

MINNESOTA DNR WALK-IN ACCESS USER STUDY (2013-2014 SEASON)



Final Summary Report

A cooperative study conducted by:

Minnesota Cooperative Fish and Wildlife Research Unit
Minnesota Department of Natural Resources

Consultant's Report

MINNESOTA DNR WALK-IN ACCESS USER STUDY (2013-2014 SEASON)

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Executive Summary

We collected information from users of the Walk-In Access (WIA) program in Minnesota to help understand hunting participation at the WIA sites, beliefs about the WIA sites and support for the WIA program. Survey questionnaires were sent to 1,530 adult (18+) Minnesota residents with valid addresses who purchased a \$3 validation for access to the WIA sites in 2013-14. A total of 786 completed questionnaires were returned resulting in a 51.4% response. This sample size provides estimates within $\pm 3.5\%$ at the 95% confidence level. We sent a shortened non-response questionnaire to all remaining non-respondents to assess for any non-response bias. Because we knew there was some confusion between the WIA donation program and the WIA access validation permit, we contacted 783 individuals who had donated to the WIA program to assess what proportion of these individuals actually hunted at WIA sites.

The median age of respondents (48.1) was slightly older than the population of WIA validation purchasers (44.1.), which indicated that younger people were less likely to complete the survey. The proportion of respondents who were male (97.1%) did not differ from the study population (96.3% male). Respondents (68.1%) were more likely to have hunted at WIA sites than non-respondents (57.7%) and donators (41.4%). The weighted average estimate of respondents and non-respondents who actually hunted at WIA sites was 63.0%. Based on this finding, we can estimate that a total of 65.7% of the donators had the intention to hunt WIA sites by making their donation ($.414/.63 = .657$).

The study questionnaire included the following topic areas:

- Participation in the fall and winter 2013-2014 WIA program
- Hunter experiences
- Hunter satisfaction
- Beliefs about using WIAs in Minnesota
- Condition of WIAs for hunting
- Beliefs about the degree to which other activities impede the ability to hunt on WIAs
- Sources of information for locating WIAs
- Support for charging a use fee for accessing WIAs and willingness to pay
- Importance of hunting activities
- Demographics

The shortened non-response instrument included six key questions that were identical to the wording used in the full survey. These questions asked about:

- Participation in hunting at WIAs
- Satisfaction with experiences at WIAs
- Perceptions of conditions of WIAs
- Support for charging a use fee for accessing WIAs

Hunting Participation and Satisfaction with Hunting

Respondents were more likely to have participated in pheasant hunting at WIA sites (63.5%) than any other hunting activity, followed by firearm deer hunting (15.6%) and duck hunting (9.5%). Respondents most frequently reported hunting in Lincoln (22.8%), Lyon (18.3%), Murray (15.1%), and Lac Qui Pearle (14.9%) counties. A majority (50%+) of respondents were satisfied with their general hunting experiences at the county level and specifically on WIA sites, although satisfaction with actual harvest was lower than with general experience. Respondents also tended to feel less crowded on WIA sites compared to public lands such as state Wildlife Management Areas and federal Waterfowl Production Areas. More than 70% of respondents indicated that they were satisfied overall with their experiences at WIA sites.

Beliefs about using WIAs in Minnesota

Large majorities of respondents believed that WIA sites provided important places to hunt pheasants (84.5%), easy places to go hunting (81.8%), and places to take kids hunting (78.8%). More than half of the respondents (57.8%) believed that WIA sites provide high quality hunting experiences. Large majorities of respondents also believed that there were not enough WIA sites near them (77.2%) and that the number of WIA sites (91.1%) and the geographic area of the WIA program (83.9%) should be expanded.

Beliefs about negative impacts on hunting quality and condition of WIA sites for hunting

A majority of respondents believed plowed land (62.2%), amount of mowing (61.1%), amount of haying (61.1%), and the amount of grazing (56.15) had at least moderate negative impacts on hunting at WIA sites. However, a majority of respondents also reported that the condition of the WIA sites for hunting was good (51.9%) or excellent (12.6%). Skeet/trap shooting, target shooting, and camping were all viewed as having the potential to impede hunting at WIA sites.

Sources of information for locating WIAs

The DNR website and materials available from the website were important to about two-thirds of respondents. A very large percentage of respondents also reported that just spotting WIA boundary signs was important for locating and hunting the sites.

Willingness to pay for access to WIAs in Minnesota

Large majorities of respondents (76.3%) and non-respondents (64.6%) supported the idea of charging a fee for accessing WIA sites. A large percentage reported they would personally be willing to pay such a fee (85.1% respondents; 72.5% non-respondents). While 14.5% of respondents and 29.4% of non-respondents would not pay a fee or reported their maximum willingness-to-pay (WTP) as \$0, most respondents and non-respondents reported a maximum willingness-to-pay a fee that ranged between \$1.00 and \$50.00. The mean WTP was \$9.04 for respondents and \$7.36 for non-respondents. A \$10.00 fee appears to maximize revenue for the program, but would reduce participation by more than 30% compared to a \$5.00 fee. A fee

between these two price points would likely reduce participation by close to 30% compared to a \$5.00 fee without increasing revenue.

Importance of hunting activities

Almost half of respondents reported that pheasant hunting (46%) was their most important hunting activity followed by firearm deer hunting (17.8%), duck/waterfowl hunting (9.8%) and archery deer hunting (6.1%). Respondents tended to report very high involvement levels with their most important hunting activity.

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Introduction

The 2012 Minnesota Legislature established a Walk-In Access (WIA) Program (Minnesota Statutes 97A.126) to provide public access to wildlife habitat on private land for hunting, excluding trapping. The goal of the WIA program is to provide new hunting opportunities on private land that is already enrolled in existing conservation programs or lands with high quality wildlife cover. The WIA program is entirely voluntary for landowners. Most landowners chose to enroll their property for two or three years. Enrolled lands are covered under the Minnesota recreational use laws that limit landowners' liability. Minnesota Department of Natural Resources (DNR) conservation officers handle trespass and hunting violations. WIA started in 2011 as a two-year pilot program funded by the U.S. Department of Agriculture Voluntary Public Access Program. In 2013, landowners in 28 counties participated in the program, enrolling more than 20,000 acres of private land (<http://www.dnr.state.mn.us/walkin/index.html>). The DNR continues to seek permanent funding to continue the program in 2015 and beyond. For this reason, the agency is interested in understanding who uses the WIA sites, their experiences at the sites, and their future interest and support of the WIA program.

Study Purpose and Objectives

The purpose of this study was to better understand WIA users' and their preferences concerning WIAs. Specific objectives of the study included determining:

- 1) hunting participation levels for different target species at WIAs;
- 2) satisfaction with hunting experiences at WIAs;
- 3) perceptions of conditions and preferences for management of WIAs; and
- 4) willingness-to-pay a fee for access to WIAs in future years.

The questions used to address the study purpose are provided in the survey instruments (Appendix A) and discussed in more detail in the subsequent sections. This report details responses to the survey. Study participants included resident Minnesota adults who purchased a 2013-2014 Minnesota Walk-In Access validation or donated to the Walk-In Access program.

Methods

Sampling

We defined two target populations for this study: individuals who had either purchased a validation to access the Walk-In Access sites or had donated to the Walk-In Access program. The primary population of interest in the study was WIA validation purchasers, but due to confusion in the purchase process we recognized that individuals who donated to the program might believe they had purchased a validation to access the WIA sites. The study samples were drawn from the Minnesota Department of Natural Resources' (DNR) electronic licensing system (ELS). The initial sample size for WIA validation purchasers was $n = 1581$. The initial sample size for WIA donators was $n = 783$.

Data Collection

We collected data from the WIA validation sample using mail-back surveys following a process adapted from Dillman (2009) to enhance response rates. We constructed a relatively straightforward questionnaire, created personalized cover letters, and made multiple contacts with the targeted respondents. Potential study respondents were contacted four times between January 2014 and May 2014. In the initial contact, a cover letter, survey booklet, and business-reply envelope were mailed to all

potential study participants. The personalized cover letter explained the purpose of the study and made an appeal for respondents to complete and return the survey. Approximately 4 weeks after the first mailing, a second mailing that included a personalized cover letter and replacement questionnaire with business-reply envelope, was sent to all individuals with valid addresses who had not yet replied. Approximately 4 weeks after the second mailing, a third mailing that included a personalized cover letter and replacement questionnaire with business-reply envelope was sent to all individuals with valid addresses who had not yet replied. Surveys were collected and data entered through June 6, 2014. In early May 2014, we mailed a shortened one-page, two-sided survey and a business reply envelope to people who had not responded by April 30th to gauge non-response bias (Appendix B contains the non-response survey instrument).

We collected data from donors to the WIA program through a business reply postcard (Appendix C). The postcard was mailed to study participants with a cover letter explaining the WIA program and the purpose of our study. Questions on the postcard asked study participants if they had hunted on WIAs in the past 12 months and, if so, what species they had hunted. We sent a second postcard survey to individuals who had not responded approximately 4 weeks after the initial contact.

Survey Instruments

Walk-In Access study respondents completed a self-administered survey instrument with ten sections of questions (Appendix A). The questionnaire included the following topic areas:

- Participation in the fall and winter 2013-2014 WIA program;
- Hunter experiences;
- Hunter satisfaction;
- Beliefs about using WIAs in Minnesota;
- Condition of WIAs for hunting;
- Beliefs about the degree to which other activities impede the ability to hunt on WIAs;
- Sources of information for locating WIAs;
- Support for charging a use fee for accessing WIAs and willingness to pay;
- Importance of hunting activities; and
- Demographics.

The shortened non-response instrument (Appendix B) included six key questions that were identical to the wording used in the full survey. These questions asked about:

- Participation in hunting at WIAs;
- Satisfaction with experiences at WIAs;
- Perceptions of conditions of WIAs; and
- Support for charging a use fee for accessing WIAs

We asked donors to the WIA program if they had actually hunted any WIA sites during the past 12 month period, and if so, what they had hunted (Appendix C).

Survey Questionnaire Items

The survey instrument included a map to illustrate the Minnesota counties that contained WIA sites. We provided a short description of the WIA program along with an illustration of the WIA signs that demarcate the locations of WIA sites to help people remember if they had hunted one of the WIA sites. We also provided illustrations of the signs that mark public lands such as state Wildlife Managements Areas (WMAs) and federal Waterfowl Production Areas (WPAs), to help with recall of hunting activities.

Participation in the fall and winter 2013-2014 WIA program

Respondents indicated if they had hunted in any of the Minnesota counties that have WIA sites and could report up to three counties that they had hunted most frequently during the fall and winter of 2013-14. Next, we asked respondents to report how many days they participated in 11 different hunting activities at WIA sites, on public lands (i.e., WMAs, WPAs), and on private land. These hunting activities included: firearm deer, muzzleloader deer, archery deer, spring turkey, fall turkey, ducks, geese, pheasant, dove, rabbits, and squirrel. In addition, respondents could list one other hunting activity not listed on the survey instrument.

Satisfaction with General Hunting Experiences and Harvest in Counties with WIA sites

We asked respondents to report their level of satisfaction with their general hunting experiences for each of the 11 listed hunting activities. Respondents reported their satisfaction level with each activity using a 7-point scale where: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied; and 9 = did not hunt this species. Respondents were also asked how satisfied or dissatisfied they were with their harvest in general in this area of Minnesota on the same 7-point scale.

