada Goose Trail at the refuge. Aside from asking about the importance of the trail, we asked about their satisfaction with the availability of the trail. It was rated as very important or important by 32% of respondents. Sixty-five percent of respondents said they are satisfied with the availability of this trail. Some respondents think it should be open to the public longer. More often, however, visitors noted that they had not heard of the trail. One individual mentioned that it was not marked on maps.

Although there were only 25 responses out of 40 respondents, several themes were identified in the open-ended question "What would enhance your experience at Des Lacs National Wildlife Refuge?" Increased signage along roads and maps of the area appeared to be a concern among visitors who were auto touring. Primitive camping opportunities were also requested by two other individuals. Two respondents requested visitor use facilities such as playground equipment and canoe rentals. And finally, environmental education opportunities were requested, including flora and fauna identification information and maps of the area. At first glance the above responses are unrelated and relatively benign. However, they all indirectly indicate that visitors, at the very least, have very little understanding of the refuge system and what refuges are intended to offer. This theme was also noted in respondents' final comments.

When asked "What experience have you had at Des Lacs National Wildlife Refuge that would bring you back?," wildlife viewing (12 of 26 responses), particularly birding, appears to be the most popular reason respondents would return, followed by hunting. Verbatim responses to these two open-ended questions are located in Appendix B.

At J. Clark Salyer NWR

Activities most visitors participate in at J. Clark Salyer NWR include deer hunting followed by nature/wildlife viewing (Fig 3.). As with Des Lacs NWR, there seems to be very limited participation in nonmotorized recreation at J. Clark Salyer. Mirroring participation, deer hunting is the activity rated as important or very important by most respondents when they are deciding to visit the refuge (Fig. 4). Also important are wildlife observation and the auto tour interpretation opportunities. Important to fewer respondents is other hunting besides deer, fishing, and environmental education programs. Important to very few respondents are nonmotorized activities such as cross country skiing, canoeing, and mountain biking.

A vast majority of respondents responded to the open ended questions "What would enhance your experience at J. Clark National Wildlife Refuge?" (72%) and "What experiences have you had at J. Clark National Wildlife Refuge that would bring you back?" (85%).

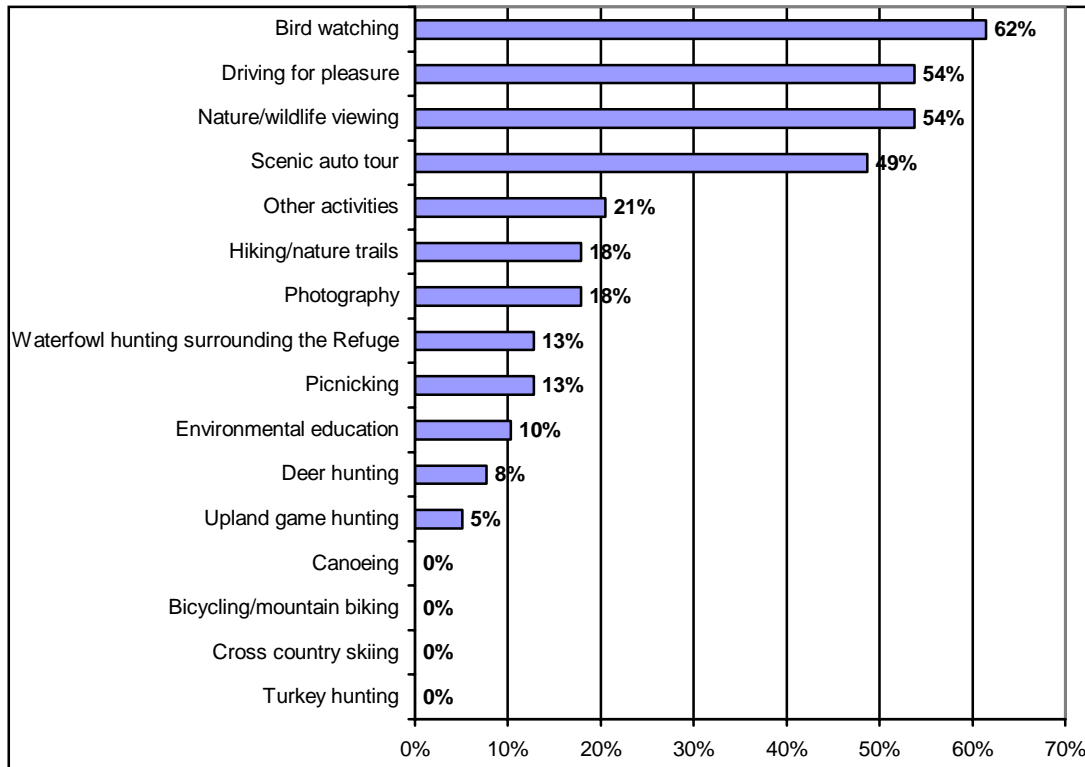


Figure 1. Activities respondents participated in during the last 12 months at Des Lacs NWR. (Numbers do not add up to 100% as respondents could select more than one activity.)

Regarding what would enhance their experience, camping was a common request. Due to the remoteness of the refuge, several individuals wish they could camp in or near the refuge. One of the more requested enhancements to visitors' experiences includes maps and directional signs of the refuge. Many respondents mentioned maps of roads and trails as being a helpful addition. Several respondents also mentioned that they would like to see improvements to road access and maintenance, particularly during the winter. In addition to improvements, a number of respondents would like to be able to use their vehicles, ATV, and/or snowmobiles to remove harvested game. Interestingly, some respondents commented on allowing more hunters where others suggested allowing fewer hunters. This may suggest potentially crowded "hot spots" where easy access results in increased hunting.

The most frequent reason respondents would return to the refuge was obviously hunting, followed by wildlife observation. Respondents indicated that wildlife observation was a significant experience that would bring them back to the refuge. Most respondents indicated that their experience had been extremely positive. Verbatim responses to these two open-ended questions are located in Appendix C. With the results presented above, as mentioned previously, they may under represent the opinions of nonconsumptive visitors to the refuge.

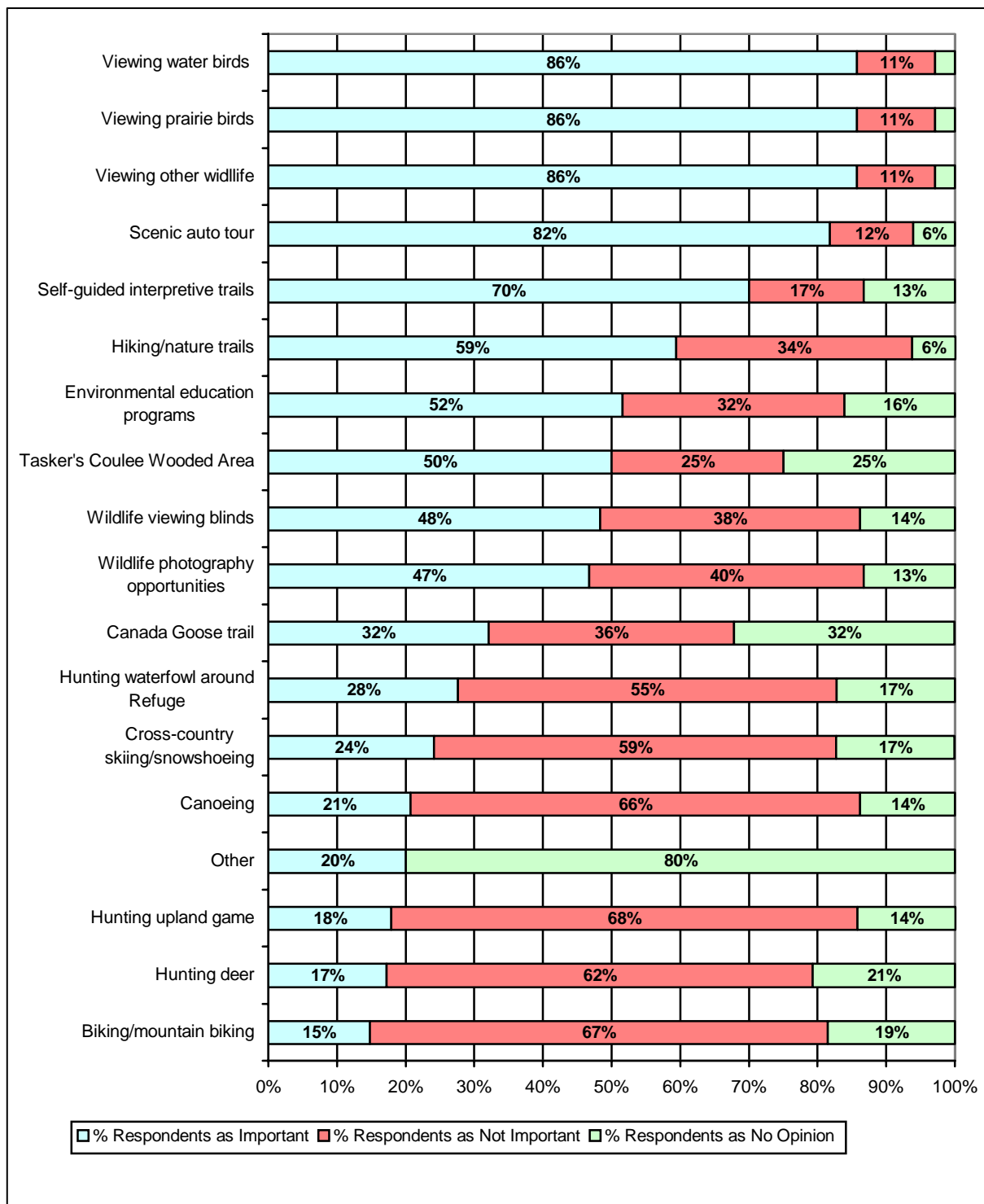


Figure 2. Importance of recreation activities respondents participate in when visiting Des Lacs NWR. (Values less than 5% are not shown.)

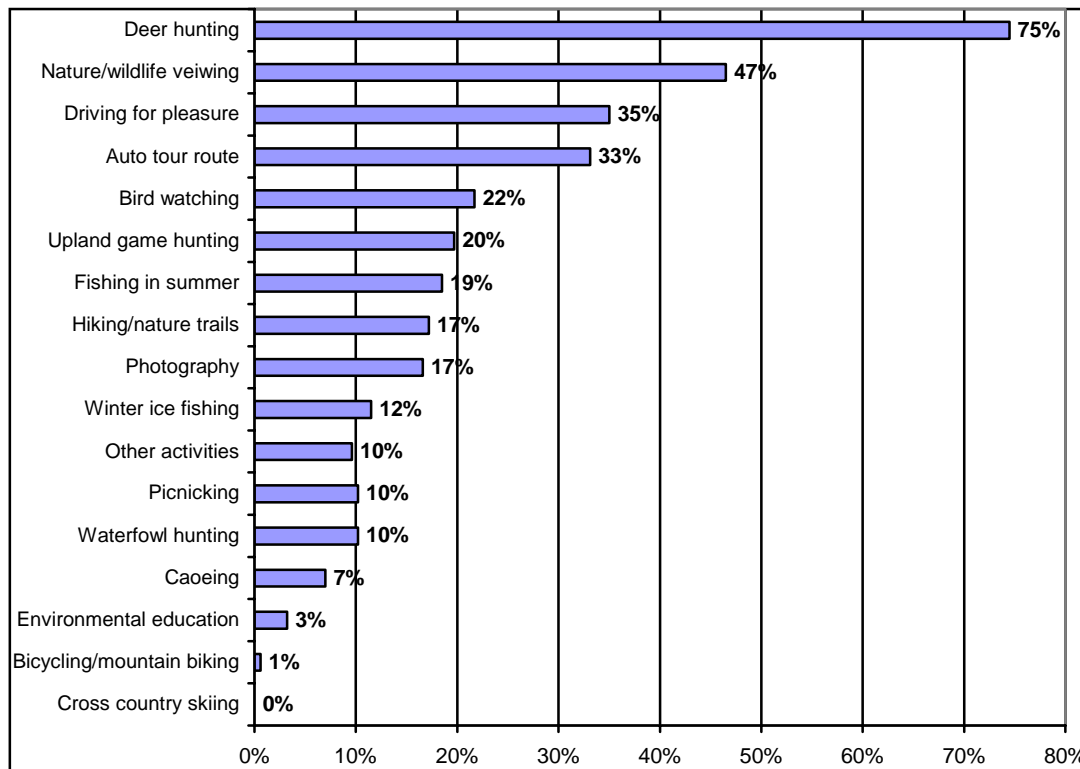


Figure 3. Activities respondents participated in during the last 12 months at J. Clark Salyer NWR. (Numbers do not add up to 100% as respondents could select more than one activity.)

At Upper Souris NWR

At Upper Souris NWR, fishing is by far the activity most visitors participate in (Fig 5.). Deer hunting is also a popular activity. As with the other refuges, there was very limited participation in nonmotorized recreation at Upper Souris NWR.

For the Upper Souris NWR respondent data, we were able to compare differences between consumptive and nonconsumptive users. This designation was defined by the type of activity that a respondent listed as most important to their most recent visit. There were statistically significant differences in importance of activity ratings for all activities except hunting upland game and horseback riding (Fig. 6). For nonconsumptive users, wildlife observation (including waterbirds and songbirds), the Prairie Marsh scenic auto tour, interpretive trails, and wildlife photography opportunities were the activities important to most. Interestingly, nearly one-fourth of all nonconsumptive users rated deer and other wildlife hunting as important as well. For consumptive users, fishing, wildlife observation, and deer hunting were important to a majority of users. Important to only a small number of either consumptive or nonconsumptive users were cross country skiing and horseback riding.

A request for additional fishing access areas (e.g., piers, docks) was the most frequent comment when asked “What would enhance your experience at Upper Souris National Wildlife Refuge?” Included in this request was access that accommodated handicapped or elderly fishermen. The second most requested enhancement to visitors’ experiences was access of ATVs or 4-wheelers by ice fishermen. Interestingly, several respondents specifically excluded snowmobiles when requesting ATV access. Improved visitor facilities, including improved bathroom facilities (specifically more frequent maintenance and cleaning), garbage cans, tables, and fish cleaning stations were also a common request.

Almost unanimously, fishing was identified as the most cited experience that would bring respondents back to Upper Souris NWR. The second most frequent response was hunting, followed by wildlife viewing. Many respondents included hunting and fishing as a single response. Similarly, many respondents who identified hunting and fishing as a primary experience that would bring them back to the refuge also included wildlife viewing. Verbatim responses to these two open-ended questions are located in Appendix D.

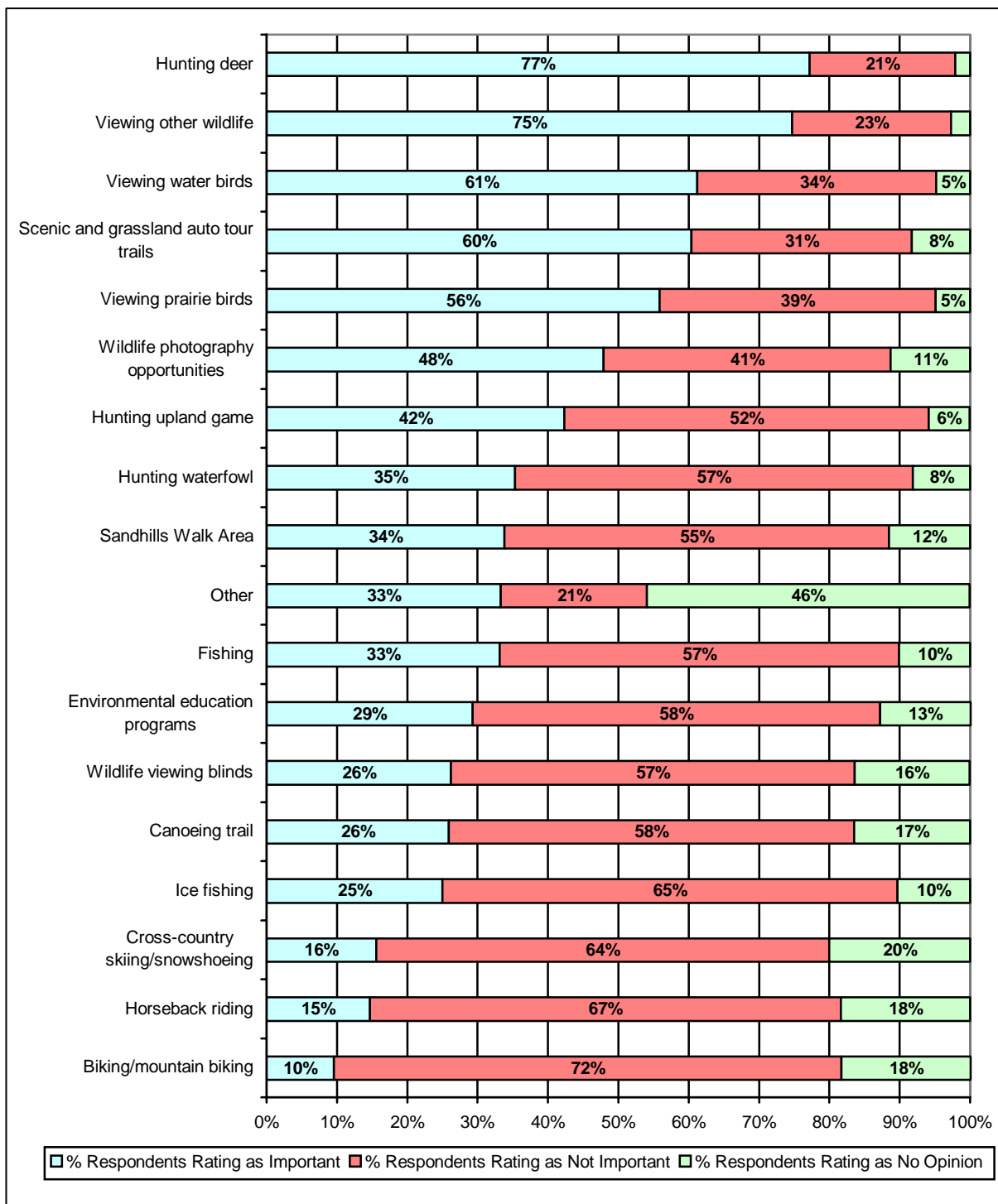


Figure 4. Importance of activities respondents participate in when visiting J. Clark Salyer NWR. (Values less than 5% are not shown.)

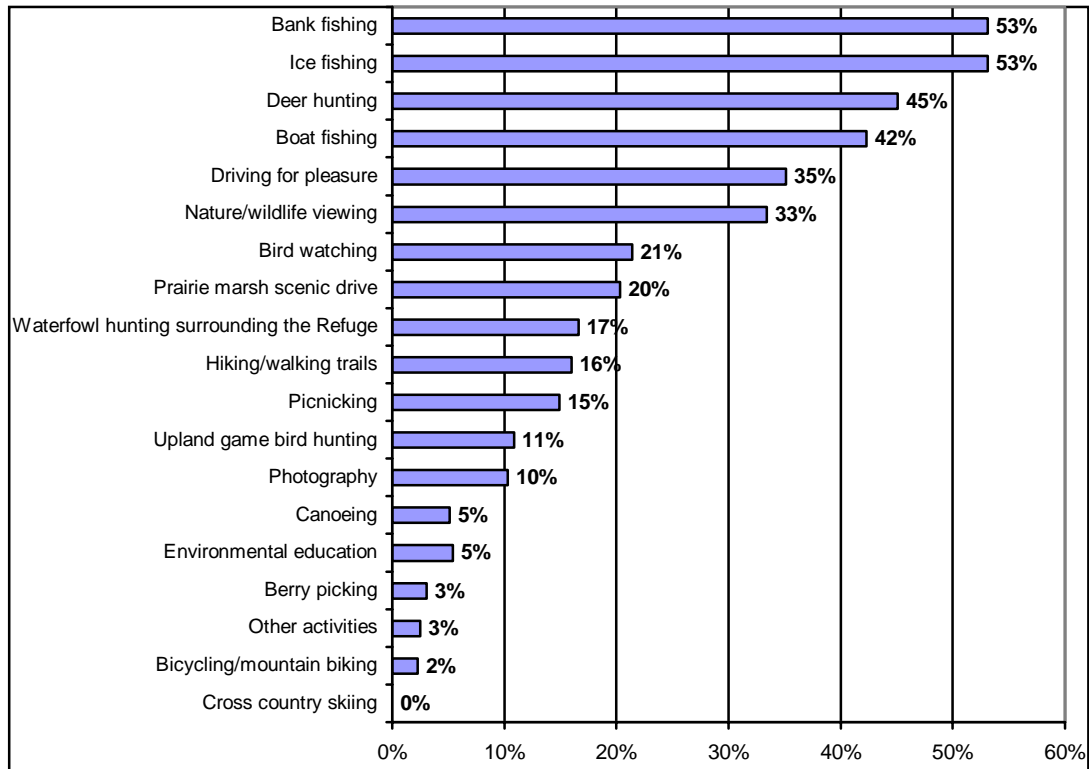


Figure 5. Activities respondents participated in during the last 12 months at Upper Souris NWR. (Numbers do not add up to 100% as respondents could select more than one activity.)

Hunting at Souris River Loop Refuges

We asked visitors to all three refuges about their hunting trips (for those who have engaged in that activity). At Upper Souris NWR visitors were asked about their fishing trips (for those who have engaged in that activity). For Des Lacs, only three respondents answered any of these questions, so information is not provided for that refuge. There was variation in responses, resulting in means with very high standard deviations, so for number of years and trips, median values are used as a more accurate representation of use.

At J. Clark Salyer NWR

At J. Clark Salyer NWR, respondents have hunted at J. Clark Salyer NWR for the past 9 years (median value). They take about four deer hunting trips, one upland game hunting trip, and two waterfowl hunting trips to the refuge per year. They are also making multiple trips hunting these game species elsewhere. Most hunters (93%, $n = 113$) hunted with a firearm on their most recent hunting trip on the refuge.

When asked about their last hunting experience on the refuge, 47% of J. Clark Salyer NWR respondents indicated that it was different than previous hunting experiences. Most hunters felt that the quality of the hunting experience was outstanding, noting “good habitat,” “healthy deer populations,” and “low hunting pressures.” Fewer hunters and no crowds were other benefits many respondents mentioned. One individual noted that this was attributed to the fact that the refuge had limited vehicle access. This respondent also mentioned that the farther he walked, the fewer hunters he saw. While others prefer “limited access,” some perceived walking as “poor access.” Another respondent noted that “You have to work like hell to get “it” (the harvested deer) out, but the quality of the hunt makes it worthwhile.” When referring to their experience at the refuge, most respondents described “feeling of seclusion” as well as a “feeling of hunting in the wilderness.” Based on comments such as these, it appears that management is providing an exceptional hunting opportunity for deer hunters at J. Clark Salyer NWR. The verbatim responses to comments received on the question “Was your last hunting experience on the refuge different than other places you hunt,” can be found in Appendix C.

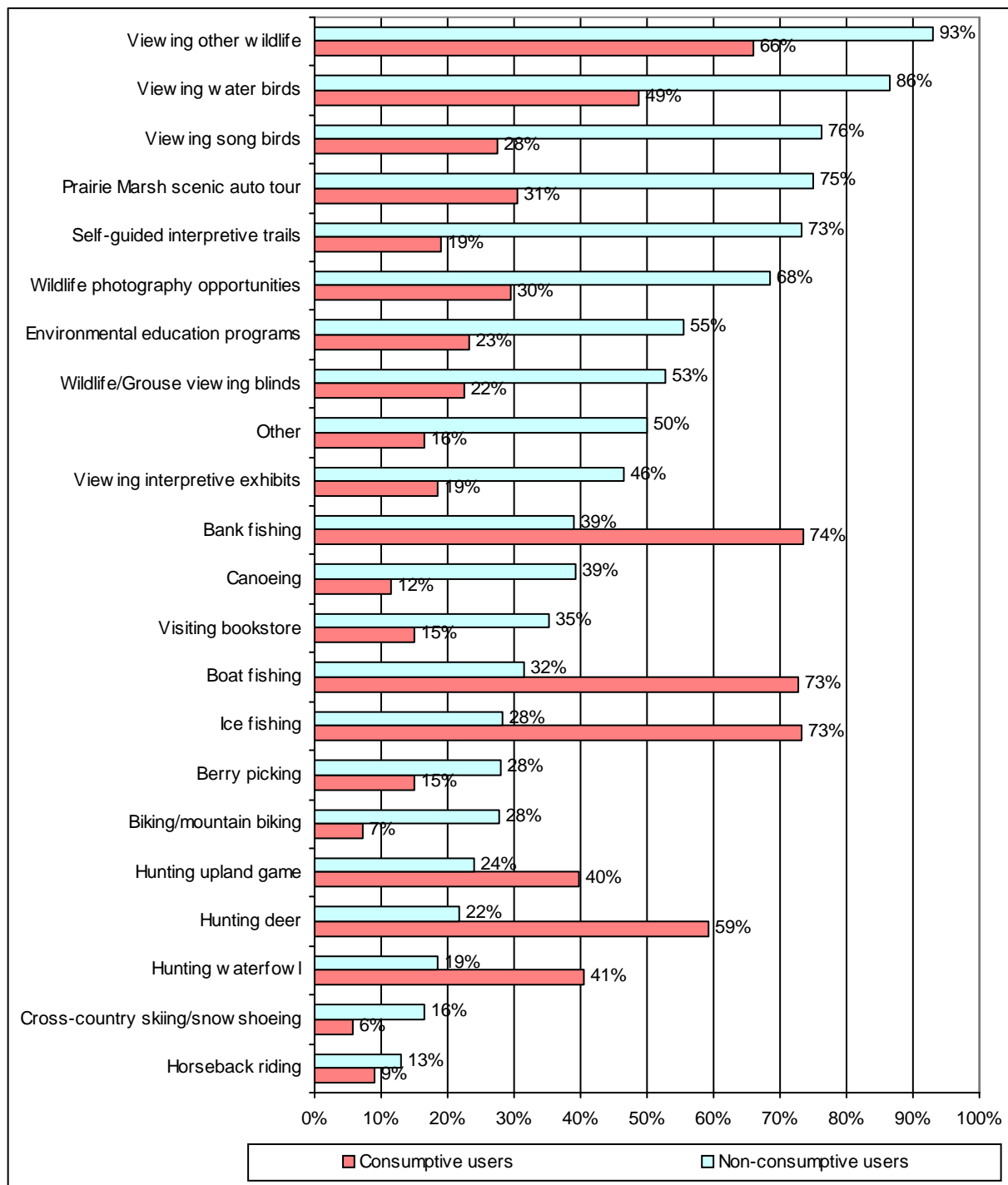


Figure 6. Comparison of importance of activities by consumptive users and nonconsumptive users for Upper Souris NWR.

At Upper Souris NWR

For Upper Souris NWR, respondents have hunted at the refuge for 13 years (Table 7). They take around three deer hunting trips, four upland game hunting trips, and five waterfowl hunting trips in the immediate area surrounding the refuge each year. They are also making multiple trips hunting these game species elsewhere. Most hunters (84%, $n = 145$) hunted with a firearm on their most recent hunting trip on the refuge. Twelve percent of hunters ($n = 20$) indicated that they hunted by archery, and 5% ($n = 8$) stated that they used a muzzleloader on their most recent hunting trip.

For Upper Souris, comments regarding their last hunting experience were generally aggregated into three major themes: accessibility, satisfaction, and resource quality. Accessibility issues that were discussed included the pros and cons of prohibiting horses or ATVs, particularly regarding the retrieval of large game. A few individuals who indicated that they were elderly or disabled also indicated that this was an issue. Limited accessibility however was also identified as a positive attribute of the refuge. A number of respondents indicated that limited access reduced crowding, and made them feel safe, which in turn added to their satisfaction. Other satisfaction-related comments were directed toward the quality of their experience. Several respondents mentioned that they successfully harvested game or had seen large bucks during their visit. Resource quality comments generally related to the quality of habitat, deer population and herd quality, all of which were positive. Overall, comments were very positive regarding hunting at Upper Souris. The verbatim responses to comments received on the question “Was your last hunting experience on the refuge different than other places you hunt,” can be found in Appendix D.

Table 7. Hunting profile for Souris River Loop Refuges.^{1,2}

	J. Clark Salyer NWR	Upper Souris NWR
Years hunting on refuge	7	7
Deer hunting trips to refuge each year	4	3
Deer hunting trips elsewhere	4	5
Upland game hunting trips to refuge each year	2	4
Upland game hunting trips elsewhere	6	10
Waterfowl hunting trips to refuge each year ³	2	5
Waterfowl hunting trips elsewhere	6	6
Type of weapon used on most recent trip		
Firearm	93%	84%
Archery	5%	12%
Muzzle	2%	5%

¹Because only three respondents completed this question for Des Lacs NWR, results are not presented for this refuge.

²Numbers are median values, unless otherwise noted, as standard deviations for means were too high for means to provide meaningful information.

³For Upper Souris, the question was worded “in the immediate area surrounding” the refuge.

Fishing at Upper Souris NWR

Because fishing is such a big part of visitor activity at Upper Souris NWR, we asked anglers specific questions regarding their experience (Fig. 7). Visitors to Upper Souris NWR have been fishing on the refuge for many years (median = 10 years). Anglers make 10 trips (median score) to the refuge to fish each year. Additionally, they make about 10 trips to other locations to fish.

In addition to understanding anglers’ trip patterns, we wanted to better understand their motivations for deciding to fish at the refuge. In a 1999 country-wide study by Responsive Management, the main reasons that Americans participate in fishing is for relaxation, to spend time with family and friends, and to be close to nature (Responsive Management, 1999). These motivations existed for angler and non-anglers alike. Thirty-five percent of anglers said that they fish for relaxation, 33% said their primary purpose was to spend time with family and friends, and 13% stated that being close to nature was their reason for fishing. Among non-anglers, 28% stated that they

would fish for relaxation, 33% stated that they would fish to spend time with family and friends, and 12% indicated that they would fish to be close to nature.

The results for Upper Souris are related to these national results with visitors placing an emphasis not on trophy fishing, but appear to gain satisfaction from catch and release as opposed to “keeping” fish.

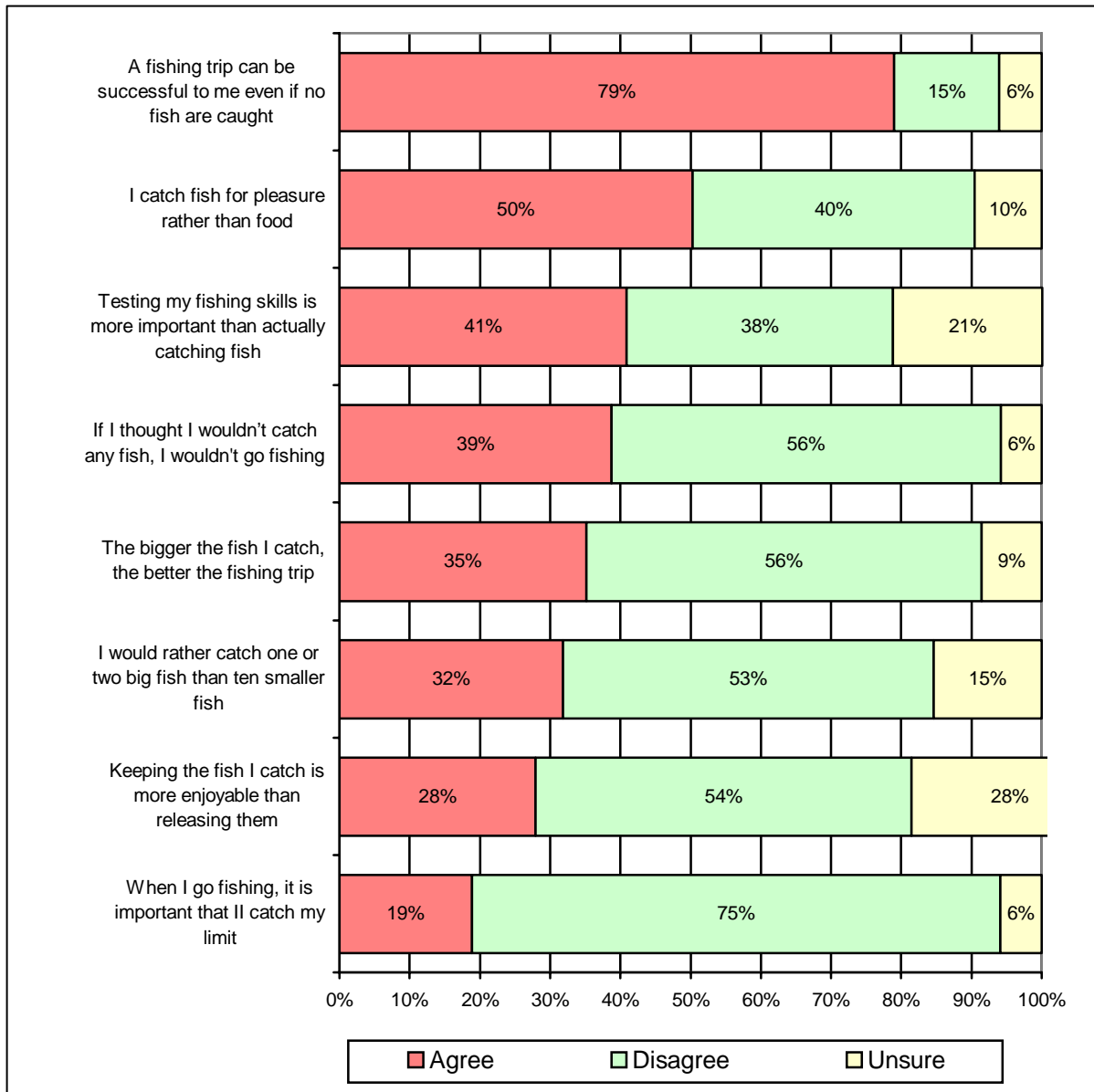


Figure 7. Visitor agreement with the fishing experience at Upper Souris NWR.

Importance of Each Refuge As a Place

With a shift from utilitarian management to an ecosystem or landscape approach to public land management, there has been an effort to understand the emotional and symbolic meanings associated with natural places or landscapes and the attachments people form with these places (Williams and Stewart, 1998). This attachment may be personal or shared publicly. Williams and Stewart (1998) identify two dimensions of place attachment—"place dependence" and "place identity" (Williams and others, 1992; Jorgensen and Stedman, 2001). Place dependence is a functional attachment to a place that provides features and conditions that support specific goals or desired activities. Place identity is the symbolic importance of a place, and is an emotional attachment. In addition to these two dimensions, we are testing a third dimension called "place tradition"—the importance of place to family tradition or heritage. All three aspects of place attachment were tested in these surveys.

Des Lacs NWR

Respondents to the Des Lacs NWR survey do not appear to be highly dependent on the refuge for the things they like to do on the refuge ($O = 2.99$, indicating uncertainty or neutrality on a 5-point scale; Table 8). However, they do agree that the refuge is the best place for what they like to do ($O = 3.47$, indicating mild agreement). Respondents were somewhat neutral regarding their identity with the refuge (or what the refuge symbolizes to them; $O = 3.32$, indicating uncertainty or neutrality). However they agree they are attached to the refuge ($O = 3.70$, indicating mild agreement). Respondents do agree that the refuge is an important place for *tradition and heritage* ($O = 3.55$, indicating mild agreement). In particular, they strongly agree the refuge is an important place for future generations ($O = 4.43$). Finally, though not a measure of place attachment, respondents agree that because of their experiences at the refuge they will definitely come back ($O = 3.97$).

J. Clark Salyer NWR

For the most part, visitors to J. Clark Salyer agree that this refuge is a meaningful place, with most statements receiving mean scores of 3.4 or greater, indicating mild to strong agreement (Table 8). They have the most agreement with statements measuring identity, or *what the refuge symbolizes* to them ($O = 3.91$ on a 5-point scale, indicating mild agreement). They also agree, although a little less strongly that the refuge is an important place for *tradition and heritage* ($O = 3.87$, indicating mild agreement). In particular, they strongly agree the refuge is an important place for future generations ($O = 4.67$). Regarding the refuge as a place visitors *depend on* for their activities, respondents also agree ($O = 3.61$, indicating mild agreement). Finally, although not a measure of place attachment, visitors strongly agree that because of their experiences at the refuge they will definitely come back ($O = 4.38$).

Upper Souris NWR

For the most part, visitors to Upper Souris NWR agree that this refuge is a meaningful place, with most statements receiving mean scores of 3.4 or greater, indicating mild to strong agreement (Table 8). Visitors to Upper Souris NWR do not, however, appear to be highly dependent on the refuge for the things they like to do on the refuge ($O = 3.23$, indicating uncertainty or neutrality). However, they do agree that the refuge is the best place for what they like to do ($O = 3.76$, indicating mild agreement). They also agree with statements measuring identity, or *what the refuge symbolizes* to them ($O = 3.76$, indicating mild agreement) and that the refuge is an important place for *tradition and heritage* ($O = 3.83$, indicating mild agreement). In particular, they strongly agree the refuge is an important place for future generations ($O = 4.56$). Finally, although not a measure of place attachment, visitors strongly agree that because of their experiences at the refuge they will definitely come back ($O = 4.48$).

Table 8. Visitor agreement with place attachment statements regarding Souris River Loop Refuges.

Place attachment statement	Des Lacs	J. Clark Salyer	Upper Souris
Place dependence	2.99¹	3.61	3.23
This area is the best place for what I like to do.	3.47 ¹	4.07	3.76
Doing what I do here is more important than doing it any other place.	2.88	3.73	3.28
I get more satisfaction out of visiting this place than any other.	2.84	3.40	3.22
I wouldn't substitute any other place for doing what I do here.	2.81	3.49	3.03
No other place can compare to this area.	2.94	3.38	2.99
Place identity	3.32	3.91	3.76
This Refuge means a lot to me.	3.38	4.05	3.93
I am very attached to the Refuge.	3.70	4.09	3.92
I feel this Refuge is a part of me.	3.13	3.86	3.66
I identify strongly with the Refuge.	3.13	3.64	3.51
Place heritage	3.55	3.87	3.83
It is important that my children and grandchildren visit the Refuge.	4.43	4.67	4.56
Coming to the Refuge is part of my family tradition.	4.09	4.15	3.95
This place is special because it is where my family and I spend time.	3.03	3.71	3.81
The Refuge provides me connection to past and future generations.	3.72	3.86	3.68
This place is special because it is where my friends and I spend time.	2.91	3.62	3.60
Coming to a place like this Refuge was an important part of my childhood.	3.16	3.23	3.35
Because of my experiences here I will definitely come back.	3.97	4.38	4.48

¹Mean scores on 5-point Likert scale, where 1= strongly disagree and 5= strongly agree.

Visitor Trip Spending

Spending associated with refuge recreational activities can generate considerable economic benefits for the local communities near a refuge. The first step in estimating the impacts associated with visitor spending is to define the local economy surrounding the refuge. A region (and its economy) is typically defined as all counties within a 30-50 mile radius of the travel destination. Only spending that takes place within this local area is included as stimulating changes in economic activity. Typically, economic impact models are built using county-level data files. However, zip code-level files are available to use when the local economic area surrounding the refuge has a different economic structure than the rest of the county. For the purposes of this analysis, the local impact region was defined as the 40-mile area surrounding each refuge.

J. Clark Salyer NWR is located in the Counties of Bottineau and McHenry. Most spending by J. Clark Salyer NWR visitors takes place in the communities of Upham, Towner, and Granville in McHenry County and the communities of Newburg, Bottineau, and Westhope in Bottineau County. Therefore, the local economic impact area for J. Clark Salyer NWR was assumed to comprise Bottineau and McHenry Counties.

Upper Souris NWR is located in Ward and Renville Counties, most spending by Upper Souris visitors takes place within the communities of Carpio and Minot in Ward County and the communities of Tolley and Mohall in Renville County. Thus, the local economic impact area for Upper Souris NWR is assumed to consist of Ward and Renville Counties.

Des Lacs NWR is located in Burke and Ward Counties. Most spending by visitors to Des Lacs occurs within the town of Kenmare in Ward County and the town of Bowbells in Burke County. Most of Ward County's

economic and population base is concentrated in the city of Minot, located outside of the 40-mile local impact area. The small rural community of Kenmare has a separate and distinct economic structure from the Minot area. Because the economic base of Ward County does not represent the local economic base surrounding Des Lacs NWR, zip code level files for the towns of Kenmare and Bowbells were chosen to represent the local economic impact region for Des Lacs NWR.

Accounting for the Number of Refuge Visitors

To determine the impacts of visitor spending within the local economic impact area, only spending by persons living outside the local area is included in the analysis. The rationale for excluding local visitor spending is two-fold. First, the local area is the main focus of the impact analysis. It is the impact area. Money flowing into the local economic impact areas from outside is considered new money injected into that economy. Second, if local residents visit the refuge within their local area more or less, they will correspondingly change their spending of money elsewhere in the local area, resulting in no net change to the local economy. These are standard assumptions made in most regional economic analyses at the local level.

Based on the visitor survey results, refuge visitors were split between local area visitors (e.g., J. Clark Salyer NWR visitors living within Bottineau and McHenry; Upper Souris NWR visitors living within Ward and Renville Counties; and Des Lacs NWR visitors living in the Towns of Kenmare and Bowbells) and those living outside of the local area (hereafter referred to as non-locals). Table 9 shows the number of survey respondents and the corresponding percentage breakdown of refuge visitors by place of residence for each visitor activity. If there were not enough survey respondents within a visitor activity to estimate the percentage of visitors by residence, estimates were adjusted by refuge personnel.

Table 9. Visitor breakdown by place of residence from the visitor survey results.

	Des Lacs NWR		J. Clark Salyer NWR		Upper Souris NWR	
Local visitor area	Towns of Kenmare and Bowbells		Bottineau and McHenry Counties		Ward and Renville Counties	
	# of survey respondents	% by residence	# of survey respondents	% by residence	# of survey respondents	% by residence
Nonconsumptive visitors	33		36		62	
Local visitors	12	25 ¹	9	25	46	74
Nonlocal visitors	21	75 ¹	27	75	16	26
Waterfowl hunting	3		7			
Local visitors	0	20 ¹	0	3 ¹		
Nonlocal visitors	3	80 ¹	7	97 ¹		
Upland game hunting	1		2		0	
Local visitors		75 ¹	1	50		67 ¹
Nonlocal visitors	1	25 ¹	1	50		34 ¹
Big game hunting	2		112		92	
Local visitors	1	75 ¹	39	35	73	79
Non-ocal visitors	1	25 ¹	73	65	19	21
Fishing			1		189	
Local visitors			1	100	168	85
Nonlocal visitors			0	0	29	15

¹Visitor percentage estimates were provided by refuge personnel when there were not enough survey respondents within a visitor activity. If there are no percentages listed, the visitor activity does not occur on the refuge.

The annual visitation estimates for each refuge were based on 2004 visitation data from the FWS Refuge Management Information System (RMIS). The RMIS information is reported by personnel at each refuge; estimates are based on visitors entering the visitor center/office, general observation, big game permits, as well as other methods that vary with each refuge's type of visitor activities. Table 10 shows the RMIS refuge visitation estimates for each visitor activity. The visitor percentages by place of residency in Table 9 were used to calculate the number of local and non-local visitors for each visitor activity.

Table 10. Local and non-local refuge annual visitation by activity.