Perceived Crowding of Hunting Areas

Respondents were asked how crowded they felt at the different kinds of places (i.e., WIAs, public and private lands) they hunted in this area of Minnesota. Respondents reported their perceptions of crowding on a single item scale that has been widely used in numerous studies of recreation activities, including hunting (Vaske & Shelby 2008; Shelby & Vaske 2007; see question Q6 on the survey in Appendix A). Respondents indicated how crowded they felt on this 9-item scale where: 1 = not at all crowded, 3 = somewhat crowded, 6 = moderately crowded, 9 = completely crowded, and NA = did not hunt.

Hunter satisfaction at WIA sites in Minnesota

We asked respondents how satisfied they were with their experiences at WIAs on a 7-point scale ranging from "very dissatisfied" to "very satisfied". We also asked how satisfied they were with their general hunting experiences and harvest for the hunting activities they participated in specifically at WIA sites in Minnesota. Respondents used a 7-point response scale where: 1= very dissatisfied, 2 = moderately dissatisfied, 3= slightly dissatisfied, 4 = neither, 5 = slightly satisfied, 6 = moderately satisfied, 7 = very satisfied and 9 = did not hunt this species.

Beliefs about using WIAs in Minnesota

Respondents were asked how much they agreed or disagreed (1= extremely disagree, 2= quite disagree, 3= slightly disagree, 4= neutral, 5= slightly agree, 6= quite agree and 7= extremely agree) with seventeen beliefs about their experiences with and the benefits they obtained from WIAs in Minnesota, including: (a) WIAs provide me with an important place to hunt deer, (b) WIAs provide me with an important place

to hunt pheasant, (c) WIAs provide me with an important place to hunt small game other than waterfowl and pheasants, (d) WIAs provide me with an important place to hunt waterfowl, (e) The quality of hunting on WIAs is not as good as other locations, (f) There are not enough WIAs near me, (g) WIAs are too crowded, (h) WIAs provide a place to take kids hunting, (i) Most of the WIAs I know about are too small, (j) Most of the WIAs I know about are too far away, (k) I do not understand the rules for using WIAs, (l) WIAs provide an easy place to go hunting, (m) WIAs provide high quality hunting experiences (n) The number of WIA sites should be increased, (o) WIA sites should be expanded to other areas of the state, (p) Hunting on WIAs is better than hunting on public lands I have access to, and (q) Hunting on WIAs is better than hunting on private lands that I have access to.

Beliefs about negative impacts of agriculture and other activities on hunting quality

We were interested in knowing the degree to which WIA users believed habitat disturbances associated with agricultural production impacted hunting quality. We recorded responses on a scale (1= not at all, 4 = moderately negative, 7= extremely negative) for eight disturbances, including: (a) The amount of haying, (b) the amount of grazing, (c) the amount of mowing, (d) The amount of farming of small grain crops (wheat, rye, oats), (e) the amount of burning, (f) the amount of farming of row crops such as corn or soybeans, (g) the amount of plowed land, and (g) other.

Respondents rated the condition of the WIAs for hunting on a scale where the options included (a) poor, (b) fair, (c) good, and (d) excellent. We also asked respondents about the degree to which they believed various activities impede their ability to hunt on WIAs. These activities included: (a) camping, (b) dog training, (c) horseback riding, (d) hiking, (e) skeet/trap shooting, (f) target shooting, and (g) other, impede hunting opportunities on WIA sites. They indicated their beliefs about level of impediment of the activity on a 7-point scale with possible responses ranging from: 1= not at all impede, 4= moderately impede, and 7= greatly impede.

Sources of information for locating WIAs

We asked survey participants to indicate on a 5-point scale (1= not at all important, 2= slightly important, 3= moderately important, 4= very important, 5= extremely important) how important the nine following sources of information were for locating and hunting WIAs: (a) the DNR website on WIAs in general, (b) printable WIA hunting atlas from the DNR website, (c) hardcopy of the WIA hunting atlas, (d) GPS data download for WIAs, (e) the DNR Recreation Compass information for WIAs, (f) Google maps for WIAs, (g) Google Earth data for WIAs, (h) WIA detail maps, and (i) just spotting the WIA boundary signs in the field.

Willingness to pay for access to WIAs in Minnesota

There is a long-history of using surveys to identify the value that the public places on public goods such as access to hunting areas (Mitchell & Carson 1989). There is not one perfect method for measuring such values, and different elicitation formats can result in varying willing-to-pay (WTP) estimates (Champ & Bishop 2006; Boyle et al. 1996; Brown et al. 1996). Two common approaches for eliciting willingness-to-pay values are open-ended and dichotomous choice (Mitchell & Carson 1989; Boyle et al. 1996). We used an open-ended approach to collect WTP values. We provide a more thorough discussion in the results section of the report.

We provided respondents with a brief overview of the need for permanent funding to help support the WIA program, and asked them if they supported or opposed the idea of charging a fee to access the WIA sites. Responses were recorded on a 7-point scale ranging from “strongly oppose” to “strongly support”. Next, we asked respondents if they personally would be willing to pay a fee to access WIA sites, and, if

so, what is the most that they personally would be willing to pay each year to have access to WIA sites. We used an open-ended question to record responses.

Survey respondents also reported the certainty that they would actually be willing to pay a given amount for access to WIAs next year. We asked survey participants to indicate on a scale (1= Not at all Certain to 7= Extremely Certain) how likely they would actually be willing to pay the amount they had indicated next year, if such a fee were created to allow access to Walk-In Access sites.

Importance of hunting activities

Survey respondents were asked to rate how important the following hunting activities are to them: (a) firearm deer, (b) muzzleloader deer, (c) archery deer, (d) spring turkey, (e) fall turkey, (f) ducks, (g) geese, (h) rabbits, and (i) squirrel. Respondents could also write an "other" category. Responses were recorded on a scale where: 1= Not at all Important, 2= Slightly Important, 3= Moderately Important, 4= Very Important, 5= Extremely Important. There was also a "do not hunt" response available.

Survey participants were asked which one hunting activity is most important to them and to indicate how much they agreed or disagreed with several statements about their level involvement with their most important hunting activity (where 1= Not at all Important, 2= Slightly Important, 3= Moderately Important, 4= Very Important, 5= Extremely Important).

The statements were adapted from previous studies of recreation involvement (Kyle et al. 2007). Items included: (a) This hunting activity is one of the most enjoyable things I do, (b) I am knowledgeable about this hunting activity, (c) The decision to go hunting is primarily my own, (d) A lot of my life is organized around this hunting activity, (e) This hunting activity has a central role in my life, (f) Most of my friends are in some way connected with this hunting activity, (g) When I participate in this hunting activity, others see me the way I want them to see me, (h) I do not really know much about this hunting activity, (i) I consider myself an educated consumer regarding this hunting activity, (j) This hunting activity is interesting to me, (k) This hunting activity is important to me, (l) You can tell a lot about a person when you see them engaged in this hunting activity, (m) When I am participating in this hunting activity I am really myself, (n) I enjoy discussing this hunting activity with my friends, (o) The decision to go hunting is not entirely my own, (p) I have a preference for this hunting activity over other leisure activities, (q) I find a lot of my life organized around this hunting activity, (r) Even if close friends recommend other recreational activities, I prefer this hunting activity, (s) I have acquired equipment that I can only use for this hunting activity, (t) I have close friendships based on a common interest in this hunting activity, and (u) Compared to other hunters, I own a lot of equipment for this activity.

Data Entry and Analysis

Data were entered in Excel 2010 and analyzed on a personal computer using the Statistical Program for the Social Sciences (SPSS for Windows 21). We computed basic descriptive statistics and frequencies for the results.

Survey Response Rate

Of the 1,581 full-length questionnaires mailed to hunters and trappers, 51 were undeliverable. Of the remaining 1,530 surveys, a total of 786 full-length surveys were returned by June 6th, resulting in a response rate of 51.4%. A total of 396 postcard surveys were returned from the WIA donator sample for a response rate of 50.6%. The sample size of $n = 786$ provides estimates within $\pm 3.5\%$ at the 95%

confidence level. The sample size for the donator postcard survey provides estimates within $\pm 5\%$ at the 95% confidence level.

Non-response Checks

We compared the age and gender of study respondents to the initial sample. The respondent sample was slightly older (mean = 48.1; $F = 71.94$, $p < 0.001$) than the targeted population of adult (18+) WIA validation purchasers (mean = 44.1). The gender distribution of the initial sample was 96.3% male, while respondents were 97.1% male. These distributions were not significantly different.

In addition, all study participants who did not respond by April 30, 2014 ($n = 757$) were sent a shortened non-response survey (Appendix B), and a total of 142 (18.7%) of these non-response surveys were returned. We compared responses to the full-length survey to those from the shortened survey to help identify any additional non-response bias. These differences are reported in the relevant portions of the study results.

Section 1: Walk-In Access User Hunting Participation and Satisfaction with Hunting

Participation in and Satisfaction with Hunting in areas with WIAs

During 2013-14, a total of 9,582 individuals made donations to the Walk-In Access (WIA) program, while 9,634 purchased a \$3 validation to access WIA sites, with 650 individuals donating and purchasing a validation both (Table 1-1). The low overlap suggests that many of the donators might have believed they were purchasing a validation instead of just making a donation, which did not provide them with access privileges.

Of the 786 respondents who had purchased a validation for WIA access, 90.1% reported that they had hunted somewhere in Minnesota during the fall/winter of 2013-14, and 68.1% reported hunting at least once at a WIA site in Minnesota (Table 1-2). Non-respondents were slightly less likely to have hunted (57.5%) at a WIA site than respondents. A total of 41.4% of donators who responded reported that they had hunted on a WIA, even though donating to the WIA program did not actually provide access to the WIA sites for hunting.

We suspect that this percentage is an underestimate of the number of donators who mistakenly believed they had purchased hunting access to WIA sites. A total of 63% of validation purchasers (weighted average of the respondent and non-respondent hunting percentage) actually went hunting even though we can assume that all who purchased a validation had some intention to hunt WIA sites. Given this finding, our best estimate of the percentage of WIA program donators who intended to go hunting at WIA sites is equal to 65.7%. We made this estimate by assuming that 63% of donators who intended to hunt WIAs also actually hunted, so 41.4%/63.0%, or 65.7% (Table 1-2). Using this percentage, we estimated that the total number of unique individuals who either purchased a validation or made a donation with the intention to hunt is about 16,000 (Table 1-3).

When asked which western Minnesota counties with WIAs they had hunted in, almost one out of four of the respondents (22.8%) reported hunting in Lincoln County (which contains the most WIA sites), while about 15% or more reported hunting in each of Lyon (18.3%), Murray (15.1%) and Lac Qui Parle counties, and 10% or more reported hunting in Kandiyohi (10%) or Yellow Medicine (12.9%) counties (Table 1-2).

Respondents most frequently reported hunting pheasant, ducks, geese and deer with a firearm on WIAs, state (Wildlife Management Areas –WMAs) and federal (Waterfowl Production Areas-WPAs) public lands, and on private lands. In almost all cases (except dove hunting), respondents spent slightly more days on average hunting on public lands and private lands than hunting on WIAs (Table 1-3). Pheasants were targeted by the largest percentage of respondents on WIAs (63.5%), public land (64.6%), and private land (45.3%). In fact, compared to pheasant hunting, respondents to the study were much less likely to have participated in other hunting activities on WIAs, public or private lands (Table 1-4). For example, firearm deer hunting was the second most popular activity on WIAs (15.6%) and private land (27.7%) followed by ducking hunting (9.5% WIAs; 14.8% private land), and duck hunting was the second most popular hunting activity among respondents on public lands (20.9%) followed by firearm deer hunting (18.1%). Less than 6% of individuals reported that they had hunted other species at WIAs. These other species included grouse, coyote, fox and raccoon.