	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Total nonconsumptive	9,400	10,030	12,462 ¹
Local visitors	2,350	2,508	10,468
Nonlocal visitors	7,050	7,523	1,994
Total waterfowl hunting	300	1,800	
Local visitors	60	54	
Nonlocal visitors	240	1,746	
Total upland game hunting	175	600	50
Local visitors	131	300	33
Nonlocal visitors	44	300	17
Total big game hunting	800	2,000	2,200 ²
Local visitors	600	700	1,738
Nonlocal visitors	200	1,300	462
Total fishing		400	53,000
Local visitors		400	45,050
Nonlocal visitors		0	7,950
Total number of annual visitors	10,675	14,830	67,712

¹Total nonconsumptive visitation of 12,462 more correctly estimates use instead of published figure of 7,453 found in the 2004 visitation data recorded in the FWS Refuge Management Information System (RMIS).

²Visitation of 2200 more correctly estimates big game hunting use instead of the published figure of 520 found in the 2004 visitation data recorded in the FWS Refuge Management Information System (RMIS).

Visitor spending is typically estimated on an average per day (8 hours) or average per trip basis. Refuge RMIS visitation records account for visitors on a per visit basis. A deer hunter spending two days hunting on the refuge is counted as two visits in RMIS. Likewise, a birdwatcher spending four hours on the refuge is counted as one visit in RMIS. In order to properly account for the amount of spending associated with each type of refuge visitor, the RMIS visitation estimates must be converted into visitor days. The average length of stay for hunting and fishing was at least one visitor day (specifics for each refuge will be provided in the following sections) while nonconsumptive users spend on average approximately one half of an eight hour visitor day. For the visitor spending analysis, one RMIS visit from Table 10 is counted as one visitor day for big game hunting, waterfowl hunting, and fishing visits. For nonconsumptive visitors at each refuge, RMIS visits were converted to visitor days based on the average amount of time spent per visit.

Accounting for the Economic Impacts of Visitor Spending

A tourist usually buys a wide range of goods and services while visiting an area. Major expenditure categories include lodging, food, supplies, and gasoline. Refuge management activities can impact the number and type of visitors. As more visitors come to an area, local businesses will purchase extra labor and supplies to meet the

increase in demand for additional services. The income and employment resulting from visitor purchases from local businesses represent the *direct* effects of visitor spending within the economy. In order to increase supplies to local businesses, input suppliers must also increase their purchases of inputs from other industries. The income and employment resulting from these secondary purchases by input suppliers are the *indirect* effects of visitor spending within the local economy. The input supplier's new employees use their incomes to purchase goods and services. The resulting increased economic activity from new employee income is the *induced* effect of visitor spending. The indirect and induced effects are known as the secondary or multiplier effects of visitor spending. Multipliers capture the size of the secondary effects, usually as a ratio of total effects to direct effects (Stynes 1998). The sums of the direct and secondary effects describe the total economic impact of visitor spending in the local economy. The economic impacts associated with spending by refuge visitors are estimated by the following equation:

$$\text{Number of refuge visitors} * \text{average spending} * \text{regional multiplier} = \text{Economic Impact}$$

The number of non-local visitors (Table 10) was calculated by using the RMIS report and visitor survey results. Survey results on visitor spending will provide the average spending. Ideally, for each refuge, average non-local visitor spending profiles for each visitor activity would be created from the visitor survey results on trip expenses. As shown in Table 9, splitting the sample of survey respondents by visitor activity and then by local verses non-local visitors resulted in only having a few or no respondents for some of the non-local visitor activities. As a result, it is not possible to create a spending profile for upland game hunting for any of the refuges. (Note: for the CCP economic analysis an upland game hunter spending profile will be created from the FWS National Survey of Hunting, Fishing and Wildlife Related Recreation report). A combined waterfowl hunting profile was created for Des Lacs NWR and J. Clark Salyer NWR by combining the respondents from both refuges. Given that the number of waterfowl hunters is still low even when combined, the spending profile was checked against the FWS National Survey of Hunting, Fishing and Wildlife Related Recreation waterfowl hunter spending profile and found to be comparable. Because there are not enough respondents to develop a big game hunting profile for Des Lacs NWR, the profile for J. Clark Salyer NWR will be used for Des Lacs NWR based on the similarities of the refuges in terms of distance to Minot and surrounding rural communities.

Economic impacts are typically measured in terms of number of jobs lost or gained, and the associated result for employment income. Economic input-output models are commonly used to predict the total level of regional economic activity that would result from a change in visitor spending. IMPLAN is a computerized database and modeling system that provides a regional input-output analysis of economic activity in terms of 10 industrial groups involving as many as 528 sectors (Olson and Lindall, 1996). The IMPLAN modeling system was used to derive the multipliers that capture the secondary (indirect and induced) effects needed to determine the economic impacts of visitor spending. IMPLAN county and zip code-level data profiles for the year 2000 were used in this study. The IMPLAN employment data estimates were comparable to the U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System data at the 1 digit Standard Industrial Code level for the year 2000. IMPLAN's regional purchase coefficients were adjusted to better reflect typical non-local visitor spending patterns.

Regional economic effects from the IMPLAN model are reported for the following categories:

- **Local output** represents the change in local sales or revenue
- **Personal income** represents the change employee income in the region that is generated from a change in regional output.
- **Employment** represents the change in number of jobs generated in the region from a change in regional output. IMPLAN estimates for employment include both full time and part time workers, which are measured in total jobs.

In the survey, we asked respondents to “indicate the amount you and members of your group with whom you shared expenses (e.g., other family members, traveling companions) spent on your most recent visit” to the refuge. Survey spending results and the resulting economic impacts are described below for each refuge individually.

Visitor Spending Results for Upper Souris NWR

Spending profiles were developed for Upper Souris non-local visitors participating in nonconsumptive use activities, big game hunting, and fishing. Table 11 illustrates the average amount spent in Ward and Renville Counties by non-local visitors to Upper Souris NWR. Amounts of local spending are the average expenditures non-local visitors (living outside of Ward and Renville Counties) reported spending in the local area near Upper Souris NWR. Not every group had expenditures in every category, so the numbers reported in Table 11 represent an average across all visitors within each visitor activity, including some who had no expenditure in that category. The expenditures reported in each category were divided by the number of persons in each group sharing the expenses as shown in Table 12 and then divided by the number of days spent in the local area to determine the average spending per person per day. Table 11 shows that on average, non-local visitors spent the most on grocery stores, gasoline, and restaurants in the local communities near Upper Souris NWR. Average spending per person per day ranges from \$94 for nonconsumptive visitors, \$89 for big game hunters, and \$81 for fishing visitors.

Table 11. Average non-local visitor spending for Upper Souris NWR.

	Nonconsumptive visitors		Big game hunters		Fishing visitors	
	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day
Nonlocal spending in Ward and Renville Counties						
Gasoline/related automobile costs	37.69	21.08	48.78	17.54	43.79	18.75
Hotels	26.92	13.46	13.89	2.31	89.66	9.74
Camping	0.00	0.00	4.72	1.81	0.00	0.00
Restaurants	45.92	27.00	43.94	28.63	130.41	20.36
Grocery stores	26.54	17.50	54.11	20.62	28.07	9.79
Supplies and souvenirs	6.15	3.08	1.83	1.09	22.59	6.09
Taxidermy	0.00	0.00	0.00	0.00	9.66	2.41
Game processing	13.08	6.54	38.83	9.91	13.45	5.86
Rental car	11.54	5.77	13.33	6.67	1.72	0.14
Equipment rental	0.00	0.00	0.00	0.00	0.00	0.00
Bait/fishing tackle	0.00	0.00	2.17	0.36	17.99	7.86
Total spending	167.85	94.42	221.61	88.95	357.33	81.00

As shown in Table 12, on average nonconsumptive visitors spend approximately 3.5 hours at Upper Souris NWR per trip, while deer hunters spend 2 days and fishing visitors spend 1 day per trip. On average there are two people within each group sharing expenses for all three visitor activities (Table 12).

Table 12. Average time spent and number sharing expenses for visitor activities at Upper Souris NWR.

	Nonconsumptive	Big game hunting	Fishing
Average time spent at refuge	3.3 hours	15.7 hours (1.96 days)	8.0 hours (1 day)
Average time spent in the local area	1.0 day	2.31 days	1.30 days
Average number of people in group sharing expenses	1.7	2.1	2.4

One RMIS visit from Table 10 will count as 1 visitor day for big game hunting and fishing visits; for nonconsumptive visitors, visits were converted to visitor days based on the average amount of time spent per visit (3.3 hours). Current Upper Souris NWR annual non-local visitation consists of 822 nonconsumptive, 462 big game hunting, and 7,950 fishing visitor days.

The current level of nonconsumptive use, big game hunting, and fishing visitor days accounts for over \$827,000 of spending annually by non-local visitors in the local communities near Upper Souris NWR (Ward and Renville Counties). The resulting impacts of non-local visitor spending on the local economy are presented in Table 13. As shown in Table 13, it is estimated that the direct and secondary effects would generate over \$1.16 million in local output, \$316,800 in personal income and 16.7 jobs annually in Ward and Renville Counties. Spending by fishing visitors account for 75% of the total impact.

Table 13. Annual economic impacts of non-local Upper Souris NWR visitor spending in Ward and Renville Counties (2005\$).

Upper Souris NWR	Nonconsumptive	Big game hunting	Fishing	Total
Direct effects				
Local output (\$/year)	\$84,161	\$44,000	\$698,903	\$827,064
Income (\$/year)	\$21,542	\$10,294	\$176,543	\$208,379
Jobs	1.4	0.7	10.3	12.4
Secondary effects				
Local output (\$/year)	\$35,682	\$18,779	\$275,644	\$330,105
Income (\$/year)	\$11,776	\$6,112	\$90,610	\$108,498
Jobs	0.5	0.2	3.6	4.3
Total effects				
Local output (\$/year)	\$119,843	\$62,779	\$974,547	\$1,157,169
Income (\$/year)	\$33,318	\$16,406	\$267,153	\$316,877
Jobs	1.9	0.9	13.9	16.7

Visitor Spending Results for J. Clark Salyer NWR

Spending profiles were developed for J. Clark Salyer NWR non-local visitors participating in nonconsumptive use activities and big game hunting. A waterfowl hunting profile was created for Des Lacs NWR and J. Clark Salyer NWR by combining the respondents from both refuges. Table 14 illustrates the average amount spent in Bottineau and McHenry Counties by non-local visitors to J. Clark Salyer NWR. Amounts of local spending are the average expenditures non-local visitors (living outside of Bottineau and McHenry Counties) reported spending in the local area near J. Clark Salyer NWR. Not every group had expenditures in every category, so the numbers reported in Table 14 represent an average across all visitors within each visitor activity, including some who had no expenditure in that category. The expenditures reported in each category were divided by the number of persons in each group sharing the expenses as shown in Table 15 and then divided by the number of days spent in the local area to determine the average spending per person per day. Table 14 shows that on average, non-local visitors spent the most on hotels, gasoline, and restaurants in the local communities near J. Clark Salyer NWR. Average spending per person per day ranges from \$31 for nonconsumptive visitors, \$24 for big game hunters, and \$112 for waterfowl hunters. The reported daily spending per person by nonconsumptive and big game hunting visitors to J. Clark Salyer NWR is lower than the reported spending by Upper Souris NWR visitors in Table 11. This could be due to Minot being included in the local economic area for Upper Souris NWR while it is outside of the local economic impact area for J. Clark Salyer NWR. Amounts of spending in Minot on the way to the refuge are captured in the local spending by Upper Souris NWR visitors but are captured as spending in the local area by J. Clark Salyer NWR visitors.

As shown in Table 15, on average nonconsumptive visitors spend approximately 5 hours at J. Clark Salyer NWR per trip, while deer hunters spend 2.5 days and waterfowl hunters spend one day per trip. For sharing expenses, on average there are 2 people within each deer hunting group, 2.5 people in nonconsumptive visitor groups, and 3.5 people in waterfowl hunting groups (Table 15).

One RMIS visit from Table 10 will count as one visitor day for big game hunting and waterfowl hunting visits; for nonconsumptive visitors, RMIS visits were converted to visitor days based on the average amount of time spent per visit (4.8 hours). Current J. Clark Salyer NWR annual non-local visitation consists of 4,514 nonconsumptive, 1,300 big game hunting, and 1,746 waterfowl hunting visitor days.

Table 14. Average non-local visitor spending for J. Clark Salyer NWR.

	Nonconsumptive visitors		Big game hunters		Waterfowl hunters	
	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day
Nonlocal spending in Bottineau and McHenry Counties						
Gasoline/related automobile costs	15.00	7.03	33.74	11.29	88.33	28.19
Hotels	35.45	12.73	13.01	2.52	483.33	32.64
Camping	0.91	0.42	0.29	0.14	0.00	0.00
Restaurants	13.16	6.96	20.36	5.47	155.00	42.22
Grocery stores	3.32	1.95	10.52	3.20	92.50	5.28
Supplies and souvenirs	1.05	0.90	2.17	0.57	41.67	3.61
Taxidermy	0.00	0.00	0.00	0.00	0.00	0.00
Game processing	0.00	0.00	3.26	0.96	0.00	0.00
Rental car	1.36	1.25	0.00	0.00	0.00	0.00
Total Spending	70.25	31.23	83.37	24.15	860.83	111.94

Table 15. Average time spent and number sharing expenses for visitor activities at J. Clark Salyer NWR.

	Nonconsumptive	Deer hunting	Waterfowl hunting
Average time spent at Refuge	4.8 hours	20.9 hours (2.6 days)	8.1 hours (1.02 days)
Average time spent in the local area	1.2 days	2.7 days	1.6 days
Average number of people in group sharing expenses	2.5	2.0	3.5

The current level of nonconsumptive use, big game hunting, and waterfowl hunting visitor days accounts for over \$404,000 of spending annually by non-local visitors in the local communities near J. Clark Salyer NWR (Bottineau and McHenry Counties). The resulting impacts of non-local visitor spending on the local economy are presented in Table 16. As shown in Table 16, the direct and secondary effects would generate over \$518,000 in local output, \$143,000 in personal income and 9.7 jobs annually in Bottineau and McHenry Counties. Spending by waterfowl hunters accounts for almost 60% of the total impact.

Table 16. Economic impacts of non-local J. Clark Salyer NWR visitor spending in Bottineau and McHenry Counties.

J. Clark Salyer NWR	Nonconsumptive	Big game hunting	Waterfowl hunting	Total
Direct effects				
Local output (\$/year)	\$156,354	\$32,126	\$215,599	\$404,079
Income (\$/year)	\$43,647	\$8,007	\$58,957	\$110,611
Jobs	3.1	0.5	4.6	8.2
Secondary effects				
Local output (\$/year)	\$42,851	\$9,469	\$61,689	\$114,009
Income (\$/year)	\$12,296	\$2,574	\$17,582	\$32,452
Jobs	0.6	0.1	0.8	1.5
Total effects				
Local output (\$/year)	\$199,205	\$41,595	\$277,288	\$518,088
Income (\$/year)	\$55,943	\$10,581	\$76,539	\$143,063
Jobs	3.7	0.6	5.4	9.7

Visitor Spending Results for Des Lacs NWR

The visitor survey results were used to develop a spending profile for Des Lacs NWR non-local visitors participating in nonconsumptive use activities. A waterfowl hunting profile was created for Des Lacs NWR and J. Clark Salyer NWR by combining the respondents from both refuges. The big game hunting profile for J. Clark Salyer NWR survey respondents was used as the big game hunting profile for Des Lacs NWR.

Table 17 illustrates the average amount spent in the Kenmare and Bowbells area by non-local visitors to Des Lacs NWR. Amounts of local spending are the average expenditures non-local visitors (living outside of the Kenmare and Bowbells area) reported spending in the local area near Des Lacs NWR. Not every group had expenditures in every category, so the numbers reported in Table 17 represent an average across all visitors within each visitor activity, including some who had no expenditure in that category. The expenditures reported in each category were divided by the number of persons in each group sharing the expenses as shown in Table 18 and then divided by the number of days spent in the local area to determine the average spending per person per day. Table 17 shows that on average, non-local visitors spent the most on hotels, gasoline, restaurants, and grocery stores in the local communities near Des Lacs NWR. Average spending per person per day ranges from \$35 for nonconsumptive visitors, \$24 for big game hunters, and \$112 for waterfowl hunters. Similar to J. Clark Salyer NWR, the reported daily spending per person by nonconsumptive and big game hunting visitors to Des Lacs NWR is lower than reported spending by Upper Souris NWR visitors in Table 17. This could be due to Minot being included in the local economic area for Upper Souris NWR while it is outside of the local economic impact area for Des Lacs NWR. Amounts of spending in Minot on the way to the refuge are captured in the local spending by Upper Souris NWR visitors but are captured as spending in the local area spending by Des Lacs NWR visitors.

As shown in Table 18, on average nonconsumptive visitors spend approximately three hours at Des Lacs NWR per trip, while deer hunters spend two and a half days and waterfowl hunters spend one day per trip. For sharing expenses, on average there are two people within each deer hunting and nonconsumptive visitor group, and three and a half people in waterfowl hunting groups (Table 18).

As previously discussed, one RMIS visit from Table 16 will count as one visitor day for big game hunting and waterfowl hunting visits; for nonconsumptive visitors, RMIS visits were converted to visitor days based on the average amount of time spent per visit (2.7 hours). Current Des Lacs NWR annual non-local visitation consists of 2,379 nonconsumptive, 200 big game hunting, and 240 waterfowl hunting visitor days.

The current level of nonconsumptive use, big game hunting, and waterfowl hunting visitor days accounts for over \$108,000 of spending annually by non-local visitors in the local communities near Des Lacs NWR (the Kenmare and Bowbells area). The resulting impacts of non-local visitor spending on the local economy are presented in Table 19. As shown in Table 19, the direct and secondary effects would generate over \$149,000 in

local output, \$48,800 in personal income and 2.5 jobs annually in the Kenmare and Bowbells area. Spending by nonconsumptive visitors accounts for almost 80% of the total impact.

Table 17. Average non-local visitor spending for Des Lacs NWR.

	Nonconsumptive visitors		Big game hunters		Waterfowl hunters	
	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day	\$ per group per trip	\$ per person per day
Nonlocal spending in the Kenmare & Bowbells area						
Gasoline/related automobile costs	20.47	11.32	33.74	11.29	88.33	28.19
Hotels	35.29	9.82	13.01	2.52	483.33	32.64
Camping	0.59	0.31	0.29	0.14	0.00	0.00
Restaurants	31.76	10.46	20.36	5.47	155.00	42.22
Grocery stores	7.94	3.66	10.52	3.20	92.50	5.28
Supplies & souvenirs	0.59	0.31	2.17	0.57	41.67	3.61
Taxidermy	0.00	0.00	0.00	0.00	0.00	0.00
Game processing	0.00	0.00	3.26	0.96	0.00	0.00
Rental car	0.00	0.00	0.00	0.00	0.00	0.00
Total spending	96.65	35.89	83.37	24.15	860.83	111.94

Table 18. Average time spent and number sharing expenses for visitor activities at Des Lacs NWR.

	Nonconsumptive	Big game hunting	Waterfowl hunting
Average time spent at refuge	2.7 hours	20.9 hours (2.6 days)	8.1 hours (1.02 days)
Average time spent in the local area	Less than 1 day	2.7 days	1.6 days
Average number of people in group sharing expenses	2.3	2.0	3.5

Table 19. Economic impacts of non-local Des Lacs NWR visitor spending in Kenmare and Bowbells.

Des Lacs NWR	Nonconsumptive	Big game hunting	Fishing	Total
Direct effects				
Local output (\$/year)	\$78,429	\$3,693	\$25,878	\$108,000
Income (\$/year)	\$22,894	\$1,051	\$7,732	\$31,677
Jobs	1.4	0.1	0.5	2
Secondary effects				
Local output (\$/year)	\$29,641	\$1,346	\$10,107	\$41,094
Income (\$/year)	\$12,398	\$572	\$4,209	\$17,179
Jobs	0.4	0	0.1	0.5
Total effects				
Local output (\$/year)	\$108,070	\$5,039	\$35,985	\$149,094
Income (\$/year)	\$35,292	\$1,623	\$11,941	\$48,856
Jobs	1.8	0.1	0.6	2.5

Visitor Preferences for Refuge Management

In an effort to better understand visitor preferences for various potential management options, we asked respondents a series of questions. These included:

- the importance of and their satisfaction with certain visitor services offered at each refuge;
- their preferences for fees;
- how certain existing features should be managed to maximize visitor experience at each refuge; and
- agreement with habitat management tradeoffs.

Importance of and Satisfaction with Visitor Services

Respondents were asked to rate the importance of and their satisfaction with various services provided at the refuge. Comparing the importance and satisfaction ratings for visitor services can help to identify how well the services are meeting visitor expectations. There are several ways to make this comparison. One way is via the importance-performance framework (Martilla and James, 1977; Tarrant and Smith, 2002), where mean scores for importance and satisfaction are charted (Fig. 8). This framework combines importance and satisfaction (or performance) into one model. It allows consideration of how visitors value an attribute at the same time considering their satisfaction with the attribute. It is a tool that can be used to prioritize management decisions related to services and features. For example, a service with a “low” satisfaction rating that is very important to visitors should be given more attention than a service with a “low” satisfaction rating that is not at all important to visitors.

Des Lacs NWR

For Des Lacs NWR, it is evident by the high percentages and mean scores that most of the services are important to a large portion of respondents (Table 20). Only access for people with disabilities and availability of information on hunting did not rank as important or very important to a majority of respondents, with many respondents checking “does not apply.” Respondents were satisfied with the features or services they rated as important, rating them as outstanding or good (Table 20). The last column in Table 20 and Figure 9 compare importance and satisfaction using the importance-performance framework. Only one feature did not fall squarely in the “keep up the good work” quadrant. When factoring in the standard error¹ of the importance and satisfaction means, there is some overlap for this feature in between the “keep up the good work” and “possible overkill” quadrant. It is unclear in which of these quadrants this feature falls. However, status quo management of this feature will likely not have any negative effects.

J. Clark Salyer NWR

For J. Clark Salyer, it is evident by the high percentages and mean scores that all of the services are important to a large portion of respondents (Table 21). Respondents were satisfied with the features or services they rated as important, rating them as outstanding or good (Table 21). The last column in Table 21 and Figure 10 compare importance and satisfaction using the importance-performance framework. All features fall within the “keep up the good work” quadrant. This suggests current management strategies appear to be working well.

Upper Souris NWR

For Upper Souris NWR, it is evident by the high percentages and mean scores that all of the services are important to a large portion of respondents (Table 22). Respondents were satisfied with the features or services they rated as important, rating them as outstanding or good (Table 22). The last column in Table 22 and Figure 11 compare importance and satisfaction using the importance-performance framework. All features fall within the “keep up the good work” quadrant. This suggests current management strategies appear to be working well.

¹ The standard error of the mean estimates the dispersion among the responses. It is the standard deviation divided by the square root of the sample size.

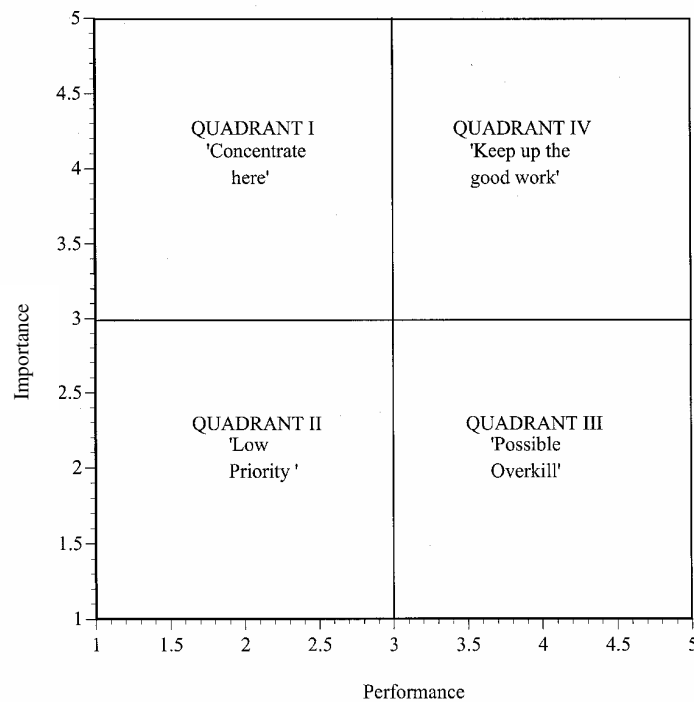


Figure 8. Importance-performance framework (Martilla and James, 1977).

Table 20. Importance-satisfaction of services provided at Des Lacs NWR.

Activity	Importance = very important/ important (%)	Mean importance ¹	Satisfaction = outstanding / good (%)	Mean satisfaction ¹	Rating ²
Condition of the natural environment	78	4.7	78	4.3	Keep up the good work
Helpfulness of the refuge staff	83	4.7	90	4.5	Keep up the good work
Wildlife viewing opportunities	83	4.7	77	4.2	Keep up the good work
Refuge easy to find	73	4.4	90	4.3	Keep up the good work
Self-guided trails or auto tours with interpretive signs	63	4.3	54	3.7	Keep up the good work
Availability of information on hiking, bird watching, and wildlife photography	70	4.3	73	3.7	Keep up the good work
Trails clearly marked	70	4.1	60	3.5	Keep up the good work
Kiosks or signs about the refuge	58	4.0	58	3.6	Keep up the good work
Picnic areas clean and maintained	50	3.9	75	3.9	Keep up the good work
Available parking	58	3.8	79	3.8	Keep up the good work
Availability of information on hunting	25	3.5	57	3.6	Keep up the good work
Access for people with disabilities	28	3.1	61	3.5	Possible overkill/ Keep up the good work

¹Importance scale is 4-point scale. Mean scores converted here to 5-point scale to more easily compare to 5-point satisfaction scale. Importance and satisfaction means do not include “does not apply” responses.

²Rating based on importance-performance framework (Martilla and James, 1977) where satisfaction is plotted on x axis and importance is plotted on y axis and graph is divided into quadrants (top right = “keep up the good work,” bottom right = “possible overkill,” bottom left = “low priority,” and top left = “concentrate here.”)

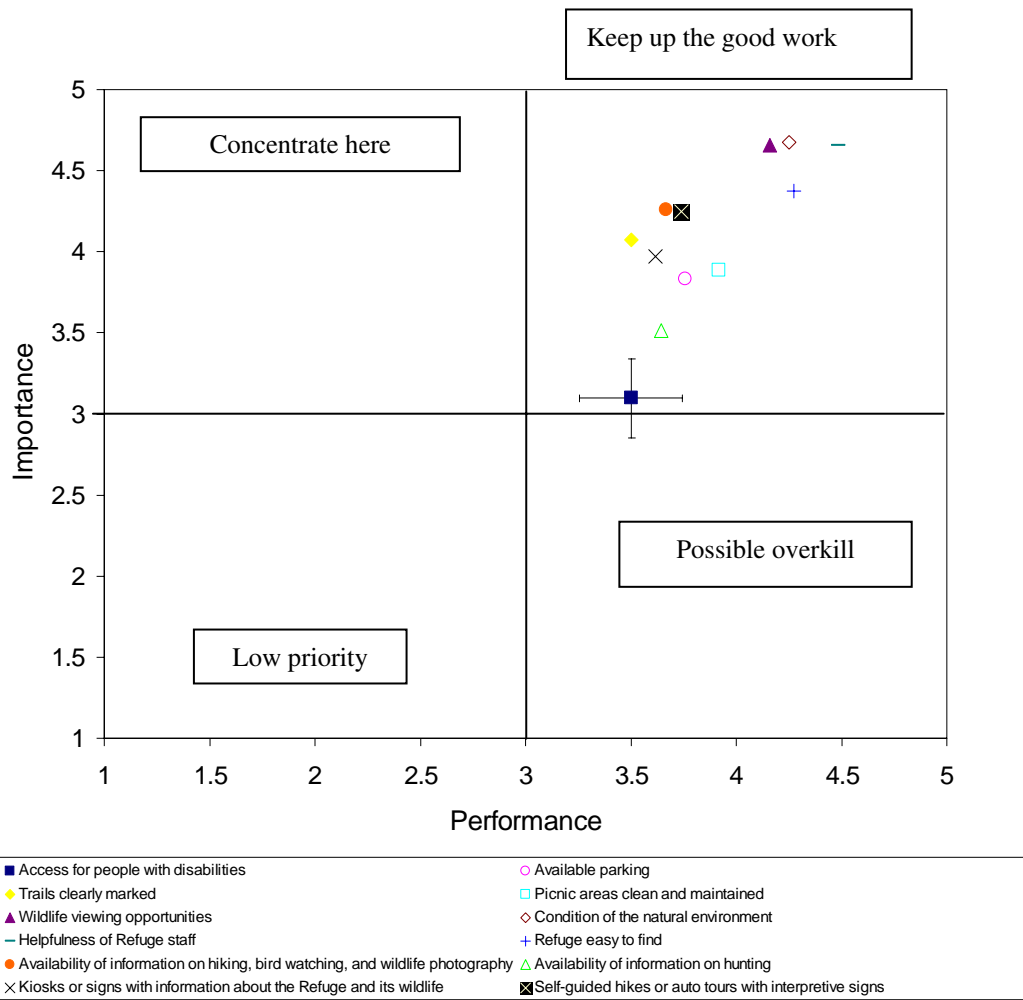


Figure 9. Importance-satisfaction ratings with services provided at Des Lacs NWR. Standard error bars are shown for features that do not fall squarely within a single quadrant.

Table 21. Importance-satisfaction of services provided at J. Clark Salyer NWR.

Activity	Importance = very important/ important (%)	Mean importance¹	Satisfaction = outstanding / good (%)	Mean satisfaction¹	Rating²
Condition of the natural environment	92	4.5	82	4.2	Keep up the good work
Wildlife viewing opportunities	86	4.2	78	4.0	Keep up the good work
Helpfulness of the refuge staff	84	4.0	74	4.0	Keep up the good work
Availability of information on hunting and fishing	80	4.0	63	3.7	Keep up the good work
Refuge easy to find	78	3.9	82	4.1	Keep up the good work
Trails clearly marked	77	3.8	54	3.5	Keep up the good work
Availability of information on hiking, bird watching, and wildlife photography	67	3.6	63	3.7	Keep up the good work
Available parking	70	3.5	72	3.7	Keep up the good work
Kiosks or signs with information about the refuge and its wildlife	65	3.5	50	3.4	Keep up the good work
Self-guided trails or auto tours with interpretive signs	62	3.5	47	3.3	Keep up the good work
Access for people with disabilities	61	3.4	53	3.25	Keep up the good work

¹Importance scale is 4-point scale. Mean scores converted here to 5-point scale to more easily compare to 5-point satisfaction scale. Importance and satisfaction means do not include “does not apply” responses.

²Rating based on importance-performance framework (Martilla and James, 1977) where satisfaction is plotted on x axis and importance is plotted on y axis and graph is divided into quadrants (top right = “keep up the good work,” bottom right = “possible overkill,” bottom left = “low priority,” and top left = “concentrate here.”)

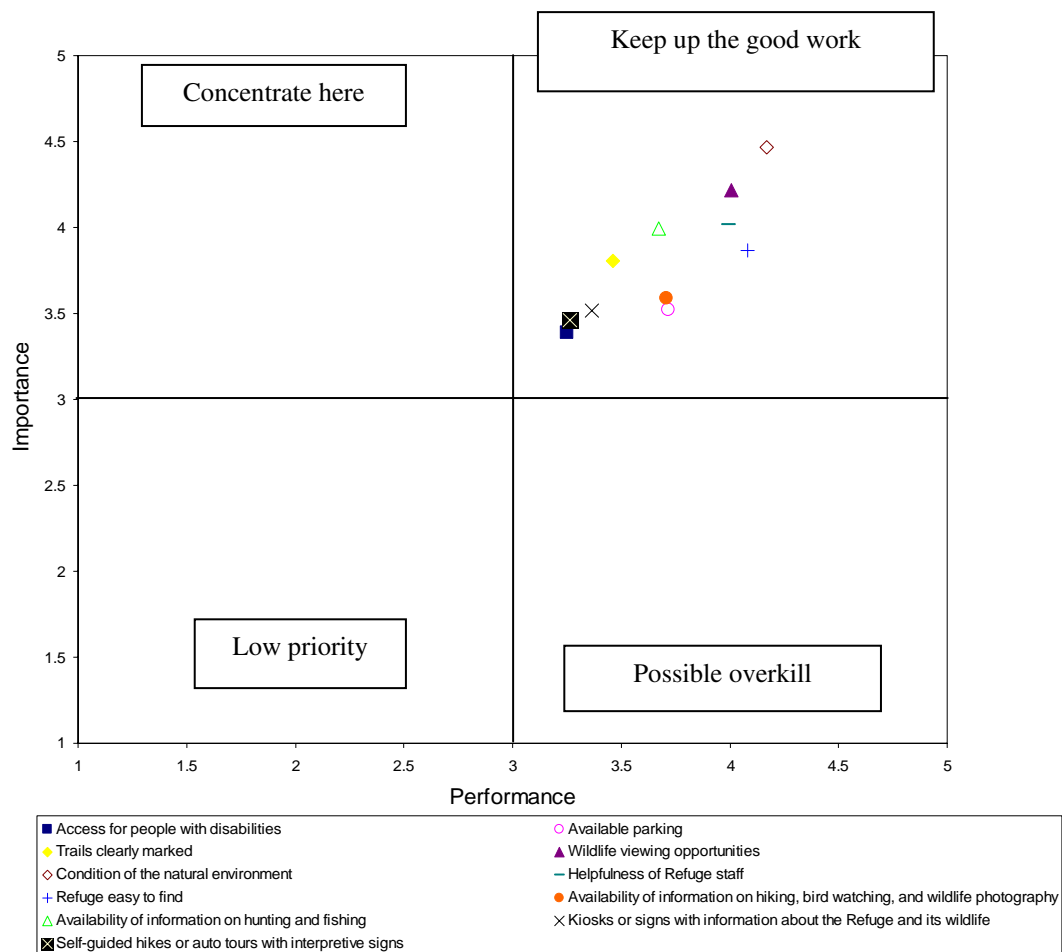


Figure 10. Importance-satisfaction ratings with services provided at J. Clark Salyer NWR.

Table 22. Importance-satisfaction of services provided at Upper Souris NWR.

Activity	Importance = very important/ important (%)	Mean importance¹	Satisfaction = outstanding / good (%)	Mean satisfaction¹	Rating²
Condition of the natural environment	94	4.5	83	4.2	Keep up the good work
Well maintained public use areas	92	4.3	69	3.8	Keep up the good work
Availability of information on hunting and fishing	86	4.2	69	3.8	Keep up the good work
Helpfulness of the refuge staff	82	4.1	73	3.9	Keep up the good work
Wildlife viewing opportunities	78	4.0	76	3.9	Keep up the good work
Refuge easy to find	80	3.9	82	4.1	Keep up the good work
Available parking	82	3.9	61	3.5	Keep up the good work
Access for people with disabilities	68	3.6	51	3.3	Keep up the good work
Kiosks or signs with information about the refuge and its wildlife	64	3.5	63	3.7	Keep up the good work
Trails clearly marked	64	3.5	66	3.7	Keep up the good work
Self-guided trails or auto tours with interpretive signs	63	3.4	65	3.7	Keep up the good work
Tables and grills	61	3.4	55	3.7	Keep up the good work
Availability of information on hiking, bird watching, and wildlife photography	60	3.4	65	3.7	Keep up the good work
Special events at the refuge	56	3.2	57	3.5	Keep up the good work
Other services/features	73	1.9	40	1.2	Keep up the good work

¹Importance scale is 4-point scale. Mean scores converted here to 5-point scale to more easily compare to 5-point satisfaction scale. Importance and satisfaction means do not include “does not apply” responses.

²Rating based on importance-performance framework (Martilla and James, 1977) where satisfaction is plotted on x axis and importance is plotted on y axis and graph is divided into quadrants (top right = “keep up the good work,” bottom right = “possible overkill,” bottom left = “low priority,” and top left = “concentrate here.”)

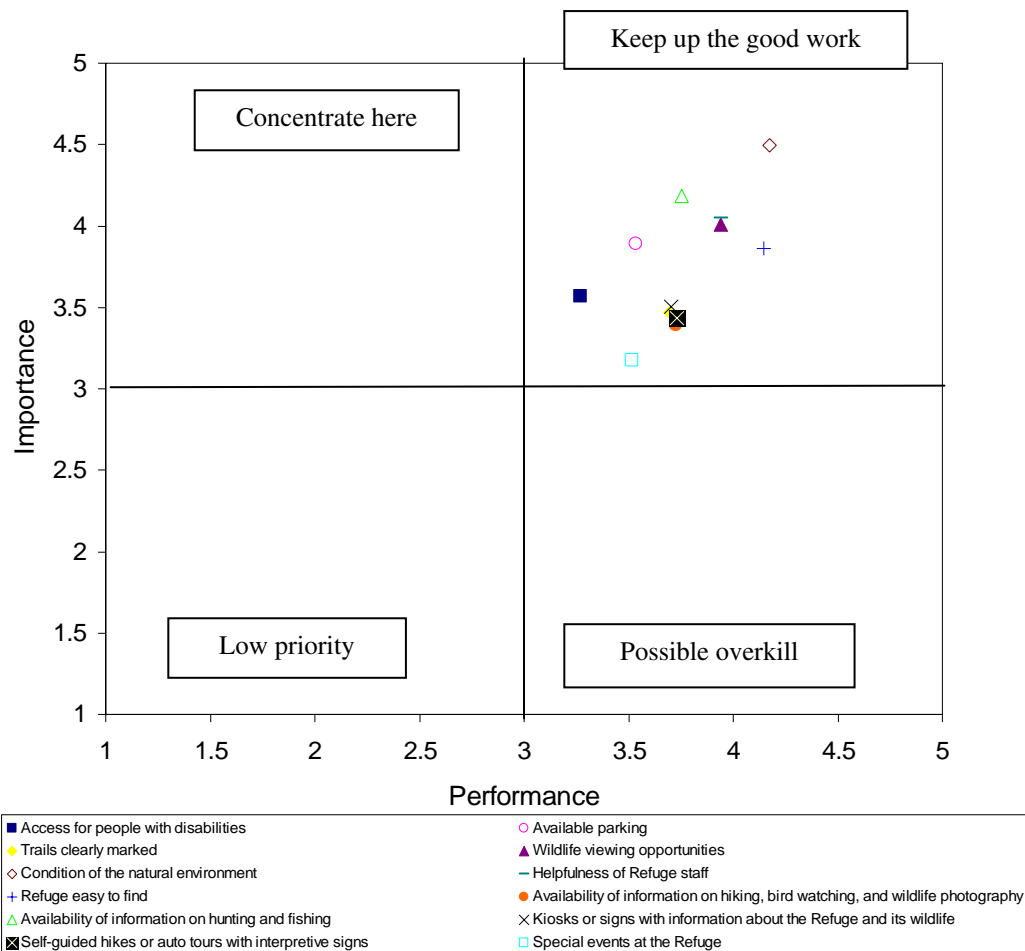


Figure 11. Importance-satisfaction ratings with services provided at Upper Souris NWR.

Management of Services

Respondents were asked how they felt features and services should be managed at the refuges. This question ties very closely to the “importance/satisfaction” question summarized above and is meant to further inform the results of that question. Specifically, they were asked for a number of services, if the service should be *minimized*, *left as is*, or *increased*.

Des Lacs NWR

Using a majority rule of >65%, respondents to the Des Lacs NWR survey felt the following services or features should be *left as is* (Table 23):

- facilities,
- auto tour route,
- signs, and
- naturalness.

Preferences for other services were less clear-cut. Respondents were divided on whether the following services or features should be *left as is* or *increased* (Table 23):

- visitor numbers,
- hiking trails,
- environmental education programs/activities,

- interpretive exhibits, and
- services.

For visitor impacts, they were divided on whether they should be managed as is or managed to reduce harmful impacts to plants and animals. There was the least consensus for the management of hunting, with responses divided across all three options (provide fewer areas, provide more, leave as is; Table 23).

Note: Although these breakdowns are presented for the respondents the high margin of error for this refuge (± 15.5) should be noted.

Table 23. Respondent preferences for management of services at Des Lacs NWR.

Feature	More (%)	Leave as is (%)	Less (%)
Facilities	26	74	0
Auto tour route	21	73	6
Signs	28	66	6
Naturalness ¹	35	65	0
Hunting areas	20	63	17
Visitor impacts ²	0	62	38
Visitor numbers ³	39	61	0
Hiking trails	37	60	3
Environmental education programs/activities	45	55	0
Interpretative exhibits	46	52	2
Services	52	48	0

¹This statement was worded “restore more natural conditions” (listed under “more” in table)/“allow more landscape alterations” (listed under “less” in table).

²This statement was worded: “Increase efforts to minimize visitor actions that are harmful to refuge plants and animals” (listed under “less” in table)/ “have less regulation of visitor behavior” (“more” in table).

³This statement was worded “restrict number of users in area,” (listed under “less” in the table)/“encourage more use and interactions,” (listed under “more” in table).

J. Clark Salyer NWR

Using a majority rule of >65%, respondents to the J. Clark Salyer NWR survey felt that the following services should be *left as is* (Table 24):

- auto tour route,
- services,
- naturalness,
- hiking trails,
- facilities,
- visitor impacts,
- interpretative exhibits,
- environmental education programs/activities, and
- fishing areas.

Preferences for other services were less clear-cut. Respondents were divided on whether the following services or features should be *left as is* or *increased* (Table 24):

- signs,
- visitor numbers, and
- hunting areas.

Table 24. Respondent preferences for management of services at J. Clark Salyer NWR.

Feature	More (%)	Leave as is (%)	Less (%)
Auto tour route	18	78	4
Services	24	75	1
Naturalness ¹	18	73	9
Hiking trails	25	73	2
Facilities	27	72	1
Visitor impacts ²	27	72	2
Interpretative exhibits	27	72	1
Environmental education programs/activities	30	68	2
Fishing areas	29	68	3
Signs	31	64	5
Visitor numbers ³	34	62	5
Hunting areas	36	61	3

¹This statement was worded “restore more natural conditions” (listed under “more” in table)/“allow more landscape alterations” (listed under “less” in table).

²This statement was worded: “Increase efforts to minimize visitor actions that are harmful to refuge plants and animals” (listed under “less” in table)/ “have less regulation of visitor behavior” (“more” in table).

³This statement was worded “restrict number of users in area,” (listed under “less” in the table)/“encourage more use and interactions,” (listed under “more” in table).

Upper Souris NWR

Using a majority rule of >65%, respondents to the Upper Souris NWR survey felt that the following services should be *left as is* (Table 25):

- inside and outside exhibits,
- services,
- auto tour route,
- naturalness,
- signs,
- visitor numbers, and
- environmental education programs/activities.

Preferences for other services were less clear-cut. Respondents were divided on whether the following services or features should be *left as is* or *increased* (Table 25):

- hiking trails,
- hunting areas,
- fishing areas, and
- facilities.

However, when comparing consumptive and nonconsumptive responses, there was a statistically significant difference for three of these. Consumptive users would like to see more hunting areas (50% vs. 13%; $\chi^2 = 38.61$, $p < .001$, Cramer's $V = .35$) and fishing areas (68% vs. 25%; $\chi^2 = 38.02$, $p < .001$, Cramer's $V = .34$). Nonconsumptive users would like to see more hiking/walking trails (70% vs. 33%; $\chi^2 = 30.73$, $p < .001$, Cramer's $V = .31$).