Among donators who responded that they had hunted on WIAs, 76.8% reported hunting pheasant, 27.4% firearm hunted deer, 18.3% hunted ducks, 12.8% archery hunted deer, and 11% hunted geese.

A majority of respondents reported being satisfied with general hunting experiences across all species both on WIA sites and with overall hunting experiences in the 28 study counties. Mean ratings were generally 5.00 on a 7.00 point scale ranging from “1 = very dissatisfied” to “7 = very satisfied” (Table 1-5 & Table 1-6). Mean scores of the same individuals were not significantly different for their general hunting experiences throughout the counties and their general hunting experiences on WIA sites for any species ($t > 0.10$ for all paired comparisons).

Satisfaction with harvest was significantly lower ($p < 0.05$) than satisfaction with general hunting experiences for both overall study area ratings and WIA specific ratings for all species for which at least 30 individuals hunted (Tables 1-5 through Table 1-8). Harvest satisfaction ratings were significantly lower for firearm deer ($p < 0.001$), muzzleloader deer ($p < 0.05$), ducks ($p < 0.01$) and geese ($p < 0.01$) on WIA sites than across the study area in general.

Respondents indicated that WIAs were significantly less crowded (mean = 2.84) than public land such as WMAs and WPAs (mean = 3.96) but more crowded than private lands (1.96). These rating were on a 9-point scale on which 1 = not at all crowded, 3 = somewhat crowded, 6 = moderately crowded, and 9 = completely crowded. Over half (57.5%) of respondents who hunted WIAs reported being “not at all crowded” compared to only 36.1% of respondents who hunted public lands. In comparison, more than 80% of respondents hunting private land reported feeling “not at all crowded” (Table 1-9). Following the recommendations of Shelby et al. (1989) and Vaske & Shelby (2008) for carrying capacity judgments, these levels represent “low normal” levels at WIAs compared to “high normal” to “more than capacity” for public lands. Private lands represent “suppressed crowding” levels.

Overall, a majority of respondents (52.6%) reported being moderately or very satisfied with their experiences at WIAs and only 1 in 10 reported being moderately (6.6%) or very dissatisfied (3.7%) with their experiences at WIAs (Table 1-10).

Results of the shortened non-response survey indicate that among the non-respondents who did hunt, overall satisfaction with experiences at the WIA sites was very similar to respondents (Table 1-10 & 1-11). Non-respondents who hunted were also most likely to hunt pheasant (45.1%) and deer with a firearm (15.5%). We report satisfaction levels for only these two hunting activities, because too few non-respondents participated in other hunting activities to make meaningful estimates of satisfaction. Non-respondents reported being more satisfied with their general hunting experiences with firearm deer and pheasant hunting at WIA sites than respondents.

Table 1-1: Validation/Donation Sales

| Validation/Donation Sales | |
|----------------------------------|--------|
| Total Donations | 9,582 |
| Donations (%) | 49.9% |
| Total Validations | 9,634 |
| Validations (%) | 50.1% |
| Overlap | 650 |
| Total Individuals | 18,566 |
| Overlap % | 3.5% |

Table 1-2: Hunting participation in the fall and winter 2013-2014 WIA program

| | Hunted in 2013-2014 % | Did not hunt in 2013-2014 % |
|---|----------------------------------|--|
| In Minnesota | 90.1 | 9.9 |
| At a WIA (Respondents) | 68.1 | 31.9 |
| At a WIA (Non-respondents) | 57.7 | 42.3 |
| At a WIA (Donators) | 41.4 | 58.6 |
| Donators who had the intention of hunting at a WIA site | 65.7 | |

Table 1-3: Validation/Donation purchasers who intended to hunt

| Validation/Donation purchasers who intended to hunt | |
|--|---------|
| | |
| | |
| Total Donations | 9,582 |
| Overlap w. validations | 650 |
| Total intended to hunt = (.657*(9582-650)) | 5,875 |
| | |
| Total Validations | 9,634 |
| Total intending to hunt (100%) | 9,634 |
| | |
| Total Individuals intending to hunt | 15,509 |
| | ~16,000 |

Table 1-4: Counties in Study Area Hunted Most Often

| n = 786 | Listed First % | Listed Second % | Listed Third % |
|---------------------|---------------------------|----------------------------|---------------------------|
| 1) Becker | 0.5 | 0.5 | 0.4 |
| 2) Big Stone | 2.2 | 2.0 | 1.4 |
| 3) Blue Earth | 1.9 | 0.5 | 0.6 |
| 4) Brown | 3.0 | 2.0 | 2.0 |
| 5) Chippewa | 1.5 | 3.1 | 2.4 |
| 6) Clay | 1.5 | 0.6 | 0.1 |
| 7) Cottonwood | 2.2 | 3.4 | 1.2 |
| 8) Douglas | 0.7 | 1.1 | 0.7 |
| 9) Grant | 0.5 | 1.7 | 0.9 |
| 10) Jackson | 1.6 | 1.1 | 0.2 |
| 11) Kandiyohi | 6.4 | 2.6 | 1.4 |
| 12) Lac Qui Parle | 7.2 | 5.1 | 2.6 |
| 13) Lincoln | 11.8 | 7.0 | 4.0 |
| 14) Lyon | 6.4 | 7.5 | 3.4 |
| 15) Martin | 0.6 | 0.1 | 0.4 |
| 16) McLeod | 2.2 | 1.5 | 0.4 |
| 17) Meeker | 2.4 | 1.1 | 0.5 |
| 18) Murray | 6.0 | 5.2 | 3.9 |
| 19) Otter Tail | 5.7 | 2.0 | 0.9 |
| 20) Pipe Stone | 4.4 | 2.4 | 1.5 |
| 21) Pope | 1.1 | 2.1 | 1.2 |
| 22) Redwood | 2.1 | 1.2 | 1.2 |
| 23) Renville | 2.5 | 1.0 | 0.2 |
| 24) Stevens | 3.0 | 2.4 | 0.7 |
| 25) Swift | 2.6 | 2.2 | 1.4 |
| 26) Traverse | 0.6 | 0.1 | .5 |
| 27) Watonwan | 2.5 | 2.0 | 1.4 |
| 28) Wilkin | 1.5 | 1.4 | 0.6 |
| 29) Yellow Medicine | 4.4 | 3.6 | 4.9 |
| 30) Other | 0.5 | 0.9 | 0.6 |
| 31) No response | 10.5 | 32.5 | 58.4 |

Table 1-5: Average number of days respondents hunted for different species in the area of Minnesota that contains WIA sites

| n = 786 | Days hunted on walk-in access areas (WIAs) | Days hunted on public land such as WMAs & WPAs in this area | Days hunted on private land in this area |
|--------------------------|---|--|---|
| Firearm Deer | 0.58 | 0.72 | 1.50 |
| Muzzleloader Deer | 0.25 | 0.37 | 0.48 |
| Archery Deer | 0.16 | 0.47 | 1.08 |
| Spring Turkey | 0.04 | 0.08 | 0.16 |
| Fall Turkey | 0.01 | 0.01 | 0.06 |
| Ducks | 0.45 | 1.72 | 1.32 |
| Geese | 0.37 | 1.31 | 1.14 |
| Pheasant | 3.63 | 5.44 | 4.32 |
| Dove | 0.17 | 0.15 | 0.27 |
| Rabbits | 0.06 | 0.09 | 0.26 |
| Squirrel | 0.07 | 0.14 | 0.21 |
| Other (list) | 0.55 | 0.91 | 1.18 |

Table 1-6: For those that hunted the species, average number of days hunted for the species in the area of Minnesota that contains WIA sites.

| n = 786 | | Average days hunted on walk- in access areas (WIAs) | Average days hunted on public land such as WMAs & WPAs in this area | Average days hunted on private land in this area |
|--------------------------|----------------|--|--|---|
| Firearm Deer | average | 3.68 | 3.95 | 5.37 |
| | n | 123 (15.6%) | 142 (18.1%) | 218 (27.7%) |
| Muzzleloader Deer | average | 4.51 | 5.96 | 5.92 |
| | n | 43 (5.5%) | 49 (6.2%) | 62 (7.9%) |
| Archery Deer | average | 6.25 | 9.66 | 14.81 |
| | n | 20 (2.5%) | 38 (4.8%) | 58 (7.4%) |
| Spring Turkey | average | 2.67 | 2.77 | 3.27 |
| | n | 14 (1.8%) | 22 (2.8%) | 40 (5.1%) |
| Fall Turkey | average | 3.25 | 3.00 | 5.33 |
| | n | 3 (0.4%) | 2 (0.3%) | 8 (1.0%) |
| Ducks | average | 4.68 | 8.30 | 8.80 |
| | n | 75 (9.5%) | 164 (20.9%) | 116 (14.8%) |
| Geese | average | 5.70 | 9.22 | 8.81 |
| | n | 52 (6.6%) | 114 (14.5%) | 101 (12.8%) |
| Pheasant | average | 5.76 | 8.45 | 9.54 |
| | n | 499 (63.5%) | 508 (64.6%) | 356 (45.3%) |
| Dove | average | 5.71 | 4.54 | 5.22 |
| | n | 24 (3.1%) | 27 (3.4%) | 39 (5.0%) |
| Rabbits | average | 5.44 | 8.22 | 10.89 |
| | n | 9 (1.1%) | 9 (1.1%) | 19 (2.4%) |
| Squirrel | average | 5.40 | 8.54 | 9.17 |
| | n | 10 (1.3%) | 13 (1.7%) | 18 (2.3%) |
| Other (list) | average | 9.47 | 13.81 | 22.71 |
| | n | 46 (5.9%) | 52 (6.6%) | 41 (5.2%) |

Table 1-7: Satisfaction with general hunting experiences in counties with WIA sites

| Total n = 786 | n | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT | Mean |
|-------------------|-----|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|--------------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| % | | | | | | | | | | |
| Firearm Deer | 295 | 10.2 | 6.8 | 7.8 | 4.4 | 12.9 | 31.5 | 26.4 | 63.3 | 5.03 |
| Muzzleloader Deer | 96 | 8.3 | 5.2 | 6.3 | 13.5 | 11.5 | 31.3 | 24.0 | 88.0 | 5.04 |
| Archery Deer | 82 | 7.3 | 9.8 | 9.8 | 8.5 | 18.3 | 25.6 | 20.7 | 89.8 | 4.80 |
| Spring Turkey | 65 | 6.2 | 0.0 | 4.6 | 9.2 | 13.8 | 30.8 | 35.4 | 91.9 | 5.58 |
| Fall Turkey | 17 | 11.8 | 5.9 | 5.9 | 17.6 | 29.4 | 11.8 | 17.6 | 97.9 | 4.53 |
| Ducks | 238 | 5.5 | 8.0 | 11.3 | 6.3 | 20.2 | 29.8 | 18.9 | 70.4 | 4.93 |
| Geese | 201 | 7.5 | 5.5 | 11.9 | 12.9 | 20.4 | 25.4 | 16.4 | 75.0 | 4.75 |
| Pheasant | 641 | 8.3 | 9.5 | 12.0 | 5.8 | 17.8 | 27.9 | 18.7 | 20.2 | 4.74 |
| Dove | 68 | 10.3 | 4.4 | 4.4 | 14.7 | 11.8 | 33.8 | 20.6 | 91.5 | 4.97 |
| Rabbits | 39 | 5.1 | 7.7 | 12.8 | 20.5 | 17.9 | 20.5 | 15.4 | 95.1 | 4.62 |
| Squirrel | 35 | 11.4 | 5.7 | 5.7 | 17.1 | 22.9 | 22.9 | 14.3 | 95.6 | 4.60 |
| Other | 37 | 13.5 | 2.7 | 0.0 | 18.9 | 16.2 | 32.4 | 16.2 | 95.4 | 4.84 |

Table 1-8: Satisfaction with general hunting experiences at WIAs in Minnesota

| Total n = 786 | n | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT | Mean |
|-------------------|-----|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|--------------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| % | | | | | | | | | | |
| Firearm Deer | 144 | 5.6 | 6.9 | 6.9 | 6.9 | 17.4 | 36.1 | 20.1 | 82.1 | 5.13 |
| Muzzleloader Deer | 51 | 5.9 | 7.8 | 3.9 | 11.8 | 11.8 | 29.4 | 29.4 | 93.6 | 5.22 |
| Archery Deer | 27 | 7.4 | 3.7 | 11.1 | 11.1 | 14.8 | 29.6 | 22.2 | 96.6 | 5.00 |
| Spring Turkey | 19 | 5.3 | 10.5 | 5.3 | 15.8 | 21.1 | 26.3 | 15.8 | 97.6 | 4.79 |
| Fall Turkey | 7 | 0.0 | 0.0 | 14.3 | 28.6 | 42.9 | 0.0 | 14.3 | 99.1 | 4.71 |
| Ducks | 95 | 2.1 | 8.4 | 11.6 | 13.7 | 21.1 | 28.4 | 14.7 | 88.2 | 4.87 |
| Geese | 74 | 4.1 | 9.5 | 10.8 | 21.6 | 23.0 | 16.2 | 14.9 | 90.8 | 4.58 |
| Pheasant | 508 | 7.9 | 8.1 | 9.6 | 8.5 | 19.1 | 29.7 | 16.9 | 36.7 | 4.81 |
| Dove | 32 | 6.2 | 9.4 | 3.1 | 18.8 | 18.8 | 15.6 | 28.1 | 96.0 | 4.94 |
| Rabbits | 16 | 0.0 | 18.8 | 6.2 | 6.2 | 31.2 | 12.5 | 25.0 | 98.0 | 4.88 |
| Squirrel | 17 | 0.0 | 5.9 | 5.9 | 11.8 | 29.4 | 17.6 | 29.4 | 97.9 | 5.35 |
| Other | 24 | 8.3 | 0.0 | 4.2 | 20.8 | 25.0 | 29.2 | 12.5 | 97.0 | 4.92 |

Table 1-9: Satisfaction with harvest in general in Minnesota counties with WIAs

| Total n = 786 | n | Very dissatisfied 1 | Moderately dissatisfied 2 | Slightly dissatisfied 3 | Neither 4 | Slightly satisfied 5 | Moderately satisfied 6 | Very satisfied 7 | DID NOT HUNT | Mean |
|-------------------|-----|------------------------|------------------------------|----------------------------|--------------|-------------------------|---------------------------|---------------------|--------------|------|
| | | | | | | | | | | |
| Firearm Deer | 291 | 16.5 | 11.0 | 10.0 | 8.9 | 12.0 | 23.0 | 18.6 | 63.3 | 4.32 |
| Muzzleloader Deer | 98 | 20.4 | 5.1 | 13.3 | 20.4 | 10.2 | 17.3 | 13.3 | 88.0 | 4.00 |
| Archery Deer | 82 | 14.6 | 9.8 | 7.3 | 14.6 | 13.4 | 29.3 | 11.0 | 89.8 | 4.34 |
| Spring Turkey | 62 | 6.5 | 4.8 | 12.9 | 22.6 | 8.1 | 19.4 | 25.8 | 91.9 | 4.82 |
| Fall Turkey | 19 | 10.5 | 10.5 | 5.3 | 31.6 | 10.5 | 15.8 | 15.8 | 97.9 | 4.32 |
| Ducks | 236 | 9.7 | 11.0 | 8.9 | 6.8 | 23.3 | 24.6 | 15.7 | 70.4 | 4.59 |
| Geese | 197 | 12.2 | 11.2 | 11.7 | 12.7 | 20.3 | 22.3 | 9.6 | 75.0 | 4.23 |
| Pheasant | 638 | 16.8 | 15.8 | 15.4 | 7.4 | 16.9 | 19.7 | 8.0 | 20.2 | 3.83 |
| Dove | 68 | 11.8 | 5.9 | 5.9 | 17.6 | 11.8 | 30.9 | 16.2 | 91.5 | 4.69 |
| Rabbits | 37 | 16.2 | 5.4 | 10.8 | 27.0 | 8.1 | 24.3 | 8.1 | 95.1 | 4.11 |
| Squirrel | 38 | 18.4 | 5.3 | 10.5 | 23.7 | 7.9 | 18.4 | 15.8 | 95.6 | 4.16 |
| Other | 34 | 11.8 | 5.9 | 11.8 | 23.5 | 8.8 | 20.6 | 17.6 | 95.4 | 4.44 |

Table 1-10: Satisfaction with harvest at WIAs in Minnesota

| Total n = 786 | n | Very dissatisfied 1 | Moderately dissatisfied 2 | Slightly dissatisfied 3 | Neither 4 | Slightly satisfied 5 | Moderately satisfied 6 | Very satisfied 7 | DID NOT HUNT | Mean |
|-------------------|-----|------------------------|------------------------------|----------------------------|--------------|-------------------------|---------------------------|---------------------|--------------|------|
| | | | | | | | | | | |
| Firearm Deer | 137 | 24.1 | 6.6 | 9.5 | 20.4 | 6.6 | 19.7 | 13.1 | 82.1 | 3.91 |
| Muzzleloader Deer | 48 | 25.0 | 8.3 | 4.2 | 27.1 | 4.2 | 14.6 | 16.7 | 93.6 | 3.88 |
| Archery Deer | 24 | 29.2 | 4.2 | 8.3 | 29.2 | 16.7 | 8.3 | 4.2 | 96.6 | 3.42 |
| Spring Turkey | 18 | 5.6 | 16.7 | 11.1 | 33.3 | 5.6 | 16.7 | 11.1 | 97.6 | 4.11 |
| Fall Turkey | 9 | 11.1 | 11.1 | 22.2 | 44.4 | 11.1 | 0.0 | 0.0 | 99.1 | 3.33 |
| Ducks | 90 | 10.0 | 10.0 | 13.3 | 17.8 | 20.0 | 18.9 | 10.0 | 88.2 | 4.24 |
| Geese | 75 | 13.3 | 13.3 | 12.0 | 30.7 | 12.0 | 10.7 | 8.0 | 90.8 | 3.79 |
| Pheasant | 495 | 17.0 | 15.6 | 15.8 | 9.5 | 15.4 | 19.4 | 7.5 | 36.7 | 3.79 |
| Dove | 35 | 28.6 | 5.7 | 0.0 | 28.6 | 11.4 | 14.3 | 11.4 | 96.0 | 3.77 |
| Rabbits | 17 | 35.3 | 17.6 | 0.0 | 23.5 | 17.6 | 0.0 | 5.9 | 98.0 | 2.94 |
| Squirrel | 18 | 22.2 | 11.1 | 0.0 | 27.8 | 16.7 | 5.6 | 16.7 | 97.9 | 3.89 |
| Other (list) | 24 | 16.7 | 4.2 | 4.2 | 33.3 | 8.3 | 20.8 | 12.5 | 97.0 | 4.25 |

Table 1-11: Perceived crowding of hunting areas among respondents

| | n | Not at all crowded | | Somewhat crowded | | | Moderately crowded | | Extremely Crowded | | Didn't hunt | Mean ¹ |
|----------------------------------|-----|--------------------|------|------------------|-----|-----|--------------------|-----|-------------------|-----|-------------|-------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| | | % | | | | | | | | | | |
| Walk-In Access areas | 605 | 35.4 | 22.1 | 17.0 | 5.3 | 4.3 | 7.8 | 2.8 | 3.5 | 1.8 | 24.7 | 2.84* |
| Public lands (WMAs, WPAs) | 653 | 18.1 | 18.1 | 17.2 | 7.4 | 7.0 | 13.9 | 9.2 | 4.7 | 4.4 | 18.7 | 3.96* |
| Private lands | 496 | 74.0 | 13.1 | 6.0 | 1.4 | .8 | 2.8 | .6 | .6 | .6 | 38.2 | 1.59* |

*Means are all significantly different from one another at $p < .001$

Table 1-12: Overall hunter satisfaction with experiences at WIA sites in Minnesota (%)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | Mean |
|------------------------------|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | % | | | | | | | |
| Respondents (n = 532) | 3.8 | 6.8 | 7.5 | 9.2 | 20.1 | 32.1 | 20.5 | 5.14 |
| Non-Resp. (n = 81) | 8.6 | 3.7 | 13.6 | 6.2 | 7.4 | 35.8 | 24.7 | 5.06 |

Table 1-13: Non-respondents' satisfaction with general hunting experiences at WIAs in Minnesota

| Total n = 786 | n | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT | Mean |
|---------------------|----|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|--------------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| | | % | | | | | | | | |
| Firearm Deer | 22 | 9.1 | -- | 9.1 | 9.1 | 4.5 | 45.5 | 22.7 | 84.5 | 5.27 |
| Pheasant | 64 | 6.3 | 3.1 | 7.8 | 12.5 | 15.6 | 34.4 | 20.3 | 54.9 | 5.13 |

Section 2: Walk-In Access User Beliefs about WIAs

Beliefs about using WIAs

Large majorities of study respondents agreed that WIAs provide: 1) an important place to hunt pheasants (84.5%); an easy place to go hunting (81.8%); and a place to take kids hunting (77.7%). Most also reported understanding the rules for using WIAs (85.4%), but believed that there are not enough WIAs sites near them (77.2%) and that the number of WIA sites should be increased (91.1%) and expanded to other areas of the state (83.9%). More than half of respondents (57.8%) believed that WIAs provide high quality hunting experiences, and less than 1 in 4 (23%) disagreed hunting on WIAs was better than hunting on public lands (Table 2-1). More than a third of hunters indicated that WIAs provide an important place to hunt small game (other than pheasants and waterfowl) (44.2%), waterfowl (37.6%), or deer (35.2%).

Beliefs about negative impacts on and condition of WIAs

When asked what level of negative impact habitat disturbances associated with agricultural production had on hunting quality at WIA sites, a majority of respondents reported that the amount of plowed land (62.2%), the amount of mowing (61.1%), the amount of haying (56.1%), and the amount of grazing (52.2%) all had at least moderately negative impacts on hunting quality (Table 2-2). The amount of farming of small grain crops and row crops, and burning were rated as at least moderately negative by about 4 out of 10 respondents. Overall, a majority of respondents reported that the condition of WIA sites for hunting were good (51.9%) or excellent (12.6%), and less than 5% reported that WIA sites were in poor condition for hunting. Non-respondents rated WIA conditions very similarly.

A majority of respondents indicated that all of the identified activities would at least moderately impede their ability to hunt on WIA sites (Table 2-4). The activities that were seen as having the largest potential to impede on hunting experiences at WIAs were skeet/trap shooting and target shooting, followed by camping and horseback riding.