For visitor impacts, all respondents were divided on whether they should be managed as is or managed to restrict behavior harmful to wildlife (Table 25).

Table 25. Respondent preferences for management of services at Upper Souris NWR. Asterisks indicate statistical differences in responses for consumptive and nonconsumptive users for Upper Souris NWR.

Feature	More (%)	Leave as is (%)	Less (%)
Inside interpretative exhibits	17	82	1
Outside interpretive exhibits	21	78	2
Services	23	75	2
Auto tour route	25	71	4
Naturalness ¹	15	70	15
Signs	25	70	5
Visitor numbers ³	28	70	2
Environmental education programs/activities	33	66	2
*Hiking trails	35	63	2
Visitor impacts ²	10	59	31
*Hunting areas	44	53	3
Facilities	47	51	2
*Fishing areas	62	38	1

¹This statement was worded "restore more natural conditions" (listed under "more" in table)/"allow more landscape alterations" (listed under "less" in table).

²This statement was worded: "Increase efforts to restrict behavior harmful to wildlife" (listed under "less" in table)/ "decrease efforts to restrict visitor behavior harmful to wildlife" ("more" in table).

³This statement was worded "restrict number of users in area," (listed under "less" in the table)/"encourage more use and interactions," (listed under "more" in table).

Fees

Respondents were asked their opinions about paying a fee to visit the refuges. Currently, no fees are charged. Over half of respondents did not agree with the statement "I would consider paying a fee to visit this refuge." (Fig.12). Nearly half of respondents to J. Clark Salyer and Upper Souris survey strongly agreed they should not have to pay a fee to visit refuges (Fig. 13). Interestingly, Vaske, Taylor, and Donnely (1999) found that for eight refuges where fees were being charged, about 88% of visitors felt that the price was about right. The authors caution, however, that the fees may have already displaced some groups who do not agree in principle with fees to public lands. More study is needed to determine how visitors cope with fees once implemented.

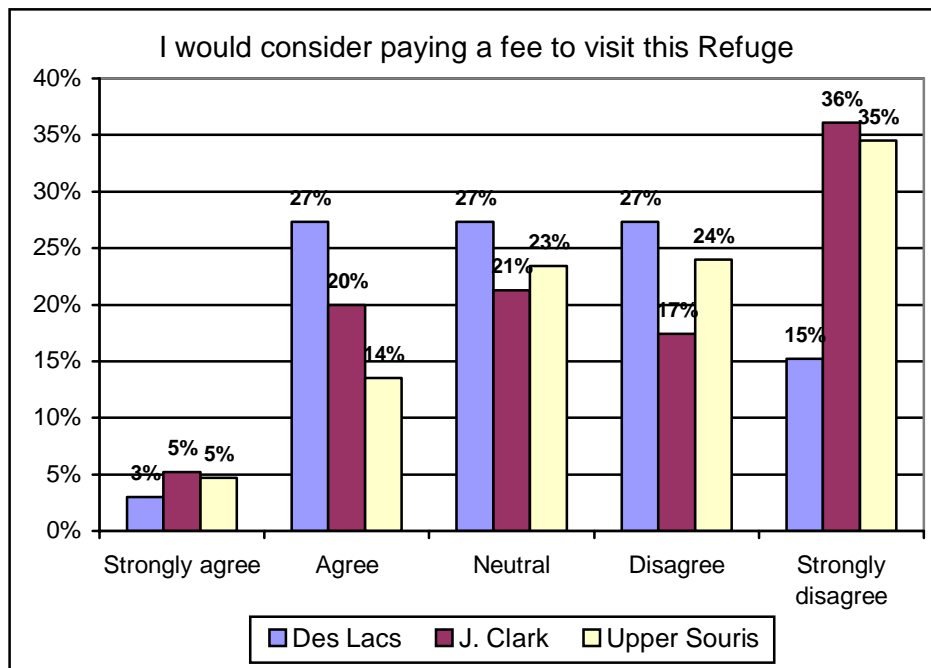


Figure 12. Respondents feelings toward paying a fee to visit Souris River Loop refuges.

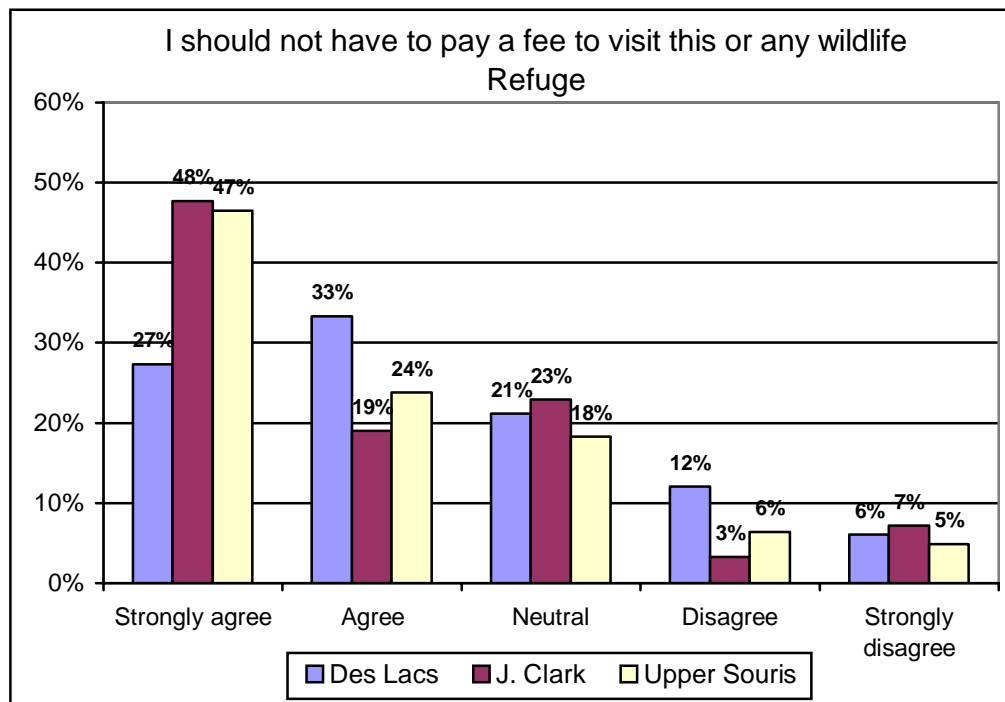


Figure 13. Respondents feelings toward paying a fee to visit Souris River Loop or other refuges.

Habitat Management Tradeoffs

The management tradeoffs are a measure of visitors' agreement with specific management options that encompasses the benefit and drawback associated with implementing each option. These tradeoff statements were developed collaboratively with refuge staff, based on the issues identified during the CCP process (at the time the survey was developed). These scenarios related to:

- grazing,
- burning,
- haying,
- chemical treatment applications,
- water level management, and
- managing for consumptive vs. nonconsumptive species.

Respondents were asked to rate (using a 5-point scale) whether they agreed or disagreed with a series of statements regarding these management issues. Mean scores are presented in Table 26.

In an attempt to identify practical differences in agreement with these different management options, we used the “potential for conflict index” (PCI; Manfredo, Vaske, Teel 2003). The PCI shows central tendency, dispersion, and form simultaneously, so presents a concise indication of potential conflict for the management issue in question. The PCI is the ratio of scoring on either side of a neutral point. This analysis assumes that the greatest conflict would occur when responses are distributed between two extreme values on a scale (in this case, 50% strongly disagreeing and 50% strongly agreeing). This scenario would produce a PCI value of 1. If all responses were on one side of the neutral point (for example 100% agreeing), a PCI value of 0 would result. Graphically, a larger bubble represents a higher potential for conflict. In addition, the graph shows the distribution of the means (e.g., where they fall on the agreement scale; Figs. 14-21).

Table 26. Visitor preference mean scores for biological management issues for Souris River Loop Refuges.

Management action ¹	Des Lacs NWR	J. Clark Salyer NWR	Upper Souris NWR
Conserve native prairie habitat on the Refuge by using prescribed burning to discourage woody vegetation and encourage native grass plants	4.4 ¹	4.2	4.4
Keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds by haying such areas every 4-5 years	3.9	4.0	4.0
Use chemicals to control weeds on the Refuge	3.6	3.9	3.8
Use grazing to control non-native plants, even if this means temporarily having less grass cover on the ground	3.3	3.3	3.5
Primarily consider prairie-dependent songbirds on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the prairie.	4.1	3.6	3.3
Manage for high populations of economically important species even though native prairie/wetlands may be lost and accompanying species may decline	2.1	3.2	3.3
Raise and lower water levels in Refuge marshes to mimic natural flood and drought cycles, even if it means wetland will produce less for waterfowl and other water birds	3.6	3.3	3.1
Use grazing on the Refuge to reduce plant material buildup, wildfire risk, and the spread of non-native plants	3.6	3.1	3.5

¹ Statements are paraphrased here. See survey in appendix for exact wording of statement. For statements written in the negative (e.g., “it is unacceptable ...”), statements have been rephrased in the affirmative and mean scores have been recoded.

² Mean scores are on 5-point Likert scale, where 1= strongly disagree and 5 = strongly agree.

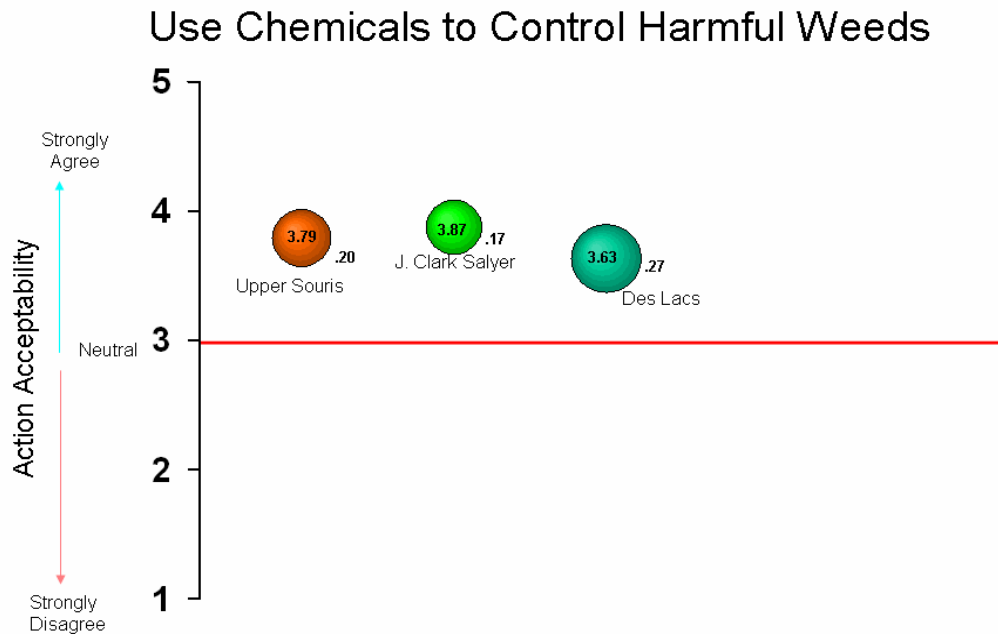


Figure 14. “Potential for Conflict Index” graph for **use of chemicals** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

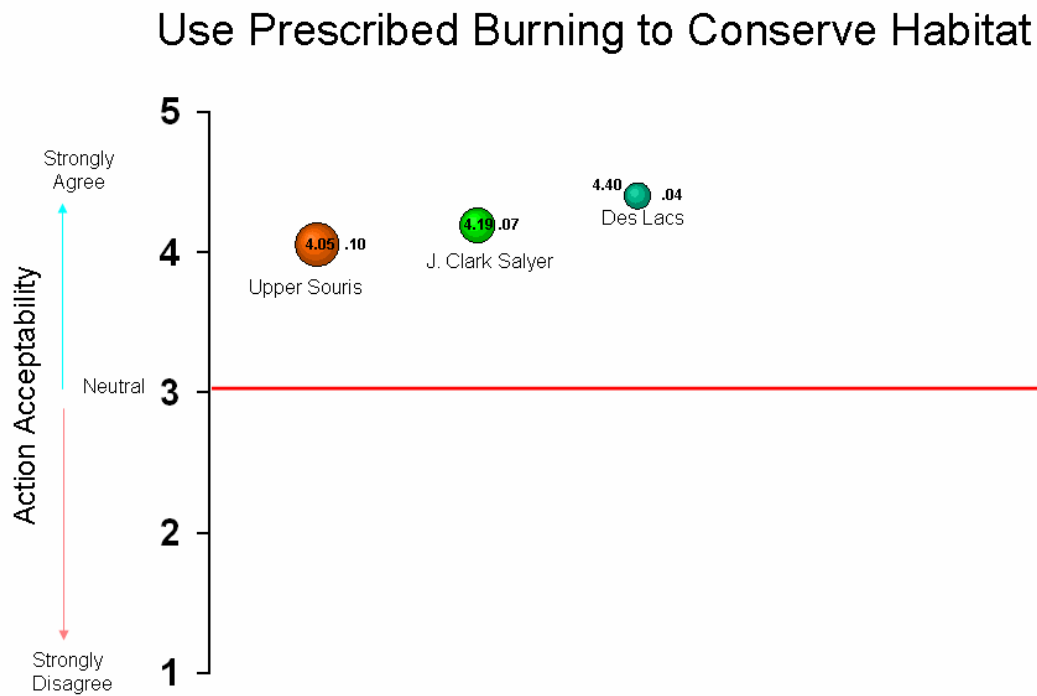


Figure 15. “Potential for Conflict Index” graph for **use of prescribed burning** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

Graze Cattle to Reduce Plant Buildup and Wildfires

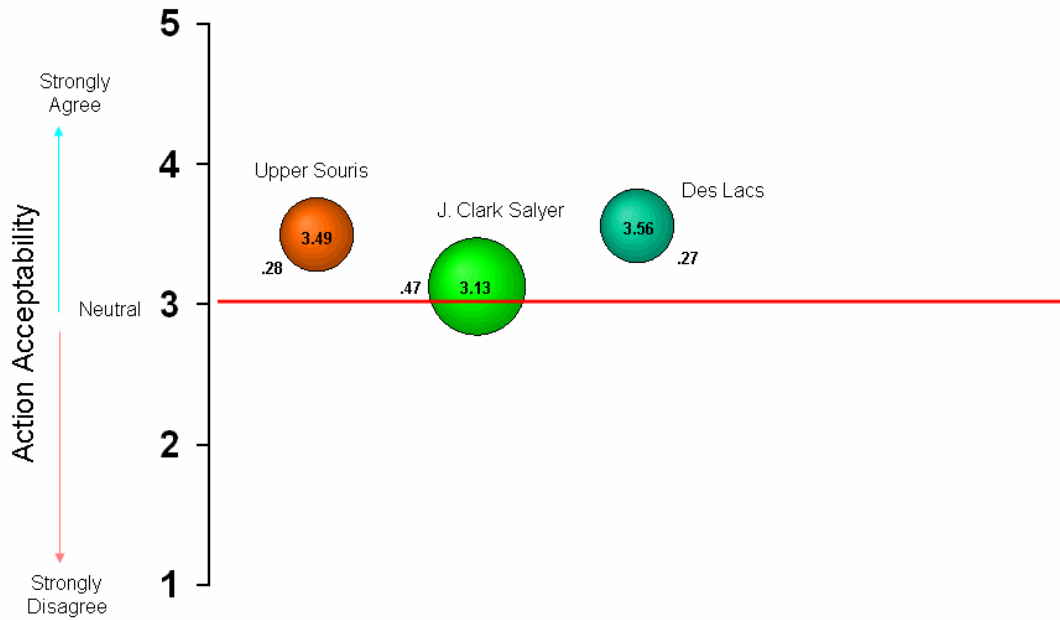


Figure 16. "Potential for Conflict Index" graph for **use of grazing** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

Manage for Economically Important Species

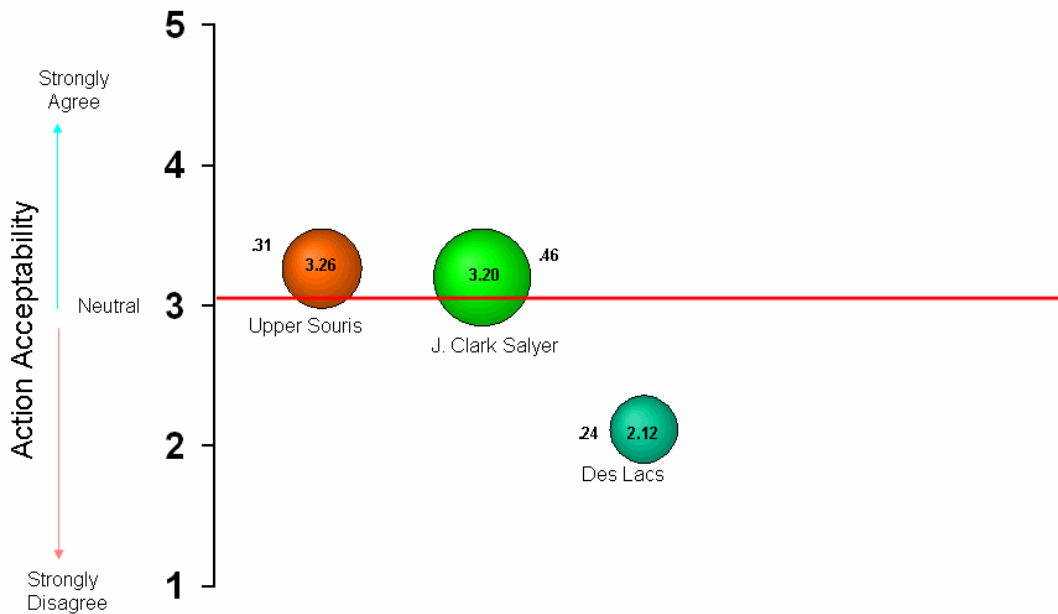


Figure 17. "Potential for Conflict Index" graph for **managing for economically important species** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

Raise and Lower Water Levels to Mimic Flood and Drought Cycles

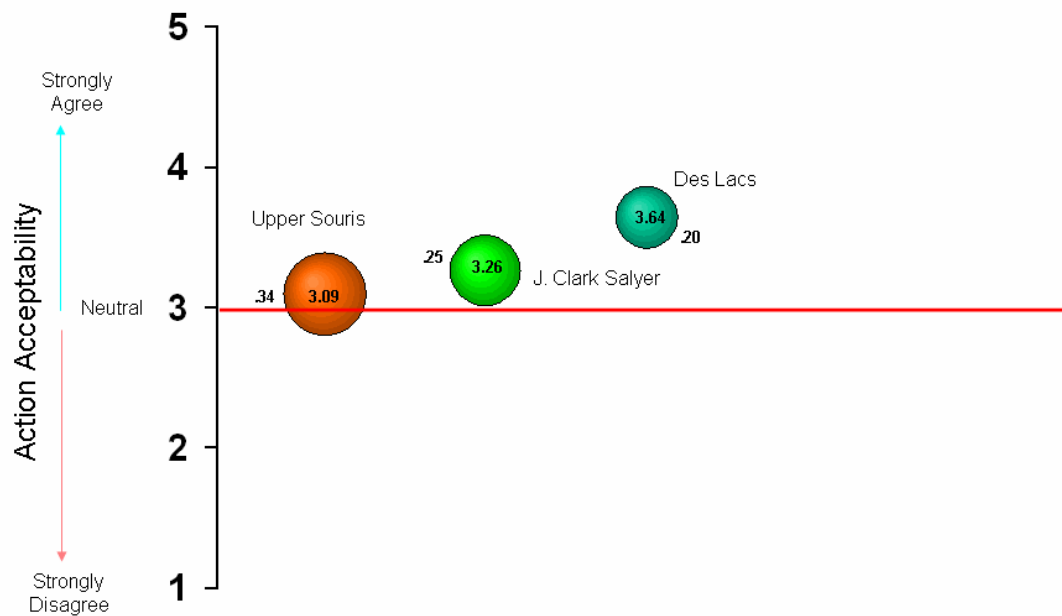


Figure 18. “Potential for Conflict Index” graph for **raising and lowering water levels** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

Use Grazing to Control Non-native Plants

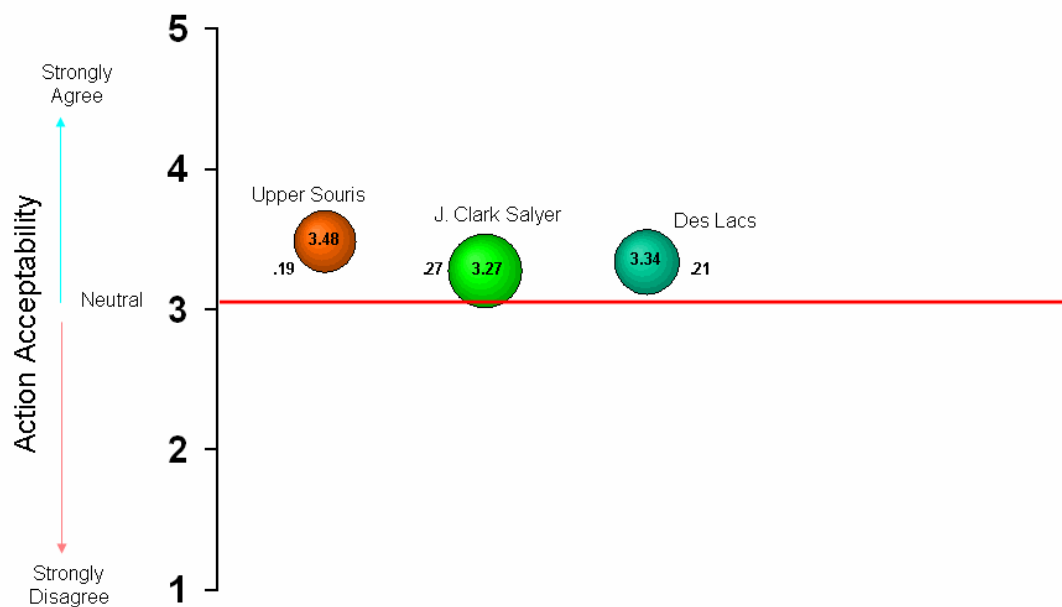


Figure 19. “Potential for Conflict Index” graph for **using grazing to control non-native plants** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

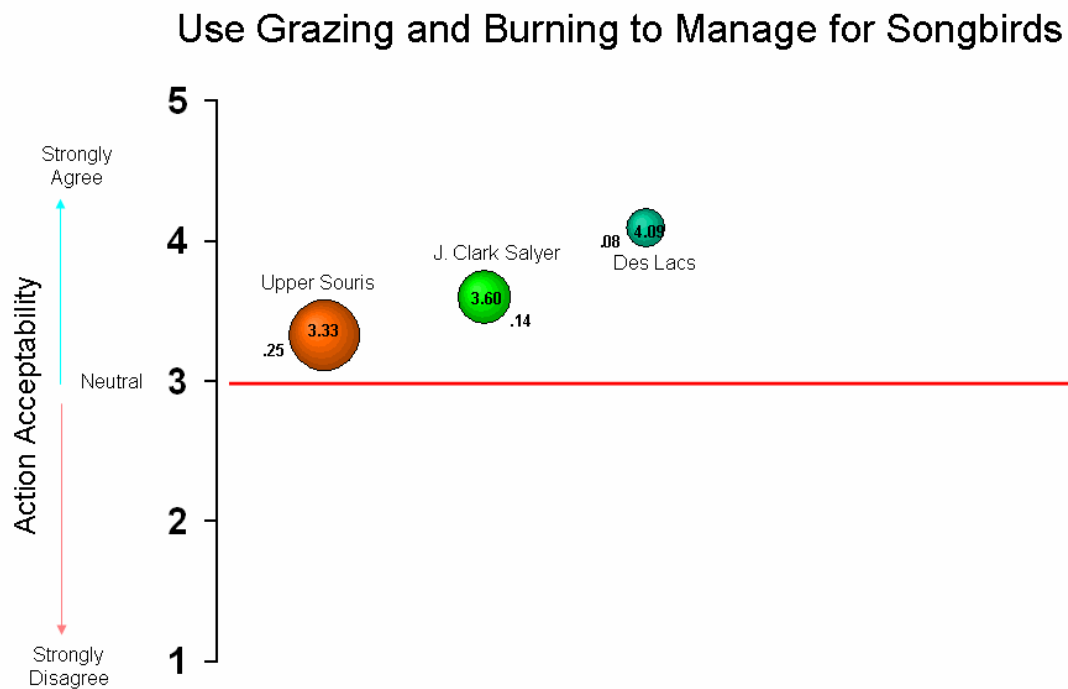


Figure 20. “Potential for Conflict Index” graph for **using grazing and burning to manage for songbirds** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

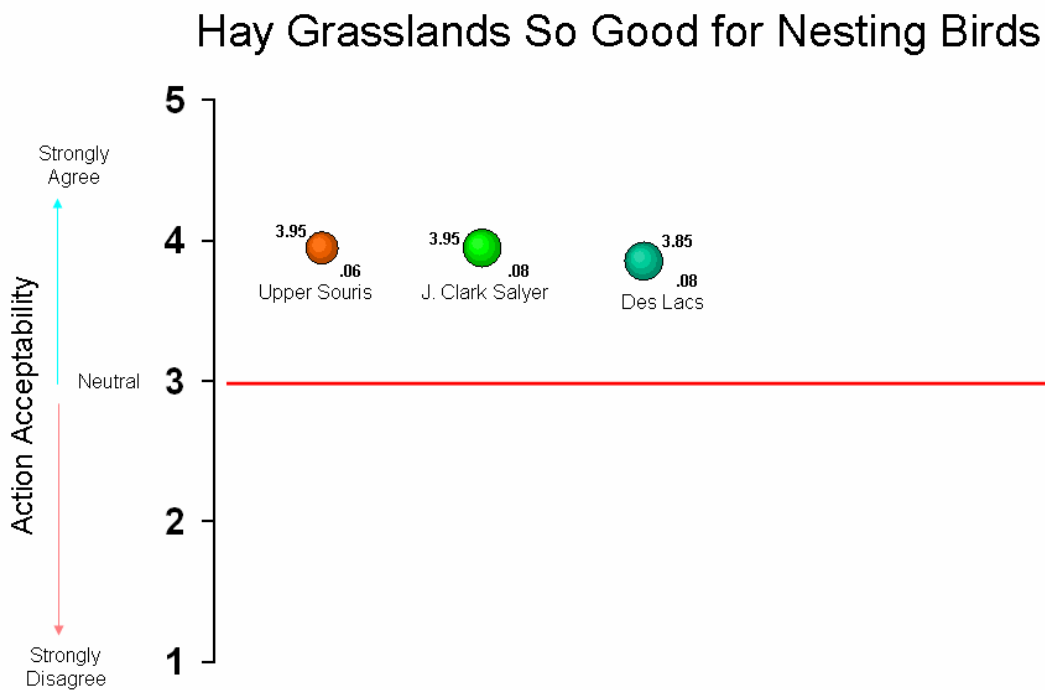


Figure 21. “Potential for Conflict Index” graph for **using haying to keep grasslands good for nesting birds** tradeoff statement. Numbers in the bubbles are the mean agreement scores. Numbers outside the bubbles are the PCI scores, where 0 indicates no conflict and 1 indicates maximum potential for conflict.

Des Lacs NWR

Based on frequencies (Fig. 22) and mean scores (Table 26), there appears to be agreement with all but two of the management tradeoff statements, with strong agreement for prescribed burning. Respondents do not agree with managing for economically important species if prairie/wetlands are lost. They appear unsure of the acceptability of using grazing to control non-native plants. For all of these options, however, there appears to be a low potential for conflict (Figs. 14-21).

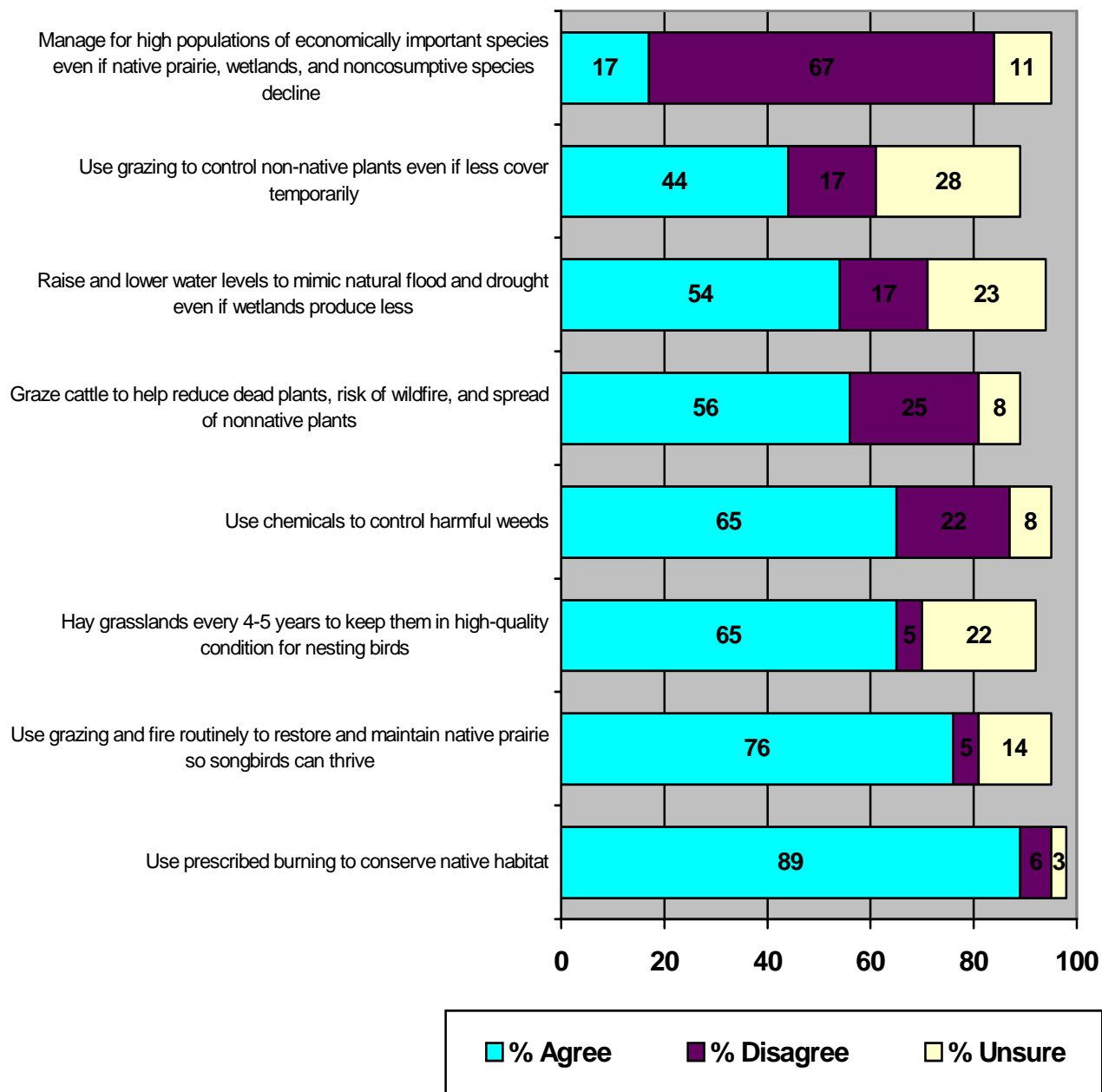


Figure 22. Des Lacs NWR respondent agreement with management tradeoff statements.

J. Clark Salyer NWR

Based on frequencies (Fig. 23) and mean scores (Table 26), there appears to be a mild level of agreement with about half of the management tradeoff statements, with strong agreement for prescribed burning. Respondents are, however, unsure about the following options: raising and lowering water levels to mimic natural flood and drought conditions; grazing cattle to reduce plant material, risk of wildfire and spread of non-natives; and managing for high populations of economically important species. The grazing options and managing for economically important species show the highest potential for conflict (Figs. 14-21).

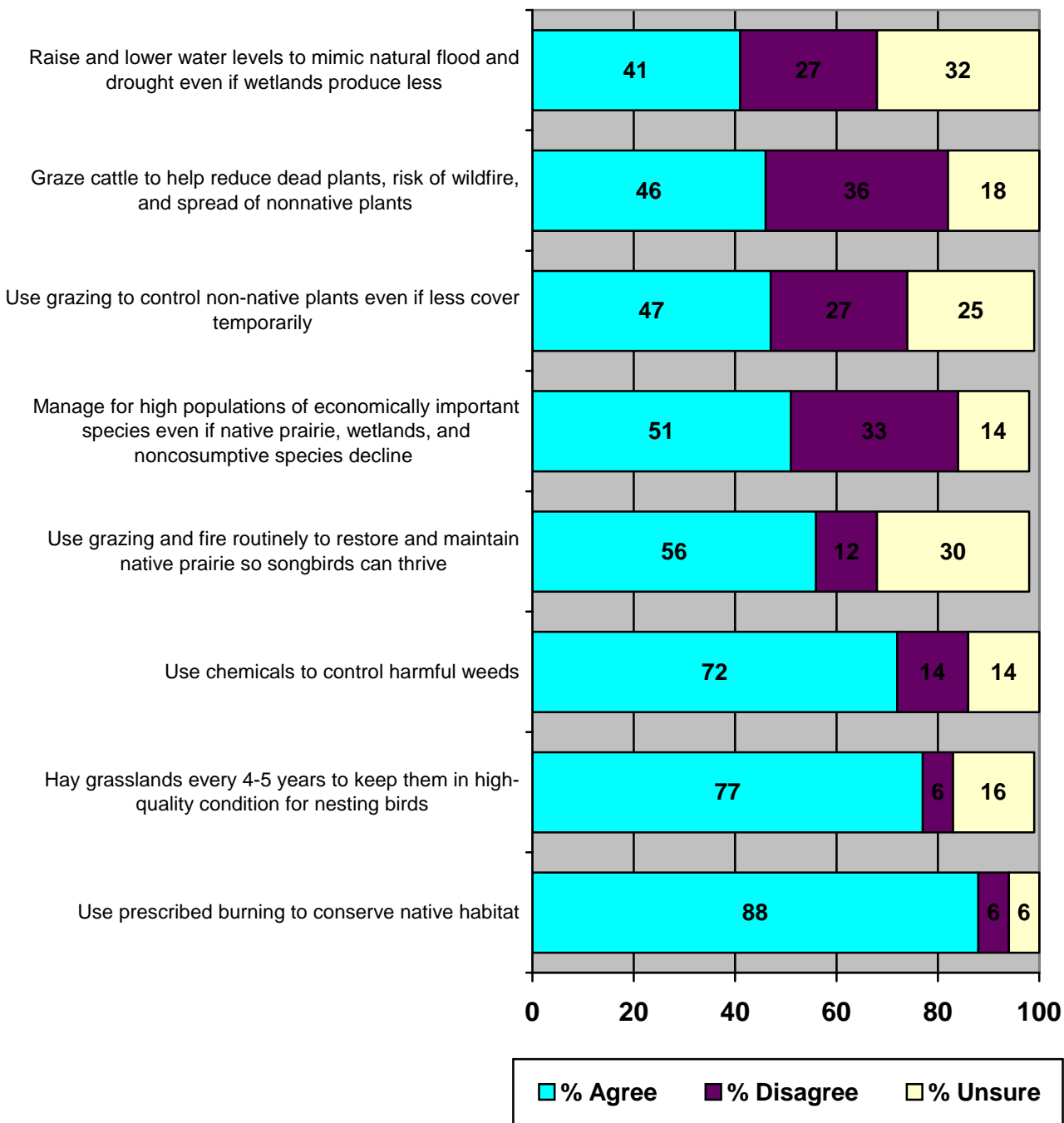


Figure 23. J. Clark Salyer NWR respondent agreement with management tradeoff statements.

Upper Souris NWR

Based on frequencies and mean scores, there appears to be a mild level of agreement with all but three of the management tradeoff statements (Table 26 and Fig. 24). Respondents are unsure about the following options: raising and lowering water levels to mimic natural flood and drought conditions; managing for economically important species; and managing primarily for prairie songbirds through the use of grazing and fire. These three options have the highest potential for conflict as well (Figs. 14-21). The potential for conflict over managing for economically important species and managing for songbirds is likely being driven by differences in consumptive and nonconsumptive respondents.^{2,3} The potential for conflict over raising and lowering water levels, however, does not appear to be driven by consumptive and nonconsumptive differences.

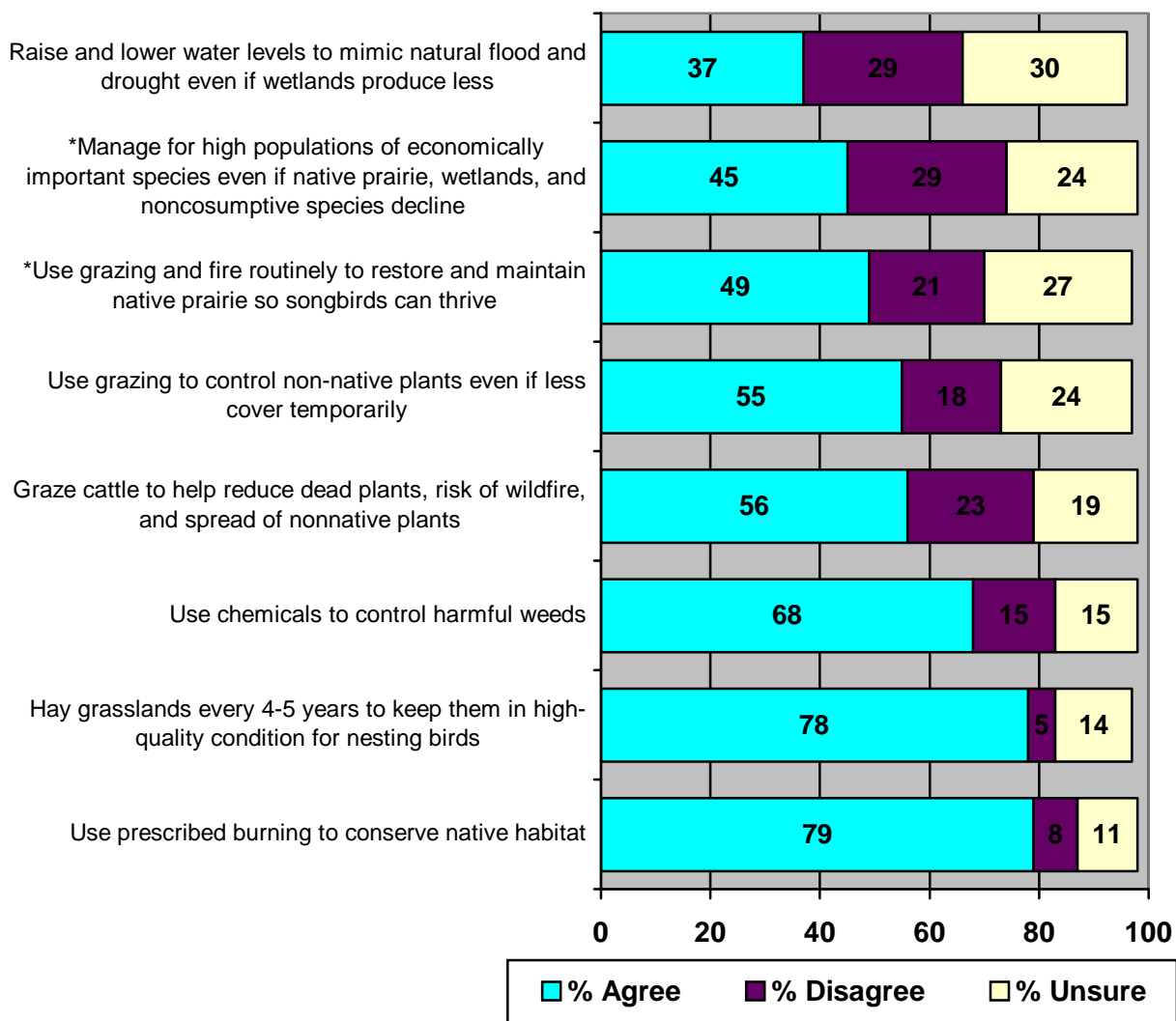


Figure 24. Upper Souris NWR respondent agreement with management tradeoff statements. Asterisks indicate statistically significant differences in responses between consumptive and nonconsumptive respondents.

² For managing for economically important species, 53% of consumptive respondents agreed, vs. 17% of nonconsumptive respondents, $\chi^2 = 44.92$, $p < .001$, Cramer's $V = .37$. For primarily managing for native songbirds using grazing and burning, 76% of nonconsumptive respondents agreed vs. 45% of consumptive respondents; $\chi^2 = 29.93$, $p < .001$, Cramer's $V = .31$.

³ Cramer's V is a measure of the degree of association between two nominal categorical variables.

Visitor Communication and Participation

In communicating with the public, it is important to understand how individuals participate in natural resource decision making and ways in which they commonly obtain information on these topics. Also important is the public's relationship with the agency. In an effort to better understand these issues, we asked respondents about their participation in natural resource issues, the information source they rely on to learn about the refuges, and their trust in the U.S. Fish and Wildlife Service in general and the refuges, specifically.

Citizen Participation

Visitors to J. Clark Salyer appear to be most engaged in natural resource decision making activities, followed by Des Lacs NWR respondents. For all three refuges, signing a petition was the most common activity (Table 27).

Table 27. Types of natural resource-related activities participated in by Souris River Loop survey respondents.

Activity	Des Lacs NWR (%)	J. Clark Salyer NWR (%)	Upper Souris NWR (%)
Signed a petition concerning natural resources or the environment	56	63	40
Attended a public hearing or meeting	51	52	28
Contacted or written a state/federal agency	43	62	25
Joined a special interest group	39	62	20
Contacted or written a U.S. senator, member of congress, or state legislator	41	48	19
Written a letter to the editor of a newspaper	21	14	9
Helped to organize a petition	0	5	7
Lead a special interest group	15	13	5

Communication

When asked how they learned about the refuges, answers were very similar across refuges (Fig. 25). Visitors primarily rely on family and friends for information about these refuges. However, also an important component of obtaining information about the refuge is the fact that most of the visitors are local, especially for J. Clark Salyer and Upper Souris NWR. Many respondents wrote in the "other" blank that they simply know the refuges exist because they have grown up in the area. A small number of respondents said they learned about the refuge from birding guide books. At Upper Souris NWR, a statistically significant larger proportion of nonconsumptive users indicated they rely on highway signs for information (34% vs. 16% for consumptive users; $\chi^2 = 16.38$, $p = .000$, Cramer's $V = .22$). This may be attributed to the fact that more consumptive users are from the local area, and thus do not rely as heavily on these signs ($\chi^2 = 10.70$, $p = .005$, Cramer's $V = .18$).