Table 2-1: Hunter beliefs about using WIAs in Minnesota

| | n | Extremely disagree 1 | Moderately Disagree 2 | Slightly Disagree 3 | Neutral 4 % | Slightly Agree 5 | Moderately Agree 6 | Extremely Agree 7 | Mean |
|---|-----|-------------------------|--------------------------|------------------------|-------------------|---------------------|-----------------------|----------------------|------|
| WIAs provide me with an important place to hunt deer. | 714 | 9.4 | 6.2 | 4.3 | 45.0 | 11.6 | 9.7 | 13.9 | 4.28 |
| WIAs provide me with an important place to hunt pheasant. | 776 | 2.6 | 1.8 | 2.6 | 8.5 | 12.1 | 28.6 | 43.8 | 5.87 |
| WIAs provide me with an important place to hunt small game other than waterfowl and pheasants | 718 | 6.4 | 3.5 | 4.2 | 41.8 | 13.8 | 13.8 | 16.6 | 4.61 |
| WIAs provide me with an important place to hunt waterfowl. | 710 | 7.5 | 5.5 | 5.1 | 44.4 | 13.8 | 11.1 | 12.7 | 4.36 |
| The quality of hunting on WIAs is not as good as other locations. | 762 | 9.8 | 16.4 | 14.4 | 30.3 | 13.8 | 11.2 | 4.1 | 3.72 |
| There are NOT enough WIAs near me. | 772 | 3.2 | 3.1 | 3.4 | 13.1 | 15.3 | 21.9 | 40.0 | 5.60 |
| WIAs are too crowded. | 771 | 11.7 | 19.2 | 13.0 | 30.6 | 12.6 | 8.0 | 4.9 | 3.57 |
| WIAs provide a place to take kids hunting. | 763 | 1.2 | 1.6 | 0.9 | 18.6 | 16.9 | 26.3 | 34.5 | 5.65 |
| Most of the WIAs I know about are too small. | 770 | 7.3 | 13.8 | 15.1 | 36.8 | 16.9 | 7.8 | 2.5 | 3.75 |
| Most of the WIAs I know about are too far away. | 770 | 8.2 | 9.6 | 8.3 | 23.8 | 19.7 | 18.2 | 12.2 | 4.41 |
| I understand the rules for using WIAs. | 776 | 1.2 | 1.0 | 2.3 | 10.1 | 10.4 | 27.2 | 47.8 | 6.00 |
| WIAs provide an easy place to go hunting. | 772 | 1.3 | 1.6 | 3.5 | 11.9 | 16.6 | 31.5 | 33.7 | 5.70 |
| WIAs provide high quality hunting experiences | 774 | 2.6 | 5.9 | 7.5 | 26.2 | 21.2 | 21.6 | 15.0 | 4.82 |
| The number of WIA sites should be increased. | 776 | 0.9 | 0.1 | 0.8 | 7.1 | 6.8 | 18.6 | 65.7 | 6.37 |
| WIA sites should be expanded to other areas of the state. | 773 | 1.4 | 0.9 | 1.3 | 12.5 | 7.8 | 17.9 | 58.2 | 6.11 |
| Hunting on WIAs is better than hunting on public lands I have access to. | 773 | 4.8 | 9.3 | 8.9 | 43.5 | 12.8 | 12.5 | 8.2 | 4.20 |
| Hunting on WIAs is better than hunting on private lands that I have access to. | 772 | 20.2 | 20.3 | 15.9 | 32.5 | 5.3 | 2.8 | 2.8 | 3.02 |

Table 2-2: Beliefs about negative impacts on hunting quality due to habitat disturbances associated with agricultural production

| | n | Not at all | | | | | | | Mean ¹ |
|---|-----|------------|------|------|---------------------|------|--------------------|------|-------------------|
| | | 1 | 2 | 3 | Moderately Negative | | Extremely Negative | | |
| | | | | | 4 | 5 | 6 | 7 | |
| | | % | | | | | | | |
| The amount of haying | 707 | 26.6 | 10.6 | 6.6 | 19.1 | 9.3 | 10.2 | 17.5 | 3.75 |
| The amount of grazing | 700 | 27.7 | 11.3 | 8.9 | 16.0 | 10.9 | 9.6 | 15.7 | 3.63 |
| The amount of mowing | 704 | 23.7 | 8.1 | 7.1 | 16.2 | 10.8 | 13.5 | 20.6 | 4.05 |
| The amount of farming of small grain crops (wheat, rye, oats) | 697 | 36.6 | 15.1 | 12.1 | 19.4 | 7.2 | 4.9 | 4.9 | 2.80 |
| The amount of burning | 695 | 37.1 | 10.5 | 11.1 | 16.1 | 7.1 | 6.3 | 11.8 | 3.12 |
| The amount of farming of row crops such as corn or soybeans | 700 | 34.3 | 13.6 | 9.9 | 15.6 | 10.1 | 5.6 | 11.0 | 3.14 |
| The amount of plowed land | 698 | 24.8 | 6.9 | 6.2 | 14.9 | 9.0 | 11.5 | 26.8 | 4.18 |
| Other (describe) | 115 | 40.9 | 7.0 | 0.9 | 12.2 | 3.5 | 7.0 | 28.7 | 3.66 |

Table 2-3: Condition of WIAs for hunting

| | n | Poor % | Fair % | Good % | Excellent % |
|-----------------|-----|--------|--------|--------|-------------|
| Respondents | 729 | 4.4 | 31.1 | 51.9 | 12.6 |
| Non-respondents | 76 | 6.6 | 22.4 | 53.9 | 17.1 |

Table 2-4: Beliefs about the degree to which other activities impede the ability to hunt on WIAs

| | n | Not at all Impede | | Moderately Impede | | | Greatly Impede | | Mean ¹ |
|---------------------|-----|-------------------|------|-------------------|------|------|----------------|------|-------------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Camping | 762 | 12.9 | 5.1 | 4.5 | 16.9 | 9.2 | 11.8 | 39.6 | 4.98 |
| Dog training | 761 | 19.2 | 11.6 | 10.2 | 17.9 | 9.5 | 9.7 | 21.9 | 4.04 |
| Horseback riding | 760 | 14.7 | 8.7 | 8.7 | 18.7 | 8.9 | 12.5 | 27.8 | 4.47 |
| Hiking | 757 | 20.5 | 9.9 | 9.9 | 20.9 | 9.1 | 8.6 | 21.1 | 3.99 |
| Skeet/trap shooting | 763 | 8.7 | 3.7 | 4.2 | 11.9 | 12.5 | 14.0 | 45.1 | 5.38 |
| Target shooting | 759 | 8.7 | 3.6 | 4.7 | 11.2 | 12.4 | 14.1 | 45.3 | 5.39 |
| Other (describe) | 96 | 30.2 | 5.2 | 3.1 | 12.5 | 5.2 | 6.3 | 37.5 | 4.26 |

Section 3: Walk-In Access Users' Use of Information Sources about WIAs

Information about WIAs

Large majorities (> 60%) of study respondents indicated that the DNR website on WIAs, the printable WIA hunting atlas, the WIA detail maps, and the hardcopy of the WIA hunting atlas were all very or extremely important as sources of information for locating and hunting WIAs (Tables 3-1 & 3-2). Slightly less than half of the respondents reported that Google maps or Google Earth data for WIAs were very or extremely important to them, and about one-third of the respondents reported that downloaded GPS data or DNR Recreation Compass information was very or extremely important to them.

Table 3-1: Sources of information for locating WIAs

| How important are the following for LOCATING WIAs... | n | Not at all Important | Slightly | Moderately | Very | Extremely Important | Mean |
|--|-----|----------------------|----------|------------|------|---------------------|------|
| | | 1 | 2 | 3 | 4 | 5 | |
| % | | | | | | | |
| The DNR website on WIAs in general | 756 | 7.1 | 6.1 | 17.7 | 31.3 | 37.7 | 3.86 |
| The printable WIA hunting atlas from the website | 754 | 6.4 | 5.2 | 15.9 | 33.3 | 39.1 | 3.94 |
| Hardcopy of the WIA hunting atlas | 749 | 11.7 | 9.2 | 20.6 | 23.9 | 34.6 | 3.60 |
| GPS data download for WIAs | 738 | 24.1 | 15.7 | 24.5 | 17.3 | 18.3 | 2.90 |
| The DNR Recreation Compass information for WIAs | 741 | 23.9 | 17.5 | 29.3 | 15.2 | 14.0 | 2.78 |
| Google maps for WIAs | 745 | 18.5 | 10.7 | 22.8 | 25.1 | 22.8 | 3.23 |
| Google Earth data for WIAs | 741 | 20.4 | 12.1 | 23.2 | 23.8 | 20.5 | 3.12 |
| WIA detail maps | 746 | 9.0 | 5.9 | 19.6 | 32.4 | 33.1 | 3.75 |
| Just spot the WIA boundary signs in the field | 762 | 5.4 | 8.9 | 21.5 | 27.4 | 36.7 | 3.81 |

Table 3-2: Sources of information for hunting WIAs

| How important are the following for HUNTING WIAs... | n | Not at all Important 1 | Slightly 2 | Moderately 3 | Very 4 | Extremely Important 5 | Mean |
|--|----------|-----------------------------------|-----------------------|-------------------------|-------------------|----------------------------------|-------------|
| | | % | | | | | |
| The DNR website on WIAs in general | 750 | 9.5 | 8.7 | 20.7 | 28.4 | 32.8 | 3.66 |
| The printable WIA hunting atlas from the website | 751 | 10.7 | 8.9 | 17.3 | 29.2 | 34.0 | 3.67 |
| Hardcopy of the WIA hunting atlas | 747 | 15.1 | 10.3 | 21.4 | 21.3 | 31.7 | 3.45 |
| GPS data download for WIAs | 737 | 29.9 | 15.9 | 22.7 | 16.3 | 15.3 | 2.71 |
| The DNR Recreation Compass information for WIAs | 738 | 30.1 | 18.4 | 24.4 | 14.4 | 12.7 | 2.61 |
| Google maps for WIAs | 744 | 23.5 | 13.4 | 21.1 | 22.6 | 19.4 | 3.01 |
| Google Earth data for WIAs | 739 | 25.6 | 13.4 | 21.7 | 21.2 | 18.1 | 2.93 |
| WIA detail maps | 737 | 12.5 | 7.9 | 19.7 | 28.6 | 31.3 | 3.58 |
| Just spot the WIA boundary signs in the field | 755 | 7.2 | 8.6 | 18.7 | 25.7 | 39.9 | 3.83 |

Section 4: Walk-In Access Users' Willingness-to-Pay a fee for WIA Access

Support for and willingness-to-pay a fee for WIA access

There is a long-history of using surveys to identify the value that the public places on public goods such as access to hunting areas (Mitchell & Carson 1989). There is not one perfect method for measuring such values, and different elicitation formats can result in varying willingness-to-pay (WTP) estimates (Champ & Bishop 2006; Boyle et al. 1996; Brown et al. 1996). Two common approaches for eliciting willingness-to-pay values are open-ended and dichotomous choice (Mitchell & Carson 1989; Boyle et al. 1996). We used an open-ended approach to collect WTP values.