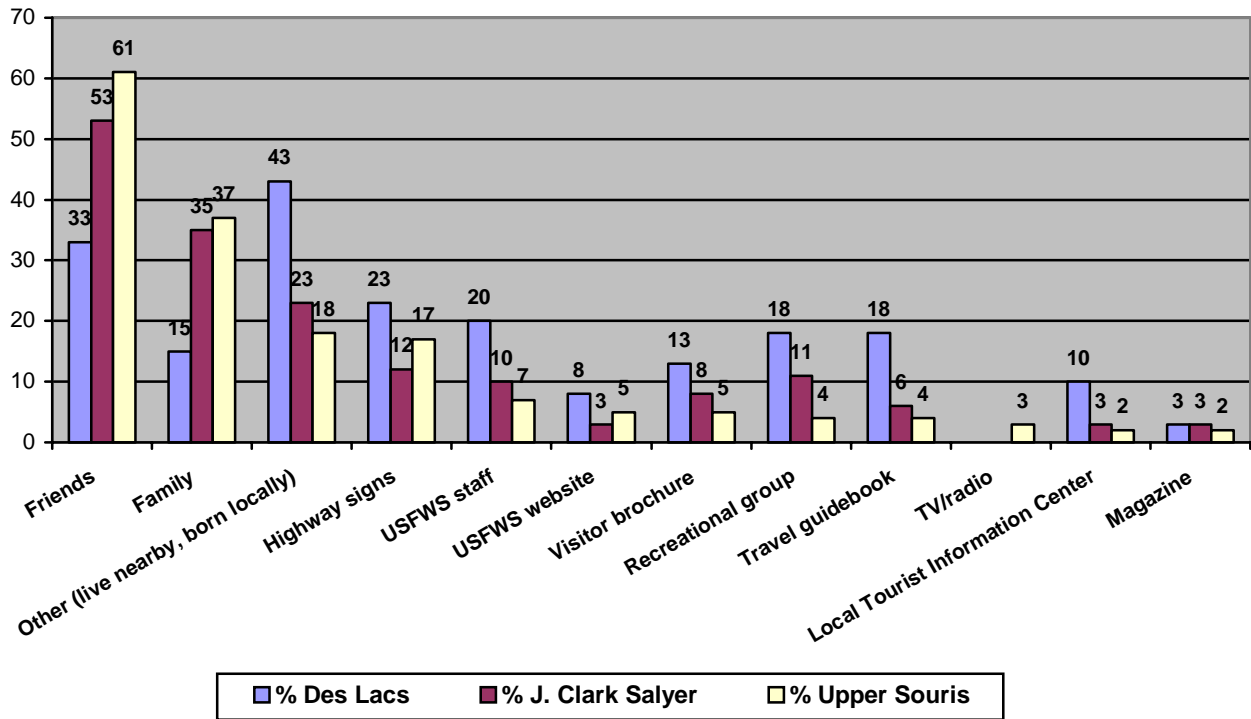
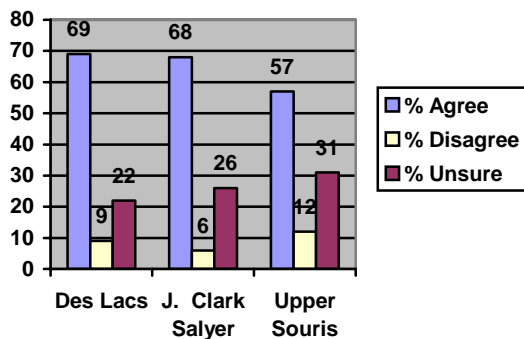


Figure 25. Sources from which respondents learned about the refugees.

Trust in the Refugees and USFWS

Respondents were asked to rate their agreement with two statements related to trust in the agency and refuge. The mean scores for these statements were slightly above the neutral mark and over half of respondents agreed with the statements (Fig. 26), indicating mild agreement. However, 16-31% of respondents were unsure about their trust. These answers give an indication that respondents are not distrustful of refuge staff and USFWS, however they are not overly trustful. This issue of trust is an important consideration when interacting with visitors and the local community in the CCP process.

I have confidence in decisions made by the local staff at the Refuge



I have confidence in Refuge decisions made by USFWS

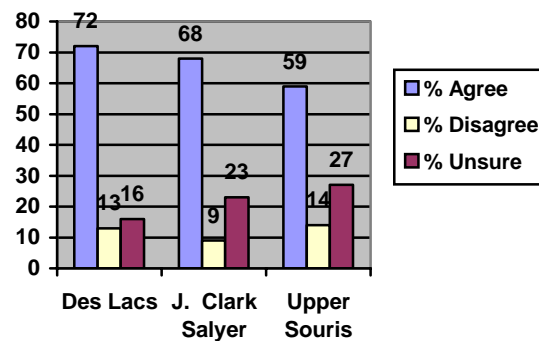


Figure 26. Respondent agreement with statements related to trust in Refuge staff and U.S. Fish and Wildlife Service. Responses were coded on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree), with unsure being the mid-point.

Summary and Discussion of Key Findings

Below is a summary and presentation of key finding from the surveys conducted at Des Lacs, J. Clark Salyer, and Upper Souris NWR's. It is important to note the limitations in the generalization of the data for Des Lacs and J. Clark Salyer NWR visitors (see p. 8).

Visitor and Trip Profile

Nearly all respondents to J. Clark Salyer and Upper Souris NWR's and about half for Des Lacs NWR are residents of the state of North Dakota. Most of these respondents also visit the refuge often each year. For J. Clark Salyer and Upper Souris, these individuals are 40-50 years old (60 yrs for Des Lacs) with fairly high levels of education and income. Understanding the profile of visitors their role in a public participatory process can be informative in communications with those visitors.

Visitor Experience at the Refuges

Not surprisingly, many of the activities that the Souris River Loop refuges are well-known for are important to a large majority of visitors sampled. Activities such as viewing prairie birds and waterfowl, the scenic auto tours, interpretive trails and hiking, and wildlife photography are important to visitors to all three of these refuges. In addition, at Upper Souris, nonconsumptive users are drawn to the refuge for environmental education programs and activities and interpretive exhibits. Consumptive users at this refuge find fishing (bank, boat, and ice) most important, followed by wildlife observation and then deer hunting. At J. Clark Salyer, deer hunting is important to most visitors sampled, followed by those activities common to all three refuges. However, as mentioned earlier in the report, this may be due to the sample for this refuge being primarily comprised of deer hunters.

Hunting on these refuges (J. Clark Salyer and Upper Souris) is clearly an important activity, with respondents making multiple trips to the refuge to do so. They feel that hunting on the refuge provides a unique experience they cannot find elsewhere.

Fishing is by far the activity to which visitors are drawn to Upper Souris NWR. They make as many as 30+ trips each year to fish there and have been doing so for many years. Angler visitors appear to be motivated to fish there simply for the enjoyment of the activity, being less concerned about catching large trophy fish. The majority of respondents who fish at the refuge would continue to do so even if they thought they would not catch any fish. This says much about the experience that the refuge provides for this activity, indicating they are likely gaining more from the experience than simply catching a fish.

It is the emotional and symbolic meanings of these refuges that appear important to visitors. Although visitors surveyed do not seem overly dependent on these refuges to do the activities they like to do (there are likely other alternative locations available that satisfy them), they think they are the *best* place for what they like to do. They identify with these places for what they symbolize to them and agree that they are important places for future generations. Visitors appear to recognize the importance of the experiences they have at these refuges and those experiences bring them back time and again.

Visitor Trip Spending

Accounting for both the direct and secondary effects, spending by non-local Upper Souris NWR visitors generates total economic impacts of over \$1.25 million in local output, \$343,468 in personal income and 18 jobs annually in Ward and Renville Counties. For J. Clark Salyer NWR, spending by non-local visitors generates total economic impacts of over \$485,000 in local output, \$133,000 in personal income and 9 jobs annually in Bottineau and McHenry Counties. Spending by non-local Des Lacs NWR visitors generates total economic impacts of over \$201,000 in local output, \$65,800 in personal income and 3.3 jobs annually in the communities of Kenmare and Bowbells.

Visitor Preferences for Refuge Management

Importance of and Satisfaction with Services

Nearly all services asked about were rated as important or very important by a majority of respondents. Exceptions to this were services that did not apply to a segment of visitors (disabled access, information on hunting). Using the importance-performance framework, all services rated as important fell in the “keep up the good work” category, indicating current management is working well.

Additional detail regarding how services should be managed to maximize refuge experience indicate the following: respondents felt most services should be *left as is*, reaffirming results of the importance-performance framework results. For some services, respondents were more split in terms of how they should be managed, with a large percentage feeling they should be increased and a large percentage feeling services should be left as is. For example, should visitor numbers at Des Lacs and J. Clark Salyer NWRs be managed as is or managed to encourage more use and interaction? Should there be more hunting areas added at J. Clark Salyer and Upper Souris NWRs? These (and others described in the report on pp. 3336) represent services or features where a sizeable portion of those interviewed feel management could be modified to maximize their experience even though existing conditions are satisfactory.

In terms of paying fees for the services and recreational opportunities that are offered at these refuges, visitors appear leery. Most respondents said they did not agree with having to pay a fee to visit a National Wildlife Refuge and expressed mild disagreement when thinking of paying to visit these refuges.

Habitat Management Tradeoffs

Visitors surveyed at all three refuges are supportive of the majority of the management tradeoffs and there appears to be low potential for conflict with most of these options as well. The most accepted tradeoff is the use of prescribed burning to conserve native prairie habitat. Also, there was little disagreement or conflict with haying grasslands every 45 years to keep them maintained for nesting birds. One quarter to one third of respondents were unsure about raising and lowering water levels to mimic natural flood and drought conditions, and it was not considered acceptable by the majority of visitors surveyed at J. Clark Salyer and Upper Souris NWR. This high level of uncertainty may indicate that respondents have little knowledge about benefits, drawbacks, or outcomes of this management tool. Other less acceptable tradeoffs differed for each refuge; however, the most uncertainty in responses occurred with J. Clark Salyer NWR respondents. Acceptability of these tradeoffs appears to be related to preferences of consumptive and nonconsumptive users, in some cases, at Upper Souris NWR. This relationship could not be tested with any reliability at the other two refuges; however a likely relationship may exist.

As options are proposed in the CCP, it will be helpful to know where opposition may occur and the public participation process continues. Likewise, as alternatives are implemented, it will be important to recognize potential resistance. Because, even though the development of a CCP is a public process, it is unlikely that all visitors will be in agreement with all management actions.

Visitor Communication and Participation

Visitors surveyed do not appear to be overly participatory in natural resource decision making processes. This may indicate that reliance on alternative methods of public involvement, such as results of this survey, will be important in understanding the preferences and opinions of refuge users in this CCP process.

Visitors surveyed appear to have some level of trust in the refuge staff or the USFWS, however it is not overwhelming. Around 5070% of respondents to all refuges indicate they trust both the refuge staff and the U.S. Fish and Wildlife Service. However, 2030% are unsure. This information is important as the refuge continues to interact with stakeholders and visitors and improve relationships throughout the CCP process.

Interestingly, while their trust in the refuge is not overwhelming, USFWS staff, websites, highway signs, and brochures are used to gain information about these refuges. It appears that even though these are not the primary

sources of information, they are being used and may be opportunistic outlets to effectively communicate and continue relationship-building pursuits with visitors.

Clearly, given the close proximity of residence of most respondents to these refuges and the fact that they rely most heavily on friends and family, or simply have grown up knowing about the refuge, informal communication and relationship-building with local residents, business leaders, and community groups is essential.

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Appendix A

Survey Instruments for Souris River Loop Refuges

Des Lacs National Wildlife Refuge Visitor Survey



Thank you for visiting Des Lacs National Wildlife Refuge and for agreeing to participate in this study. The US Fish and Wildlife Service and the US Geological Survey are conducting this survey to learn more about refuge visitors in order to improve the management of the area and enhance visitor opportunities.

The survey is completely confidential and your participation is entirely voluntary. You have been chosen to represent a typical visitor, so your participation is important to us. Your answers will be kept strictly confidential and your name will not be associated in any way with your answers.

If you have any questions about this survey, please contact Lynne Caughlan at (970) 226-9384 or email lynne_caughlan@usgs.gov. Thanks again!

PAPERWORK REDUCTION ACT STATEMENT: A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Public burden for the collection of this information is estimated to average 15 minutes per response. Comments regarding this collection of information should be directed to: Desk Officer for the Interior Department, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503; and the Bureau Clearance Officer, U.S. Geological Survey, 208 National Center, Reston, Virginia 20192.

OMB Control Number: 1028-0077

SECTION 1 – Please tell us about your visit to Des Lacs National Wildlife Refuge.

1. How many times have you visited Des Lacs National Wildlife Refuge in the last 12 months? _____ # Trips
2. Please check the activities you have participated in during the last 12 months at Des Lacs National Wildlife Refuge. (*check all that apply*):
- | | | |
|---|--|---|
| <input type="checkbox"/> Bird Watching | <input type="checkbox"/> Canoeing | <input type="checkbox"/> Deer Hunting |
| <input type="checkbox"/> Picnicking | <input type="checkbox"/> Scenic Auto Tour | <input type="checkbox"/> Upland Game Hunting |
| <input type="checkbox"/> Nature/Wildlife Viewing | <input type="checkbox"/> Environmental Education | <input type="checkbox"/> Turkey Hunting |
| <input type="checkbox"/> Photography | <input type="checkbox"/> Hiking/Nature Trails | <input type="checkbox"/> Waterfowl Hunting Surrounding the Refuge |
| <input type="checkbox"/> Driving for pleasure | <input type="checkbox"/> Bicycling/Mtn biking | <input type="checkbox"/> Cross Country Skiing |
| <input type="checkbox"/> Other, please describe _____ | | |

- 2a. Which of the activities that you checked above was the most important reason for your **most recent visit**?

Most Important Activity _____

3. For your most recent visit to Des Lacs National Wildlife Refuge was it (*check only one*):
- ☐ the primary purpose or sole destination of your trip?
- ☐ one of many equally important reasons or destinations for your trip?
- ☐ just an incidental or spur of the moment stop on a trip taken for other purposes or to other destinations?
4. What was your one way **travel time** and **travel distance** from home to Des Lacs National Wildlife Refuge on this most recent trip?

Travel time: _____ # hours _____ # minutes Distance: _____ # one-way miles

5. What was the amount of time you spent at Des Lacs National Wildlife Refuge on this most recent trip?

_____ # hours or _____ # days

6. Including yourself, what was the number of people in your group that traveled on this most recent trip? _____

7. How did you learn about Des Lacs National Wildlife Refuge? (*check all that apply*)

<input type="checkbox"/> Friends	<input type="checkbox"/> Travel guidebook
<input type="checkbox"/> Family	<input type="checkbox"/> Highway signs
<input type="checkbox"/> US Fish & Wildlife Service staff	<input type="checkbox"/> Hotel staff
<input type="checkbox"/> US Fish & Wildlife Service website	<input type="checkbox"/> Magazine
<input type="checkbox"/> Visitor brochure	<input type="checkbox"/> Local Tourist Information Center
<input type="checkbox"/> Recreational Group (birding group, hunting club, hiking group, etc...)	<input type="checkbox"/> Other _____

If you hunt on the Refuge please answer the following questions, otherwise skip to Section 2.

8. How many years have you been hunting at Des Lacs National Wildlife Refuge? _____ # years
9. Typically, how many trips for the primary purpose of hunting do you take to Des Lacs National Wildlife Refuge during each hunting season?

_____ # Deer hunting trips each season

_____ # Upland game hunting trips each season

_____ # Turkey hunting trips each season

_____ # Waterfowl hunting trips *in the immediate area surrounding* Des Lacs National Wildlife Refuge each season

10. Typically, what is the total number of hunting trips you take to all other hunting sites besides Des Lacs National Wildlife Refuge during each hunting season?

- _____ # Deer hunting trips to other sites each season
_____ # Upland game hunting trips to other sites each season
_____ # Turkey hunting trips to other sites each season
_____ # Waterfowl hunting trips to other sites each season

11. Was your last hunting experience on the Refuge different than other places you hunt?

- ☐ No
☐ Yes → *please describe* _____

12. Are you satisfied with the availability and access of the deer hunting retrieval roads on the Refuge?

- ☐ Yes
☐ No → *please explain* _____

13. What was the primary type of weapon you used on your **most recent hunting trip** on the Refuge?
(check one) ___Firearm ___Archery ___Muzzleloader

SECTION 2 – Please tell us about your trip expenditures.

1. Please indicate how far you live from Des Lacs National Wildlife Refuge:

- ☐ Local North Dakota Resident (*closer than 40 miles from the Refuge including Kenmare and Bowbells area*)
☐ Non Local North Dakota Resident (*farther than 40 miles from the Refuge*)
☐ I live outside of North Dakota

2. Please indicate the amount you and members of your group with whom you shared expenses (e.g., other family members, traveling companions) spent on **your most recent visit** to Des Lacs National Wildlife Refuge (*please enter the amount for each category*)

Category	Amount Spent Locally in Kenmare or Bowbells Area (within 40 miles of the Refuge)	Amount Spent Elsewhere in North Dakota En Route to Des Lacs National Wildlife Refuge
Gasoline/related automobile costs	\$ _____	\$ _____
Hotels/motels	\$ _____	\$ _____
Campground/RV Park fees	\$ _____	\$ _____
Food/drink: restaurants	\$ _____	\$ _____
Food/drink: groceries	\$ _____	\$ _____
Supplies/souvenirs/other retail	\$ _____	\$ _____
Hunting license	\$ _____	\$ _____
Taxidermy	\$ _____	\$ _____
Game processing	\$ _____	\$ _____
Rental car	\$ _____	\$ _____
Other: _____	\$ _____	\$ _____

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

_____ # of persons in your group sharing expenses

SECTION 3– Please tell us about the importance of your experience at Des Lacs National Wildlife Refuge.

1. Please tell us how important the following activities are in terms of your decision to take recreation trips to Des Lacs National Wildlife Refuge. (*Please circle one number for each item.*)

Activity	Importance for your recreation at Des Lacs NWR					No Opinion
	Not Important	Somewhat Important	Important	Very Important		
Viewing ducks, geese, and other water birds	1	2	3	4		<input type="checkbox"/>
Viewing prairie birds	1	2	3	4		<input type="checkbox"/>
Viewing other wildlife	1	2	3	4		<input type="checkbox"/>
Hunting deer	1	2	3	4		<input type="checkbox"/>
Hunting upland game	1	2	3	4		<input type="checkbox"/>
Hunting waterfowl in the immediate area surrounding the Refuge	1	2	3	4		<input type="checkbox"/>
Hiking/Nature trails	1	2	3	4		<input type="checkbox"/>
Canoeing	1	2	3	4		<input type="checkbox"/>
Scenic Auto Tour	1	2	3	4		<input type="checkbox"/>
Canada Goose Trail	1	2	3	4		<input type="checkbox"/>
Biking/mountain biking	1	2	3	4		<input type="checkbox"/>
Cross country skiing or snowshoeing	1	2	3	4		<input type="checkbox"/>
Self-guided hikes or tours with interpreted signs	1	2	3	4		<input type="checkbox"/>
Environmental education programs	1	2	3	4		<input type="checkbox"/>
Wildlife photography opportunities	1	2	3	4		<input type="checkbox"/>
Wildlife viewing blinds	1	2	3	4		<input type="checkbox"/>
Tasker's Coulee Wooded Area	1	2	3	4		<input type="checkbox"/>
Other activities (<i>Please list</i>) _____	1	2	3	4		<input type="checkbox"/>

2. Would you like to see Bison grazing on the Refuge? ☐ Yes ☐ No

3. Are you satisfied with the availability of the Canada Goose Hiking Trail?

☐ Yes

☐ No → *please explain* _____

4. This question has two parts. **First** rate how important the item is to your satisfaction during your last visit to Des Lacs National Wildlife Refuge. **Then** rate how satisfied you are with the way the Refuge is managing for each item.

	Importance					Satisfaction with Conditions					
	Not Important	Somewhat Important	Important	Very Important	Does not apply	Poor	Adequate	Average	Good	Outstanding	Does not apply
Access for people with disabilities	1	2	3	4	DA	1	2	3	4	5	DA
Available parking	1	2	3	4	DA	1	2	3	4	5	DA
Trails clearly marked	1	2	3	4	DA	1	2	3	4	5	DA
Picnic areas clean and maintained	1	2	3	4	DA	1	2	3	4	5	DA
Wildlife viewing opportunities	1	2	3	4	DA	1	2	3	4	5	DA
Condition of the natural environment	1	2	3	4	DA	1	2	3	4	5	DA
Helpfulness of Refuge staff	1	2	3	4	DA	1	2	3	4	5	DA
Refuge easy to find	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hiking, bird watching, and wildlife photography	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hunting	1	2	3	4	DA	1	2	3	4	5	DA
Kiosks or signs with information about the Refuge and its wildlife	1	2	3	4	DA	1	2	3	4	5	DA
Self-guided hikes or auto tours with interpretive signs	1	2	3	4	DA	1	2	3	4	5	DA

5. Please indicate how you feel the features listed below should be managed to maximize your experience at Des Lacs National Wildlife Refuge. *(Please check one answer for each feature.)*

Naturalness	___ restore more natural conditions	___ leave as is	___ allow more landscape alterations
Facilities	___ remove some facilities	___ leave as is	___ develop additional facilities
Services	___ provide less visitor info & staff	___ leave as is	___ provide more visitor info & staff
Auto tour route	___ provide fewer roads	___ leave as is	___ increase the number of roads
Hiking trails	___ provide fewer trails	___ leave as is	___ provide more trails
Information signs	___ limit the number of signs	___ leave as is	___ provide more signs
Environmental education opportunities	___ reduce programs and interpretation	___ leave as is	___ more programs & interpretation
Interpretive exhibits	___ provide fewer interpretive exhibits	___ leave as is	___ provide more interpretive exhibits
Hunting	___ provide fewer hunting areas	___ leave as is	___ provide more hunting areas
Visitor numbers	___ restrict number of users in area	___ leave as is	___ encourage more use and interactions
Visitor impacts	___ increase effort to minimize visitor actions that are harmful to Refuge plants and animals	___ leave as is	___ have less regulation of visitor behavior

6. What would enhance your experience at Des Lacs National Wildlife Refuge?

7. What experience have you had at Des Lacs National Wildlife Refuge that would bring you back?

8. Please indicate the extent to which each statement below describes your general feelings about Des Lacs National Wildlife Refuge (*circle the number that best describes how you feel about each statement*).

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is important to me that my children and my children's children will be able to visit the Refuge	1	2	3	4	5
I am very attached to the Refuge	1	2	3	4	5
Coming to places like this Refuge is an important part of my family tradition	1	2	3	4	5
This area is the best place for what I like to do	1	2	3	4	5
Because of my experiences at this Refuge I will definitely come back	1	2	3	4	5
I feel this Refuge is a part of me	1	2	3	4	5
This place is special because it is where my family and I spend time	1	2	3	4	5
I get more satisfaction out of visiting this place than visiting any other	1	2	3	4	5
This Refuge means a lot to me	1	2	3	4	5
Doing what I do at this Refuge is more important to me than doing it in any other place	1	2	3	4	5
I have confidence in decisions made by the local staff at the Refuge	1	2	3	4	5
The Refuge provides me a sense of connection to past and future generations	1	2	3	4	5
No other place can compare to this area	1	2	3	4	5
I identify strongly with the Refuge	1	2	3	4	5
Coming to places like this Refuge was an important part of my childhood	1	2	3	4	5
I wouldn't substitute any other place for doing what I do here	1	2	3	4	5
This place is special because it is where my friends and I spend time	1	2	3	4	5
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge	1	2	3	4	5
I would consider paying a fee to visit this Refuge	1	2	3	4	5
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge	1	2	3	4	5

SECTION 4 – Please tell us about your participation in natural resource issues.

1. We are interested in the ways refuge visitors may try to influence decisions about local or regional natural resource or environmental issues. Please indicate which of the activities you have participated in within the last 5 years.

Participation	Yes	No
1. Attending a public hearing or meeting	<input type="checkbox"/>	<input type="checkbox"/>
2. Contacting or writing a state/federal agency	<input type="checkbox"/>	<input type="checkbox"/>
3. Contacting or writing a U.S. senator, member of congress, or state legislator	<input type="checkbox"/>	<input type="checkbox"/>
4. Writing a letter to the editor of a newspaper	<input type="checkbox"/>	<input type="checkbox"/>
5. Signing a petition	<input type="checkbox"/>	<input type="checkbox"/>
6. Helping to organize a petition	<input type="checkbox"/>	<input type="checkbox"/>
7. Joining a special interest group (such as an environmental, sportsman's, animal rights, agriculture, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>
↳ 7a. If YES, Please list organization(s) _____		
8. Leading a special interest group (such as an environmental, sportsman's, animal rights, agriculture, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 5 -- Please tell us your opinion about different management issues on Des Lacs NWR.

1. This refuge houses major biological communities of the Great Plains region of the United States. Historically, this ecosystem was exposed to dynamic processes such as grazing, fire, flood, and drought. Generally, Refuge Managers use grazing, haying, burning, rest and water management to restore and maintain this prairie system in order to provide good nesting and escape cover for wildlife. Please read each statement below and circle the number that best represents your level of agreement.

Management Issues	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	No Opinion
1. It is acceptable to use chemicals to control harmful weeds on the Refuge such as leafy spurge, Canada thistle, and wormwood.	1	2	3	4	5	N
2. It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	1	2	3	4	5	N
3. It is unacceptable to have cattle grazing on the Refuge even if cattle grazing helps reduce the buildup of dead plant material, the risk of wildfire, and the spread of non-native plants on the prairie.	1	2	3	4	5	N
4. It is important to consistently manage for high populations of economically important game species such as mallards, deer, pheasants, and turkeys even though native prairie/wetlands may be lost and populations of songbirds, frogs, shorebirds, marsh birds, and butterflies may decline.	1	2	3	4	5	N
5. It is unacceptable to increase and decrease water levels in Refuge marshes to mimic natural flood and drought cycles, even if this means wetlands will produce significantly less plant and animal food for waterfowl and other water birds.	1	2	3	4	5	N
6. It is acceptable to use grazing to control such non-native plants as smooth brome grass and Kentucky bluegrass on the Refuge, even if this means less grass cover on the ground.	1	2	3	4	5	N
7. Songbirds that depend on native prairie should be a primary consideration on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	1	2	3	4	5	N
8. It is important to keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	1	2	3	4	5	N

SECTION 6 – Please tell us something about yourself.

These last few questions will help us in evaluating how well our sample represents visitors to the area. **Your answers will be kept strictly confidential and will not be passed on to anyone. You will not be identified in anyway.**

- Are you? ☐ Male ☐ Female
- Age Years
- Are you employed? ☐ Yes → (check one) ☐ Full time ☐ Part time
☐ No → Are you retired? ☐ Yes ☐ No
- What is your zip code?
- Your highest year of formal schooling? (Please circle one)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+
(elementary) (jr. high or (high school) (college or (graduate or
middle) technical school) professional school)
- How many members are in your household? persons
- Including these people, what was your approximate household income from all sources (before taxes) last year?
 less than \$10,000 \$25,000-\$34,999 \$75,000-\$99,999
 \$10,000-\$14,999 \$35,000-\$49,999 \$100,000-\$149,999
 \$15,000-\$24,999 \$50,000-\$74,999 over \$150,000

Thank you for completing the survey!

Comments?

Please write any comments you have about your visit to Des Lacs National Wildlife Refuge

The U.S. Fish and Wildlife Service manages National Wildlife Refuges on behalf of the American people. The Refuge system provides habitat for waterfowl, migratory bird populations, and other resident wildlife and protects biodiversity and endangered/threatened species through restoration and maintenance of native vegetation. The Refuge also provides wildlife-oriented opportunities including hunting, wildlife observation and photography, interpretation, and environmental education.



U.S. Geological Survey
Fort Collins Science Center
4512 McMurry Ave
Fort Collins, CO 80525



J. Clark Salyer National Wildlife Refuge

Visitor Survey



Thank you for visiting J. Clark Salyer National Wildlife Refuge and for agreeing to participate in this study. The US Fish and Wildlife Service and the US Geological Survey are conducting this survey to learn more about refuge visitors in order to improve the management of the area and enhance visitor opportunities.

The survey is completely confidential and your participation is entirely voluntary. You have been chosen to represent a typical visitor, so your participation is important to us. Your answers will be kept strictly confidential and your name will not be associated in anyway with your answers.

If you have any questions about this survey, please contact us at (970) 226-9205 or email fort_pasa_survey@usgs.gov. Thanks again!

PAPERWORK REDUCTION ACT STATEMENT: A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Public burden for the collection of this information is estimated to average 15 minutes per response. Comments regarding this collection of information should be directed to: Desk Officer for the Interior Department, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503; and the Bureau Clearance Officer, U.S. Geological Survey, 208 National Center, Reston, Virginia 20192.

OMB Control Number : 1028-0077

SECTION 1 – Please tell us about your visit to J. Clark Salyer National Wildlife Refuge.

1. How many times have you visited J. Clark Salyer National Wildlife Refuge in the last 12 months? _____ # Trips

2. Please check the activities you have participated in during the last 12 months at J. Clark Salyer National Wildlife Refuge. (*check all that apply*):

<input type="checkbox"/> Bird Watching	<input type="checkbox"/> Canoeing	<input type="checkbox"/> Fishing in Summer
<input type="checkbox"/> Picnicking	<input type="checkbox"/> Auto Tour Route	<input type="checkbox"/> Winter Ice Fishing
<input type="checkbox"/> Nature/Wildlife Viewing	<input type="checkbox"/> Driving for pleasure	<input type="checkbox"/> Waterfowl Hunting
<input type="checkbox"/> Photography	<input type="checkbox"/> Bicycling/Mtn biking	<input type="checkbox"/> Deer Hunting
<input type="checkbox"/> Environmental Education	<input type="checkbox"/> Hiking/Nature Trails	<input type="checkbox"/> Upland Game Hunting
<input type="checkbox"/> Cross Country Skiing	<input type="checkbox"/> Other, please describe _____	

2a. Which of the activities that you checked above was the most important reason for your **most recent visit**?

Most Important Activity _____

3. For your most recent visit to J. Clark Salyer National Wildlife Refuge was it:
(*check only one*):

3a. ☐ the primary purpose or sole destination of your trip?

3b. ☐ one of many equally important reasons or destinations for your trip?

3c. ☐ just an incidental or spur of the moment stop on a trip taken for other purposes or to other destinations?

4. What was your one way **travel time** and **travel distance** from home to J. Clark Salyer National Wildlife Refuge on this most recent trip?

Travel time: _____ # hours or _____ # minutes

Distance: _____ # one-way miles

5. What was the amount of time you spent at J. Clark Salyer National Wildlife Refuge on this most recent trip?

_____ # hours

or

_____ # days

6. Including yourself, what was the number of people in your group that traveled on this most recent trip? _____

7. How did you learn about J. Clark Salyer National Wildlife Refuge? (*check all that apply*)

☐ Friends

☐ Travel guidebook

☐ Family

☐ Highway signs

☐ US Fish & Wildlife Service staff

☐ Hotel staff

☐ US Fish & Wildlife Service website

☐ Magazine

☐ Visitor brochure

☐ Local Tourist Information Center

☐ Recreational Group (birding group, hunting club, hiking group, etc...)

☐ Other _____

If you hunt on the Refuge please answer the following questions, otherwise skip to Section 2.

8. How many years have you been hunting at J. Clark Salyer National Wildlife Refuge? _____ # years

9. Typically, how many trips for the primary purpose of hunting do you take to J. Clark Salyer National Wildlife Refuge during each hunting season?

_____ # Deer hunting trips each season

_____ # Upland game hunting trips each season

_____ # Waterfowl hunting trips each season

10. Typically, what is the total number of hunting trips you take to all other hunting sites each season?

_____ # Total Deer hunting trips to other sites each season
_____ # Total Upland game hunting trips to other sites each season
_____ # Total Waterfowl hunting trips to other sites each season

11. Was your last hunting experience on the Refuge different than other places you hunt?

☐ No

☐ Yes → *please describe* _____

12. What was the primary type of weapon you used on your **most recent hunting trip**?

(check one) ___Firearm ___Archery ___Muzzleloader

SECTION 2 – Please tell us about your trip expenditures.

1. Please indicate how far you live from J. Clark Salyer National Wildlife Refuge.

☐ Local North Dakota Resident (*closer than 40 miles from the Refuge*)

☐ Non Local North Dakota Resident (*farther than 40 miles from the Refuge*)

☐ I live outside of North Dakota

2. Please indicate the amount you and members of your group with whom you shared expenses (e.g., other family members, traveling companions) spent on **your most recent visit** to J. Clark Salyer National Wildlife Refuge (*please enter the amount for each category*)

Category	Amount Spent Locally in Upham, Bottineau, Towner, Newburg Granville, Rugby or Westhope Area (<i>within 40 miles of the Refuge</i>)	Amount Spent <u>Elsewhere in North Dakota</u> En Route to J. Clark Salyer NWR
Gasoline/related automobile costs	\$ _____	\$ _____
Hotels/motels	\$ _____	\$ _____
Campground/ RV Park fees	\$ _____	\$ _____
Food/drink: restaurants	\$ _____	\$ _____
Food/drink: groceries	\$ _____	\$ _____
Supplies/souvenirs/other retail	\$ _____	\$ _____
Fishing/Hunting license	\$ _____	\$ _____
Taxidermy	\$ _____	\$ _____
Game Processing	\$ _____	\$ _____
Rental car	\$ _____	\$ _____
Other:_____	\$ _____	\$ _____

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

_____ # of persons in your group sharing expenses

SECTION 3– Please tell us about the importance of your experience at J. Clark Salyer National Wildlife Refuge

1. Please tell us how important the following activities are in terms of your decision to take recreation trips to J. Clark Salyer National Wildlife Refuge. (*Please circle one number for each item.*) .

Activity	Importance for your recreation at J. Clark Salyer NWR				
	Not Important	Somewhat Important	Important	Very Important	No Opinion
Viewing ducks, geese, and other water birds	1	2	3	4	<input type="checkbox"/>
Viewing prairie birds	1	2	3	4	<input type="checkbox"/>
Viewing other wildlife	1	2	3	4	<input type="checkbox"/>
Hunting deer	1	2	3	4	<input type="checkbox"/>
Hunting upland game	1	2	3	4	<input type="checkbox"/>
Hunting waterfowl	1	2	3	4	<input type="checkbox"/>
Sandhills Walk Area	1	2	3	4	<input type="checkbox"/>
Canoeing Trail	1	2	3	4	<input type="checkbox"/>
Scenic and Grassland Auto Tour Trails	1	2	3	4	<input type="checkbox"/>
Ice fishing	1	2	3	4	<input type="checkbox"/>
Fishing	1	2	3	4	<input type="checkbox"/>
Horseback riding on public roads and trails	1	2	3	4	<input type="checkbox"/>
Biking/mountain biking on public roads and trails	1	2	3	4	<input type="checkbox"/>
Cross country skiing or snowshoeing	1	2	3	4	<input type="checkbox"/>
Environmental education programs	1	2	3	4	<input type="checkbox"/>
Wildlife photography opportunities	1	2	3	4	<input type="checkbox"/>
Wildlife viewing blinds	1	2	3	4	<input type="checkbox"/>
Other activities-Please list _____ _____	1	2	3	4	<input type="checkbox"/>

2. What would enhance your experience at J. Clark Salyer National Wildlife Refuge?

3. What experience have you had at J. Clark Salyer National Wildlife Refuge that would bring you back?

4. This question has two parts. **First** rate how important the item is to satisfaction during your last visit to J. Clark Salyer National Wildlife Refuge. **Then** rate how satisfied you are with the way the Refuge is managing for each item.

	Importance					Satisfaction with Conditions					
	Not Important	Somewhat Important	Important	Very Important	Does not apply	Poor	Adequate	Average	Good	Outstanding	Does not apply
Access for people with disabilities	1	2	3	4	DA	1	2	3	4	5	DA
Available parking	1	2	3	4	DA	1	2	3	4	5	DA
Trails clearly marked	1	2	3	4	DA	1	2	3	4	5	DA
Wildlife viewing opportunities	1	2	3	4	DA	1	2	3	4	5	DA
Condition of the natural environment	1	2	3	4	DA	1	2	3	4	5	DA
Helpfulness of Refuge staff	1	2	3	4	DA	1	2	3	4	5	DA
Refuge easy to find	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hiking, bird watching, and wildlife photography	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hunting and fishing	1	2	3	4	DA	1	2	3	4	5	DA
Kiosks or signs with information about the Refuge and its wildlife	1	2	3	4	DA	1	2	3	4	5	DA
Self-guided hikes or auto tours with interpretive signs	1	2	3	4	DA	1	2	3	4	5	DA

5. Please indicate how you feel the features listed below should be managed to maximize your experience at J. Clark Salyer National Wildlife Refuge. (Please check one answer for each feature.)

Naturalness	___ restore more natural conditions	___ leave as is	___ allow more landscape alterations
Facilities	___ remove some facilities	___ leave as is	___ develop additional facilities
Services	___ provide less visitor info & staff	___ leave as is	___ provide more visitor info & staff
Auto tour route	___ provide fewer roads	___ leave as is	___ increase the number of roads
Hiking trails	___ provide fewer trails	___ leave as is	___ provide more trails
Information signs	___ limit the number of signs	___ leave as is	___ provide more signs
Environmental education opportunities	___ reduce programs and interpretation	___ leave as is	___ more programs & interpretation
Interpretive exhibits	___ provide fewer interpretive exhibits	___ leave as is	___ provide more interpretive exhibits
Hunting	___ provide fewer hunting areas	___ leave as is	___ provide more hunting areas
Fishing	___ provide fewer fishing areas	___ leave as is	___ provide more fishing areas
Visitor numbers	___ restrict number of users in area	___ leave as is	___ encourage more use and interactions
Visitor impacts	___ increase effort to minimize visitor actions that are harmful to Refuge plants and animals	___ leave as is	___ have less regulation of visitor behavior

6. Please indicate the extent to which each statement below describes your general feelings about J. Clark Salyer National Wildlife Refuge (*circle the number that best describes how you feel about each statement*).

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is important to me that my children and my children's children will be able to visit the Refuge	1	2	3	4	5
I am very attached to the Refuge	1	2	3	4	5
Coming to places like this Refuge is an important part of my family tradition.	1	2	3	4	5
This area is the best place for what I like to do	1	2	3	4	5
Because of my experiences at this Refuge I will definitely come back	1	2	3	4	5
I feel this Refuge is a part of me	1	2	3	4	5
This place is special because it is where my family and I spend time	1	2	3	4	5
I get more satisfaction out of visiting this place than visiting any other	1	2	3	4	5
This Refuge means a lot to me	1	2	3	4	5
Doing what I do at this Refuge is more important to me than doing it in any other place	1	2	3	4	5
I have confidence in decisions made by the local staff at the Refuge	1	2	3	4	5
The Refuge provides me a sense of connection to past and future generations	1	2	3	4	5
No other place can compare to this area	1	2	3	4	5
I identify strongly with the Refuge	1	2	3	4	5
Coming to places like this Refuge was an important part of my childhood.	1	2	3	4	5
I wouldn't substitute any other place for doing what I do here	1	2	3	4	5
This place is special because it is where my friends and I spend time	1	2	3	4	5
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge	1	2	3	4	5
I would consider paying a fee to visit this Refuge	1	2	3	4	5
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge	1	2	3	4	5

SECTION 4 – Please tell use about your participation in natural resource issues.

1. We are interested in the ways Refuge visitors may try to influence decisions about local or regional natural resource or environmental issues. Please indicate which of the activities you have participated in within the last 5 years.

Participation	Yes	No
1. Attending a public hearing or meeting	<input type="checkbox"/>	<input type="checkbox"/>
2. Contacting or writing a state/federal agency	<input type="checkbox"/>	<input type="checkbox"/>
3. Contacting or writing a U.S. senator, member of congress, or state legislator	<input type="checkbox"/>	<input type="checkbox"/>
4. Writing a letter to the editor of a newspaper	<input type="checkbox"/>	<input type="checkbox"/>
5. Signing a petition	<input type="checkbox"/>	<input type="checkbox"/>
6. Helping to organize a petition	<input type="checkbox"/>	<input type="checkbox"/>
7. Joining a special interest group (such as an environmental, sportsman's, animal rights, agriculture, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>
→ 7a. If YES, Please list organization(s) _____		
8. Leading a special interest group (such as an environmental, sportsman's, animal rights, agriculture, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 5 – Please tell us your opinion about different management issues on J. Clark Salyer NWR.

1. This Refuge houses major biological communities of the Great Plains region of the United States. Historically, this ecosystem was exposed to dynamic processes such as grazing, fire, flood, and drought. Generally, Refuge Managers use grazing, haying, burning, rest and water management to restore and maintain this prairie system in order to provide good nesting and escape cover for wildlife. Please read each statement below and circle the number that best represents your level of agreement.

Management Issues	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	No Opinion
1. It is acceptable to use chemicals to control harmful weeds on the Refuge such as leafy spurge, Canada thistle, and wormwood.	1	2	3	4	5	N
2. It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	1	2	3	4	5	N
3. It is unacceptable to have cattle grazing on the Refuge even if cattle grazing helps reduce the buildup of dead plant material, the risk of wildfire, and the spread of non-native plants on the prairie.	1	2	3	4	5	N
4. It is important to consistently manage for high populations of economically important game species such as mallards, deer, pheasants, turkeys, and walleye even though native prairie/wetlands may be lost and populations of songbirds, frogs, shorebirds, marsh birds, and butterflies may decline.	1	2	3	4	5	N
5. It is unacceptable to increase and decrease water levels in Refuge marshes to mimic natural flood and drought cycles, even if this means wetlands will produce significantly less plant and animal food for waterfowl and other water birds.	1	2	3	4	5	N
6. It is acceptable to use grazing to control such non-native plants as smooth brome grass and Kentucky bluegrass on the Refuge, even if this means less grass cover on the ground.	1	2	3	4	5	N
7. Songbirds that depend on native prairie should be a primary consideration on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	1	2	3	4	5	N
8. It is important to keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	1	2	3	4	5	N

SECTION 6 – Please tell us something about yourself.

These last few questions will help us in evaluating how well our sample represents visitors to the area. **Your answers will be kept strictly confidential and will not be passed onto anyone. You will not be identified in anyway.**

- Are you? ☐ Male ☐ Female
- Age Years
- Are you employed? ☐ Yes → (check one) ☐ Full time ☐ Part time
☐ No → Are you retired? ☐ Yes ☐ No
- What is your zip code?
- Your highest year of formal schooling? (Please circle one)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+
(elementary) (jr. high or middle) (high school) (college or technical school) (graduate or professional school)
- How many members are in your household? persons
- Including these people, what was your approximate household income from all sources (before taxes) last year?
☐ less than \$10,000 ☐ \$25,000-\$34,999 ☐ \$75,000-\$99,999
☐ \$10,000-\$14,999 ☐ \$35,000-\$49,999 ☐ \$100,000-\$149,999
☐ \$15,000-\$24,999 ☐ \$50,000-\$74,999 ☐ over \$150,000

Thank you for completing the survey!

Comments?

Please write any comments you have about your visit to J. Clark Salyer National Wildlife Refuge

The U.S. Fish and Wildlife Service manages National Wildlife Refuges on behalf of the American people. The Refuge provides habitat for waterfowl, migratory bird populations, and other resident wildlife and protects biodiversity and endangered/threatened species through restoration and maintenance of native vegetation. The Refuge also provides wildlife-oriented opportunities including hunting, wildlife observation and photography, interpretation, and environmental education.



U.S. Geological Survey
Fort Collins Science Center
4512 McMurray Ave
Fort Collins, CO 80525



Upper Souris National Wildlife Refuge Visitor Survey



Thank you for visiting Upper Souris National Wildlife Refuge and for agreeing to participate in this study. The US Fish and Wildlife Service and the US Geological Survey are conducting this survey to learn more about refuge visitors in order to improve the management of the area and enhance visitor opportunities.

The survey is completely confidential and your participation is entirely voluntary. You have been chosen to represent a typical visitor, so your participation is important to us. Your answers will be kept strictly confidential and your name will not be associated in any way with your answers.

If you have any questions about this survey, please contact us at 226-9205 or email fort_pasa_survey@usgs.gov. Thanks again!

PAPERWORK REDUCTION ACT STATEMENT: A Federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Public burden for the collection of this information is estimated to average 15 minutes per response. Comments regarding this collection of information should be directed to: Desk Officer for the Interior Department, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503; and the Bureau Clearance Officer, U.S. Geological Survey, 208 National Center, Reston, Virginia 20192.

OMB Control Number: 1028-0077

SECTION 1 – Please tell us about your visit to Upper Souris National Wildlife Refuge.
--

1. How many times have you visited Upper Souris National Wildlife Refuge in the last 12 months? _____ # Trips
2. Please check the activities you have participated in during the last 12 months at Upper Souris National Wildlife Refuge (*please check all that apply*):
- | | | |
|---|---|---|
| <input type="checkbox"/> Bird watching | <input type="checkbox"/> Canoeing | <input type="checkbox"/> Boat fishing |
| <input type="checkbox"/> Picnicking | <input type="checkbox"/> Prairie marsh scenic drive | <input type="checkbox"/> Bank fishing |
| <input type="checkbox"/> Nature/Wildlife viewing | <input type="checkbox"/> Driving for pleasure | <input type="checkbox"/> Ice fishing |
| <input type="checkbox"/> Photography | <input type="checkbox"/> Bicycling/Mtn biking | <input type="checkbox"/> Deer hunting with rifle |
| <input type="checkbox"/> Environmental education | <input type="checkbox"/> Hiking/Walking trails | <input type="checkbox"/> Deer hunting with bow |
| <input type="checkbox"/> Cross country skiing | <input type="checkbox"/> Berry picking | <input type="checkbox"/> Deer hunting with muzzle loader |
| | | <input type="checkbox"/> Upland game bird hunting |
| <input type="checkbox"/> Other (<i>please describe</i>) _____ | | <input type="checkbox"/> Waterfowl Hunting surrounding the Refuge |

2a. Which of the activities that you checked above was the most important reason for your **most recent visit**?

Most Important Activity _____

3. For your most recent visit to Upper Souris National Wildlife Refuge was it (*please check only one*):
- 3a. ☐ the primary purpose or sole destination of your trip?
- 3b. ☐ one of many equally important reasons or destinations for your trip?
- 3c. ☐ just an incidental or spur of the moment stop on a trip taken for other purposes or to other destinations?
4. What was your one way **travel time** and **travel distance** from home to Upper Souris National Wildlife Refuge on this most recent trip?
- Travel time: _____ # hours or _____ # minutes Distance: _____ # one-way miles
5. What was the amount of time you spent at Upper Souris National Wildlife Refuge on this most recent trip?
- _____ # hours or _____ # days
6. Including yourself, what was the number of people in your group that traveled on this most recent trip? _____
7. How did you learn about Upper Souris National Wildlife Refuge? (*check all that apply*)
- | | | |
|---|---|---|
| <input type="checkbox"/> US Fish & Wildlife Service staff | <input type="checkbox"/> Friends | <input type="checkbox"/> Hotel staff |
| <input type="checkbox"/> US Fish & Wildlife Service website | <input type="checkbox"/> Family | <input type="checkbox"/> Magazine |
| <input type="checkbox"/> Recreational group (birding group, hunting club, hiking group, etc...) | <input type="checkbox"/> Travel guidebook | <input type="checkbox"/> Local Tourist Information Center |
| | <input type="checkbox"/> Highway signs | <input type="checkbox"/> TV/Radio |
| | <input type="checkbox"/> Visitor brochure | <input type="checkbox"/> Other _____ |

If you fish or hunt on the Refuge please answer the following questions, otherwise skip to Section 2.

8. How many years have you been fishing/hunting at Upper Souris National Wildlife Refuge?
- _____ # years fishing _____ # years hunting
9. Typically, how many trips for the primary purpose of fishing/hunting do you take to Upper Souris National Wildlife Refuge?
- _____ # Fishing trips each year
- _____ # Deer hunting trips each season
- _____ # Upland game bird hunting trips each season
- _____ # Waterfowl hunting trips *in the immediate area surrounding* Upper Souris National Wildlife Refuge each season

10. Typically, what is the total number of fishing/hunting trips you take to all other hunting sites besides Upper Souris National Wildlife Refuge?

_____ # Fishing trips to other sites each year
_____ # Deer hunting trips to other sites each season
_____ # Upland game hunting trips to other each this season
_____ # Waterfowl hunting trips to other sites each season

11. Was your last hunting experience on the Refuge different than other places you hunt?

☐ No

☐ Yes → *please describe* _____

12. What was the primary type of weapon you used on your **most recent hunting trip** on the Refuge (*please check one*)?

____Firearm ____Archery ____Muzzleloader

SECTION 2 – Please tell us about your trip expenditures.

1. Please indicate how far you live from Upper Souris National Wildlife Refuge.

☐ Local North Dakota Resident (*closer than 40 miles from the Refuge including the Minot area*)

☐ Non Local North Dakota Resident (*farther than 40 miles from the Refuge*)

☐ I live outside of North Dakota

2. Please indicate the amount you and members of your group with whom you shared expenses (e.g., other family members, traveling companions) spent on **your most recent visit** to Upper Souris National Wildlife Refuge (*please enter the amount for each category*)

Category	Amount Spent Locally (within 40 miles of the Refuge including Minot)	Amount Spent Elsewhere in North Dakota En Route to Upper Souris NWR
Gasoline/related automobile costs	\$ _____	\$ _____
Hotels/motels	\$ _____	\$ _____
Campground/ RV Park fees	\$ _____	\$ _____
Food/drink: restaurants	\$ _____	\$ _____
Food/drink: grocery/convenience stores	\$ _____	\$ _____
Supplies/souvenirs/other retail	\$ _____	\$ _____
Equipment rental	\$ _____	\$ _____
Bait/fishing tackle	\$ _____	\$ _____
Fishing/Hunting license	\$ _____	\$ _____
Taxidermy	\$ _____	\$ _____
Game Processing	\$ _____	\$ _____
Rental car	\$ _____	\$ _____
Other: _____	\$ _____	\$ _____

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

_____ # of persons in your group sharing expenses

SECTION 3– Please tell us about the importance of your experience at Upper Souris National Wildlife Refuge.

1. Please tell us how important the following activities are in terms of your decision to take recreation trips to Upper Souris National Wildlife Refuge. *(Please circle one number for each item)*

Activity	Importance for your recreation at Upper Souris NWR				
	Not Important	Somewhat Important	Important	Very Important	No Opinion
Viewing ducks, geese, and other water birds	1	2	3	4	<input type="checkbox"/>
Viewing upland song birds	1	2	3	4	<input type="checkbox"/>
Viewing other wildlife	1	2	3	4	<input type="checkbox"/>
Hunting deer	1	2	3	4	<input type="checkbox"/>
Hunting upland game birds	1	2	3	4	<input type="checkbox"/>
Hunting waterfowl in the immediate area surrounding the Refuge	1	2	3	4	<input type="checkbox"/>
Canoeing	1	2	3	4	<input type="checkbox"/>
Driving the Prairie Marsh Scenic Auto Tour	1	2	3	4	<input type="checkbox"/>
Ice fishing	1	2	3	4	<input type="checkbox"/>
Bank Fishing	1	2	3	4	<input type="checkbox"/>
Boat Fishing	1	2	3	4	<input type="checkbox"/>
Horseback riding on public roads and trails	1	2	3	4	<input type="checkbox"/>
Biking/mountain biking on public roads and trails	1	2	3	4	<input type="checkbox"/>
Cross country skiing or snowshoeing	1	2	3	4	<input type="checkbox"/>
Self-guided trails with interpreted signs	1	2	3	4	<input type="checkbox"/>
Environmental education programs	1	2	3	4	<input type="checkbox"/>
Wildlife photography opportunities	1	2	3	4	<input type="checkbox"/>
Wildlife/Grouse viewing blinds	1	2	3	4	<input type="checkbox"/>
Berry picking	1	2	3	4	<input type="checkbox"/>
Viewing interpretive exhibits	1	2	3	4	<input type="checkbox"/>
Visiting nature and history bookstore at headquarters	1	2	3	4	<input type="checkbox"/>
Other activities-Please list _____	1	2	3	4	<input type="checkbox"/>

2. What would enhance your experience at Upper Souris National Wildlife Refuge?

3. What experiences have you had at Upper Souris National Wildlife Refuge that would bring you back?

4. This question has two parts. **First** rate how important the item is to satisfaction during your last visit to Upper Souris National Wildlife Refuge. **Then** rate how satisfied you are with the way the Refuge is managing for each item.

	Importance					Satisfaction with Conditions					
	Not Important	Somewhat Important	Important	Very Important	Does not apply	Poor	Adequate	Average	Good	Outstanding	Does not apply
Access for people with disabilities	1	2	3	4	DA	1	2	3	4	5	DA
Available parking	1	2	3	4	DA	1	2	3	4	5	DA
Trails clearly marked	1	2	3	4	DA	1	2	3	4	5	DA
Wildlife viewing opportunities	1	2	3	4	DA	1	2	3	4	5	DA
Condition of the natural environment	1	2	3	4	DA	1	2	3	4	5	DA
Helpfulness of Refuge staff	1	2	3	4	DA	1	2	3	4	5	DA
Special events at the Refuge	1	2	3	4	DA	1	2	3	4	5	DA
Refuge easy to find	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hiking, bird watching, and wildlife photography	1	2	3	4	DA	1	2	3	4	5	DA
Availability of information on hunting and fishing	1	2	3	4	DA	1	2	3	4	5	DA
Kiosks or signs with information about the Refuge and its wildlife	1	2	3	4	DA	1	2	3	4	5	DA
Self-guided trails or auto tours with interpretive signs	1	2	3	4	DA	1	2	3	4	5	DA
Well maintained public use areas	1	2	3	4	DA	1	2	3	4	5	DA
Tables and grills	1	2	3	4	DA	1	2	3	4	5	DA
Other (please specify) _____	1	2	3	4	DA	1	2	3	4	5	DA

5. Please indicate how you feel the features listed below should be managed to maximize your experience at Upper Souris National Wildlife Refuge (*please check one answer for each feature*).


Naturalness	___ restore more natural conditions	___ leave as is	___ allow more landscape alterations
Visitor facilities (such as tables, grills, boat ramps, etc.)	___ remove some visitor facilities	___ leave as is	___ develop additional visitor facilities
Visitor services (such as law enforcement, education programs, etc.)	___ provide less visitor info & staff	___ leave as is	___ provide more visitor info & staff
Auto tour route	___ provide fewer roads	___ leave as is	___ increase the number of roads
Hiking/walking trails	___ provide fewer trails	___ leave as is	___ provide more trails
Information signs	___ limit the number of signs	___ leave as is	___ provide more signs
Environmental education opportunities	___ reduce programs and interpretation	___ leave as is	___ more programs & interpretation
Outside interpretive exhibits	___ provide fewer interpretive exhibits	___ leave as is	___ provide more interpretive exhibits
Inside interpretive exhibits	___ provide fewer interpretive exhibits	___ leave as is	___ provide more interpretive exhibits
Hunting	___ provide fewer hunting areas	___ leave as is	___ provide more hunting areas
Fishing	___ provide fewer fishing areas	___ leave as is	___ provide more fishing areas
Visitor numbers	___ restrict number of users in area	___ leave as is	___ encourage more use and interactions
Visitor impacts	___ decrease efforts to restrict visitor behavior that is harmful to wildlife	___ leave as is	___ increase efforts to restrict visitor behavior that is harmful to wildlife

6. Please indicate the extent to which each statement below describes your general feelings about Upper Souris National Wildlife Refuge (*circle the number that best describes how you feel about each statement*).

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is important to me that my children and my children's children will be able to visit the Refuge	1	2	3	4	5
I am very attached to the Refuge	1	2	3	4	5
Coming to places like this Refuge is an important part of my family tradition.	1	2	3	4	5
This area is the best place for what I like to do	1	2	3	4	5
Because of my experiences at this Refuge I will definitely come back	1	2	3	4	5
I feel this Refuge is a part of me	1	2	3	4	5
This place is special because it is where my family and I spend time	1	2	3	4	5
I get more satisfaction out of visiting this place than visiting any other	1	2	3	4	5
This Refuge means a lot to me	1	2	3	4	5
Doing what I do at this Refuge is more important to me than doing it in any other place	1	2	3	4	5
I have confidence in decisions made by the local staff at the Refuge	1	2	3	4	5
The Refuge provides me a sense of connection to past and future generations	1	2	3	4	5
No other place can compare to this area	1	2	3	4	5
I identify strongly with the Refuge	1	2	3	4	5
Coming to places like this Refuge was an important part of my childhood.	1	2	3	4	5
I wouldn't substitute any other place for doing what I do here	1	2	3	4	5
This place is special because it is where my friends and I spend time	1	2	3	4	5
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge	1	2	3	4	5
I would consider paying a fee to visit this Refuge	1	2	3	4	5
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge	1	2	3	4	5
If I could, I would volunteer my services to the Refuge	1	2	3	4	5
If available, I would consider participating in a Refuge friends group	1	2	3	4	5

SECTION 4 – Please tell us about your participation in natural resource issues.

1. We are interested in the ways refuge visitors may try to influence decisions about local or regional natural resource or environmental issues. Please indicate which of the activities you have participated in within the last 5 years.

Participation	Yes	No
1. Attending a public hearing or meeting	<input type="checkbox"/>	<input type="checkbox"/>
2. Contacting or writing a state/federal agency or agency representative	<input type="checkbox"/>	<input type="checkbox"/>
3. Contacting or writing a U.S. senator, member of congress, or state legislator	<input type="checkbox"/>	<input type="checkbox"/>
4. Writing a letter to the editor of a newspaper	<input type="checkbox"/>	<input type="checkbox"/>
5. Signing a petition	<input type="checkbox"/>	<input type="checkbox"/>
6. Helping to organize a petition	<input type="checkbox"/>	<input type="checkbox"/>
7. Joining a special interest group (such as an environmental, sportsperson's, animal rights, agriculture, refuge friends group, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>
8. If YES, Please list organization(s) _____ <div style="margin-left: 20px;">  </div>		
9. Leading a special interest group (such as an environmental, sportsperson's, animal rights, agriculture, refuge friends group, or resource use organization)	<input type="checkbox"/>	<input type="checkbox"/>

SECTION 5 – Please tell us your opinion about different management issues on Upper Souris NWR.

1. Major biological communities of the Great Plains region of the United States are found on this Refuge. Historically, this ecosystem was exposed to dynamic processes such as grazing, fire, flood, and drought. Refuge managers use grazing, haying, burning, rest and water management to restore and maintain this prairie system in order to provide good nesting and escape cover for wildlife. Please read each statement below and circle the number that best represents your level of agreement.

Management Issues	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	No Opinion
It is acceptable to use chemicals to control harmful (noxious) weeds on the Refuge such as leafy spurge, Canada thistle, and wormwood.	1	2	3	4	5	<input type="checkbox"/>
It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	1	2	3	4	5	<input type="checkbox"/>
It is unacceptable to have cattle grazing on the refuge even if cattle grazing helps reduce the buildup of dead plant material, the risk of wildfire, and the spread of non-native plants on the prairie.	1	2	3	4	5	<input type="checkbox"/>
It is important to consistently manage for high populations of economically important species such as mallards, deer, pheasants, turkeys, and walleye even though native prairie/wetlands may be lost and populations of songbirds, frogs, shorebirds, marsh birds, and butterflies may decline.	1	2	3	4	5	<input type="checkbox"/>
It is unacceptable to raise and lower water levels in refuge marshes to mimic natural flood and drought cycles, even if this means wetlands will produce significantly less plant and animal food for waterfowl and other water birds.	1	2	3	4	5	<input type="checkbox"/>
It is acceptable to use grazing to control such non-native plants as smooth brome grass and Kentucky bluegrass on the Refuge, even if this means temporarily having less grass cover on the ground.	1	2	3	4	5	<input type="checkbox"/>
Songbirds that depend on native prairie should be a primary consideration on a refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	1	2	3	4	5	<input type="checkbox"/>
It is important to keep grassland that has been planted on the refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	1	2	3	4	5	<input type="checkbox"/>

2. Please indicate the extent to which you agree or disagree with each of the following statements about fishing. There are no right or wrong answers, so please just give us your opinion. **If you do not fish at Upper Souris National Wildlife Refuge, please skip to Section 6.**

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	No Opinion
When I go fishing, it is important that I catch my limit	1	2	3	4	5	N
If I thought I wouldn't catch any fish, I wouldn't go fishing	1	2	3	4	5	N
I would rather catch one or two big fish than ten smaller fish	1	2	3	4	5	N
A fishing trip can be successful to me even if no fish are caught	1	2	3	4	5	N
Keeping the fish I catch is more enjoyable than releasing them	1	2	3	4	5	N
Testing my fishing skills is more important than actually catching fish	1	2	3	4	5	N
The bigger the fish I catch, the better the fishing trip	1	2	3	4	5	N
I catch fish for pleasure rather than for food	1	2	3	4	5	N

SECTION 6 – Please tell us something about yourself.

These last few questions will help us in evaluating how well our sample represents visitors to the area. **Your answers will be kept strictly confidential and will not be passed onto anyone. You will not be identified in any way.**

1. Are you? ☐ Male ☐ Female
2. Age Years
3. Are you employed? ☐ Yes → (check one) ☐ Full time ☐ Part time
☐ No → Are you retired? ☐ Yes ☐ No
4. What is your zip code?
5. Your highest year of formal schooling? (Please circle one)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+
(elementary) (jr. high or (high school) (college or (graduate or
middle) technical school) professional school)
6. How many members are in your household? persons
7. Including these people, what was your approximate household income from all sources (before taxes) last year?

<input type="text"/> less than \$10,000	<input type="text"/> \$25,000-\$34,999	<input type="text"/> \$75,000-\$99,999
<input type="text"/> \$10,000-\$14,999	<input type="text"/> \$35,000-\$49,999	<input type="text"/> \$100,000-\$149,999
<input type="text"/> \$15,000-\$24,999	<input type="text"/> \$50,000-\$74,999	<input type="text"/> over \$150,000

Thank you for completing the survey!

Comments?

Please write any comments you have about your visit to Upper Souris National Wildlife Refuge



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Appendix B

Survey Question Summaries for Des Lacs National Wildlife Refuge

This appendix contains the information obtained from frequency counts of the raw data from the Des Lacs National Wildlife Refuge visitor survey. The order of the tables follows that of the questions in the survey section by section. Summaries of the open-ended questions contained in the survey and comments that were included by some respondents at the end of the survey, as well as the verbatim answers and comments, are provided following the frequency report.

Section 1

Question 1

Table 1. Visitation to Des Lacs NWR.

Times visited	n
0	1
1	20
2	8
3	4
4	1
Over 5	6

Question 2

Table 2. Activities participated in during the visit to Des Lacs NWR.

Activity	Percent participation
Bird watching	63%
Driving for pleasure	59
Nature/wildlife viewing	53
Scenic auto tour	49
Other activities	22
Hiking/walking trails	19
Photography	19
Waterfowl hunting surrounding the Refuge	16
Picnicking	16
Environmental education	13
Deer hunting	10
Upland game bird hunting	6
Canoeing	0
Bicycling/mountain biking	0
Cross country skiing	0
Turkey hunting	0

n = 40

Table 3. Other activities in which visitors to Des Lacs NWR participated.

Activity	n
Book club meeting	2
Open house	2
Check waterfowl population at Refuge	1
National Wildlife Refuge Centennial Celebration	1
Celebration, government property small lot sale	1
Visiting new interpretive center	1

Table 4. Most important activity in which visitors to Des Lacs NWR participated.

Activity	n
Bird watching	12
Auto tour	3
Nature/wildlife viewing	3
Deer hunting	2
Hiking/nature trails	2
National Wildlife Refuge Centennial	2
Waterfowl hunting	2
Book club meeting	1
Deer watching	1
Driving for pleasure	1
Fill in time	1
Government property-small lot sale	1
Hunting	1
Open house	1
Picnicking	1
Upland game	1

Question 3

Table 5. Reason for most recent visit to Des Lacs NWR.

Nature of visit	Percentage
Primary purpose or sole destination	38%
One of many equally important reasons or destinations	25
Incidental or spur of the moment stop	38

n = 40

Questions 4 & 5

Travel time from a respondent's home varied from 2 minutes to 10 hours. Visitors traveled an average of 1.5 hours (93 minutes) to get to Des Lacs NWR. Most respondents traveled less than 15 minutes (n = 9). Once at the Refuge, respondents spent approximately 3 hours there on average.

Table 6. Travel distances for visitors to Des Lacs NWR.

Distance	Percentage
1-10	42%
11-20	5
21-30	0
31-40	3
41-50	5
51-100	10
101-500	0
> 500	35

n = 40

Question 7

Table 7. Sources from which respondent learned about Des Lacs NWR.

Source	%
Other	43
Friends	33
Highway signs	23
USFWS staff	20
Recreational groups	18
Travel guidebook	18
Local Tourist Information Center	16
Family	15
Visitor brochure	13
USFWS website	12
Magazine	3
Hotel Staff	0

n = 25

Table 8. Other sources from which respondents learned about Des Lacs NWR.

Sources	n
Live or have lived nearby/born locally	5
Birding guide book	4
Word of mouth	2
State map	1
Newspaper	1
Internet	1
Visit to Refuge	1

Questions 8-13

Due to the small sample size ($n = 40$), only three respondents indicated that they hunted at Des Lacs NWR. When asked how many years they had been hunting at Des Lacs NWR, two individuals had been hunting on the Refuge for approximately ten years, while the only other respondent had been hunting there for seven years.

When asked about specific hunting experiences, two of the three individuals had taken 2 to 3 deer hunting trips each season, one individual had taken three trips to other sites and another took ten.

When asked about upland game hunting, one hunter indicated that he takes approximately one trip per season while the other indicated taking five trips per season. When asked about hunting at other sites, only one hunter indicated that he hunted places other than the Refuge, specifically, that he hunted four times per season at places other than the Refuge.

In regards to waterfowl hunting in the immediate area surrounding Des Lacs NWR, two hunters indicated that they had hunted the area. One indicated that he had only hunted in the area once, while the other indicated hunting there about five times. No respondents indicated that they hunted turkey on the Refuge or on other lands.

When asked about their last hunting experience at Des Lacs NWR, again, response rates were a hindrance in interpreting meaningful results. Of the three respondents who replied, two indicated that it was not different, while only one said that it was. Of the one person who said that that their experience was different, and described there explanation, said only: "I can't retrieve my deer with my vehicle", not alluding to how the experience was different.

Section 2 –see main report

Section 3

Questions 1, 2 & 3

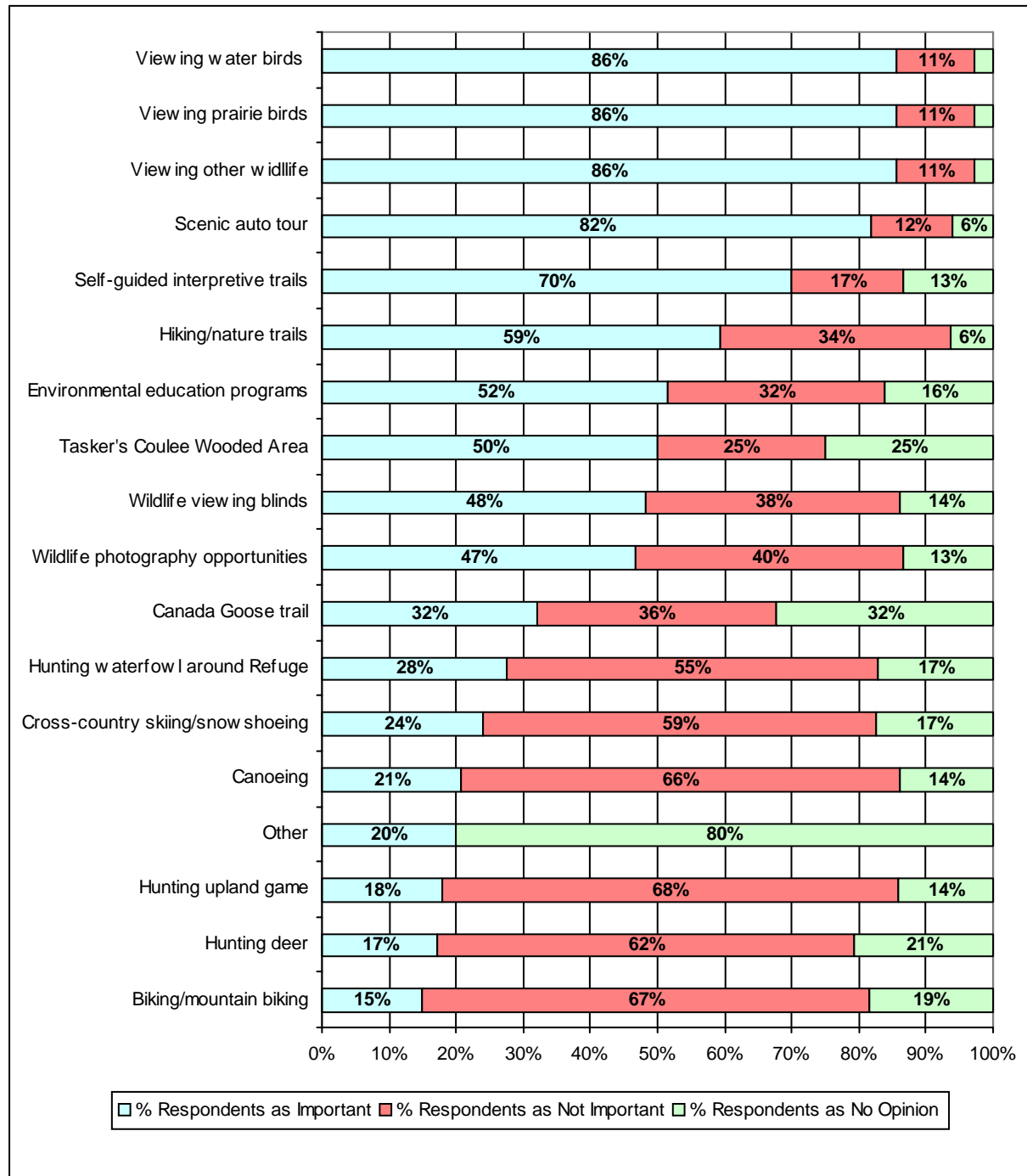


Figure 1. Importance of activities in decision to take trips to Des Lacs NWR.

Table 9. Would you like to see Bison grazing on the Refuge?

	Percent	n
Yes	77%	30
No	23	9

Table 10. Satisfaction of Canada Goose Hiking Trail.

Satisfaction	Percent	n
Yes	65%	17
No	35	9

A summary of and verbatim comments in response to this question is provided starting on p. B-16.

Question 4

Table 11. Percentage of respondents indicating the importance of various items in contributing to recreation satisfaction while at Des Lacs NWR.

Service or feature	Important/Very Important	Not Important/Somewhat Important	n
Condition of the natural environment	97%	0%	32
Helpfulness of the Refuge staff	94	0	35
Wildlife viewing opportunities	91	6	34
Refuge easy to find	91	3	32
Availability of information on hiking, bird watching, and wildlife photography	85	12	33
Trails clearly marked	80	9	35
Self-guided trails or auto tours with interpretive signs	78	16	32
Kiosks or signs about the Refuge	74	16	31
Available parking	72	25	32
Picnic areas clean and maintained	61	21	33
Access for people with disabilities	33	36	33
Availability of information on hunting	31	19	32

*Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Table 12. Satisfaction with service or feature as ranked by those to whom these items were important or very important.

Service or feature	Outstanding	Good	Average	Adequate	Poor
Access for people with disabilities	20	30	30	10	10
Available parking	23	64	4	9	0
Trails clearly marked	23	39	15	4	15
Picnic areas clean and maintained	29	47	6	12	0
Wildlife viewing opportunities	50	30	13	3	3
Condition of the natural environment	48	32	19	0	0
Helpfulness of the Refuge staff	61	26	7	3	3
Refuge easy to find	45	45	3	7	0
Availability of information on hiking, bird watching, and wildlife photography	29	48	7	4	11
Availability of information on hunting	56	22	22	0	0
Kiosks or signs about the Refuge	26	39	22	4	4
Self-guided trails or auto tours with interpretive signs	35	26	22	13	0

*Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Question 5

Table 13. Perceptions of management of features in order to maximize experience at Des Lacs NWR

Feature		<u>More features</u>	<u>Leave as is</u>	<u>Less features</u>
Naturalness	Allow more landscape alterations	0		
	Leave as is		65	
	Restore more natural conditions			35
Facilities	Develop additional visitor facilities	26		
	Leave as is		74	
	Remove some visitor facilities			0
Hunting	Provide more hunting areas	20		
	Leave as is		63	
	Provide fewer hunting areas			17
Hiking trails	Provide more trails	37		
	Leave as is		60	
	Provide fewer trails			3
Education	More programs & interpretation	45		
	Leave as is		55	
	Reduce programs & interpretation			0
Visitor impacts	Increase efforts to restrict behavior harmful to wildlife	38		
	Leave as is		62	
	Decrease efforts to restrict visitor behavior harmful to wildlife			0
Visitor numbers	Encourage more use & interactions	39		
	Leave as is		61	
	Restrict number of users in area			0
Auto tour route	Increase number of roads	21		
	Leave as is		73	
	Provide fewer roads			6
Signs	Provide more signs	28		
	Leave as is		66	
	Limit the number of signs			6
Services	Provide more visitor info & staff	52		
	Leave as is		48	
	Provide less visitor info & staff			0
Interpretative exhibits	Provide more interpretive exhibits	46		
	Leave as is		52	
	Provide fewer interpretive exhibits			2

* Respondents were asked to rate statements specific to a given feature.

Question 6 & 7

A summary of and verbatim comments in response to these questions is provided starting on p. B-16.

Question 8

Table 14. Mean scores of visitors' feelings toward Des Lacs NWR.

Statement	<u>M</u>	<u>SD</u>
It is important to me that my children and my grandchildren will be able to visit the Refuge.	4.43	.77
Coming to places like this Refuge is an important part of my family tradition.	4.09	1.12
Because of my experiences at the Refuge I will definitely come back.	3.97	1.03
I have confidence in decision made by the local staff at the Refuge.	3.78	.98
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	3.75	1.08
The Refuge provides me a sense of connection to past and future generations.	3.72	.92
I am very attached to the Refuge.	3.70	.81
This are is the best place for what I like to do.	3.47	.80
This Refuge means a lot to me.	3.38	.83
Coming to places like this Refuge was an important part of my childhood.	3.16	1.14
I feel this Refuge is a part of me.	3.13	.94
I identify strongly with the Refuge.	3.13	.98
This place is special because it is where my family and I spend time.	3.03	1.03
No other place can compare to this area.	2.94	.84
Doing what I do at this Refuge is more important to me than doing it in any other place.	2.88	.660
I get more satisfaction out of visiting this place than visiting any other.	2.84	.628
I wouldn't substitute any other place for doing what I do here.	2.81	.69

n's range from 30 to 33. *Variables coded on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Table 15. Respondents who agreed or disagreed with statements about their feelings towards Des Lacs NWR.

Statement	Strongly/ Mildly agree (%)	Strongly/ Mildly disagree (%)	Neutral	n
Place heritage				
It is important to me that my children and my grandchildren will be able to visit the Refuge.	83	---	17	30
Coming to places like this Refuge is an important part of my family tradition.	75	6	19	32
The Refuge provides me a sense of connection to past and future generations.	59	9	31	32
Coming to places like this Refuge was an important part of my childhood.	38	25	38	32
This place is special because it is where my family and I spend time.	25	22	53	32
This place is special because it is where my friends and I spend time.	25	31	44	32
Place identity				
I am very attached to the Refuge.	55	3	42	33
This Refuge means a lot to me.	50	13	38	32
I identify strongly with the Refuge.	38	19	44	32
I feel this Refuge is a part of me.	28	22	50	32
Place dependence				
This are is the best place for what I like to do.	41	6	53	32
No other place can compare to this area.	19	22	59	32
I wouldn't substitute any other place for doing what I do here.	13	28	59	32
Doing what I do at this Refuge is more important to me than doing it in any other place.	9	25	66	32
I get more satisfaction out of visiting this place than visiting any other.	9	22	69	32
Trust				
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	72	13	16	32
I have confidence in decisions made by the local staff at the Refuge.	69	9	22	32
Because of my experiences at the Refuge I will definitely come back.	72	13	16	32

Table 16. Feelings towards paying a fee to visit Refuges.

Statement	Strongly/ Mildly agree	Strongly/ Mildly disagree	Neutral	n
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge.	61	18	21	33
I would consider paying a fee to visit this Refuge.	30	42	27	33

Section 4

Question 1

Table 17. Types of natural resource related activities participated in by Refuge visitors sampled.

Activity	Percentage of respondents
Signed a petition concerning natural resources or the environment	56%
Attended a public hearing or meeting	51
Contacted or written a state/federal agency	43
Contacted or written a U.S. senator, member of congress, or state legislator	41
Joined a special interest group	39
Written a letter to the editor of a newspaper	21
Lead a special interest group	15*
Helped to organize a petition	0

n = 39, *n = 34

Table 18. Types of special interest groups Refuge visitors belong to.

Organization Type	Organization (n)			
	One	Two	Three	Four
Sportsman	1	0	2	1
Birding	2	4	3	1
Wildlife/Animal	3	1	0	0
Environmental	1	0	0	0
Conservation/Natural Resource	5	5	1	1
Other	1	1	0	0

Section 5

Question 1

Table 19. Visitor agreement with the acceptability of management actions at Des Lacs NWR.

Management technique	Agree	Disagree	Unsure
It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	89%	6%	3%
Songbirds that depend on native prairie should be a primary consideration on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	76	5	14
It is important to keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	65	5	22
It is acceptable to use chemicals to control weeds on the Refuge.	65	22	8
It is acceptable to use grazing to control non-native plants, even if this means temporarily having less grass cover on the ground.	44	17	28
It is unacceptable to have cattle grazing on the Refuge even to reduce plant material buildup, wildfire risk, and the spread of non-native plants.	25	56	8
It is important to manage for high populations of economically important species even though native prairie/wetlands may be lost and accompanying species may decline.	17	67	11
It is unacceptable to raise and lower water levels in Refuge marshes to mimic natural flood and drought cycles, even if it means wetland will produce less plant and animal food for waterfowl and other water birds.	17	54	23

n's range from 35 to 37

Section 6

Questions 1 & 2

Table 20. Gender of visitors to Des Lacs NWR.

Male	55%
Female	45%

n = 40

Table 21. Age categories of Des Lacs NWR visitors.

Age category	Percentage
Under 18 years	0%
18-24 years	0
25-34 years	5
35-44 years	15
45-54 years	18
55-64 years	25
65-74 years	20
75-84 years	10
Over 84 years	< 8

*Categorized according to the 2000 U.S. Census Bureau categories

n = 40

Question 3

Table 22. Employment of visitors to Des Lacs NWR.

Employed ^a (%)		Employment type ^b (%)		Retired ^c (%)	
Yes	No	Full-time	Part-time	Yes	No
50	50	40	61	81	19

^a n = 38, ^b n = 38, ^c n = 21

Question 5

Table 23. Level of education of respondents.

Level of education	% respondents
Less than high school	0
High school	11
Some college	26
College	21
Advanced degree	42

n = 38

Question 6

Table 24. Number of members in the households of visitors to Des Lacs NWR.

Number in household	n
1	10
2	19
3	8
5	3

Question 7

Table 25. Income of visitors to Des Lacs NWR.

Income	% respondents
Less than \$10,000	3%
\$10,000 to \$14,999	0
\$15,000 to \$24,999	3
\$25,000 to \$34,999	15
\$35,000 to \$49,999	30
\$50,000 to \$74,999	18
\$75,000 to \$99,999	18
\$100,000 to \$149,999	6
Over \$150,000	6

n = 33

**Des Lacs National Wildlife Refuge Visitor Survey
Summary and Comments from Open-Ended Questions**

Section 1

Question 11: Was your last hunting experience on the Refuge different than other places you hunt?

Only one comment: "I can't retrieve my deer with my vehicle."

Section 3

Question 3: Are you satisfied with the availability of the Canada Goose Hiking Trail?

Of the individuals who were familiar with the trail the consensus was that it should be open to the public longer. More often, however, visitors noted that they had not heard of the trail. One individual mentioned that it was not marked on maps.

Question 6: What would enhance your experience at Des Lacs National Wildlife Refuge?

Though there were only twenty-five responses out of forty respondents, several themes were identified. Increased signage along roads and maps of the area appeared to be a concern among visitors who were auto touring. Primitive camping opportunities were also requested by two other individuals. Two respondents requested visitor use facilities such as playground equipment and canoe rentals. And finally environmental education opportunities were requested, including flora and fauna identification information and maps of the area.

At first glance the above responses are unrelated and relatively benign. However, they all indirectly indicate that visitors, at the very least, have a very little understanding of the refuge system and what refuges are intended to offer. This was also noted in respondents' final comments.

Question 7: What experiences have you had at Des Lacs National Wildlife Refuge that would bring you back?

Wildlife viewing, particularly birding, appears to be the most popular reason respondents would return to the Des Lacs NWR followed by hunting. Of the twenty-six respondents who answered this question twelve cited wildlife viewing as the primary reason they would return.

Comments at End of Survey

Friendly, courteous, helpful, knowledgeable were all adjectives used to describe the staff at Des Lacs. Kudos given to the staff were frequent and sincere.

It appears that local residents of the area view the Des Lacs NWR as a place of recreation and leisure, as such they feel that more visitor access and amenities are needed. Requested access and amenities included: playground equipment, environmental education, canoe rentals, ramp areas near the lake, handicap access, and increased trail hours. It appears that playground equipment was a memory of the past for a number of these visitors; as such the removal of this equipment was not well received.

One comment such as: *“Treat the community (local) with respect instead of just doing whatever you want, despite what the community wants”* could possibly indicate that the local community is not effectively interpreting the goals and objectives of the NWR system. Another respondent’s comment further emphasizes this possible miscommunication of NWR system objectives: *“I know that the NWR system in North Dakota was developed mainly to provide habitat for waterfowl for hunters. I am grateful for that history but feel that it is time for a shift in emphasis to prairie birds and wildlife.”*

Verbatim Comments on Open-ended Questions

Section 1

Question 11: Was your last hunting experience on the Refuge (Des Lacs) different than other places you hunt? If yes, please explain.

- I can't retrieve my deer with my vehicle.

Section 3

Question 3: Are you satisfied with the availability of the Canada Goose Hiking Trail? If no, please explain.

- Have not been
- More notice of times open. Open more of the year, please.
- I don't know anything about this.
- I have not taken it-I am 91 and do not walk easily.
- Maybe it should be open longer than a week-especially to view the geese that are flying south.
- I have never heard of it.
- Keep it open-don't gate it off.
- I didn't know about it.
- I have not been on hiking trail only road.
- Did not use it due to heavy rain.
- It was not marked on any maps we had. I don't recall anyone at headquarters mentioning this trail when we stopped there.
- Not well marked
- No opinion
- Did not use

Section 3

Question 6: What would enhance your experience at Des Lacs National Wildlife Refuge?

- Improve the condition of the auto tour road. I prefer one way roads as I know I am a hazard when I get totally involved in watching birds and other wildlife. Maybe a wider road with pull offs would help.
- Better marking of beginning of South Drive South out of Kenmare.
- Simple maps of the area in which the refuge is located and of the refuge itself; posted outside the visitor centre and in local markets.
- At Tasker Coulee-better signage from the main road-the picnic tables are broken-signs to identify some plants.
- I think more people with children would use the refuge if there was more play equipment for kids. I would like to see it as a place where I could bring my daughter (3 years old) to play. She is too small to go on many hikes.
- More auto tour routes; less ticks on walking trails.
- More drive out ramps to see the lake and names of the trees.
- It would be nice, as a teacher in Kenmare, to have more information about what the refuge has to offer as educational opportunities for my students.
- Environmental education opportunities for adults, w/college credit available and/or with connections to drawing, writing, photography, literature, etc.
- Increase visitor options at Tasker's Coulee: longer hours, playground equipment, etc.
- Provide canoes that could be rented easily/day. Improve communications between refuge & local community-refuge tends to have the mindset that they can do what they wish and "screw" the community.
- Actually, all we did was drive the old lake road, then we left, we went to the Lantwood Refuge.
- Bulletin board w/birds seen listings, approximate location
- Better weather! Otherwise we enjoyed it-everything was very good.
- Provide primitive camping facilities at outer limits of refuge in a manner that would not encroach on refuge wildness or wildlife
- Road from Kenmare S not equally marked- Also, I run on NW Card 31st of one reserved-too far away from walls
- Fishing
- None
- A longer access along the west side would be nice.
- More prairie & less non-native woody vegetation.
- Great as it was
- Mostly beautiful but a little cold.
- Nice time of year
- Leave as is
- We like it as it is now.
- More hunting opportunities
- Somewhere to camp-without electrical, etc. More of the "primitive" style-just water supply and pit toilet.

Section 3

Question 7: What experiences have you had at Des Lacs National Wildlife Refuge that would bring you back?

- Good birding and friendly, helpful and well-informed staff.
- Seeing the hundreds of ducks, grebes, black terns on the lake/river and then the sparrows in the grasslands.
- Wonderful birds - especially sparrows & grassland birds.
- Picnicking, wildlife viewing, hunting and education opportunities.
- Hiking/bird watching/picnic
- Scenic; bird viewing.
- The entire area.
- The beauty of it and its inhabitants.
- Exceptional wildlife!!
- Bird watching, greenwing days, eco-ed camp for students, birding & geology tours, drives along auto tour route.
- To hike, loved it.
- Celebrations-open house occasions-Government property sales.
- Mating water walk of Western Grebes; would like to see mating dance of grouse and prairie chickens
- Good wildlife viewing & western grebes!
- The birds we saw and the opportunity to kayak there. Continue to keep out motorized boating.
- All
- Scouting for hunting-will hunt this fall.
- Very helpful info about hunting refuge & areas in refuge vicinity
- The scenic road was the highlight of our brief visit.
- Birds, birds & prairies.
- This was the only time we were there, but would go again when we know those auto trails are open.
- Nice people
- None
- All experiences have been good, we just wish we had time to visit more often.
- Hunting
- Great people
- Very good deer population
- We try to visit a couple of times each year for bird watching

End of Survey Comments

Your reception area is beautiful but has little warmth. The staff is very friendly and helpful but it is a little unsettling not to have a seating area of some sort to sit down and talk -- a standing talk in the reception area just doesn't "cut it" in my view.

Thoroughly enjoyed the private tour given.