The open-ended format simply asks respondents, "What is the most that you would be willing to pay each year to have access to WIA sites in Minnesota?" The responses are continuous in form, and the actual WTP value is hypothetically obtained from a relatively small probability sample (i.e., $n = 400$). In the dichotomous-choice approach random sub-samples of respondents are presented with a question that asks, "Are you willing to pay $\$X$ each year to have access to WIA sites in Minnesota?" In this approach researchers need to anticipate what the range of realistic willingness-to-pay values are and generate multiple discrete choice questions that are presented to different sub-samples of the population of interest. Only a discrete indicator of WTP is obtained from each individual, and logit or probit statistical techniques are used to estimate the WTP of the study population.

Open-ended questions were one of the earliest WTP questioning formats used (Hammack & Brown 1974), and in practice are often used to identify the range of discrete values used in subsequent dichotomous-choice formats (Boyle et al. 1996). Open-ended questions are broadly used in contingent value studies, but they have been criticized for being difficult for some respondents to complete because respondents might not have a range of maximum WTP values in mind and because the format is open to strategic responses in which respondents could provide values that are dramatically higher than their actual willingness-to-pay in hopes of affecting policy decisions. Since their development in the late 1970s (Bishop and Heberlein 1979) have become the most commonly used question format for WTP. Dichotomous-choice formats are often preferred in non-market, hypothetical situations because they are easy to answer (e.g., you simply say "yes" or "no" to the value presented instead of providing your own value) and because they can guard against strategic response. Single, dichotomous-choice (yes/no) are an incentive-compatible approach because it is in the respondents' strategic interest to say "yes" if their WTP is greater to or equal to the price asked, and to say "no" otherwise (Mitchell & Carson 1989; Hoehn & Randall 1987). The open-ended format does not have such an incentive-compatible property, and so, can be less likely to guard against strategic response.

The dichotomous-choice approach, however, has several drawbacks. It requires many more observations for the same level of statistical precision as does the open-ended format; strong assumptions about the distribution of the discrete values obtained in order to calculate mean and median WTP; and the approach is prone to "yea" saying responses that can inflate the mean and median WTP.

A key concern for open-ended responses is a few respondents might provide an unrealistically high personal WTP which would inflate the mean. Such a strategic response could occur in which WTP is overestimated, especially if respondents perceive that they are unlikely to have to actually pay what they report as their maximum WTP. Open-ended formats might also lead to a relatively high level of protest

\$0, especially if respondents are being asked to pay for something they have not had to pay for in the past. In their comparisons of the opened-ended format with the dichotomous-choice format, Boyle et al. (1996) and Brown et al. (1996) found that, in general, open-ended questions might tend to shift estimates of WTP downward due to “nay-saying” while dichotomous-choice formats might shift estimates of WTP upward due to “yea-saying”. Boyle et al. (1996) conclude that open-ended data should be screened for protests \$0 and invalid responses, especially at the high value end of the distribution.

In the case of WTP for an access fee for Walk-In Access sites, we chose to use an open-ended approach. The public good in question is relatively straightforward, and hunters had to purchase a \$3 validation permit in 2013-14 to access WIAs, so likely formed some opinions about their willingness to pay for access to WIA sites. We were also cautious about over-estimating what hunters in Minnesota would actually pay for access to WIAs, and the dichotomous-choice format tends to produce high estimates of mean and median WTP. We did want to encourage setting an inflated price on access fees due to such an upwardly inflated WTP. A price set too high could potentially lead to a much lower percentage of hunters purchasing WIA access. We also believed that because hunters are routinely purchasing hunting license and paying other similar fees, most would likely be able to readily provide a response to the open-ended format.

After providing some background context (see survey wording in Appendix A), we asked respondents if they supported or opposed a fee for access to WIA sites as a way to help permanently fund the WIA program. A large majority (76.3%) of respondents and non-respondents (64.6%) supported the charging a fee to access WIA sites (Table 4-1). When asked if they would personally be willing to pay such a fee 85.1% of respondents and 72.5% of non-respondents indicated that they would be willing to pay a fee (Table 4-2).

Next we asked both respondents and non-respondents to report the most they personally would be willing to pay each year to access WIA sites. Only 21 out of 786 respondents did not provide a response, suggesting respondents did not have difficulty with the question format. Among respondents, 14.5% either reported they would not pay such a fee or enter “0” as the most they would pay, and a total of 29.4% of non-respondents either reported they would not be willing to be a fee or entered a “0” as the most they would be willing to pay (Table 4-3). The most frequently provided amount for respondents (32.7%) and non-respondents (27.2%) was \$5.00, with \$10.00 the next most frequently provided value for the most respondents (22.1%) and non-respondents (18.3%) would be willing to pay for a fee to access WIA sites. Only 8 (1.0%) respondents and no non-respondents provided values above \$50. For this reason, we removed values above \$50 as outliers before computing other statistics. We also examined the frequency of response treating “0” as a protest value for respondents and non-respondents (Table 4-4).

The median and mode for both respondents and non-respondents was \$5.00 (Table 4-5), while the mean was \$9.03 for respondents and \$7.36 for non-respondents. When all “0” values were removed from the responses for WTP, the mean WTP = \$10.59 and the median WTP = \$10.00.

Because of the relatively low response rate and the difference in reported maximum willing-to-pay values among respondents and non-respondents, we calculated a weighted probability (0.514 respondents; 0.486 non-respondents) for each amount reported (Table 4-3). Next, we calculated the cumulative probability that the current WIA users (donators and validation purchasers) would pay an access fee in future years. We also made these calculations assuming that all “0” values were protest values (Table 4-4) for comparison.

We used the cumulative probabilities in Table 4.3 to trace a demand curve for the WIA access at various price levels (Figure 4-1). The demand curve allowed us to estimate overall use levels and total revenues for different price levels under different WIA user population assumptions (Table 4-7; Figures 4-2 & 4-3).

We projected estimates assuming a base population of WIA users of: 16,000 (current level); 20,000; and 30,000. Both the use estimates, and the fee access purchase estimates, assume that both current WIA validation purchasers and two-thirds of current WIA donators will have similar probabilities of purchasing a WIA access fee in the future. While the number of WIA users would be at its maximum with a \$0.00 fee, the maximum revenue would be realized at a \$10.00 fee level, with a \$5.00 fee providing slightly less revenue (Table 4-7; Figure 4-3). These projections were made assuming that the \$0.00 WTP values were an accurate reflection of those respondents' WTP for WIA access.

One limitation of these estimates is that a relatively high percentage of respondents (21.4% adjusted for non-response) said "no" to a WIA access fee or reported \$0.00 as their maximum WTP, and many of these individuals might have done so as a "protest" to the idea of a permanent fee. Given all respondents and non-respondents included in the study paid \$3.00 in 2013-14, it is likely that many of these individuals would likely pay at least that fee in future years. For this reason, the estimates provided for the \$3.00 and \$5.00 may be lower than what would actually be realized at these levels.

This limitation is an important caveat to the revenue estimates, because if only a slightly higher proportion of current WIA users would pay a \$5.00 fee but not a \$10.00 fee, then revenue would be maximized at \$5.00. The steep slope of the demand curve between the \$5.00 and \$7.00 price levels, suggests that a fee of \$7 or \$7.50 would NOT represent a good compromise as about 30% of respondents indicated they would not pay for a fee if the price moved from \$5.00 to \$7.00 (Table 4-3). Thus, participation would be reduced at a \$7.00-7.50 fee compared to a \$5.00 fee, with less revenue generated.

Table 4-1: Support for charging a use fee for accessing WIAs

| | n | Strongly Oppose | Mod. Oppose | Slightly Oppose | Neither % | Slightly Support | Mod. Support | Strongly Support | Mean |
|------------------------|----------|------------------------|--------------------|------------------------|------------------|-------------------------|---------------------|-------------------------|-------------|
| Respondents | 761 | 5.7 | 4.7 | 4.9 | 8.4 | 14.3 | 23.4 | 38.6 | 5.48 |
| Non-respondents | 138 | 14.5 | 5.8 | 6.5 | 8.7 | 13.8 | 22.5 | 28.3 | 4.82 |

Table 4-2: Willingness to pay for WIAs in Minnesota

| | n | No | Yes |
|------------------------|----------|-----------|------------|
| Respondents | 773 | 14.9% | 85.1% |
| Non-respondents | 138 | 27.5% | 72.5% |

Table 4-3: Respondents and non-respondents willingness-to-pay amount indicated next year, if such a fee were created to allow access to WIAs

| Amount \$ | Freq. Respond. | Percent Respond. | Freq. Non-Respond. | Percent Non-Respond. | Weighted Probability | Cumulative Probability |
|------------------|-----------------------|-------------------------|---------------------------|-----------------------------|-----------------------------|-------------------------------|
| \$0.00 | 111 | 14.5 | 40 | 29.4 | 0.2174 | 1.0000 |
| \$1.00 | 3 | 0.4 | 1 | 0.7 | 0.0055 | 0.7826 |
| \$2.00 | 4 | 0.5 | 3 | 2.2 | 0.0133 | 0.7771 |
| \$3.00 | 45 | 5.9 | 6 | 4.4 | 0.0517 | 0.7639 |
| \$4.00 | 7 | .9 | 0 | 0.0 | 0.0046 | 0.7122 |
| \$5.00 | 250 | 32.7 | 37 | 27.2 | 0.3003 | 0.7075 |
| \$6.00 | 3 | 0.4 | 1 | 0.7 | 0.0055 | 0.4073 |
| \$7.00 | 4 | 0.5 | 1 | 0.7 | 0.0060 | 0.4018 |
| \$7.50 | 1 | 0.1 | 0 | 0.0 | 0.0005 | 0.3958 |
| \$8.00 | 4 | 0.5 | 1 | 0.7 | 0.0060 | 0.3953 |
| \$10.00 | 169 | 22.1 | 25 | 18.3 | 0.2025 | 0.3893 |
| \$15.00 | 29 | 3.8 | 6 | 4.4 | 0.0409 | 0.1868 |
| \$20.00 | 75 | 9.8 | 6 | 4.4 | 0.0718 | 0.1459 |
| \$25.00 | 30 | 3.9 | 5 | 3.6 | 0.0375 | 0.0741 |
| \$30.00 | 8 | 1.0 | 1 | 0.7 | 0.0085 | 0.0366 |
| \$40.00 | 2 | 0.3 | 0 | 0.0 | 0.0015 | 0.0281 |
| \$50.00 | 13 | 1.7 | 3 | 2.2 | 0.0194 | 0.0265 |
| \$100.00* | 5 | 0.7 | 0 | 0.0 | 0.0036 | 0.0071 |
| \$125.00* | 1 | 0.1 | 0 | 0.0 | 0.0005 | 0.0035 |
| \$150.00* | 1 | 0.1 | 0 | 0.0 | 0.0005 | 0.0030 |
| \$500.00* | 1 | 0.1 | 0 | 0.0 | | |
| Total n | 765 | | 136 | | | |

*These values were treated as outliers and removed prior to subsequent calculations.