I visited Des Lacs NWR as part of a round trip from Beaver Dam, WI. Our focus on the trip was birding, wildlife -- history. Our destination was all of the North Dakota. Starting in the East along I-94 -- Jamestown -- Steel -- Bismarck -- Medora -- Williston -- Minot -- Devils Lake. We took in Slade, Arrowood, Chase Lake, Des Lacs, Long Lake, Lostwood, Upper Souris, Lake Alice, NWR. Also the Roosevelt N.P. Fort Union Historic Area, State parks of N.D., Fort Abraham Lincoln, Lewis and Clark interpretive center/Fort Mandan.

So this was a onetime (probable) visit, but we made NWR's a major factor in our stops.

They are VERY important to us. I am an active member of the Friends of Horicon, NWR. I visit there 3-4 times a month. I also volunteer there. So the FWS means a lot to me, as I do 25% of my recreation within the Dept of Interior, Birding, hunting, wildlife watching -- Nature are all important to me. Since this was a one time visit to Des Lacs, I cannot comment on management decisions there. The "Birding North Dakota" guide that we picked up at Arrowhead NWR was very helpful in our visit. I don't care for our NWR's to be giant cattle ranches. Cattle are not wild or native. If grazing needs to be done to keep grasslands healthy then do it with native grazers (buffalo, elk, etc.) Hunting could be used to keep grazers in check.

NWR's are among our favorite places. So we look for them when we travel, etc. The 100th Anniversary Bash was very well done! Thanks for all the hard work.

Sec 2, #5 Naturalness -- restore to the extent of removing /controlling invasive species, but don't erase historical manmade features such as oil mines, the brickyard hill, etc. . C. Services -- info provided is currently very good, add staff only if mission justifies. General comment -- The leadership, staff, facilities are currently better than they have ever been, am uncertain that much change is needed.

Section 5, Question 5. I don't understand the logic here. "Unacceptable" has a negative connotation as does "less". I assume that the public reaction to the increase and decrease in water levels has been negative. However, I assume that's done on purpose to provide more food for wildlife. It's a trade off (as written the question has no meaning).

-- Save the Des Lacs Lake -- quit managing the water levels for the sake of waterfowl. --
Treat the community (local) with respect instead of just doing whatever you want, despite what the community wants. -- Encourage increased visitor access. Keep trails, Taskers's Coulee, etc. open longer hours. --
Provide handicapped accessibility access -- the community has many elderly. -- Recently had 100th celebration here. Provided free buffalo burgers, etc. Local paper had the meal time incorrectly advertised.
When we arrived, the food was gone (put away). NO APOLOGIES or accommodations were made for those who came at the incorrect time. There was leftover food. When you know the times were advertised wrong try to accommodate. Go our of your way instead of saying "We're done serving."

I have had a great deal of contact with employees of the USDA Forest Service and Bureau of Land Management in the past 15 years, and the USFWS staff at Des Lacs NWR is EXEMPLARY. Every employee at Des Lacs NWR has been friendly, courteous, knowledgeable and helpful in my experience. They obviously care about the refuge and the quality of assistance they provide to the public. This staff's talent and creativity, as well as a strong work ethic and sense of dedication recently planned and carried out an exceptional celebration for the centennial of the NWR system, which attracted more than 600 visitors in a single day. If the USFWS continues to employ people of this caliber the refuge system will flourish in its second century!

From the main trail going northwest lake is not very visible -- some ramp areas would help. More information in our local paper -- something about the people who come to work every summer -- where from? Names! What they do.

Several years ago, the play equipment at Des Lacs caused my children to want to go there and play. They had a good time when they were there. Now all the equipment is gone, even the flagpole. The refuge has no pull for my family anymore because there is really nothing to play on. One can only go on so many hikes and my 3 year old gets tired and wants to quit. If we are having a picnic, I like her close to me so I can watch her and the play equipment used to be in plain view of the picnic tables. Now when we go there, I can't find her because she runs off looking for things to do.

Important to have public open space available for outdoor equipment for individuals and families. Not many areas, rural, as such. Tasker Coulee -- needs better signs and picnic facilities have not been kept up. Previously was important family/church group's destination for outings. Benches and tables need repairs! 1) Plants and trees could use ID plaques. 2) A board shoeing birds and animals in coulee (new stone facility by parking) 3) ID trails and distance -- could these be projects for youth groups or Scout projects of troops in area? 4) Ranger talks on wildlife scheduled around campfire on some summer evenings? 5) History of tasker coulee provided on sign board. 6) Control # of hunters -- impact on environment or control numbers of vehicles with hunters to encourage groups. 7) Donations box for bird watchers using area. 8) Any interest in blue birds nesting boxes?

Des Lacs NWR is important as an example of native prairie. If it would be possible to use bison instead of cattle to control non-native plants by grazing, which would be great. On the other hand, if money from grazing fees is needed to help finance the refuge, I don't have strong objections to the cattle. I know that the NWR system in North Dakota was developed mainly to provide habitat for waterfowl for hunters. I am grateful for that history but feel that it is time for a shift in emphasis to prairie birds and wildlife.

I enjoy watching the waterfowl along the roadway as I pass through the Des Lacs valley from the city of Kenmore past the DLNWR headquarters on numerous occasions through the summer. The staff are always courteous and friendly whether on the job or off the job when you meet them on the street.

We crossed five states, traveling almost 2000 miles to get to North Dakota due to the reputation for the variety of birds to be seen at the many wildlife refuges. We felt it is extremely important to protect and maintain habitat for the many varieties of birds. In spite of adverse weather (wind and rain) we were pleased with the numbers and variety of birds we saw, including several "new" birds for our life lists. We have touring kayaks that we intended on using to see the birds from the water (we got rained and blown out). We were pleased to see that motorized boats were allowed.

Friendly -knowledgeable staff. Good use of tax payer's money. Clean - Good graphic illustrations. Surprised by the number of employees.

I enjoyed visiting many NWR's and we visited both Lostwood and Des Lacs on our recent trip to ND. We made a special side trip to Manitoba to visit there and the natural areas of ND. It was certainly worth it and all were superb. Despite the awful weather, we will be back.

The refuge staff assisted us in becoming familiar with hunting regulations and the general region. Being our first visit and the local regulations are so different from ours. This was important to us. Our hunting experience was fabulous and we would like to return. The very reasonable rates for stay and food in the Kenmore area is one reason we may be back (and large waterfowl numbers/access to land). Hunting license cost were high and that may determine a visit elsewhere Thank you.

Appendix C

Survey Question Summaries for J. Clark Salyer National Wildlife Refuge

This appendix contains the information obtained from frequency counts of the raw data from the J. Clark Salyer National Wildlife Refuge visitor survey. The order of the tables follows that of the questions in the survey section by section. Summaries of the open-ended questions contained in the survey and comments that were included by some respondents at the end of the survey, as well as the verbatim answers and comments, are provided following the frequency report.

Section 1

Question 1

Table 1. Visitation to J. Clark Salyer NWR.

Times visited	n
0	15
1	33
2	19
3-6	42
7-10	23
11-50	25
Over 50	1

Question 2

Table 2. Activities participated in during the visit to J. Clark Salyer NWR.

Activity	Percent participation
Deer hunting	75%
Nature/wildlife viewing	47
Driving for pleasure	35
Auto tour route	33
Bird watching	22
Upland game bird hunting	20
Fishing in Summer	19
Hiking/walking trails	17
Photography	17
Winter ice fishing	12
Waterfowl hunting	10
Picnicking	10
Other activities	10
Canoeing	7
Environmental education	3
Bicycling/mountain biking	1
Cross country skiing	0

n = 157

Table 3. Most important reason for visit to J. Clark Salyer NWR.

Activity	n
Deer hunting	105
Bird watching	16
Horseback riding	7
Nature/wildlife viewing	7
Hunting	6
Waterfowl hunting	6
Canoeing	1
Driving for pleasure	1
Fishing	1
Pheasant hunting	1
Seek hunting/camping opportunities	1
Work	1

Travel time from a respondent's home varied from 2 minutes to 16.5 hours. Visitors traveled an average of just over one and one-half hours (100 minutes) to get to J. Clark Salyer NWR. Modal, or most frequently cited travel time was 30 minutes (n =83). Once at the Refuge, respondents spent 5 hours there on average. Of the visitors who reported spending multiple days on the Refuge, the average time spent was 4 days.

Question 3

Table 4. Reason for most recent visit to J. Clark Salyer NWR.

Nature of visit	Percentage
Primary purpose or sole destination	79%
One of many equally important reasons or destinations	16
Incidental or spur of the moment stop	4

n = 157

Question 4

Table 5. Travel distances for visitors to J. Clark Salyer NWR.

Distance	Percentage
1-10	9%
11-20	4
21-30	7
31-40	8
41-50	13
51-100	20
101-500	25
> 500	15

n = 138

Question 7

Table 6. Sources from which respondent learned about J. Clark Salyer NWR.

Source	Percentage
Friends	53%
Family	35
Other	21
Highway signs	12
Recreational group	11
USFWS staff	10
Visitor brochure	8
Travel guidebook	6
USFWS website	3
Magazine	3
Local Tourist Information Center	3
Hotel staff	0

n = 155

Table 7. Other sources from which respondents learned about J. Clark Salyer NWR.

Sources	n
Live or have lived nearby/born locally	17
Birding guide	4
Hunting	4
NWL/Game & Fish Guide Book	3
Drove by/self discovery	1
Work/worked on Refuge	1
Trail Ride	1
KRYR TV /News coverage	1

Question 8

Table 8. Number of years hunters have been hunting at J. Clark Salyer NWR.

Number of years hunting	n
0	36
1	17
2	11
3	15
4	8
5	5
6-10	20
11-20	22
21-30	15
> 30	8

Questions 9 & 10

Table 9. Number of trips taken by visitors for hunting each year.

	Deer Hunting trips		Upland game bird hunting trips		Waterfowl hunting trips	
	To J. Clark Salyer NWR	To other areas	To J. Clark Salyer NWR	To other areas	To J. Clark Salyer NWR	To other areas
0	12	39	78	38	87	54
1	15	14	12	3	10	1
2	13	9	1	11	3	10
3	12	3	10	6	4	6
4	16	10	4	8	1	5
5	8	7	3	8	4	7
6-10	26	16	3	26	2	18
11-20	10	10	1	10	0	8
21-30	0	4	0	2	1	2
> 30	1	1	1	1	1	2

Question 11

Table 10. Experience of hunters at J. Clark Salyer differed from other places hunted.

Hunting experience different	% Hunters
Yes	61%
No	39

n = 122

A summary of and verbatim comments in response to this question is provided starting on p. C-17.

Question 12

Table 11. Type of weapon used by hunters at J. Clark Salyer NWR.

Weapon type	% Hunters
Firearm	93%
Archery	5
Muzzleloader	3

n = 122

Section 2 – See main report

Section 3

Question 1

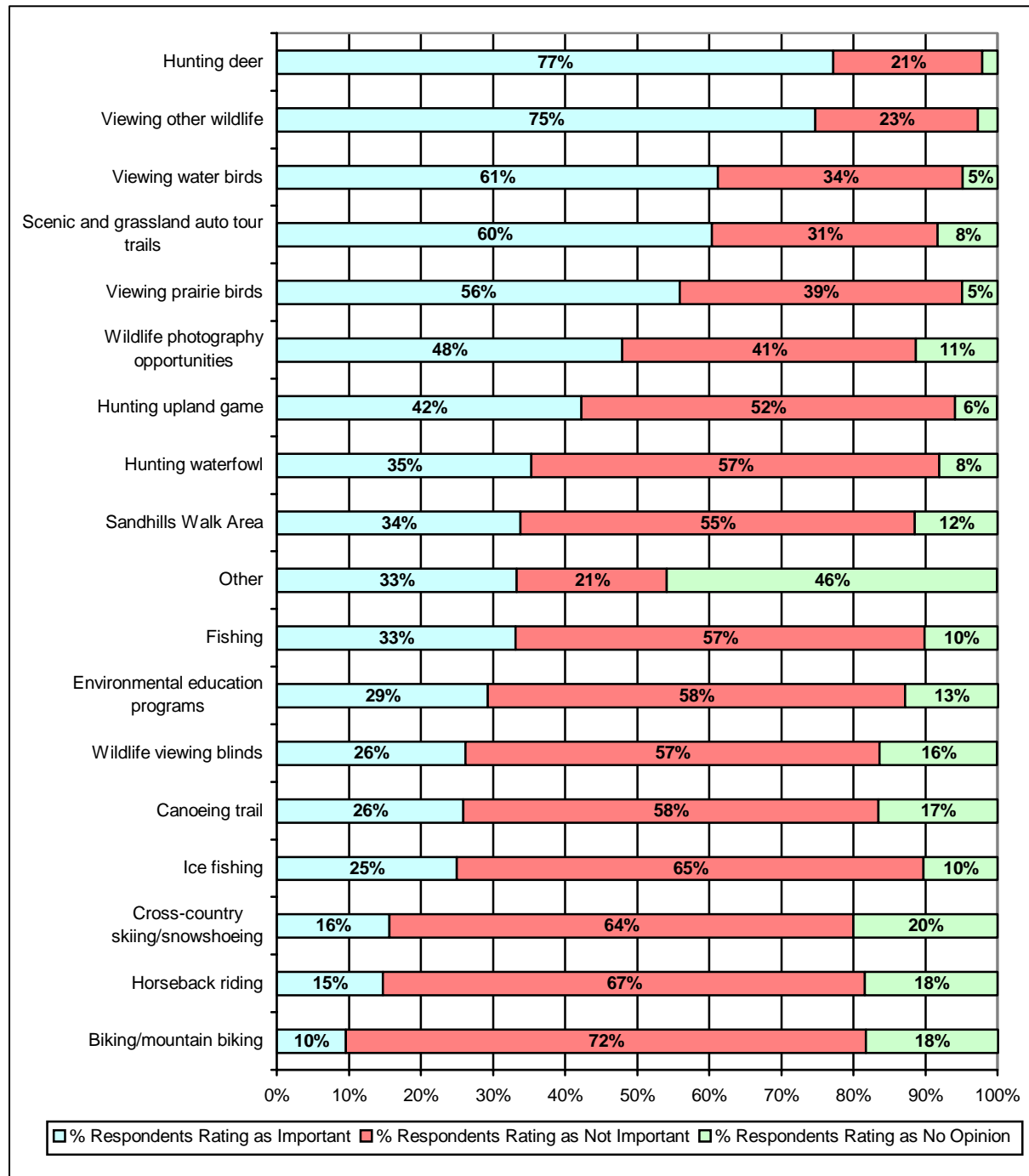


Figure 1. Importance of activities participated in at J. Clark Salyer NWR.
n's range from 134 to 158.

Table 12. Other activities important in decision to take trips to J. Clark Salyer NWR.

Activities	n
Horseback riding	7
Seek hunting & camping opportunities	1
Scouting waterfowl, species	1
Banding ducks with scout troop	1
Exploring North Dakota NWR's	1
Work	1
Scouting for deer	1
Getting water	1
Turkey hunting	1

Questions 2 & 3

A summary of and verbatim comments in response to these questions is provided starting on p. C-17.

Question 4

Table 13. Percentage of respondents indicating the importance of various items in contributing to recreation satisfaction while at J. Clark Salyer NWR.

Service or feature	Important/Very Important	Not Important/ Somewhat Important	n
Condition of the natural environment	89%	8%	151
Wildlife viewing opportunities	82	14	147
Helpfulness of the Refuge staff	78	14	147
Trails clearly marked	70	21	150
Refuge easy to find	73	21	149
Availability of information on hunting and fishing	68	17	150
Available parking	65	28	153
Availability of information on hiking, bird watching, and wildlife photography	60	30	149
Kiosks or signs	60	32	149
Self-guided trails or auto tours with interpretive signs	56	34	148
Access for people with disabilities	36	23	151

* Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Table 14. Satisfaction with service or feature as ranked by those to whom these items were important or very important.

Service or feature	Outstanding	Good	Average	Adequate	Poor
Condition of the natural environment	45%	40%	11%	38%	1%
Wildlife viewing opportunities	36	48	10	5	10
Helpfulness of the Refuge staff	44	33	14	6	2
Trails clearly marked	20	38	56	9	8
Refuge easy to find	39	45	8	8	0
Availability of information on hunting and fishing	29	38	17	8	7
Available parking	27	45	11	11	7
Availability of information on hiking, bird watching, and wildlife photography	28	38	22	7	1
Kiosks or signs	24	29	28	7	9
Self-guided trails or auto tours with interpretive signs	25	27	19	19	9
Access for people with disabilities	19	35	17	12	14

* Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Question 5

Table 15. Perceptions of management of features in order to maximize experience at J. Clark Salyer NWR.

Feature		<u>More features</u>	<u>Leave as is</u>	<u>Less features</u>
Fishing	Provide more fishing areas	29		
	Leave as is		68	
	Provide fewer fishing areas			3
Facilities	Develop additional visitor facilities	27		
	Leave as is		72	
	Remove some visitor facilities			1
Hunting	Provide more hunting areas	36		
	Leave as is		61	
	Provide fewer hunting areas			3
Hiking trails	Provide more trails	25		
	Leave as is		73	
	Provide fewer trails			2
Education	More programs & interpretation	30		
	Leave as is		68	
	Reduce programs & interpretation			2
Visitor impacts	Increase efforts to restrict behavior harmful to wildlife	2		
	Leave as is		72	
	Decrease efforts to restrict visitor behavior harmful to wildlife			26
Visitor numbers	Encourage more use & interactions	34		
	Leave as is		62	
	Restrict number of users in area			5
Auto tour route	Increase number of roads	18		
	Leave as is		78	
	Provide fewer roads			4
Signs	Provide more signs	31		
	Leave as is		64	
	Limit the number of signs			5

Table 15. Continued

Feature		<u>More features</u>	<u>Leave as is</u>	<u>Less features</u>
Services	Provide more visitor info & staff	24		
	Leave as is		75	
	Provide less visitor info & staff			1
Interpretive exhibits	Provide more interpretive exhibits	27		
	Leave as is		72	
	Provide fewer interpretive exhibits			1
Naturalness	Allow more landscape alterations	9		
	Leave as is		73	
	Restore more natural conditions			18

* Respondents were asked to rate statements specific to a given feature.

Question 6

Table 16. Mean scores of visitors' feelings toward J. Clark Salyer NWR.

Statement	<u>Q</u>	<u>SD</u>
It is important to me that my children and my grandchildren will be able to visit the Refuge.	4.67	.64
Because of my experiences at the Refuge I will definitely come back.	4.48	.80
Coming to places like this Refuge is an important part of my family tradition.	4.15	.90
I am very attached to the Refuge.	4.09	.69
This are is the best place for what I like to do.	4.07	.99
This Refuge means a lot to me.	4.05	.98
The Refuge provides me a sense of connection to past and future generations.	3.86	.88
I feel this Refuge is a part of me.	3.86	1.11
I have confidence in decision made by the local staff at the Refuge	3.81	.88
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	3.80	.97
Doing what I do at this Refuge is more important to me than doing it in any other place.	3.73	1.13
This place is special because it is where my friends and I spend time.	3.71	1.15
I identify strongly with the Refuge.	3.64	.94
This place is special because it is where my family and I spend time.	3.62	1.14
I wouldn't substitute any other place for doing what I do here.	3.49	1.23
I get more satisfaction out of visiting this place than visiting any other.	3.40	1.05
No other place can compare to this area.	3.38	1.10
Coming to places like this Refuge was an important part of my childhood.	3.23	1.27

n = 157 *Variables coded on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Table 17. Respondents who agreed or disagreed with statements about their feelings towards J. Clark Salyer NWR.

Statement	Strongly/ Mildly agree (%)	Strongly/ Mildly disagree (%)	Neutral (%)	n
Place heritage				
It is important to me that my children and my grandchildren will be able to visit the Refuge.	94%	1%	6%	157
Coming to places like this Refuge is an important part of my family tradition.	77	5	19	156
The Refuge provides me a sense of connection to past and future generations.	68	6	26	157
This place is special because it is where my family and I spend time.	59	12	229	157
This place is special because it is where my friends and I spend time.	59	14	27	155
Coming to places like this Refuge was an important part of my childhood.	39	25	36	155
Place identity				
This Refuge means a lot to me.	75	6	18	119
I am very attached to the Refuge.	72	3	25	158
I feel this Refuge is a part of me.	64	10	27	157
I identify strongly with the Refuge.	57	7	36	156
Place dependence				
This are is the best place for what I like to do.	73	6	21	157
Doing what I do at this Refuge is more important to me than doing it in any other place.	58	12	30	158
I wouldn't substitute any other place for doing what I do here.	49	19	32	157
No other place can compare to this area.	47	18	35	156
I get more satisfaction out of visiting this place than visiting any other.	46	15	40	158
Trust				
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	68	9	23	154
I have confidence in decisions made by the local staff at the Refuge.	68	6	26	154
Because of my experiences at the Refuge I will definitely come back.	90	3	8	157

Table 18. Feelings towards paying a fee to visit Refuges.

Statement	Strongly/ Mildly agree (%)	Strongly/ Mildly disagree (%)	Neutral (%)	n
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge	67	11	23	153
I would consider paying a fee to visit this Refuge	25	54	21	155

Section 4

Question 1

Table 19. Types of natural resource related activities participated in by Refuge visitors sampled.

Activity participated in	Percentage of respondents
Signed a petition concerning natural resources or the environment	63%
Contacted or written a state/federal agency	62
Joined a special interest group	62
Attended a public hearing or meeting	52
Contacted or written a U.S. senator, member of congress, or state legislator	48
Written a letter to the editor of a newspaper	14
Lead a special interest group	13
Helped to organize a petition	5

n's range from 151-147

Table 20. Types of special interest groups Refuge visitors belong to.

Organization Type	Organization (n)			
	One	Two	Three	Four
Sportsman	36	17	8	5
Birding	1	4	2	2
Wildlife/Animal	6	2	2	2
Environmental	2	1	0	0
Conservation/Natural Resource	9	3	5	1
Other	1	2	1	2

Section 5

Question 1

Table 21. Visitor agreement with the acceptability of management actions at J. Clark Salyer NWR.

Management technique	Agree	Disagree	Unsure
It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	88%	6%	6%
It is important to keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	77	6	16
It is acceptable to use chemicals to control weeds on the Refuge.	72	14	14
It is acceptable to use grazing to control non-native plants, even if this means temporarily having less grass cover on the ground.	47	27	25
Songbirds that depend on native prairie should be a primary consideration on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	56	12	30
It is important to manage for high populations of economically important species even though native prairie/wetlands may be lost and accompanying species may decline.	51	33	14
It is unacceptable to raise and lower water levels in Refuge marshes to mimic natural flood and drought cycles, even if it means wetland will produce less plant and animal food for waterfowl and other water birds.	27	41	32
It is unacceptable to have cattle grazing on the Refuge even to reduce plant material buildup, wildfire risk, and the spread of non-native plants.	36	46	18

n's range from 153 to 156

Section 6

Question 1

Table 22. Gender of visitors to J. Clark Salyer NWR.

Male	85%
Female	15%

n = 158

Question 2

Table 23. Age categories of J. Clark Salyer NWR visitors.

Age category	Percentage
Under 18 years	1%
18-24 years	7
25-34 years	16
35-44 years	20
45-54 years	26
55-64 years	21
65-74 years	6
75-84 years	3
Over 84 years	< 1

*Categorized according to the 2000 U.S. Census Bureau categories
n = 157

Question 3

Table 24. Employment of visitors to J. Clark Salyer NWR.

Employed ^a (%)		Employment type ^b (%)		Retired ^c (%)	
Yes	No	Full-time	Part-time	Yes	No
83	17	74	27	88	13

^a n = 150

^b n = 151

^c n = 32

Question 5

Table 25. Level of education of respondents.

Level of education	% respondents
Less than high school	5%
High school	21
Some college	30
College	25
Advanced degree	20

n = 155

Question 6

Table 26. Number of members in the households of visitors to J. Clark Salyer NWR.

Number in household	n
1	30
2	67
3	22
4	21
> 4	17

Question 7

Table 27. Income of visitors to J. Clark Salyer NWR.

Income	% respondents
Less than \$10,000	1%
\$10,000 to \$14,999	4
\$15,000 to \$24,999	6
\$25,000 to \$34,999	9
\$35,000 to \$49,999	18
\$50,000 to \$74,999	39
\$75,000 to \$99,999	16
\$100,000 to \$149,999	3
Over \$150,000	4

n = 145

J. Clark Salyer National Wildlife Refuge Visitor Survey Summary and Comments from Open-Ended Questions

Section 1

Question 11: Was your last hunting experience on the J. Clark National Wildlife Refuge different than other places you hunt?

Overall comments were exceptionally positive. Most hunters felt that the quality of the hunting experience was outstanding, noting “good habitat”, “healthy deer populations”, and “low hunting pressures”. Fewer hunters and no crowds was another benefit many respondents mentioned. One individual noted that this was attributed to the fact that the refuge limited vehicle access. This respondent also mentioned that the farther he walked, the fewer hunters he saw. While others prefer “limited access”, some perceive walking as “poor access”. Another respondent noted that “You have to work like hell to get “it” (the harvested deer) out, but the quality of the hunt makes it worth wild.” When referring to their experience at the refuge most respondents described “feeling of seclusion” as well as a “feeling of hunting in the wilderness”. Based on comments such as these, it appears that management is providing an exceptional hunting opportunity for deer hunters.

Section 3

Question 2: What would enhance your experience at J. Clark National Wildlife Refuge?

Camping was a common request by respondents. Due to the remoteness of the refuge, several individuals wished they could camp in or near the refuge. One of the more requested enhancements to visitors’ experiences included maps and directional signs of the refuge. Many respondents mentioned maps of roads and trails would be a helpful addition. Several respondents also mentioned that they would like to see improvements to road access and maintenance, particularly during the winter. In addition to improvements, a number of respondents would like to be able to use their vehicles, ATV, and or snowmobiles to remove harvested game. Interestingly, some respondents commented on allowing more hunters and where others suggested allowing fewer hunters. This may suggest potentially crowded “hot spots” where easy access results in increased hunting.

Section 3

Question 3: What experiences have you had at J. Clark National Wildlife Refuge that would bring you back?

The most frequent reason respondents would return was obviously hunting, followed by wildlife viewing. Respondents indicated that wildlife viewing was a significant experience that would bring them back to the refuge. Most respondents indicated that their experience has been extremely positive.

End of Survey Comments

While many respondents reiterated the same points reviled in the previous questions, several took the time to commend the refuge staff and express their appreciation for the refuge. Overall, comments were positive, focusing on hunting and hunting experiences.

Verbatim Comments on Open-ended Questions

Section 1

Question 5: Was your last hunting experience on the Refuge different than other places you hunt? If yes, please explain.

- It's the closest a person can come to real hunting without leaving this state. Besides, there are no posted signs to be concerned about.
- Quality of archery deer hunting is exceptional.
- Traveling was more difficult because the main roads were blocked with snow.
- I like to sit and wait to hunt deer-tough to do on prairie. Don't have to put up w/idiots and buck fever hunters on refuge vs. the prairie. Love to hunt on refuge.
- It is harder hunting. Very few deer tags are issued on the refuge & horses should be allowed!!
- I like to hunt alone and on the refuge you don't have to worry about people waiting for you to chase deer to them, therefore I'm not getting shot at.
- All other places I hunt are private property; more area to hunt with many fewer hunters.
- Different because there is more foot travel.
- Very enjoyable deer hunting experience-a lot of deer, a lot of area & great habitat.
- Different terrain & habitat.
- More natural than a field for deer.
- Didn't have to worry about posted land!
- Free access-no posted signs.
- You have to drag your deer so far!
- It has better coverage for the wildlife.
- It's not posted-this is why we like to hunt it.
- I can get away from the road warriors. Since vehicle access is limited there are less hunters the farther you walk.
- No posted signs and peaceful.
- Much higher quality, wasn't crowded.
- I was successful!
- More bush & cover, bigger whitetail bucks, and a lot of moose!!
- Better access!
- Better, stronger and healthier deer!
- Quiet, minimal competition.
- More land-no permission needed.
- Scenery is fantastic, many more trees and hills.
- Not over crowded with other hunters & enjoy hunting the refuge.
- I'm alone on the refuge.
- It is usually more secluded. I see fewer people in the field.
- We got a deer.
- Didn't have to worry about posting signs.
- Better cover-more deer-lots of fun.
- It is always a pleasure to hunt deer on the refuge(big bucks).
- Accessibility with vehicles is more limited than in surrounding farm country.
- The refuge is a lot more peaceful.
- Way more fun-it's like being in a real wilderness rather than just hunting a tree row.
- You have to work to get your deer. You have to work like hell to get it out, but the quality of the hunt makes it worthwhile.
- I enjoy being able to walk and hunt a large area.
- I hunted deer 7 miles straight across from the headquarters & I appreciated being the only deer hunter in the area!!
- The atmosphere & solitude of being in the woods with no other sounds except the squirrels & porcupines moving.
- Public land, not many other hunters.
- No other hunters. Unpressured deer.
- Better.
- We were able to spend all day as a group in the wilderness-it was beautiful & we really bonded.
- No posted signs-lots of acres to walk.
- Refuge has 0 vehicles on motorized accesses.
- It feels more like hunting in the wilderness.
- Scenery, wildlife, quiet, peaceful, serene.
- There were less people fighting for a spot to hunt on the refuge.
- Much better as far as the deer population.

- More deer; less pressure.
- I like hunting heavy cattail cover for pheasants in late season, it's hard to find cover like the refuge anywhere else.
- We hunt the refuge because of its vast acreage and lack of roads which presents a unique deer hunting experience in North Dakota.
- Highest quality hunting compared to other areas. JCS management of hunter numbers and pressure results in a high quality experience.
- Peaceful and quiet.
- Only walking-poor access.
- You have to take your tree stand down daily.
- Trees & hills
- No access on a lot of trails.
- You don't have to ask the landowner for permission.
- More variety of habitat to hunt, and the freedom of not dealing with landowners.
- It was different in that on the refuge there is land to hunt and there is abundant game also.
- In the past I hunted more hills, less like river bottoms or cattails.
- Seemed difficult to get away from all of the other hunters.
- You don't have to deal with road hunters-you get out of the refuge hunts what you put into them.
- I love the refuge, because you never know what you will see.
- There are more trees, hills, and brush.
- I've seen less bucks, smaller racks & very difficult access.
- A lot of walking.
- Few hunters.
- Limited vehicle access on refuge to retrieve game.
- Access is different, can't use tree stands or steps.
- Excellent quality hunt. Good quality bucks and ability to find solitude make J. Clark an excellent hunting choice. Only problem.... If one draws the management unit and does not draw the refuge permit. It would be nice if the refuge was a "stand alone" unit. But-don't let pressure groups(e.g. Game & Fish Department)pressure you into increasing the number of permits. Maintain the high quality of hunting @ J.C.S.N.W.R.

Section 3

Question 2: What would enhance your experience at J. Clark National Wildlife Refuge?

- It's good just as it is.-It would be nice to camp overnight.
- It would be great if groups could have a camp over.
- Nothing.
- We were curious about the scat (quite a bit) on the stairway to the viewing platform-looked like coyote, fox, even raccoon.
- More clearly marked roads.
- Perfect the way it is-helpful staff always so no problem there.
- More public toilets.
- More area open to waterfowl hunting.
- More waterfowl.
- Nearby or on refuge camping areas. Readily available hunting conditions information. Increased areas open to hunting.
- My primary interest is birding-my visit was outstanding.
- More walk in and retrieving zones for waterfowl hunting.
- Coming at peak waterfowl migration.
- Better weather for waterfowl hunting.
- To see it opened up for more hunting. The population is there dying of old age.
- Seeing more wildlife.
- More accessible roads to the public
- Snowmobiling on the trails.
- Improved road access and picnic and camping facilities.
- I like to bird but I'm not familiar w/local birds. Some kind of guide would be nice.
- Video about J. Clark Salyer National Wildlife Refuge
- More observation blinds-picnic tables-shelters pull offs-more restrooms
- Very pleased

- Having had more time available to go back & see again
- Staff knowledgeable about non-game birds; site locations for "specialty" species (e.g. yellow rail, leconte's sparrow, etc.); photo blinds; guided walks. When I visited, the staff was friendly but didn't know about birds. Someone named Gordon was the only one who knew about them. He wasn't around.
- A better map showing roads, driving trails, etc would be a big help.
- No cows on trails
- Benches in strategic locations, elevated viewing platforms, id labels with common & scientific names for flora(grasses, forbs, trees, etc)
- More mileage markers along the auto route
- Post canoeing conditions to your website. Put markers for canoers to see where they are along the canoe trail.
- We enjoyed our visit. Thought the viewing area was excellent for bird watching.
- That some of the fields that are grown in the refuge be left unharvested-whether it's 20%, 50%. The more cover and food on the refuge for wildlife the better.
- Allowing a person with a refuge tag to deer hunt off the refuge but in his or her unit! All other refuges are this way.
- Access to the Hillman Grade north of Bantry.
- Less people during rifle season(deer).
- Predator hunting.
- Camping area in or near refuge. Not allowing hunters to shoot from the roads in refuge. More enforcement officers available.
- More access to different areas of the refuge by road, designated camping areas & use of the outdoor toilets.
- More trail information.
- Obviously, I have not been aware of all activities available here. Deer hunting & horseback riding would bring me back. Perhaps fishing.
- Good as is.
- More detailed map of the area to handout.
- Cross country skiing/mountain biking.
- To be able to get a deer.
- Potentially better access after a heavy snowfall.
- Road improvement of all roads.
- Crane hunting.
- More places to fish.
- A buck tag every year.
- The ability to deer hunt in an area not over crowded with hunters. The experience of deer hunting in a wooded area that is peaceful and full of a variety of other wildlife for viewing.
- Need to explore it more and also take more time there.
- Nothing.
- Nothing-my first 5 visits this year were great!
- Nothing!
- It's a great place already.
- It is such a wonderful experience I wouldn't change anything.
- Hunting.
- The ability to shoot either sex deer instead of just getting a doe tag.
- There is a lot less waterfowl the last 10 years on the refuge. It would be great to see more birds again.
- Being able to erect portable deer stands & leave them on the refuge for more than one day.
- Bring back the lookout tower from Rugby.
- Actually, I'm quite satisfied.
- The beautiful outdoors.
- If disabled people could leave tree stands out there and not take them down every day(I can't).
- Better road maps of refuge.
- It would be nice to be able to camp on the refuge.
- Better weather.
- It would be nice to open up old roads again(ex. Cole Ford Road-Demming Cemetery).
- A little easier access to the deeper areas of the refuge.
- A few more restrooms.
- I would like to be able to leave tree stands up and not have to take them out everyday.
- Refuge tag for deer.
- Taking a canoe trip.
- More hunting opportunities.
- Less snow.
- Camping on refuge; huge turkey population.
- Trophy whitetail.
- Less hunting tags, too many people.

- Good groundcover maps.
- An antlered deer license.
- With the amount of ducks and especially geese I believe the hunting access should be open more to hunters. With weary birds more liberal hunting and harvesting should be allowed.
- Letting hunters retrieve deer from established trails with vehicle.
- I have no new ideas at this time.
- Better road access after heavy snowstorms.
- Horseback riding in the sand hills.
- More free time!
- Very good.
- Plow snow off authorized off road trails.
- Good wildlife habitat.
- It would be nice to have the opportunity to find deer antler sheds in the late winter/spring. I would like to see a more discriminatory plan for handicapped deer hunter access to refuge land and buck tags.
- Very good the way it is.
- Better roads-some places on east side.
- Better access to roads already maintained & used by rangers.
- I would like to see it made easier to get a refuge permit.
- Being able to leave tree stands up till the end of season. That rule is not reasonable.
- Information about the moose on the refuge: i.e.- where they are, how many, why you can't hunt them
- More access to trails.
- Nothing.
- Possibly seeing even more wildlife.
- To be able to hunt deer every year that I have a 3A4 tag, and not worrying if I will get a refuge tag or not.
- Taking a trophy whitetail buck.
- Seeing more full sized does.
- A good map of the refuge!!! I'd be more than happy to pay for it.
- Open gates on more scenic trails, make more parts of the refuge more accessible during rifle season, especially when heavy snows hit early in the season. I believe if you are going to sell tags then the roads should be kept passable and useable till end of season.
- Nothing that I could think of. Because to me it's all there. The nature & the land are well preserved & protected.
- Getting a deer buck tag every year. Also, being able to hunt and trap coyotes and beavers.
- Every once in a while a directional sign.
- More access roads.
- Nothing-enjoy it every time.
- More refuge permits available for deer hunters.
- Nothing.
- Remove some of the trees on the edge of the road by Willow Creek Bridge, actually north of the bridge.
- After the 1st weekend of deer season, open the refuge to 3A4 permit holders. That way, the ones that truly want to get out of their trucks and walk in, can. 2. Open the southwest gate to access the Hillman grade area-again.
- Mentioned earlier. Work with state to make JCS a "stand alone" deer management unit. Either you draw the refuge & can hunt-or you don't. Avoid the(current)risk of drawing the management unit but not the refuge.

Section 3

Question 3: What experiences have you had at J. Clark National Wildlife Refuge that would bring you back?

- Would like to be there at peak migration times.
- Duck banding.
- We saw a young moose! He was beautiful!
- Horseback riding & seeing all the wildlife.
- Just viewing birds, bucks, wildlife.
- Seeing the ducks & other birds and possibly wildlife.
- I host a birding retreat every year at the refuge-the grounds and headquarters are also so clean.
- Cheerful, helpful aid from staff, plus successful deer hunts.
- Lots of ducks & geese.

- Seeing marsh & birds.
- The quality of archery deer hunting, abundance of deer, age class deer, landscape and wildlife diversity.
- None.
- Enjoyed great birding, solitude, excellent advice & friendly ranger.
- Birding opportunities & overall beauty of the refuge.
- Good hunting.
- Wildlife.
- Talking to refuge employees-very informative, seeing waterfowl & other wildlife.
- Timing trip to include hunting northern birds.
- Deer hunting-walking-pulling deer out on toboggans-bird hunting-geese hunting.
- Seeing moose and deer when riding horse.
- All
- Any
- Deer hunting, horseback riding, recreational riding and photography
- Just enjoying nature.
- Horseback riding and bird watching.
- The beauty of fall in a natural wildlife setting(on horseback).
- New bird species, new area(much different than my native CA)
- Variety of birds
- Gray partridge-wildlife-auto trail(scenic)
- The birding
- We enjoy the auto tours in the wildlife refuges in the U.S.
- Frankly, I enjoyed Lostwood NWR more because I was able to find the species I was interested in. However, if I knew I'd get some help finding Yellow Rail(guide, map, etc.)at Salyer, I'd come back. Also, perhaps re-routing the auto tour through(on edge of)more diverse habitats would increase access to different species of birds
- Beautiful place
- Canoe trail was tops. Would like to return for seasonal bird watching.
- Everything-but going nuts trying to i.d. grasses! Appreciated helpful staff.
- Variety of birds local to North Dakota.
- Canoeing, maybe waterfowl hunting
- Hunting & fishing & relaxation from everywhere.
- We enjoyed the bird life and chance to view the birds in different habitats.
- Excellent hunting and lots of wildlife passing thru on flyway to and from the South.
- Seeing all the deer, moose, bald eagles, upland game, waterfowl and birds without a lot of public interruption.
- Abundance of deer.
- I went on a horse & wagon trail ride.
- Deer hunting.
- All, very nice place, very wild when you get off roads.
- The wildlife.
- Viewing big game.
- It's a nice quiet place to hunt.
- Friendly, helpful staff and deer hunting.
- Excellent hunting.
- Deer hunting.
- The deer hunting is great-as often as I can get a refuge deer tag-I will return.
- We see a lot of deer-that's what makes us go back, but it's hard to get a deer in all of the trees.
- Hunting with my father and now my own family and brothers.
- Deer hunting, canoeing & fishing.
- Successful hunting.
- Deer hunting.
- Getting a nice buck.
- Successful deer hunts; good fishing & goose hunting.
- The sight of the big bull moose and the big bucks-also it is not loaded with hunters-it is very peaceful.
- Deer hunting & fishing.
- None.
- Deer hunting & fishing both ice & summer.
- Killing my first deer!
- The big deer and healthy deer!
- Good deer hunting with few hunters.
- All of the peaceful and great scenery.

- The deer hunting is fantastic. The scenery is great!!
- Very good deer population & hunting!
- The deer population is great.
- I have had some of my best hunts on the refuge.
- Being able to hunt deer, sharp-tail grouse, pheasants and being able to view ducks & geese-when there is water in the refuge.
- I feel it is one of the best places in the state to hunt deer.
- Hunting success.
- It was fun-the amount & size of the deer.
- Enjoy hunting with very few other people around
- Beautiful solitude. I love walking and just being out there. It is basically untouched for 80 years.
- Hunting.
- Deer hunting, beautiful scenery, ice fishing, summer fishing.
- Abundance of wildlife.
- The overall experience was great and I'll be back there soon.
- The amount of deer(quality of deer).
- The natural environment for all the wildlife is great.
- Seeing wildlife that's not scared of people up close-I got to see a porcupine from 4 feet away!
- I have seen and taken some very nice quality whitetail bucks in the past.
- The hunting.
- Successful deer hunting.
- Deer hunting.
- Great deer hunting.
- Access to hunting area.
- Semi-wilderness, all current activities.
- Continued success in drawing refuge deer tags.
- Deer hunting and auto tour road.
- Deer hunting.
- Time spent with family & friends with no interruption from the outside world.
- No posted signs.
- The chance to hunt upland game and deer, all on the same weekend and on the same lands of the refuge.
- Seeing wildlife you normally don't get to see.
- The scenery and wildlife of the refuge and showing this to my children.
- It's been a lot of fun because it is quiet and you get to see many types of wildlife.
- Deer hunting and upland game hunting.
- Good deer hunts & just the right amount of public access.-I would not want to see any roads paved or improved beyond the current condition/status.
- Hunting success.
- Excellent numbers of deer, upland game and waterfowl
- Good hunting.
- Successful hunt, low hunting pressure.
- I love the fact that if you have a refuge permit to hunt deer, you have to hunt only on the refuge. This eliminates having to deal with road hunters & you can get away from the roads & the crowds.
- Opportunity at a very large buck.
- A high quality hunting experience and limits to vehicle access for a more pristine hunt.
- Good deer hunting and if you have a refuge permit you do not have to worry about posted land.
- Hunting & viewing wildlife.
- Excellent deer hunting.
- Being able to hunt without running into road hunters.
- Successful hunt & great scenery
- A lot of quality deer seen.
- All the deer that I saw.
- Enjoying the peace and solitude of the area.
- Just having the opportunity to hunt for a trophy buck. Very seldom getting one, but at least having the chance.
- Successful deer hunts and viewing the wildlife in their habitat. Very enjoyable!
- The ability to hunt deer and have a chance at a once in a lifetime trophy buck.
- The number of average(8 point)bucks.
- Rifle season-spending time just driving through the refuge with my father-in-law who has since passed.
- The time I was hunting deer at the big meadow. I was on one side of a big hole and a bull moose was on the other side. What a thrill!

- The deer hunting and being able to see all the deer. Also canoeing and fishing.
- Great time with my sons hunting-best ever.
- Because of limited access roads I "may not" hunt J. Clark again.
- Fishing.
- Great hunting on public land.
- The scenic trails.
- I like the area.
- Deer hunting.
- Deer hunting.
- My successful bow hunting the last two seasons.
- Great hunting!
- The large areas for hunting. The chance to see moose and the chance to harvest a mature whitetail.
- The high quality of the deer hunt.

End of Survey Comments

I have a strong bond to all the animals of the refuge. However with the over population of migratory birds there needs to be more Availability and access to hunting geese. Bird hunting for the fall should be open to all the public, national, federal wild life areas. The protection of these birds are very important and so we should not allow for their starvation and illness do to lack of resources.

This is a well managed refuge with a professional and talented staff.

I would like to see the old road past (south) of Harlan Atkinson's opened up again. It ran down to Cole ford. It was fun to deer hunt in that area. I would like to commend the refuge for the "user friendly" management practices. I have seen lots of improvements the past five+ years. 10 to 20 years ago, it was heading in the wrong direction.

I thank the staff for this refuge is doing an outstanding job of managing the refuge and its resources. On our most recent visit this year, my son and I saw lots of deer, grouse, porcupines, and even three bald eagles. The wooded areas near the river seem to have a large amount of fallen down trees. My son and I really cherish the refuge, it's one of the few places to hunt deer without posted signs every where. There have been a few times where deer retrieval has been very hard, but I understand completely the need to keep motorized traffic to a minimum. I sometimes wish though that there were retrieval roads. Thank you Richard D. [illegible name]

My first year of hunting on the refuge was very enjoyable. For bird season and waterfowl season there was very little pressure, but deer season was very busy. There is a lack of signs that tell you where you can and cannot hunt especially waterfowl. I was very concerned with the number of deer hunters that hunt from the main roads, out of their vehicles. I shot my deer early in the season and drove a friend there several times as he hunted. I drove and walked some areas and seen 5 deer being shot at from the roads. I also found three dead deer that were left in the woods dead. I where there was a designated camping area so we could spend the night on or near the refuge so we didn't have to drive everyday in the dark and snow.

Keep up the good work and [illegible word] those wood ticks out of there. Thanks.

I have always enjoyed going to the refuge in the last 25 or 30 years going to lake Metegoshe [sp?] area camping! Also when I visit friends who live in Bothinea [sp?] I always go that way. Have always enjoyed deer hunting even when we don't have refuge permit we hunt the public areas. I also take a lot of pictures either wildlife or just scenery. I have ice fished there more years than I can remember, with my dad and uncle, when they were living/ Hope to be there next weekend fishing.

Let horses in the refuge to pack out large game

I like how you have to walk a ways to see a lot of the refuge. I like how there is a lot of trees and brush which is different from most of North Dakota. I don't really like seeing all the trees being cut down along the roads that go through the refuge.

Sec 3 #6: Comment on paying a fee to visit - Because of financial limitations it would cut into my amount I set aside for hunting costs. If it were to cost more I would probably not be able to hunt on the refuge any more. I enjoy hunting on the refuge very much. I have been able to pass that enjoyment on to my nephew and my daughter when they both turned 14. My daughter was able to get her first buck this past youth season off of the refuge.

Clean up the weeds. Plant more trees.

It's great to have such a large diverse area that friends and family can escape to. There are no outside distractions. Whether it's hunting, scouting, hiking, taking pictures, or just getting "lost" for a few hours. It's so important to have havens like these - havens for nature, wildlife, and humans.

It would be nice if the auto tour road could be plowed to remove snow during deer season.

Your rules on deer hunting are a little too tuff. It's hard for older men to hunt the refuge because the trails are shut off during deer hunting. Just about impossible to get deer out alone.

The refuge is a great place to visit, hunt, and fish. I've seen all kinds of wildlife and shared it with my kids. The staff have always been helpful even though I've been hunting as a non-resident from Washington State. Thanks for doing such a great job of managing the wildlife and habitat.

I have been hunting the refuge for 3 years and I enjoy it. But it would be nice to use a snowmobile or a four-wheeler to retrieve a deer from the refuge. Otherwise no complaints. Very happy hunter. Thank you!

It was very nice. Hunting was good. The only thing to possibly allow - atv's to retrieve deer, down in the deep parts of the refuge. Thank you for the experience. [illegible signature]

I would like to see a trail on the north east side of the refuge about a mile down from coreston [sp?] line to the south, going west to the river area fenced in with a parking spot for deer hunting. Road and parking lot all fenced so they shouldn't drive off. Us older hunters can't drag deer out from that far away anymore, so we don't get in those hills which are fun to walk in. Thank you for your consideration. Consider opening up for more does next deer season. I saw many more does and fawns, too many really, about average number of bucks that I usually see.

I have always enjoyed hunting at J.C.S.W.R. I only wish I had more years left to do it. I have become somewhat physically disabled these last seven years, and it has gotten tough for me to hunt there. I have talked with several hunters from Rugby who have complained about how the coyotes are hunting the deer numbers on the refuge. This last time I didn't hear any, but maybe it was too cold. I have several places on the refuge that I go and don't use trails. I couldn't get too one of them because of the snow, even with four wheel drive, since I was pulling the trailer. If I didn't have the trailer I could have made it. When you say trails does that mean trail vehicles can use, or only people? I think of it as people trails. I used to go there alone but now I don't even dare. If I shot a deer it might kill me dragging it out even though I have a sled and a cart. Next year may be my last year to go there, though I hope not. I think we should be able to shoot coyotes if we would get the chance.

They [trips] have been very relaxing and have been very fun for me to be able to spend time with my dad and my uncles. I also have had fun being able to spend time in the wilderness and being able to watch wild animals in their natural environment.

This year it seemed like you burned a lot of area north of the headquarters. Could the burning be spread out more?

I think the management of the refuge is very good. My only comment is, I would like to see more trees.

I think you could increase the number of deer permits on the refuge. And I would like to see hunters with buck tags be allowed to shoot either sex on the last day or the weekend of the season. I think this would be a great way to increase the harvest of the population of deer. There seems to be an abundance of deer right now and I hear complaints from drivers, ranchers, and farmers all hoping for a successful hunt this fall. Although I realize one harsh winter could take care of that.

Some consideration needs to be given to making the refuge a deer gun hunting unit in itself. Currently it is part of unit 3A4. As a deer hunter, I would rather apply for a deer license for J. Clark Salyer and not 3A4.

I would like information about the facilities available at the refuge. I would like a map of the refuge.

Beautiful place! Interesting this year to see all of the trees knocked down along the trail on the east side of the refuge. I certainly didn't like it! Too many. I am still undecided about handicap access as without continuous monitoring the access becomes used by other hunters. As luck would have it one of the gates that is opened for handicapped access is near where we have hunted for many years. What used to be peaceful and quiet is now a steady stream of vehicle traffic. There has to be better way. Maybe assign them a key and keep the gates locked. All in all I love it out there.

Refuge personnel were very helpful and knowledgeable.

Our people found the employees at the visitor's center very helpful.

I have walked the entire refuge over the years enjoyed turkey, geese hunting, worked with the staff at [illegible word]. [illegible sentence]. And enjoyed working with boy scouts and have helped them get their wildlife [illegible word] badge. The refuge holds a Good population of moose on the southern [illegible word]. I have seen as many as eight on one hike. I would like to see a season On them, to keep numbers down to prevent [illegible words] disease. The deer are in good shape and the have bandaged to keep their [illegible sentence fragment]

I visited J. Clark Salyer twice in mid-June of this year with 11 other friends from CT. We are avid birders and I personally have interest in the resident grassland species e.g. Bairdisk LeCoutes sparrows and a wide range of waterfowl. We visited other refuges in the area; Audubon, Des Lacs, Upper Souris, and Lostwood and found all to be exceptionally beautiful. It was my first visit to North Dakota and I found the refuges to all be outstanding. It would appear that the staffs are doing a good job. However, I am sure resources are probably insufficient to do all of the things that really need to be done. I will support the refuge system to the extent possible through the many organizations of which I am a member.

Since 1954, my family has used and loved the refuge - Boy Scouts, Girl Scouts with us - A wonderful nature outing to learn. It has been a delight to see it develop, and although spring rains have [illegible word] some roads, the fix them as soon as possible. Sincerely Miss [illegible signature] 815 S.W. 3 Rugby ND 58368

The refuge seems to be in quite good shape. Enjoyed my dog, saw ducks, geese, and 4 deer. Mostly heard rather than saw song birds except for a blue bird. I grew up near Upham. My family used to gather hay on the refuge and in those days (50's) we used a team of horses on the refuge to cut and rake hay. I'm not able to visit the Salyer refuge very often, though I do go to other ones. But it's very important to preserve native habitat and wildlife for future generations. Hope to bring my grandchildren to visit Salyer.

Had fine conversation with refuge staff. Did not find hunting opportunity. Not likely to return. Refuge was very "dry," perhaps water not managed well.

[comments in bulleted points] Refuge staff very friendly and helpful. Create a \$5 map that shows the entire refuge including access points. Get volunteers to cruise the roads to discourage all idiots road hunting. Have a mandatory check of all deer taken at the refuge so managers have a better idea of what they are dealing with. In two days I saw 40 does and 1 buck. Was very disappointed with the hunt; wasn't the wilderness I hoped for. You see, this is my 1st ND hunt. Moved here from Michigan's Upper Peninsula - its nearly all wilderness up there! Way too many hunters blasting away with semi auto's for my taste! Would like to see some "checkerboard" clear cuts of the aspen for better habitat. A couple tactically located sit toilets would be nice. National Wildlife Refuge Management The only considerations should be wildlife and their habitat.

In North Dakota we have a lottery system for obtaining a deer license. You apply for the unit you wish to hunt in. J Clark Salyer is in Unit 3A4. I would like to see the refuge removed from 3A4 and be a separate unit by itself. I also believe some moose could be harvested on the refuge.

1) The refuge should allow bow hunters to leave tree stands erected during the entire bow season, provided that it is portable, uses portable steps and has the name and address of the owner on the stand. 2) Deer hunters should be allowed special access roads at various points to assist hunters in retrieving deer once they are shot. Possibly designate these trails or roads as retrieval access only.

Some of the agricultural trails or roads would serve such a purpose. Access could be checked by requesting that hunter place their name and address on a slip of paper that also requests the time of day that they pass a checkpoint. The checkpoint could be a locked wooden box where slips of paper are provided and protected from the elements. 3) Examine the benefits of predator control on the refuge by hunting or trapping. It appears the coyote population has increased greatly. This particular predator is devastating game species populations. The refuge would probably benefit from increasing populations of red fox, mink, raccoon etc.

The low numbers of mature does concerns me. There was a number of mature bucks do to the low number of tags. But so many little fawns. I wonder about next years numbers. We have spent 95% of our time on the south end. I have no thoughts on waterfowl. There were a lot of sharp-tail grouse. All in all wonderful job on the refuge.

Like to see refuge open to sled hunting and would like to be able to leave tree stands up over night. You [illegible word] to a great job, and it's a pleasure to get to hunt there. Thanks.

I believe J. Clark is an excellent place to hunt or watch wildlife. I live close to it, so I see a lot in and near the refuge. One thing I would like to see different would be to not harvest some of the crops that are grown on the refuge. I hunt birds on the river bottom (Missouri River) and what [illegible word] are grown there, they do not harvest around 15-25% of it. I personally see how good that is for the wildlife. Right now any crop in Northern J. Clark is totally harvested. I would like to see that changed. My family and I respect and value the refuge. One other thing is that it would be nice if there was a way to get a hold of someone at the refuge later on in the evening. My father and I have tagged many deer through the years and have had a tough time getting a hold of someone to help us or give us permission to drive in to retrieve the animal. Dragging a deer 1/2 mile to 2 miles is not fun in the snow and dark. Some people have got a hold of a warden, but then you have to wait until they get there, which could be an hour to 2 hours later. Maybe there could be more people, closer distance to let the hunter in and get animals. Just a thought that would help. Thank you

I have been hunting and nature watching with my husband and children for the past eleven years now on the refuge. My husband got me started with hunting and since then my husband and I have made it a point to take our children on scenery rides and hikes, so they can learn about the animals and birds that live on the refuge. I do enjoy the hunting that my husband and I do on the refuge it gives us special time to ourselves. But I think I like going to the refuge mostly because of the peacefulness and how serene it is and if I'm lucky I get to watch a squirrel jumping in the trees, a porcupine mow on the bark of trees a flock of geese fly over so low to the ground that the wind coming off of their wings is a rush and a female moose waling in a [illegible sentence fragment]. I really enjoy these things and I hope to be able to show these same things to my children and to teach them at the same time about how important places like the refuge are! Thank you Mary L. [illegible last name]

I do visit the refuge at different times of the year and do enjoy each time. However the main reason I visit or should say use the refuge is for hunting purposes. Especially deer rifle season, I do not agree with cattle grazing the refuge. I have seen how it pushes deer out of these areas along with destroying smaller trees and other cover. Also not fair to other rancher of which I am not. My one real complaint is that the roads are not kept plowed when heavy snows fall early in rifle season, making access impossible, this hurts the overall harvest. Would like to see the roads opened back up and kept clear throughout the year. There were more scenic trails open 10 years ago then now. Also believe moose tags should be made available. I closing it is a great place. Keep up the good work.

I want to say thanks for the hunt I had this year. I tagged a doe on the last day. I had a lot of fun.

I also cut wood out along Scenic trail. I believe this helps keep the trail open, in our winter wonder land. Looks And looks real good after a foot of snow. It's just great year round. Just keep doing what you're doing. Thank you [illegible name] P.O. Box 182 Upham ND 58789

It is unreasonable and unrealistic to put up a tree stand, hunt that evening take it down, then go in the morning and have to put it back up in the dark. (Think about it!) Taking tree stands down after the season is over seems to work on all other refuges, state land, wildlife protection areas, etc.

The most important thing to me is to access the refuge for deer hunting (rifle mostly) The way the ND lottery is set up you first have to get a 3A4 tag. Buck tags take about 2 years to get. There is no way to build preference points towards the refuge. The refuge now is like a separate unit, but no preference points. I think this needs to change! Make the refuge more accessible to more people with 3A4 tags, like open it up after the 1st weekend. Or make the refuge a separate unit. So you can have total control access. This way if you want to hunt the refuge then you should be able to build preference points towards getting on the refuge. The refuge is for wildlife and the general public. Let more people use it! Thank you

Snowmobiling would be nice!

Although not a resident of this state, I greatly enjoy hunting in North Dakota. In ND, I was not issued a buck tag for 2003, but because I enjoy hunting there, I applied for a doe tag. After deer hunting during the 2003 rifle season on J. Clark Salyer NWR, I was a little disappointed in the accessibility of certain woods. I feel that more of the woods could be accessible if vehicles were allowed to retrieve your game by use of existing trails across hayfields. Some of your woods do require a 2 to 3 mile drag of your game back to an access road. I feel that a pickup truck, 4-wheeler, or snowmobile will not do any more damage to the ground than a heavy tractor harvesting hay. If more access roads were available, my hunt on J. Clark would have been much more enjoyable. My decision to hunt there will depend on access to retrieved game.

The refuge has always been like a second home to me and many of my family. You see my mother was born on the refuge and lived in the area up until she got married to my father who was also an Upham native. So deer hunting was always something we did there, and enjoyed it very much. I would walk with my father and brother on many hunting trips way before I could get a deer license. I just feel the way it done now with the refuge permit drawing, where you first have to get the unit tag and then the refuge permit, it's like you are trying for two separate units. I feel the refuge should be its own unit or let people with 3A4 tags get on after a period of time (like the start of the 2nd weekend). I know there are no easy solutions but there are people who wait years before the get a chance to hunt the refuge. As far as the handicap access, I think there are way too many individuals taking advantage of that. What I have seen in the last 3 years (which I am fortunate to have received a tag) has been a lot of abuse for those who drive around like they own the place. My brother who is one of those individuals, is the only one I know that goes to his designated spot and sits there all day. The rest drive around like they own it, and this is very irritating to those of us that have to play by the rules. It gets old when you spend a 1/2 day walking to get back 2-3 miles just to have someone drive past. I think you should open the road back up to the Hillman Grade and quit giving further access from that point. There is way too much traffic back there and I see very little discipline from those individuals, nor do I see any enforcement from the refuge personnel. Like I say the refuge will always be a part of my hunting heritage and I'm proud to have 2 sons and many nephews that also enjoy it. I just think the system has to become fairer on offering a permit and more accountability with those who abuse handicap access. Thanks for giving me the opportunity to express myself. Sincerely [illegible signature]

You will never please everyone, but as a whole I think the refuge is being managed properly. Managed haying and grazing in not only a sound management tool, but a good way to develop relations with area landowners.

J. Clark Salyer is a wonderful piece of ND. It is a pleasure visiting the refuge annually.

I am disappointed to find out that one of the reasons for the refuges beginning is the explanation that the land was too poor to farm. Generally lands along riverbanks are extremely fertile, and ranches from Mohall were purchasing hay from the farmers near Upham when there was a drought. If the land was poor, would anything grow?

I love the way the deer rifle season is set up on this refuge. Too many people don't like to walk and hunting this refuge gives me the opportunity to do some serious walking and I don't have to worry about some road hunter posting for me. It gives me an opportunity to do a little backcountry hunting away from the roads and crowds also. I would like to see this refuge managed a little more for upland game. There are many areas that would be perfect from some feed plots or shelter belts. I realize that the primary goal for this refuge is waterfowl but I don't think by establishing some food plots or shelterbelts that the waterfowl would be hurt. There have always been a few pheasants around my home area of Westhope and I believe if there were more shelterbelts and food plots on the refuge they would have an easier time making it through the winter. I believe the population could be a lot better if it was managed better.

I have seen some pickup and four-wheeler trails off the original trails. It looks to me that someone is not obeying the rules of the refuge. My friends and I would like to see more control over the handicap people that drive on the refuge. It seems that every year that we hunt on the refuge, Vehicles are driving up and down trails and fore trails making the wildlife avoid the surrounding areas. I have a friend that is handicapped and he drives into the refuge in the morning, parks at a location that he's supposed to then leave after hunting hours are over so he does not ruin a person's hunt. I would like to see these people restricted to a specific area, not anywhere they want to drive on or off the trails. The refuge is a wonderful place for people to visit. My family and I have enjoyed all of the sites - walks - picnic grounds and wildlife. Keep up the great work and effort on keeping an area for this generation and the future to enjoy. P.S. My kids think its great having the bald eagles in the area.

I have only visited the refuge twice, but have enjoyed myself immensely both times. The variety of waterfowl, song birds, and prairie birds indigenous to the refuge are important. Of possible developing more hiking trails closer to the water, without disrupting the natural habitats of waterfowl would increase the visibility of some species.

1. Auto route - a good trip - focuses on the south end of the refuge and is about zero up on anything north of the H.Q. Now, maybe there is nothing there to see, but I doubt it. How about some info on opportunities to view wildlife birds in the north. 2. Some hiking trails might be good (though using the car as a blind is very effective), and would expose people to the plains. 3. Consider installing some benches at strategic places so that visitors can observe quietly, and absorb the scenery before them. This would be a very welcoming feature at little cost.

We were very please with our visit to the refuge. We read about it in a travel brochure on N. Dakota and checked it out. Had a wonderful experience. I would enjoy returning if I had the chance.

Sparrows, Gray Partage, Mountain Bluebirds

Birder: friendly information would have been so useful to me. The NWR is so large and daunting, as a first time visitor. I did not know where to go to look for LeConte's Sparrow and Yellow Rail. Also, given the sensitivity of these species during the nesting season, the refuge would benefit by directing folks like me into "sacrifice" areas, so to speak (places where you know the species occurs and where you are monitoring effects of recreational activities), rather than having us just blunder about and do damage. Also, I am a photographer but didn't see any photo blinds. Do any exist? Thanks and best of luck. North Dakota refuges are truly amazing places.

I am a wildlife management major at Humboldt State University and I believe that if it is possible to restore native prairies, then that should be a goal. Also, there should be as much hunting opportunity as possible, mammals or birds. I also think public learning should be a priority. I'm already a big fan of NWR's, they provide a wonderful opportunity for the public to learn about wildlife an their importance.

Appendix D

Survey Question Summaries for Upper Souris National Wildlife Refuge

This appendix contains the information obtained from frequency counts of the raw data from the Upper Souris National Wildlife Refuge visitor survey. The order of the tables follows that of the questions in the survey section by section. Summaries of the open-ended questions contained in the survey and comments that were included by some respondents at the end of the survey, as well as the verbatim answers and comments, are provided following the frequency report.

Section 1

Question 1

Table 1. Visitation to Upper Souris NWR.

Times visited	n
0	29
1	39
2	30
3	25
4	22
5	11
6-10	68
11-15	37
16-20	32
21-25	16
26-30	16
31-40	13
41-50	10
Over 50	13

Question 2

Table 2. Activities participated in during the visit to Upper Souris NWR.

Activity	Participation (%)
Bank Fishing	53
Ice Fishing	53
Boat Fishing	42
Driving for pleasure	35
Nature/wildlife viewing	33
Deer hunting with rifle	32
Bird watching	21
Prairie marsh scenic drive	20
Waterfowl hunting surrounding the Refuge	17
Hiking/walking trails	16
Picnicking	15
Upland game bird hunting	11
Photography	10
Deer hunting with bow	9
Canoeing	5
Environmental education	5
Deer hunting with muzzle loader	4
Berry picking	3
Other activities	3
Bicycling/mountain biking	2
Cross country skiing	0

n = 350

Table 3. Other activities in which visitors to Upper Souris NWR participated.

Activity	n
International Migratory Bird Day	2
Canine recreation	1
Relaxation	1
Retirement ceremony	1
Running/roller skiing	1
Stay at cabin	1
Taking short cut home	1
Visit friends that were ice fishing	1

Table 4. Most important reason for visit to Upper Souris NWR.

Activity	n
Fishing	185
Hunting	93
Wildlife/bird watching	30
Driving/auto tour	7
Biking/hiking	6
Canoeing	5
Environmental education	4
Other	4
Hunt and fish	4
Picnicking	3
Photography	3

Question 3

Table 5. Reason for most recent visit to Upper Souris NWR.

Nature of visit	%
Primary purpose or sole destination	83
One of many equally important reasons or destinations	12
Incidental or spur of the moment stop	5

n = 347

Questions 4, 5 & 6

Travel time from a respondent's home varied from 3 minutes to 7 days (168 hours). Visitors traveled an average of just under two hours (106.48 minutes) to get to Upper Souris NWR. Modal, or most frequently cited travel time was 30 minutes (n = 89). Once at the Refuge, respondents spent 4 hours there on average. Of the visitors who reported spending multiple days on the Refuge, the average time spent was 3 days.

Table 6. Travel distances for visitors to Upper Souris NWR.

Distance	%
1-10	7
11-20	20
21-30	24
31-40	12
41-50	9
51-100	7
101-500	5
> 500	3

n = 361

Table 7. Number of people traveling in group during the most recent trip to Upper Souris NWR.

Number of people in group	n
0	41
1	81
2	132
3	56
4	25
5	9
> 5	17

Question 7

Table 8. Sources from which respondent learned about Upper Souris NWR.

Source	Percentage
Friends	61%
Family	37
Other	18
Highway signs	17
USFWS staff	7
USFWS website	5
Visitor brochure	5
Recreational group	4
Travel guidebook	4
TV/radio	3
Local Tourist Information Center	2
Magazine	2

n = 346

Table 9. Other sources from which respondents learned about Upper Souris NWR.

Source	n
Live or have lived nearby/born locally	27
Drove by/self discovery	4
Own adjoining land	
Always knew about it/knew about it for years	2
Work/worked on Refuge	2
State map	2
Newspaper	2
Civilian Conservation Corps	1
Employees	1
Hunting	1
North Dakota birding guide	1
Scenery	1
Visit to Refuge	1

Questions 8, 9 & 10

Table 10. Number of years hunters have been fishing and hunting at Upper Souris NWR.

Number of years fishing	n	Number of years hunting	n
1	28	1	26
2	22	2	12
3	21	3	19
4	8	4	4
5	12	5	10
6-10	52	6-10	21
11-20	43	11-20	31
21-30	33	21-30	18
> 30	62	> 30	18

Table 11. Number of trips taken by visitors for fishing and hunting each year.


Number of Trips	Fishing trips		Deer Hunting trips		Upland game bird hunting trips		Waterfowl hunting trips	
	To Upper Souris NWR	To other areas	To Upper Souris NWR	To other areas	To Upper Souris NWR	To other areas	Around Upper Souris NWR	To other areas
0	22	25	171	127	249	150	229	181
1	18	11	32	27	11	6	6	6
2	22	17	21	23	10	12	12	8
3	16	11	11	12	2	12	3	8
4	12	22	13	10	8	18	6	7
5	11	16	6	20	8	10	13	17
6-10	73	67	30	32	7	36	19	27
11-20	62	55	10	14	2	17	5	13
21-30	33	29	1	5	0	8	3	6
> 30	25	21	2	4	1	5	2	1

Question 11

Table 12. Experience of hunters at Upper Souris NWR differed from other places hunted.

Hunting experience different	% Hunters
Yes	34%
No	66

n = 122

A summary of and verbatim comments in response to these questions is provided starting on p. 7.

Question 12

Table 13. Type of weapon used by hunters at Upper Souris NWR.

Weapon type	% Hunters
Firearm	84%
Archery	12
Muzzleloader	5

n = 188

Section 2—see main report

Section 3

Question 1

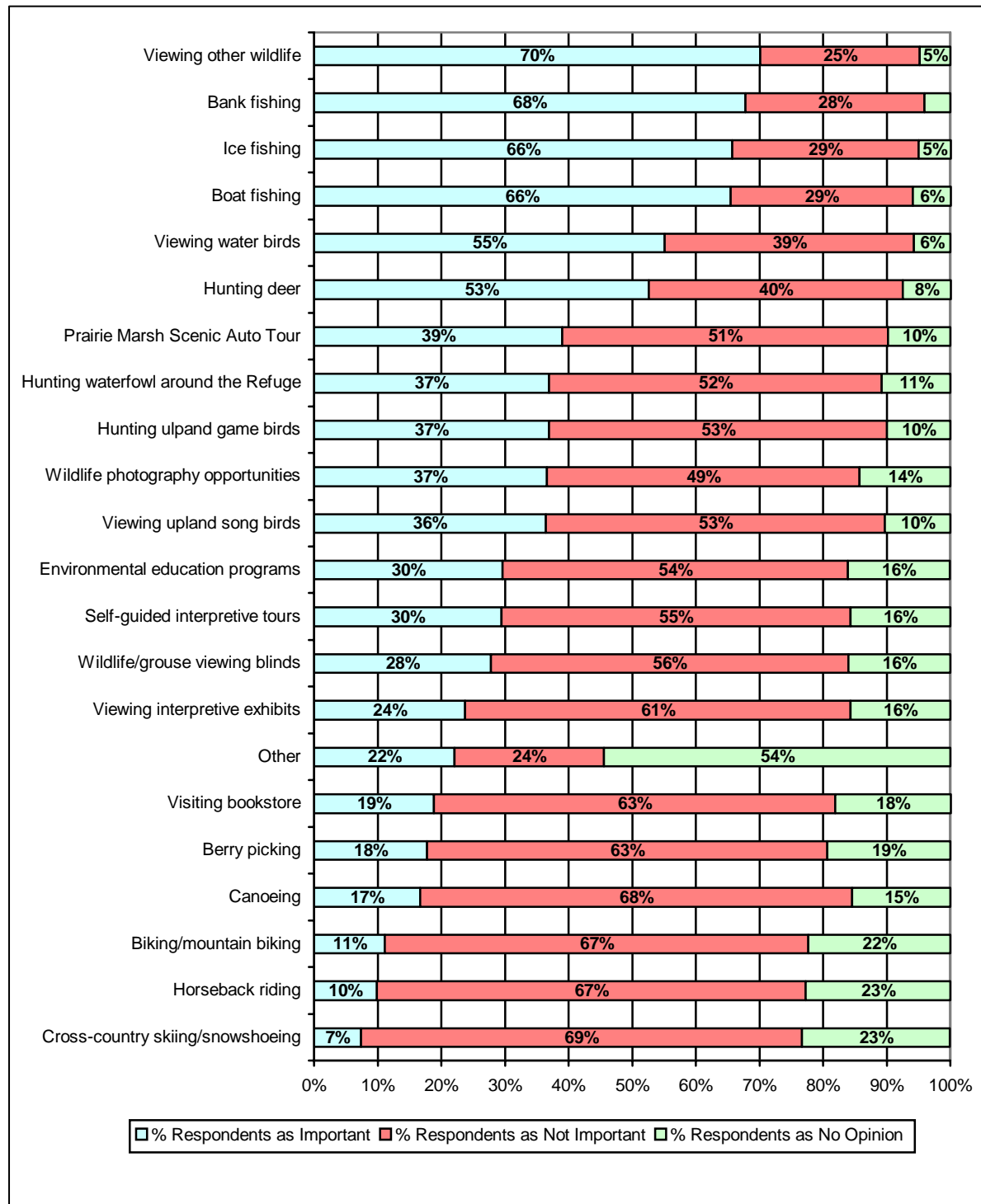



Figure 1. Importance of activities in decision to take trips to Upper Souris NWR.

Table 14. Other activities important in decision to take trips to Upper Souris NWR.

Activity	n
Hiking/walking/jogging	6
Picnicking	2
Fishing/fishing off bridges	2
Do something different	1
Hunting	1
Canine recreation	1
Camping	1
Relaxing	1
Viewing prairie plants	1

Questions 2 & 3

A summary of and verbatim comments in response to these questions is provided starting on p. C-

Question 4

Table 15. Percentage of respondents indicating the importance of items in contributing to recreation satisfaction while at Upper Souris NWR.

Service or feature	Important / Very Important	Not Important / Somewhat Important	n
Condition of the natural environment	90%	6%	323
Well maintained public use areas	86	8	328
Availability of information on hunting and fishing	78	13	321
Available parking	76	18	329
Refuge easy to find	74	19	319
Helpfulness of the Refuge staff	73	16	323
Wildlife viewing opportunities	68	19	319
Information about the Refuge and its environment	57	32	321
Trails clearly marked	53	30	317
Tables and grills	51	32	327
Self-guided trails or auto tours with interpretive signs	51	30	319
Availability of information on hiking, bird watching, and wildlife photography	47	32	320
Access for people with disabilities	45	21	330
Special events at the Refuge	42	33	318
Other services/features	34	13	64

* Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Table 16. Satisfaction with service or feature as ranked by those to whom these items were important or very important.

Service or feature	Outstanding	Good	Average	Adequate	Poor
Refuge easy to find	41%	43%	12%	3%	< 1%
Helpfulness of the Refuge staff	40	34	12	6	4
Condition of the natural environment	39	43	13	3	1
Wildlife viewing opportunities	30	52	13	4	1
Availability of information on hiking, bird watching, and wildlife photography	29	40	17	8	3
Self-guided trails or auto tours with interpretive signs	28	44	17	5	3
Well maintained public use areas	27	41	18	5	6
Information about the Refuge and its environment	26	42	22	6	2
Availability of information on hunting and fishing	24	47	17	8	3
Trails clearly marked	20	51	22	4	1
Special events at the Refuge	18	41	22	9	3
Tables and grills	17	38	23	9	9
Available parking	15	49	21	11	4
Access for people with disabilities	10	37	26	12	11

* Where percentages do not add to 100%, the remaining percentage of respondents indicated that the item did not apply.

Table 17. Perceptions of management of features in order to maximize experience at Upper Souris NWR.

Feature		<u>More features</u>	<u>Leave as is</u>	<u>Less features</u>
Fishing	Provide more fishing areas	62		
	Leave as is		38	
	Provide fewer fishing areas			1
Facilities	Develop additional visitor facilities	47		
	Leave as is		51	
	Remove some visitor facilities			2
Hunting	Provide more hunting areas	44		
	Leave as is		53	
	Provide fewer hunting areas			3
Hiking trails	Provide more trails	35		
	Leave as is		63	
	Provide fewer trails			2
Education	More programs & interpretation	33		
	Leave as is		66	
	Reduce programs & interpretation			2
Visitor impacts	Increase efforts to restrict behavior harmful to wildlife	31		
	Leave as is		59	
	Decrease efforts to restrict visitor behavior harmful to wildlife			10
Visitor numbers	Encourage more use & interactions	28		
	Leave as is		70	
	Restrict number of users in area			2
Auto tour route	Increase number of roads	25		
	Leave as is		71	
	Provide fewer roads			4
Signs	Provide more signs	25		
	Leave as is		70	
	Limit the number of signs			5

Table 17, continued.

Feature		<u>More features</u>	<u>Leave as is</u>	<u>Less features</u>
Services	Provide more visitor info & staff	23		
	Leave as is		75	
	Provide less visitor info & staff			2
Outside exhibits	Provide more interpretive exhibits	21		
	Leave as is		78	
	Provide fewer interpretive exhibits			2
Inside exhibits	Provide more interpretive exhibits	17		
	Leave as is		82	
	Provide fewer interpretive exhibits			1
Naturalness	Allow more landscape alterations	15		
	Leave as is		70	
	Restore more natural conditions			15

* Respondents were asked to rate statements specific to a given feature.

Table 18. Mean scores of visitors' feelings toward Upper Souris NWR.

Statement	<u>M</u>	<u>SD</u>
It is important to me that my children and my grandchildren will be able to visit the Refuge.	4.56	.71
Because of my experiences at the Refuge I will definitely come back.	4.38	.75
Coming to places like this Refuge is an important part of my family tradition.	3.95	.96
This Refuge means a lot to me.	3.93	.87
I am very attached to the Refuge.	3.92	.91
This place is special because it is where my family and I spend time.	3.81	1.00
This area is the best place for what I like to do.	3.76	.96
The Refuge provides me a sense of connection to past and future generations.	3.68	.85
I feel this Refuge is a part of me.	3.66	9.8
I have confidence in decision made by the local staff at the Refuge.	3.61	.98
This place is special because it is where my friends and I spend time.	3.60	1.00
I identify strongly with the Refuge.	3.57	.99
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	3.57	.99
Coming to places like this Refuge was an important part of my childhood.	3.34	1.15
Doing what I do at this Refuge is more important to me than doing it in any other place.	3.28	1.02
I get more satisfaction out of visiting this place than visiting any other.	3.22	.98
I wouldn't substitute any other place for doing what I do here.	3.03	.97
No other place can compare to this area.	2.99	.89

n's range from 333 to 342 *Variables coded on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

Table 19. Respondents who agreed or disagreed with statements about their feelings towards Upper Souris NWR.

Statement	Strongly/ Mildly agree (%)	Strongly/ Mildly disagree (%)	Neutral (%)	n
Place heritage				
It is important to me that my children and my grandchildren will be able to visit the Refuge.	92	1	7	342
Coming to places like this Refuge is an important part of my family tradition.	68	6	26	341
The Refuge provides me a sense of connection to past and future generations.	56	6	38	340
This place is special because it is where my family and I spend time.	64	9	26	339
This place is special because it is where my friends and I spend time.	58	13	30	336
Coming to places like this Refuge was an important part of my childhood.	46	21	34	333
Place identity				
This Refuge means a lot to me.	70	5	35	342
I am very attached to the Refuge.	66	4	30	342
I feel this Refuge is a part of me.	54	10	36	340
I identify strongly with the Refuge.	48	9	43	340
Place dependence				
This are is the best place for what I like to do.	63	9	29	340
Doing what I do at this Refuge is more important to me than doing it in any other place.	34	19	47	341
I wouldn't substitute any other place for doing what I do here.	25	27	48	339
No other place can compare to this area.	22	25	53	340
I get more satisfaction out of visiting this place than visiting any other.	33	20	47	341
Trust				
In general, I have confidence in the decisions that the U.S. Fish and Wildlife Service makes about managing this Refuge.	59	14	27	340
I have confidence in decisions made by the local staff at the Refuge.	57	12	31	341
Because of my experiences at the Refuge I will definitely come back.	87	10	36	340

Table 20. Feelings towards paying a fee to visit Refuges.

Statement	Strongly/ Mildly agree	Strongly/ Mildly disagree	Neutral	n
I should <i>not</i> have to pay a fee to visit this or any wildlife Refuge.	70	11	18	344
I would consider paying a fee to visit this Refuge.	18	58	23	342

About half of the respondents (n = 171) agreed with the statement, “If I could, I would volunteer my services to the Refuge” and 39% (n = 131) agreed that if it were available, they would consider participating in a Refuge friends group.

Section 4

Question 1

Table 21. Types of natural resource related activities participated in by Refuge visitors sampled.

Activity participated in	Percentage of respondents
Signed a petition concerning natural resources or the environment	40%
Attended a public hearing or meeting	28
Contacted or written a state/federal agency	25
Joined a special interest group	20
Contacted or written a U.S. senator, member of congress, or state legislator	19
Written a letter to the editor of a newspaper	9
Helped to organize a petition	7
Lead a special interest group	5

n = 356

Table 22. Types of special interest groups Refuge visitors belong to.

Organization Type	Organization (n)			
	One	Two	Three	Four
Sportsman	34	8	9	1
Birding	2	1	1	0
Wildlife/Animal	5	3	2	1
Environmental	5	1	1	0
Conservation/Natural Resource	3	4	2	1
Other	11	2	0	1

Section 5
Question 1

Table 23. Visitor agreement with the acceptability of management actions at Upper Souris NWR.

Management technique	Agree	Disagree	Unsure
It is important to conserve native prairie habitat on the Refuge, even if this means using prescribed burning to discourage woody vegetation and encourage native grassland plants.	79%	8%	11%
It is important to keep grassland that has been planted on the Refuge in an attractive, high-quality condition for nesting birds, even if this means haying such areas every 4-5 years.	78	5	14
It is acceptable to use chemicals to control weeds on the Refuge.	68	15	15
It is acceptable to use grazing to control non-native plants, even if this means temporarily having less grass cover on the ground.	55	18	24
Songbirds that depend on native prairie should be a primary consideration on a Refuge in the prairie region, even if this means using grazing and fire routinely to restore and maintain the Refuge's native prairie.	49	21	27
It is important to manage for high populations of economically important species even though native prairie/wetlands may be lost and accompanying species may decline.	45	29	24
It is unacceptable to raise and lower water levels in Refuge marshes to mimic natural flood and drought cycles, even if it means wetland will produce less plant and animal food for waterfowl and other water birds.	29	37	30
It is unacceptable to have cattle grazing on the Refuge even to reduce plant material buildup, wildfire risk, and the spread of non-native plants.	23	56	19

n's range from 344 to 348

Table 24. Visitor opinions of fishing at Upper Souris NWR.

	Agree	Disagree	Unsure
A fishing trip can be successful to me even if not fish are caught.	77%	15%	6%
I catch fish for pleasure rather than for food.	49	39	9
Testing my fishing skills is more important than actually catching fish.	39	36	20
If I thought I wouldn't catch any fish, I wouldn't go fishing.	38	54	6
The bigger the fish I catch, the better the fishing trip.	34	54	8
I would rather catch one or two big fish than ten smaller fish.	31	51	15
Keeping the fish I catch is more enjoyable than releasing them.	27	52	18
When I go fishing, it is important that I catch my limit.	18	73	6

n's range from 312 to 317

Section 6

Questions 1 & 2

Table 25. Gender of visitors to Upper Souris NWR.

Male	85%
Female	15%

n = 357

Table 26. Age categories of Upper Souris NWR visitors.

Age category	Percentage
Under 18 years	3%
18-24 years	7
25-34 years	17
35-44 years	27
45-54 years	25
55-64 years	12
65-74 years	7
75-84 years	1
Over 84 years	< 1

*Categorized according to the 2000 U.S. Census Bureau categories
n = 354

Question 3

Table 27. Employment of visitors to Upper Souris NWR.

Employed ^a (%)		Employment type ^b (%)		Retired ^c (%)	
Yes	No	Full-time	Part-time	Yes	No
86	14	75	18	38	32

^a n = 328

^b n = 333

^c n = 68

Question 5

Table 28. Level of education of respondents.

Level of education	% respondents
Less than high school	4%
High school	30
Some college	36
College	14
Advanced degree	16

n = 155

Question 6

Table 29. Number of members in the households of visitors to Upper Souris NWR.

Number in household	n
1	60
2	119
3	47
4	82
> 4	46

Question 7

Table 30. Income of visitors to Upper Souris NWR.

Income	% respondents
Less than \$10,000	2%
\$10,000 to \$14,999	4
\$15,000 to \$24,999	11
\$25,000 to \$34,999	15
\$35,000 to \$49,999	21
\$50,000 to \$74,999	27
\$75,000 to \$99,999	10
\$100,000 to \$149,999	7
Over \$150,000	3

n = 331

Upper Souris National Wildlife Refuge Visitor Survey Summary and Comments from Open-Ended Questions

Section 1

Question 11: Was your last hunting experience on the Refuge different than other places you hunt?

Comments were generally aggregated into three major themes: accessibility, satisfaction, and resource quality. Accessibility issues that were discussed included the pros and cons of prohibiting horses or ATVs, particularly regarding the retrieval of large game. A few individuals who indicated that they were elderly or disabled also indicated that this was an issue. Limited accessibility however was also identified as a positive attribute of the Refuge. A number of respondents indicated that limited access reduced crowding, and made them feel safe, which in turn added to their satisfaction. Other satisfaction related comments were directed toward the quality of their experience. Several respondents mentioned that they successfully harvested game or that they had seen large bucks during their visit. One individual in particular noted that he harvested a white tail buck that scored 150+ non typical. Resource quality comments generally related to the quality of habitat, deer population and herd quality, all of which were positive. Despite that 92 respondent that did provide comments for this question, not a single one identified how their experience on the Refuge was different from other places where they hunt. Several respondents did indicate that they did hunt near the Refuge, most of which were waterfowl hunters. Overall, comments were very positive.

Section 3

Question 2: What would enhance your experience at Upper Souris National Wildlife Refuge?

A request for additional fishing access areas (e.g. piers, docks) was the most frequent comment. Included in this request was access that accommodated for handicapped fisherman. In regards to ice fishing on the refuge, one individual added that he had to help a handicapped fisherman who was stuck in the ice, creating a potentially serious hazardous situation. It was also mentioned that access to the ice fishing areas was potentially hazardous for elderly ice fishermen. In particular, one respondent mentioned that the “Green area” was difficult for him due to the rocky surface.

The second most requested enhancement to visitors’ experiences was access of ATVs or 4-wheelers by ice fishermen. Interestingly, several respondents specifically excluded snowmobiles when requesting ATV access.

Improved visitor facilities were also a common request. Of which, requested amenities included: improved bathroom facilities (specifically more frequent maintenance and cleaning), garbage cans, picnic tables, and fish cleaning stations. Fish cleaning stations however, were requested less frequently than the other amenities.

Visitor education: signage, flora and fauna identification information.

Camping, particularly primitive camping was requested by a number of respondents.

Section 3, Question 3

What experiences have you had at Upper Souris National Wildlife Refuge that would bring you back?

Almost unanimously, fishing was identified as the most cited experience that would bring respondents back to the Upper Souris NWR. The second most frequent response was hunting, followed by wildlife viewing. Many respondents included hunting and fishing as a single response. Similarly, many responded who identified hunting and fishing as a primary experience that would bring them back to the refuge also included wildlife viewing.

End of Survey Comments

In addition to fishing, hunting was a significant topic among respondents' final comments. Visitors were overall very satisfied with there experiences at the Refuge, however, suggestions were not uncommon. Most comments focused on the same topics reviled in the previous questions: increased access and/or services.

Management issues that were discussed included: cattle grazing, prescribed fires, refuge deer hunting permit system, and hunter access. Typical to theses topics comments reflected dichotomous perspectives.