Table 4-4: Respondents and non-respondents willingness-to-pay amount indicated next year, if such a fee were created to allow access to WIAs (with "0" and very high values removed).

| Amount | Frequency Respond. | Percent Respond. | Frequency Non-respond | Percent Non-respond. | Wtd. Probability | Cumulative Probability |
|---------|--------------------|------------------|-----------------------|----------------------|------------------|------------------------|
| \$1.00 | 3 | 0.5 | 1 | 1.0 | 0.0074 | 1.0000 |
| \$2.00 | 4 | 0.6 | 3 | 3.1 | 0.0184 | 0.9926 |
| \$3.00 | 45 | 7.0 | 6 | 6.3 | 0.0661 | 0.9742 |
| \$4.00 | 7 | 1.1 | 0 | 0.0 | 0.0056 | 0.9081 |
| \$5.00 | 250 | 38.6 | 37 | 38.5 | 0.3859 | 0.9025 |
| \$6.00 | 3 | 0.5 | 1 | 1.0 | 0.0074 | 0.5166 |
| \$7.00 | 4 | 0.6 | 1 | 1.0 | 0.0082 | 0.5091 |
| \$7.50 | 1 | 0.2 | 0 | 0.0 | 0.0008 | 0.5009 |
| \$8.00 | 4 | 0.6 | 1 | 1.0 | 0.0082 | 0.5001 |
| \$10.00 | 169 | 26.1 | 25 | 26.0 | 0.2608 | 0.4919 |
| \$15.00 | 29 | 4.5 | 6 | 6.3 | 0.0534 | 0.2310 |
| \$20.00 | 75 | 11.6 | 6 | 6.3 | 0.0900 | 0.1776 |
| \$25.00 | 30 | 4.6 | 5 | 5.2 | 0.0491 | 0.0877 |
| \$30.00 | 8 | 1.2 | 1 | 1.0 | 0.0114 | 0.0385 |
| \$40.00 | 2 | 0.3 | 0 | 0.0 | 0.0016 | 0.0271 |
| \$50.00 | 13 | 2.0 | 3 | 3.1 | 0.0255 | 0.0255 |
| Total | 647 | | 96 | | | |

Table 4-5: Measures of central tendency for the willingness-to-pay values of respondents and non-respondents.

| | Mean | Median | Mode |
|----------------------|---------|---------|--------|
| Respondents | \$9.04 | \$5.00 | \$5.00 |
| Respondents (no 0's) | \$10.59 | \$10.00 | \$5.00 |
| Non-respondents | \$7.36 | \$5.00 | \$5.00 |

Table 4-6: Certainty of actually being willing to pay the reported amount next year.

| N | Not at all certain (1) | 2 | 3 | Moderately Certain (4) | 5 | 6 | Extremely Certain (7) | Mean |
|-----|------------------------|-----|-----|------------------------|-----|------|-----------------------|------|
| | % | | | | | | | |
| 670 | 1.2 | 1.0 | 1.9 | 14.5 | 9.9 | 16.9 | 54.6 | 6.00 |

Table 4-7: Projections of WIA participants and project WIA revenue under different access price levels and assuming different base user population levels.

| Price of WIA Access | Number of Participants Total Projected Revenue | | | | | |
|---------------------|---|----------------|------------------|----------------|------------------|----------------|
| | 16,000 User Base | 16,000 Revenue | 20,000 User Base | 20,000 Revenue | 30,000 User Base | 30,000 Revenue |
| \$3 | 12222 | \$36667 | 15278 | \$45834 | 22917 | \$68751 |
| \$4 | 11395 | \$45581 | 14244 | \$56976 | 21366 | \$85464 |
| \$5 | 11320 | \$56600 | 14150 | \$70750 | 21225 | \$106125 |
| \$6 | 6517 | \$39101 | 8146 | \$48876 | 12219 | \$73314 |
| \$7.00 | 6429 | \$45002 | 8036 | \$56252 | 12054 | \$84378 |
| \$7.50 | 6333 | \$47496 | 7916 | \$59370 | 11874 | \$89055 |
| \$8 | 6325 | \$50598 | 7906 | \$63248 | 11859 | \$94872 |
| \$10 | 6229 | \$62288 | 7786 | \$77860 | 11679 | \$116790 |
| \$15 | 2989 | \$44832 | 3736 | \$56040 | 5604 | \$84060 |
| \$20 | 2334 | \$46688 | 2918 | \$58360 | 4377 | \$87540 |
| \$25 | 1186 | \$29640 | 1482 | \$37050 | 2223 | \$55575 |
| \$30 | 586 | \$17568 | 732 | \$21960 | 1098 | \$32940 |
| \$40 | 450 | \$17984 | 562 | \$22480 | 843 | \$33720 |
| \$50 | 424 | \$21200 | 530 | \$26500 | 795 | \$39750 |

Figure 4-1: Demand curve for WIA access permits for current WIA validation purchasers

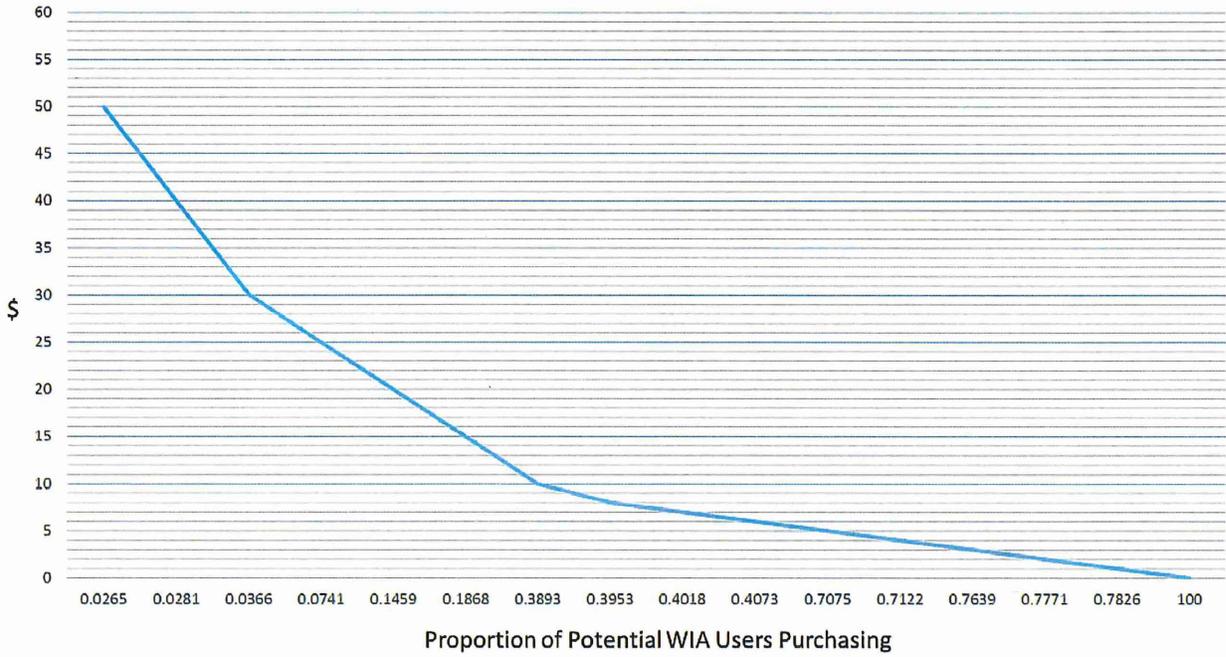


Figure 4-2: Projected number of users for different WIA access prices assuming different base user populations (N = 16,000; N = 20,000; N = 30,000).

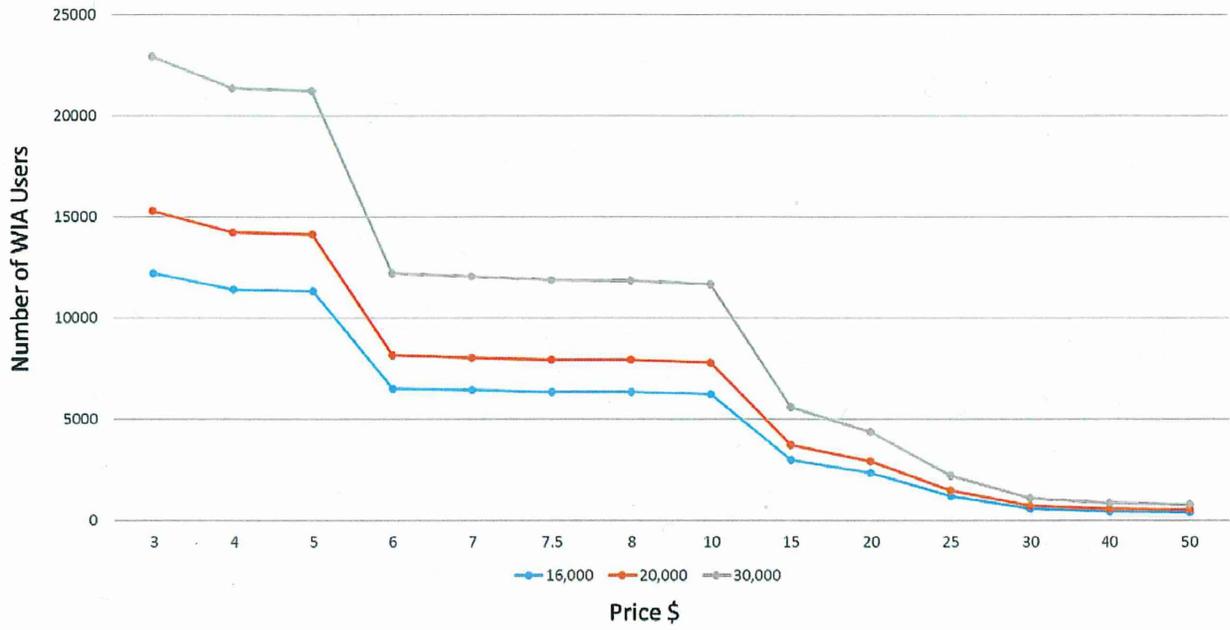
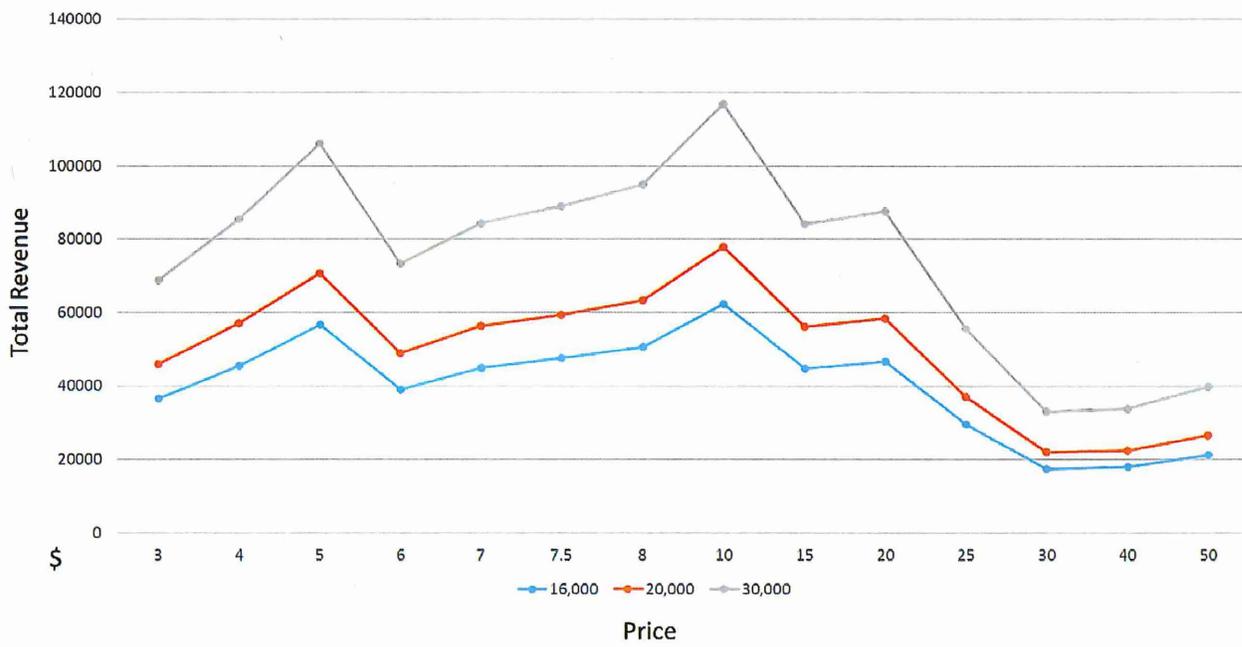


Figure 4-3: Projected WIA program revenue at different access price levels assuming different base user population levels



Section 5: Walk-In Access Users' Importance of Hunting Activities

Importance of hunting activities to WIA study respondents

Respondents were asked to rate how important different hunting activities were to them. We listed nine popular hunting activities, as well as the opportunity to identify another hunting activity that was not listed. The listed activities included: firearm, muzzleloader, and archery deer hunting; spring and fall turkey hunting; duck and geese hunting; and rabbit and squirrel hunting. We had also intended to include pheasant on the list but it was deleted in error. Because of this omission a large percentage (54.5%) of respondents included it as an "other" hunting activity.