A few interesting comment that are worth mentioning: One individual mentioned that the area was a beautiful place to harvest fish and game; however, he felt that the area should provide "landscaped facilities" for visitors.

Verbatim Comments on Open-ended Questions

Section 1

Question 11: Was your last hunting experience on the Refuge different than other places you hunt?

- Not a hunter
- Haven't hunted on the Souris Refuge yet
- More trees in this area.
- Hunting on the refuge is more difficult because of walking access only & you don't have to worry about "other" people posting for you or competing with road hunters.
- Fewer birds in area and hard to find on public land. Hunt out of area now.
- Shoot geese/ducks off the refuge line
- Not as accessible by vehicle
- More ravines & different type of cover.
- Had to drag deer 2 miles
- Did not hunt
- No hunting on refuge
- I don't hunt on the refuge
- More trees
- Don't hunt
- More mature deer
- Motorized travel not allowed, more hiking required. I like the fact that the Refuge is not easily accessible. Most of the surrounding land is posted "No trespassing" "No hunting"
- Did not hunt on refuge for last 10 years
- Snow geese
- If I don't have a refuge permit, I have the farmer's permission to hunt next to the refuge near Tolly.
- Do not hunt on refuge
- Not certified currently w/North Dakota Game & Fish Safety Course.
- Don't hunt
- Don't hunt
- Great pike fishing
- Snow had all gravel roads shut down; still we could not walk through the rifle range area? If it is closed, we should be able to.
- Don't hunt refuge
- Never hunted refuge
- Don't hunt
- Did not hunt on refuge
- Because of my age I'm limited to where I hunt-I like to be near roads
- The hunting is better. Lots of space, and no, "no hunting signs" as most of the private land is.
- Never hunted refuge
- Didn't hunt
- Had to pack the deer out about 1 1/2 miles
- Fine "print" trespassing ticket?
- Fishing from the Brano Bridge I usually shore fish or from Ring Rap at D.L.
- Waterfowl shooting (hunting) in northern Wisconsin is over small wooded lakes & rivers.
- Late bow season there are many ice fishermen to spook deer in hunting areas around lake.
- Harder work.
- Have not hunted in more than 10 years
- Do not hunt
- More geese
- Lottery draw for refuge permit & very large area with plentiful wildlife
- Good deer habitat.
- Other places easier to hunt.
- Successful and not crowded making a memorable 1st deer harvested by my son.
- I did not hunt the refuge this year but I did have a tag for it.
- Forrstro River Bottom
- I hunted south of McKinney bridge (1-1 1/2 miles) and harvested a really nice whitetail buck that Green scored over 150-non typical.

- Don't usually hunt anywhere else.
- Game & Fish Officers were clearly harassing hunters from Minot AFB. Filed formal complaint during deer gun season.
- Safer, no land owners homes, etc., easy access, fewer hunters.
- It was nice to hunt the refuge-you didn't have to worry about posted land.
- The deer are much larger and more of them
- The refuge is the best place to hunt-if you walk in a ways you won't see many hunters.
- What a long drag after getting a deer.
- I sought a refuge deer permit because I wanted to patiently walk and still hunt through an undisturbed, tranquil environment. That is what differentiates the refuge from other areas where I hunt.
- It was real hunting.
- It was a little crowded! I came back a week later and bagged a doe.
- Having no family in the area, we hunt there so we have a place to hunt. It is not overly crowded most of the time.
- Less hunting pressure.
- Harder to get to-more secluded.
- Lots of trees, brush, and coulees
- Many large bucks-more than anywhere else.
- Shot a buck on refuge, and had to drag it out-I am handicapped-bad lung, back, need to change rules for handicapped/disabled. But love to hunt refuge, born & raised nearby.
- Fewer hunters, better habitat, more opportunity for trophy animals
- It was nice hunting on land that hasn't been disturbed for hundreds of years. Most of all, not having to look for non-posted land!
- It was an opportunity to get away from the crowds and enjoy myself.
- More walking-love the coulies and deer no.s'
- There weren't as many people.
- No hunters!!!!
- No one can drive around you while you are walking.
- Fine print statement closed till end of deer season (fine for trespassing).
- Had to walk in, can't drive in to get deer taken.
- Less people!!
- No roads
- Refuge provides a safe, relaxing place to hunt without the crowds and without your typical road hunters etc...
- Adjoining land or land near refuge.
- I got a trophy buck.
- I enjoy the quality of the hunt at the refuge. Although I had an antler less tag it is enjoyable to have access to the unique habitat that is available at the refuge.
- I saw a moose
- I could not leave my tree stand up overnight and/or could not drive down service roads.
- It is, in my opinion, the best place to gun hunt in this area-I feel this is because of management.
- Spent most of the time scouting & hunting by myself-other places I was accompanied by friends.
- Find better access on other land.
- Very busy. Hunted private land before out of state.
- The amount of deer seen in the refuge is at least 3 times more than seen at other sites.
- Horseback and/or ATV to retrieve downed game.
- Unable to hunt due to surgery.
- Hunted alone on the refuge so I just posted near a ravine.
- Less people!!
- Rough, rugged. Real hunting. Beautiful country.

Section 3

Question 2: What would enhance your experience at Upper Souris National Wildlife Refuge?

- Possibly areas to camp(not car camp but backcountry style)within the refuge
- Great fishing-more fishing area
- More history of the area
- Camping
- Additional fishing piers
- Ability to drive ATV's on the ice during ice fishing for safety & environmental reasons.
- Having a boat.
- Shelter along the lake bank
- Keep place pristine
- Seeing wildlife and taking pictures.
- Seeing wildlife and taking pictures.
- Playground equipment for young people at the fishing area
- We need better access to shore fishing for the physically handicapped.
- Catching perch & walleye
- More shore fishing locations
- Cannot think of anything to add right now
- More dirt fishing piers-put some in at Grano crossing like the one at Greene
- Just relaxing, fishing and getting out in the wilderness.
- I rifle deer hunt on J. Clark Salyer NWR & there if you can get a refuge permit that is the only place you can hunt & non-permit holders can't hunt there. I like this feature-see section 1 question 11 for reasons why. I wouldn't mind seeing a few camping areas for summer fishing.
- Extend the hours-no time limit should be required to fish on Souris.
- More areas available for bank fishing
- Catching more fish
- Not such slimy water
- They should have well marked trails and increased access to visitors who are most interested in walking the park. A wildlife viewing guide would also be nice
- Garbage cans, horseback trails, camping abilities
- Bigger docks to fish off
- KPM is too early to close fishing in summer months while daylight is longer
- Unknown
- Primitive camping areas that wouldn't impact the refuge.
- The Game and Fish Dept. needs to stop burning the refuge, it does more harm than good. Stop killing the cover for the animals and the animals themselves!
- Larger fishing area in summer.
- Stocking the water w/fish, mosquito control(bat houses)
- More summer fishing area-longer season
- I think campgrounds where individuals can camp during hunting season. Also maybe open the scenic into town up to drive further is an sxland hours of trail being open later due to hunters walking out.
- Enforce the 35 mph speed limit posted in the area if possible.
- Identified examples of prairie plants.
- Clear between ponds on canoe trail. Water is currently a little low making it impossible to pass.
- More picnic tables and more areas to camp
- More & better places to do bank fishing.
- More sites for bank fisherman (example) there's a lot of shoreline but little access if you don't own a boat.
- Better accessibility to bank fishing
- Remote camping possibilities
- More access to shore fishing & camping
- Lengthen the fall boat fishing season. Open a mile or two south of Grano bridge.
- No opinion
- No opinion
- More bank fishing areas like the one west of Grano
- My wife & I like to camp & bike. Very handy for us (Sunday afternoon trip). We haven't tried biking at Runtime.

- More info on what is available
- Building a skeet and trap range for public use
- Longer or more trails
- Drive on road to retrieve deer
- An explanation of the dam and other man made structures to control water, if not already available-first time to the refuge
- More deer & bird hunting on Refuge
- This year the gate by Lake Darling was closed, making too hard to get back in the area, to bow hunt.
- Spray weeds on bank at Greene.
- I would like to see a change in the deer hunting regulations and extend the summer fishing time from 10 p.m. to 11 p.m. This would make walleye fishing better as they usually bite toward dark.
- To have more time to devote to fishing and hunting
- On waterfowl hunting more public retrieving zones so you can hunt the refuge line at more places.
- Being able to hunt waterfowl inside the refuge.
- Put a slot limit on walleyes/Only keep one over 20"/The rest 16" to 20"
- Camping areas-ability to overnight camp. Cleaner toilet facilities at fishing/picnic area.
- Opening up more of the park
- Nothing I can think of.
- Staying overnight at Grand landing
- More areas open to bank & boat fishing
- More trees along shore of Greene and Grand Crossings. Fish cleaning area at Grand
- Allowing 4 wheelers on the ice, but not snowmobiles
- More fish in mg pool
- More waders to catch
- More fishing venues
- Better fishing
- Catching bigger fish.
- More fish!
- Bigger perch, walleye & no northern pike
- Increase the daily limit of Northern Pike daily & possession limits-too many Northerns in Lake Darling
- Expand limited access to area south of Grand Crossing to Lake Darling Dam.
- Plowed roads during winter
- I would like to see a program for handicapped deer hunting
- Cleaner restroom facilities
- Catching fish in the winter and having snow geese here for more than 2 or 3 days.
- Better access on the lake when it has lots of snow.
- Winterize bathroom windows/i.e.: snow blew through the screens into the restrooms. Shovel a path to the restrooms.
- More access
- Being able to place portable deer stands in trees for more than one night, during bow season.
- Less wind, better parking below Grano
- Letting us leave our camper type fish house overnight on the ice and letting us stay in the fish houses.
- Pave road to Landing Three picnic grounds.
- Use of ATV
- Catching more record size fish.
- Having better access to the lake at Grano for ice fishing. I would like to see lake access on the east side of the lake near the restroom, and then I wouldn't have to drive across the channel.
- Overnight camping.
- More fish
- Being able to bring my four wheeler on the ice to pull my ice house around.
- It's all available to use.
- More ski/hiking trails, more canoe trails
- A good blind for photographing spring diving ducks
- ATV access on Lake Darling for ice fishing.
- Cross country ski trails
- It was great!
- The experience is always good.
- Very well enjoyed by myself & grandson-very educational & well prepared day
- More hiking trails with interpretive signs & information. More fishing piers on the lake side of the area.

- More hiking trails & more educational opportunities on weekends.
- Spray for bees, if possible? Bees were all over the fishing area
- More perch
- Less mosquitoes, a couple of jetties or longer docks to fish from, more trash cans & a fish cleaning station, trailer camping grounds
- More access to piers or boat docks, points etc. closer to deeper water for bank fishing.
- More parking at boat launch
- You need some bathrooms there-it would be nice if there was some kind of gas station or convenience store there
- More walkways by the water
- Very good-boat ramps need to be improved badly, more shoreline fishing opportunities. Need to be able to drive snowmobiles and 4 wheels on lake but not refuge! Open whole refuge to summer fishing!
- Lately-catch more perch
- It would be fun to use ATV's & snowmobiles for pulling ice fishing houses around the lake.
- Being able to camp overnight
- Longer hours to fish in the wintertime!
- Scoring trophies
- The Game and Fish Dept needs to be honest with sportsmen about the #'s and types of fish test netted. They have not been the last couple of years. Perch #'s are down significantly.
- Fishing and sightseeing
- Good fishing
- More access to Lake Darling during the winter.
- An emergency ramp on east side for fishermen caught in high wind.
- If you could start using ATV's on the lake during the winter!!!!
- More public meetings on what's happening in the refuge and information on what's happening in the future!
- More wildlife, toilet paper, garbage cans, camping
- Outstanding...
- Friendlier staff
- A fish cleaning station
- More hiking trails.
- At the Green area where they put the small rocks, it would be wise if some sand could be dumped on top of the rocks so they wouldn't rock & roll so much. As for me, I'm not very capable to walk on them without losing my balance. It would sure help steady those small rocks for getting down to shore to land the fish & not all along but in a couple of spots-thank you! This would really help the older people who are not so sure on their feet.
- More docks to fish off.
- More or updated services: modern restrooms, garbage facilities
- More fish
- Great place
- Continued fishing management to keep fishing quality high
- I'm content with my experiences at USNWR
- Another full-time biologist for outreach/educational purposes.
- Good day fishing-picnic
- Being able to camp overnight or have an area for swimming if possible.
- Different places to fish from the banks(green, Grano)
- Seeing a size limit put on walleyes at 15" min.
- To pursue wounded deer if hit beyond the 10:00 limit! Better fishing pier off of the point at landing 3 and S.E. corner
- Being able to fish after 10:00 P.M.
- Camping
- Fine
- More scenic driving
- To allow small sailboats on the lake. 2. To add additional hiking trails(i.e. let people walk on service roads)
- A close place to park a camper.
- Nothing
- Catch more fish
- Get cormorants from lake-they eat all bait fish
- Camper access area @ Carter Dam
- Better fishing conditions-put fish cribs in certain areas. Mark areas safe to drive on.

- Maintaining winter roads off grades or landings on ice.
- Better fishing structure (cribs).
- More fish
- More deer tags on refuge.
- Overnight camping, improving boat ramps and roads to them.
- More fish
- During snowy weather keep main road (83 to the lake) clearer to drive through.
- To be able to spend the night ice fishing.
- Being able to spend the night when ice fishing.
- Being able to take an ATV or snowmobile ice fishing. If you can drive your pickup why not your snowmobile?
- Being allowed to take snowmobiles & all-terrain vehicles on the lake during ice fishing season.
- Better perch fishing.
- The ability to use a 4 wheel ATV or snowmobile for ice fishing.
- Access to the ice with 4 wheeler or snowmobile-directly to fishing site & directly off refuge.
- Extend the summer boat fishing area and increase the summer hunting season.
- Extend summer hunting season as much as possible. Extend summer boat fishing areas from the dam to the Grand crossing.
- Better access.
- Local bait shop, allowed to travel to grand bridge on lake
- That I could let my dog swim in the river
- More signs describing the wildlife, plants and trees, better restroom facilities
- More fish
- No comment.
- More fish stocking programs
- Having a boat.
- Sunday hours @ visitor's center, more hiking trails
- Designated deer retrieval roads. Use of ATV or snowmobile on lake only for ice fishing.
- ATV use on ice & trails during hunting season (deer).
- To be able to drive on the access roads.
- Canoeing below the dam.
- Increase the population of perch.
- More bike riding trails & cross country skiing
- Allow hunting for rabbit & squirrel
- More access to retrieve deer.
- It's a nice park as is.
- More trails to hike during summer.
- Allow dogs on refuge and more access for hiking.
- Vehicle usage during hunting season.
- Having more points of access
- Being able to spend more time there!!
- I like it just as it is.
- Use a 4 wheeler/snowmobile for ice fishing(not opening for regular riding)
- To be able to drive trails at certain times of the year.
- A fishing pier or dock needs to be installed where Silver Bridge used to be-also roads to Silver Bridge should be accessible for ice fishing
- Not sure
- It would be nice to be able to call someone after getting a beer so we could drive on the dirt road to pickup a deer.
- Better depiction of the refuge boundary line as viewed from inside the refuge
- Ease of access
- Just keep the refuge open.
- Being able to raccoon & predator hunt! It would help the upland birds & waterfowl survive better.
- Access to the roads for hauling out deer, after they have been shot & tagged
- I'm 72. Being able to drive the road to get close to my kill (not off road), but I realize this is not possible. Signing areas by access roads as to whether the area is open to pheasant and upland bird hunting. The boundary maps and lines are confusing.
- Build better roads to Carter Dam & fishing access.
- Nothing-it is fine the way it is.
- Better shore access for fishing & better access for handicapped people for hunting & fishing.
- Allowing ATV's on lake for ice fishing
- More trails open to horseback riding.

- Being able to drive a little closer to pick up your deer.
- Being able to ice fish after 10:00
- ?
- Improved access at the north end.
- Overnight camping at Grand campgrounds
- Draw a buck tag.
- No opinion
- Having the rules spelled out better!
- Marking area around headquarters that cannot be hunted on. /440 yard rule.
- Knowing I had access to hunt when I am notified me have a deer permit. It would be nice to know as far in advance as possible. I found out 1 week before I flew out.
- Catch more perch
- Opening refuge to ice fishing 24 hours
- More deer hunting on refuge.
- Nothing.
- Perhaps more hiking/mountain biking opportunities.
- More buck hunting
- Allow tree stands to stay up overnight and allow vehicles down service roads for hunting purposes-allow squirrel hunting.
- Actually shooting a deer would
- Land easy to get to. Private land owners block access.
- If they would get rid of discontinued fence lines.
- Unknown
- It's great as it is-maybe more trails south of the headquarters.
- Easier access during deer gun season. Better access at camping area, more boat docks & restrooms.
- Better ice fishing. Easier access for hunting secluded areas.
- Being able to draw a buck tag.
- 4-point minimum restriction on bucks.
- ATV on early ice fishing-more refuge permits.
- Is there a main office with maps to help find trails/exhibits? Maybe I always come in the back way & miss it.
- Licenses for the refuge deer hunting that would allow hunters to just hunt on the refuge only! Or posted land would allow hunters access to the refuge.
- A detailed map of trails.
- Better roads
- Better restroom facilities.
- More access points.
- Allowing deer stands for archery to remain in place during the open season.
- Allowing waterfowl hunting on the refuge.
- Better access for hunting and fishing; access to get to deer (etc) for retrieval purposes.
- Better maintenance of roads to the boat ramps.
- More full time rangers. No hunting!
- Nothing, it was fine.
- Everything was great!
- More access for other hunting party members. When only one or two people out of ten get refuge permits, it is a wasted effort.
- Inner access to retrieve game.
- Better access

Section 3, Question 3

What experiences have you had at Upper Souris National Wildlife Refuge that would bring you back?

- Photography, canoeing
- Good fishing
- Wildlife & trails
- Good fishing (in the past). Maybe time to restock.
- Good fishing
- Good fishing, clean areas.
- Great fishing; hiking trails
- Friendly people and the abundance of wildlife and fishing.
- Caught some nice walleye.
- Fishing
- Great fishing
- Beautiful area
- Beautiful area
- Fishing
- Stock the lake more often for fish
- Fishing and having some luck!
- Fishing
- Good fishing
- Good fishing.
- All of the experiences here are great, but I enjoy the hunting opportunities the most.
- Pike fishing & wildlife viewing opportunities
- The excellent fishing and meeting friendly people.
- Good quality hunting & fishing, wildlife viewing & good facilities like boat camps & docks & restrooms.
- Good boat ramps, fair fishing, & clean environment.
- Quiet, relaxing fishing lake; with good scenery.
- Peace & quiet
- Love the variety of wildlife & fishing
- Nice scenery, peaceful environment
- Nice area with few people making for good bird watching
- An enjoyable time exploring the area and viewing the wildlife
- Quality time w/family & friends, peacefulness w/nature.
- Good fish-safe ice
- Fish-big walleye!
- Fishing
- Good fishing
- Fishing
- Solitude
- Hunting ducks
- Good fishing.
- Catching walleye & small mouth!
- Fishing
- Ice fishing
- I am a regular visitor. I visit the area for fitness reasons. I enjoy the outside experience-the geography and wildlife. Also, the experience is relaxing.
- Viewing native prairie, deer hunting, viewing duck/goose migration bird watching
- Canoe trail, prairie marsh tour
- Good fishing, valley view & wildlife
- Boat fishing
- Fishing, picnics, nice peaceful solitude.
- Bank & ice fishing
- All of them-especially if there were more areas to fish from shore.
- Catching fish
- Fishing is good!
- Great fishing
- Great fishing, both summer boating & ice fishing.
- Goose viewing, good fishing, view the scenery
- Catching fish
- Everything was great I will be back for sure
- I vote to hunt upland game, haven't hunted the refuge for awhile, but have hunted surrounding areas.
- Canoeing & fishing
- Fishing

- Kayak & canoe trips-hunting & walking trails, peace of the area
- Hunting, fishing
- Car & walking trails were fun to explore
- For sure good fishing shore or boat
- I enjoy bow hunting because I always see big bucks in the Refuge.
- Hunting, fishing
- Good fishing
- Good fishing.
- Excellent fishing and hunting
- Everything
- Fishing
- Friendly staff, nice facilities
- The hills for hiking & my dogs
- Fishing
- Good fishing -hunting
- Quality of fishing is fair to excellent at various times; distance from my home is great to take kids instead of traveling hours
- Great waterfowl hunting opportunities and fishing areas.
- Good fishing
- Fishing
- Big walleye
- Fishing
- Fishing, peacefulness, chance to take kids fishing & see nature-Etc-
- Catching fish
- I caught a fish!
- 3 years ago good fishing
- I'm an outdoors man and have been all my life and enjoy all that this area has to offer; with this proviso that all people who visit, police all litter one brings and everything that affects the beauty of this area.
- Good fishing-not overly populated.
- Productive fishery during the winter months
- Refuge is clean, well maintained & easily accessible to the public
- Sunset
- The peacefulness of the environment
- I've had many great experiences fishing & goose hunting over my lifetime.
- Good fishing.
- Ice fishing-lots of fun.
- Good fish management
- Fishing, viewing ducks & geese, bow hunting
- Good fishing & hunting
- Great hunting and fishing
- Good fishing.
- Fishing
- Ice fishing fair
- Limiting out on walleye again, again, again.
- Catching big perch & walleye
- Fair fishing.
- Good fishing
- Walleye & perch
- Good fishing
- Good fishing
- I enjoy the outdoors, hunting, fishing, etc. It's near my home.
- Wildlife/grouse viewing blinds
- Birding/watching
- Hunting, boat fishing, photography, grouse blind
- Watching the grouse, good fishing
- Grouse dancing
- Friendly staff, easy access to diverse habitat, good bird & wildlife viewing, well organized & helpful visitor center area & publications
- Good birding!!
- Wildlife and birding this close to Minot
- Friendliness of the staff, cleanliness of the public areas, the wise development of any public access areas, natural setting.
- Another birding day
- All these interpretive days are great! Darla & the staff are wonderful! I bring Scouts out here each season of the year.
- Birding, wildlife viewing, & hiking.
- Programs-educational-activities for students-
- Birds-variety, songbirds
- Fishing
- Catching fish and seeing the different animals

- Fishing
- Good fishing
- There is a lot of room for people to fish. It was very clean up there. The people that fish up there are nice. There was no one drinking and being stupid. It's a great place to bring the whole family.
- Good fishing
- I like to fish
- Very good fishing but needs to be more receptive to fisherman's needs, without harming purpose of refuge.
- Good fishing
- Fishing
- Meeting Shawn Tripp-refuge law enforcement officer
- The fishing & friends!
- Good fishing, hunting, relaxation
- Walleye & Northern fishing/Perch fishing 3-4 years ago
- Fishing
- Good perch fishing
- Good fishing
- Good fishing
- Ramps, parking, toilets.
- Ice fishing & boat fishing & deer hunting
- Only the ice fishing
- Ice fishing, deer hunting.
- Nothing
- Good fishing
- All of them
- Put in more sidewalks & less rocks
- Fishing/hunting
- Watching deer interact.
- Deer hunting, bird watching, nature watching & fishing
- Good fishing
- Biking, hiking, fishing, picnicking, etc.
- Lots of good fishing & excellent deer hunting.
- Catching the big one
- Wonderful sightseeing, catching fish
- Fishing
- Nothing yet, fished all day, got nothing
- Great bird list, missed a lot that we need to come back for
- Great fishing
- The diversity of birds and wildlife.
- Great wildlife viewing, incredible diversity and some neat spots with native prairie.
- Enjoyment of the outdoors
- Good fishing-nature watching
- Peace and tranquility of the songbirds and pelicans and the fishing is excellent.
- Relaxing and good weather
- The good fishing it has to offer and the new boat ramp at landing 1
- Good trophy animals/fish
- Clean North Dakota waters, air & good people.
- Fishing
- Good fishing
- Fishing
- The relaxation and good fishing
- Viewing wildlife and plants 2. Canoeing 3. Bank fishing
- Perch fishing
- Fishing is usually good
- The wonderful array of wildlife & beautiful scenery
- Seeing less cormorants
- Fishing
- I have friends in the area.
- Past excellent fishing and duck/goose hunting. Friends & relatives in immediate Carpio area.
- Not many fishing-has been bad every time.
- Fishing & goose hunting
- Fishing and hunting thrills.
- Good fishing.
- Ice fishing, bank fishing and wildlife viewing.
- Good fishing & good people.
- Close to home, otherwise nothing
- Main places to choose to fish, hunt & other activities.
- It used to be good fishing.
- Lots of game and fish.

- Good fishing
- Good perch fishing-hasn't been great the last ten years.
- Good fishing, deer viewing.
- Excellent fishing, viewing of wildlife and visiting with refuge personnel.
- Fishing with family and friends. Visiting with fishermen & refuge personnel.
- I find it a very nice place to go and my grandkids love it.
- 1st 30" Northern while ice fishing
- The fishing
- The beauty
- Fishing & locality
- Walking the self guided trails and fishing.
- Fishing
- Great scenery
- Wildlife viewing
- Viewing & hunting waterfowl & deer, ice fishing.
- Great fishing and hunting.
- Good hunting
- Hiking, bow hunting, ice fishing and bank fishing.
- I enjoy fishing the lake and spillway.
- Deer hunting
- Good deer hunting.
- Seeing a large quantity of land that has been left untouched by society or by anything(untouched by progress)and felt lucky in having the opportunity to hunt deer that may have never been hunted before(or seen by humans)!!
- Great fishing
- The hunting, fishing and the public access to it!
- Hunting deer, and the great fishing.
- Very nice place.
- Great deer hunting
- Large, healthy deer herd and good population of grouse; decent accessibility to refuge.
- It is well kept.
- Deer hunting, photography, fishing and wild game watching.
- Beautiful area
- Good deer population
- A lot of deer in the refuge-a very nice place to deer hunt.
- I have seen the biggest deer in my life so far on the refuge
- The peace & tranquility that only nature provides-seeing wildlife in its natural habitat.
- We like to view wildlife of every type-& wild places. Hiking would be the best way to do this.
- Great fishing-numerous deer hunting opportunities-helpfulness of U.S. Game/Fish personnel
- Excellent hunting & fishing-peaceful.
- The excellent hunting & fishing. My young sons 3 & 6 enjoy every trip to the refuge
- Public programs-especially for children.
- Kind people
- Continuance and/or enhancement of the opportunity for solitude
- Good hunting/fishing
- Everything.
- Ice fishing and walking the refuge in winter and bow hunting (the solitude).
- Good deer hunting. Good fishing (sometimes!)
- Good fishing & hunting
- Our own place to hunt. Helpful and friendly refuge employees, healthy deer.
- Good deer hunting & numbers of deer to hunters are nice.
- Hunting success-viewing wildlife.
- Hunting deer.
- Great hunting opportunities.
- Hunting & fishing.
- Good fishing, opportunities to see & harvest trophy deer
- Bank fishing, ice fishing, deer hunting
- Incredible hunting, beautiful views, and nature.
- Great wildlife & good fishing
- Not as much people traffic as a lot of other places.
- Wildlife viewing, quality fishing.
- Hunting & fishing-nature watching
- Good deer hunting.

- None
- Deer hunting, ice fishing.
- Fishing
- Good fishing-wildlife.
- Ice fishing, deer hunting.
- Deer hunting
- Good fishing & hunting
- Ice fishing & hunting
- Hunting/fishing
- Deer hunting, fishing, solitude, viewing wildlife etc... Upper Souris National Wildlife Refuge has beautiful landscape and provides great shelter for the state wildlife.
- Hunting and observing wildlife.
- Tagging a trophy buck.
- I enjoy the relative solitude, wildlife, and natural setting.
- Really nice and peaceful place
- None/However, if tree stands could stay up overnight, I would hunt there daily.
- Deer hunting & fishing
- Everything. I really like it and use it as much as I can.
- Hunting & wildlife
- Vast amounts of wildlife.
- Fishing and hunting-I'm in the military, and leaving this year-the refuge will always be a place I remember.
- Amount of deer and upland birds along with all types of fishing.
- Ice fishing
- Like watching geese and wildlife. Enjoy ice fishing and hunting. Hunting deer gave me more knowledge on areas to hike.
- Receiving a buck tag.
- Limited access-not over hunted
- Refuge permit.
- Fishing/hunting; picking lime berries.
- Peacefulness at getting back to nature and unspoiled land like it used to be & the wildlife in it.
- Abundance of wildlife.
- Good hunting, good spots for viewing wildlife
- Enjoyable scenery, wildlife viewing, excellent hunting opportunities, large numbers of deer, close proximity to our residence.
- Early success at deer hunting.
- Great deer hunting opportunities, great fishing.
- Seeing vast numbers of duck and geese during their annual migration and year round.
- Fishing and hunting
- All, especially hunting and fishing opportunities.
- Seeing the large deer
- Friendly employees
- A successful hunt.
- Enjoyed it!
- Plentiful game
- Good hunt!!
- Have had excellent fishing in the past

End of Survey Comments

- I would like to see a points system started for the Deer rifle tags. (Buck)
- I would like to get wild turkeys at the farm. How would this be possible to do? One quarter with lots of pasture. Thank you Jonathan May Box 94 202 3rd Ave. S.E. Mohall, ND 58761
- I think if you allow cows on the refuge then those same farmers should let us on the refuge through their land. I am willing to help out up there if contacted Trent Thomas 1101 13th St. N.W. Minot ND 58703 (701) 838-0069
- I would like to see the use of controlled burning. I feel the area is at a high risk for fire. It should be a major issue, so it does not end up destroying public buildings when a wildfire sparks. I look at a fire as a good thing for maintaining the health of the refuge.
- I do not believe that animal rights groups have any place at the table when considering any policies that may impact the refuge. Refuges were funded through the dollars of hunters, primarily and would not exist without their unprecedented, generous contributions. The refuge system should be managed to enhance the populations of species that are close to the hearts of the sportsmen whose stamp purchases funded the refuge.
- Walking the refuge for hunting was rewarding. The unspoiled environment was good to see. We saw deer, moose, pheasants, grouse, geese, ducks, songbirds and predators such as eagles and owls. They were beautiful. Thank you for your efforts.
- The refuge, landowners, and hunters should get along so they would allow access to their land and refuge land a little better so there wouldn't be such an overpopulation of deer and other wildlife. They will starve in a tough winter anyway. The humane thing would be hunted instead of starvation. Thanks.
- Overnight camping at Grano [sp?] Campgrounds
- Overnight camping at Grano [sp?] Campgrounds
- It is very hard to put a ladder stand up for bow hunting and take it down the same day. I scrap site late fall and getting in and out quiet is important, not to mention the small project of setting up. I understand some of the troubles you have had. But each should be dealt with separately. All the years I've bow hunted I haven't seen another hunter in the woods. If the problem happens in gun season maybe that is when the rule should apply with tree stands. Thank you. Milton T. [illegible signature] 6620 Stage Rd. Ithica NY, 13502
- If not all, certain areas should be available for waterfowl hunting. The money sportsman pay in licenses, taxes, and conservation clubs would and have provided the refuges with support in many ways.
- It would be great if boat fishing would be extended into late October. More shore areas open would also be great too. Being able to fish the whole lake in the boat fishing season would be outstanding.
- It's a wonderful area not only to harvest game and fish, but just to get out and appreciate the beauty. My only objection is that they don't provide enough landscaped facilities for people like me.
- We are new to this area so many things/questions do not yet apply.
- Basically I want to have a place where I can go away to - to enjoy the outdoors, nature - a place where nature has a place to be, and I trust the US Fish and Wildlife to do this.
- I would like to see the refuge managed a little more for deer and pheasants than it is now. Although there is plenty of cover now I hate to see too much burring taking place. The survey talked about keeping woody plants down, but that is good cover for deer and pheasants. I don't think we need to let it totally overrun the refuge, but I can't imagine the songbird population would drop that much if you let some woody plants grow. Maybe it's selfish of me because I love to hunt deer and pheasants but with the fee hunting business getting bigger it would be nice to see the refuges available for hunting. I would also like to see some tree plots or brushes planted in areas for added cover but there again I realize that it is not necessarily what the refuge was designed for. Thank you, you are doing a good job.
- It was a very nice surprise! For years we drove past the turn off on Hwy 83 (my husband didn't think it was worth stopping for). He, by the way, was born here in Maybass. I would suggest better signage on

Hwy 83, something that says the place is a great stop! Plus, I've never seen any advertisements anywhere about it, Minot or on T.V.

- Needs camping. This would bring money to the refuge and a serene place to camp and fish without the extremely long drive.
- I've been coming here for a few years but never realized there was a scenic auto tour or berry picking. Hopefully these things are well advertised at the visitors center/head quarters and I will be able learn about them when I go there (I have not been already). Everything is in good condition but we'd probably picnic more and be more comfortable if the tables were useable. They are often sticky which of course makes them fly infested and the spider webs underneath can be overbearing.
- I enjoy driving and using the refuge. It is close, always well kept and we usually catch fish.
- The refuge is a great place to escape and feel peace of mind with family, friends, and animals.
- To bring back the walleyes - Unit one - lye [sp?] over - 20" This winter [illegible line] People will pay for the right to use the lake.
- 1) Open fishing until ice up. 2) Open whole lake to fishing in summer.
- The use of ATV's on the ice for safety reasons and stiff penalties for violations of the rules.
- The entire refuge is a great place to [illegible word] about natural resources in this part of the state. It is a well managed and operated. I enjoy myself greatly here and spend a lot of time here.
- While at some of the banks and fishing sites there has been an abundance of dog feces. I thought that maybe a sign could be posted in the parking areas asking visitors to "Please pick up after their pet!" I don't want to keep pets from being aloud to come, but people need to remember to pick up after them. I do whenever I bring my two dogs along.
- As stated earlier. I feel more public access areas on the other side of the lake for bank fishing needs to be established.
- Spent a lovely two hours with you at approx. half way round your 4,000 mile tour of your 'big' country. Thank you for preserving our wildlife in such a beautiful and peaceful place, we will always remember it.
- The employee conducting this survey was very professional and friendly and answered all of our questions. 30 Aug 2003
- I wonder if many people actually filled this out carefully, anyway my fishing buddy and I filled this out together and we figured you might want to contact us further. If so... Bradley J. Berdahl 2101 3st. N.W. #622 Minot ND, 58703 Kent V. Larsox1 2101 3st. N.W. #515 Minot ND, 58703 Thanks
- I often drive through just to observe the ducks and geese. I appreciate the fact that the level of the lake is kept consistent. Please keep up with stocking the lake when appropriate and necessary to maintain good fishing.
- I have enjoyed all on my trips and created memorable experiences through my life
- Very nice place.
- I have always enjoyed my trips to or around the refuge. Having this refuge has been wonderful for my family and I.
- I think I disagree with burning. Maybe in late fall but not in the spring. But my comment is, I think you are doing a very good job.
- We had extreme weather conditions and very poor fishing (ice fishing), but I bring 8-12 men each year for the past 5 years. And most return. Maintenance of trails on ice and approaches to ice are important. We had a wheel chair handicapped fisherman that got stuck and I had to pull him of the ice during the whiteout. This could have been a deadly situation.
- The Fish and Wildlife Service is doing a great job. I've always enjoyed going to the refuge and look forward to my trips there every year. Thanks for maintaining it in the manor in which you do!
- More fish structure like cribs or rock piles.

- Very enjoyable, I wish I could have greater access to hike and take my dogs.
- Thanks for asking me to take part! [illegible signature]
- If you get a refuge deer tag you have to hunt it.
- My wife and I own a cabin at the Mouse River park, we drive there from our home near Fargo as often as we can get away. Our intent is to retire there in a couple to a few years. The refuge is a big part of our love for this area. It's ok with me if you use "pathfinder" on the new growth of Buck Thorn.
- I was disappointed in how the refuge in our area has been fed down by cattle. Where we tried to hunt it has turned into more of a pasture than a wildlife sanctuary. Grass has been fed down and trees and shrubs have been trampled fewer cattle for shorter periods of time would be better. If there is going to be cattle then fences should be maintained to keep cattle out of fields and land not in the refuge. We had sunflowers and small grains destroyed by cattle that got out of the refuge this year, with no one notifying us their cattle had done this damage.
- [in bulleted points] Made calls to get some rules clarified at refuge, no one there could answer them. Allow 4-wheelers/snowsleds on ice fishing - even if only through Feb. Better winter access needed at key locations most fishermen use. I like the deer management that is being used. Controlled grazing is good.
- Well pleased
- I always enjoy my time at the refuge and only wish I could find more time to enjoy it. Thanks for all you do!
- The place I learned to fish for "northern" species is on the refuge. This is also the first place I went ice fishing, and hunting in ND. I have spent many hours there, as well as many great memories. Plus, I have a few things on the wall to remember it by. As I mentioned earlier, I am in the military and moving this year. The Upper Souris Refuge will always be special place I remember, and on the top places in ND. Thanks for giving me this opportunity. [illegible signature]
- In the winter months there are no wildlife (ducks and geese) on the lake so it would be great to stay overnight at the fish house.
- Poor fishing
- As a retired biologist I feel that the present permit system for the deer gun season is not good for the deer hear management. Many of the people who apply for the refuge permits do not hunt the refuge by walking. They just want the permit so they can road hunt on the roads that cross the refuge. Many of them never set foot on the refuge. Therefore the number of permits issued has no relationship to the number of deer harvested. I feel that if you get a permit for the refuge you should have to hunt only on the refuge. This would insure an adequate deer harvest.
- The Upper Souris Wildlife Refuge is my favorite place in the state of North Dakota.
- I believe that tree stands for bow hunters should be allowed to remain on the refuge provided that they are portable, they do not utilize permanent fasteners such as nails or screws. And they have written on a tag the name, address, and phone number of the owner. I would also like to see more eminence on the gravel road which runs along the west and north sides of lake Darling. During the winter, this road becomes heavily traveled and is in poor condition. Ice fishermen could utilize a beacon or set of beacons on the north side of the lake - landing 3 - in order to navigate off of the lake after dark. At times it is difficult to determine where the approach is. A solar powered lamp would be adequate for this and provide light until 10pm when the refuge closes.
- Great refuge, great place, very pleasant, friendly. I think it was better limits on the size of [illegible word], but that probably increased usage taking the limits off. Lower the limits on the number of perch that can be taken. It was a sad day to see 3 people from Minn. take five gallon pairs of perch a few years back.
- Game warden (I believe first name Shawn) checked us on Jan 10. Very professional & Courteous to both myself and my wife. Thanks

- I understand the reason why you don't allow ATV's and Snowmobiles on the refuge but, if you were to increase the staff and hold people responsible for their actions. Also what is the reason the refuge closes at 10pm?
- A very peaceful, quiet, and beautiful place to visit. Very concerned about quality of water coming in from Canada!
- We are very happy overall when we spend the day at this refuge. But we would love to be able to camp and spend days instead of the day. :(Thank you.
- I would like to see the off roads to the ice opened once in a while at Green, N. Dak. I have never seen this done one time in my 20 years of fishing there.
- I think that the refuge is absolutely fantastic but it upsets me that people have to litter and that there are beer cans in ditches. I realize that litter control is hard to enforce. I appreciate all the facilities that are available to me at the refuge. Great work.
- I would just like to be able to walk down to shore to net a fish without the fear of falling on those small loose rocks at Green Crossing -- they did a very good job but some sand in a few spots 30 ft wide would make it much easier to get down to shore. I hope this helps a little. Wes Wenker.
- The road to and from Carter Dam "East of Tolley" needs to be better taken care of in the future.
- Concerning section 5 Item #2. For better information about me. I like to keep a few fish to eat, but I further like to catch many and release, a few nice large fish are enjoyable, but knowing the amount and size of the fish in a lake is important to me. I release really big fish, I keep a few smaller ones to eat. But catch and release is my main reason to fish. I enjoy that. Thank you.
- My trip to this refuge was great. The ranger in the visitor center was extremely helpful and friendly. She most obviously enjoys her job and this place. The area was set up well for visitors -- very easy to obtain information on a variety of subjects. Great publications about area.
- I am impressed with the staff and the main visitor's area. They have a good ongoing management of the natural/wildlife area from all reports. A migratory Bird Visitors Program on May 15, 2004 was outstanding.
- All the staff are helpful, knowledgeable, and caring. I bring Cub Scouts out here 3-4x per year and I enjoy the special events (such as International Migratory Bird Day) at the refuge. It is very educational and informative. The resources and support materials are incredible and Darla does a great job in keeping materials handy and in supply. Keep up the great work!
- I feel it is important to have more biologists employed at the Refuge. My husband especially enjoys the fishing, I rather bird. Don't make them too commercialized.
- I like to see a lower perch limit. Enforcement of perch limit.
- I enjoy the refuge, it's important to our area. Very important.
- Public natural / wild land is very important to have access to.
- Please manage refuge better for fishermen, both boat and shore fisherman. Allow snowmobiles and 4 wheels on Lake only in winter. Open refuge same time as rest of state for fishing by boat. No closed boating areas except during Waterfowl migration> Birds need to have place to rest. Improve or put new boat ramps all thru refuge. Grand ramp is terrible Green ramp is terrible, landing 3 ramp is terrible, and landing I ramp is marginal. Long range goal of having fish cleaning stations at landing I and at Grand ramp site when money is available. Have a long range goal of putting campsites, one or two on refuge where impact to wildlife would be minimal. If you do these projects, you will increase value of refuge for wildlife and people. These are common sense things to do at refuge, work too and hire people to achieve these goals! Sincerely, Duane Jacobson.
- I've been coming to the refuge for a few years to hunt and fish pretty much all my life. Anymore, I am most comfortable around here because I know where the borders are. Boundaries that are open to anyone who respects the guidelines. I don't have to try to find out who owns what or if I'm allowed to hunt, fish, or whatever. Thanks! Keep up the good work.
- As stated before, I think the game and fish should be more honest about the results of test nettings and

fish #'s. 3-5 years ago there were good #'s of nice size perch caught. Last year and this past winter it was difficult to even locate perch. What happened to them? I have an aqua... (Illegible) underwater camera and the perch #'s are way down. There are a few small ones seen. Walleye and Northern #'s are fair. It gets disgusting drilling 50-60 holes a day and not catching a decent sized perch. It makes a person look for other places to fish. An honest explanation of this information and the possible reasons would be appreciated by most fishermen.

- I strongly wish we could use ATV's or snowmobiles strictly on the ice for ice fishing. You could fine someone for using it on land, or driving around on roads.
- I don't think the Auto Tour Route should be paved. The tars, oils, increased impermeable surface, and alteration of current route will all degrade current, sensitive conditions. For the public, mallard nesting structures should be better maintained. I've seen some rare species (birds) or those I've never seen before on this Refuge because of habitat that exists. The staff is splendid and a kpu to be around. This area is critical in the Souris River Loop and should be considered a priority.
- 1. I wish you would allow primitive overnight camping. I.e. backpacking, and canoe camping. 2. I wish you would allow small boat sailing. 3. I wish you would add additional hiking trails by allowing people to hike the service roads. 4. If you need a volunteer, I am generally available Friday, Saturday, and Sunday. By profession I am also a heavy equipment operator, with a farm background and was a heavy equipment mechanic in the Active Army for 8 years and for 13 more in the AD ARNG.
- Keep up the good work.
- Overall it is a well run/maintained refuge. There is a paving project on the auto tour route that I don't totally agree with. I think it is best to kept in gravel as it is now for both the environment as well as wildlife. Other than that, all other management and projects are pro-active.