Among the listed activities, more than half of the respondents indicated that firearm deer hunting was more than moderately important to them (54.2%), while duck (41.3%) and goose (37.6%) hunting were rated as more than moderately important by about 4 out of 10 respondents. Archery deer (25.0%) and spring turkey (25.2%) were more than moderately important to about 1 out of 4 respondents.

Even though it was not listed and respondents had to volunteer pheasant hunting, more than half of the respondents (54.5%) indicated it was more than moderately important to them (54.1%). And among those who did list pheasant hunting, more than 90% reported that it was extremely important to them. Other than pheasant hunting, grouse hunting (4.7%) was the most commonly volunteered hunting activity added to the list.

Respondents were asked to identify the one hunting activity that is most important to them. Almost half (46.0%) of the respondents listed pheasants, 17.8% listed firearms deer, 9.8% listed ducks/waterfowl, and 6.1% listed archery deer. No other activity was listed by more than 2% of respondents, although 11.7% of respondents did not list a hunting activity (Table 5-2). Large majorities of respondents agreed or disagreed with most statements that indicated a high-level of personal and life commitment to the activity they identified as their most important hunting activity, indicating that most WIA validation purchasers are strongly committed to at list one hunting activity (Table 5-3). And for most WIA users this hunting activity is pheasant hunting.

Table 5-1: Importance of hunting activities to respondents

| | n | Importance | | | | | | | Do not hunt | Mean |
|-------------------|-----|-----------------|-----|-----|--------------------------------|-----|-----|--------------------------|-------------|------|
| | | Not at all 1 | 2 | 3 | Moderately Important 4 % | 5 | 6 | Extremely Important 7 | | |
| Firearm Deer | 613 | 9.0 | 1.5 | 3.2 | 8.5 | 4.7 | 8.0 | 41.5 | 23.7 | 5.47 |
| Muzzleloader Deer | 404 | 14.2 | 2.1 | 3.5 | 8.3 | 4.0 | 3.9 | 14.3 | 49.7 | 4.09 |
| Archery Deer | 409 | 13.9 | 2.9 | 2.4 | 6.7 | 2.6 | 4.5 | 17.9 | 49.1 | 4.30 |
| Spring Turkey | 435 | 10.8 | 4.4 | 4.0 | 9.8 | 4.9 | 5.5 | 14.8 | 45.8 | 4.28 |
| Fall Turkey | 366 | 14.7 | 5.9 | 4.1 | 10.0 | 4.1 | 1.7 | 5.1 | 54.4 | 3.19 |
| Ducks | 526 | 7.7 | 3.0 | 4.1 | 9.3 | 5.1 | 7.6 | 28.6 | 34.5 | 5.11 |
| Geese | 525 | 8.3 | 3.6 | 4.5 | 11.3 | 6.7 | 6.4 | 24.5 | 34.6 | 4.86 |
| Rabbits | 402 | 20.4 | 7.3 | 4.4 | 10.2 | 3.0 | 1.7 | 3.0 | 49.9 | 2.70 |
| Squirrel | 403 | 20.7 | 7.1 | 3.9 | 9.3 | 3.2 | 2.0 | 4.0 | 49.8 | 2.79 |
| Pheasant* | 438 | 0.0 | 0.0 | 0.0 | 0.4 | 0.5 | 2.9 | 50.7 | 45.5* | 6.90 |
| Other* | 79 | 2.2 | 0.2 | 0.2 | 0.7 | 1.0 | 2.4 | 24.9 | 91.2* | 6.30 |

Table 5-2: Identification of most important hunting activity

| Species | % |
|------------------------|----------|
| (n = 786) | |
| Pheasants | 46.0 |
| Archery Deer | 6.1 |
| Firearms Deer | 17.1 |
| Muzzleloader Deer | 1.7 |
| Ducks or Waterfowl | 9.8 |
| Grouse | 1.4 |
| Upland Bird | 1.1 |
| Rabbits | 0.7 |
| Turkey | 1.2 |
| Squirrel | 1.5 |
| Coyote/fox | 0.6 |
| Raccoon | 0.2 |
| Dove | 0.1 |
| Other | 0.6 |
| No response/left blank | 11.7 |

Table 5-3: Ratings of involvement with the most important hunting activity

| | n | Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 | Mean |
|--|-----|------------------------|---------------|--------------|------------|---------------------|------|
| | | % | | | | | |
| This hunting activity is one of the most enjoyable things I do. | 771 | 0.0 | 0.8 | 3.9 | 25.9 | 69.4 | 4.64 |
| I am knowledgeable about this hunting activity. | 773 | 0.0 | 0.5 | 3.8 | 29.5 | 66.2 | 4.61 |
| The decision to go hunting is primarily my own. | 770 | 0.5 | 1.8 | 3.4 | 21.7 | 72.6 | 4.64 |
| A lot of my life is organized around this hunting activity. | 773 | 1.0 | 10.5 | 23.4 | 31.3 | 33.8 | 3.86 |
| This hunting activity has a central role in my life. | 762 | 2.1 | 10.2 | 24.3 | 32.2 | 31.2 | 3.80 |
| Most of my friends are in some way connected with this hunting activity. | 768 | 1.8 | 14.2 | 19.9 | 39.8 | 24.2 | 3.70 |
| When I participate in this hunting activity, others see me the way I want them to see me. | 768 | 1.4 | 3.1 | 21.9 | 34.9 | 38.7 | 4.06 |
| I do not really know much about this hunting activity. | 768 | 74.6 | 19.7 | 3.3 | 2.0 | 0.5 | 1.34 |
| I consider myself an educated consumer regarding this hunting activity. | 760 | 1.7 | 1.7 | 6.6 | 36.1 | 53.9 | 4.39 |
| This hunting activity is interesting to me. | 771 | 0.1 | 0.1 | 1.8 | 28.0 | 69.9 | 4.67 |
| This hunting activity is important to me. | 763 | 0.3 | 0.4 | 2.6 | 27.7 | 69.1 | 4.65 |
| You can tell a lot about a person when you see them engaged in this hunting activity. | 770 | 1.8 | 3.6 | 27.9 | 38.7 | 27.8 | 3.87 |
| When I am participating in this hunting activity I am really myself. | 765 | 0.4 | 1.4 | 14.5 | 36.9 | 46.8 | 4.28 |
| I enjoy discussing this hunting activity with my friends. | 768 | 0.3 | 0.4 | 5.6 | 39.7 | 53.9 | 4.47 |
| The decision to go hunting is not entirely my own. | 762 | 48.8 | 21.4 | 10.4 | 12.3 | 7.1 | 2.07 |
| I have a preference for this hunting activity over other leisure activities. | 765 | 1.4 | 2.7 | 15.7 | 38.6 | 41.6 | 4.16 |
| I find a lot of my life organized around this hunting activity. | 767 | 2.9 | 13.7 | 26.7 | 29.3 | 27.4 | 3.65 |
| Even if close friends recommend other recreational activities, I prefer this hunting activity. | 770 | 0.8 | 7.8 | 25.1 | 35.5 | 30.9 | 3.88 |
| I have acquired equipment that I can only use for this hunting activity. | 769 | 1.8 | 4.4 | 7.8 | 33.2 | 52.8 | 4.31 |
| I have close friendships based on a common interest in this hunting activity. | 770 | 0.9 | 3.8 | 14.3 | 37.4 | 43.6 | 4.19 |
| Compared to other hunters, I own a lot of equipment for this activity. | 769 | 3.4 | 13.7 | 32.6 | 27.7 | 22.6 | 3.53 |

Section 6: Walk-In Access User Demographic Characteristics

Study participant demographics

The initial study sample was 96.3% male, and 97.1% of the respondents were male. The median age of respondents was 48.0, which is slightly older than the median age of 44.0 in the initial study sample. On average, respondents had lived in Minnesota 44 years and hunted in Minnesota for 32 years. The median year when respondents first hunted in Minnesota was 1978.

More than 40% of respondents reported household incomes of \$100,000 or greater, which is likely higher than the study population given the upward age bias in the respondent sample compared to the initial sample. Likewise, more than 40% of respondents indicated they had at least a college degree, which is likely biased upward compared to the target population given the upward bias in age. Almost all respondents identified themselves as white/non-Hispanic (99%).

Table 6-1: Demographic background of respondents

| | n | Median | Range |
|---------------------------------|----------|---------------|--------------|
| Years in Minnesota | 774 | 44.0 | 1-92 |
| First year hunted in Minnesota | 772 | 1978 | 1923-2013 |
| Total years hunted in Minnesota | 774 | 32.0 | 1-80 |
| Age (respondents) | 786 | 48.0 | 19-93 |
| Age (sample) | 1580 | 44.0 | 18-93 |

Table 6-2: Household income of respondents

| n = 642 | % |
|---------------------|----------|
| Less than \$10,000 | 0.8 |
| \$10,000-19,999 | 2.0 |
| \$20,000-29,999 | 2.8 |
| \$30,000-39,999 | 5.1 |
| \$40,000-49,999 | 6.7 |
| \$50,000-59,999 | 10.7 |
| \$60,000-69,999 | 8.7 |
| \$70,000-79,999 | 7.6 |
| \$80,000-89,999 | 8.7 |
| \$90,000-99,999 | 7.0 |
| \$100,000-124,999 | 13.9 |
| \$125,000-149,999 | 10.1 |
| \$150,000-174,999 | 4.5 |
| \$175,000-199,999 | 4.0 |
| \$200,000-224,999 | 1.6 |
| \$225,000-249,999 | 1.6 |
| More than \$250,000 | 4.0 |

Table 6-3: Ethnicity of respondents

| | % |
|-----------------------------------|----------|
| African American/Black | -- |
| Asian | 1.0 |
| Pacific Islander | -- |
| American Indian or Alaskan Native | 0.5 |
| Caucasian/White | 99.3 |
| Other | 0.5 |
| | |
| Hispanic/Latino/Spanish | 0.5 |

Table 6-4: Educational background of respondents

| n = 751 | % |
|-------------------------|----------|
| Grade school | 0.1 |
| Some high school | 0.9 |
| High School Diploma/GED | 12.5 |
| Some vo-tech school | 8.4 |
| Vo-tech school degree | 19.2 |
| Some college | 14.4 |
| Four-year degree | 26.5 |
| Some graduate school | 4.9 |
| Graduate degree | 13.0 |

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Appendix A: Full Survey Instrument

Minnesota Department of Natural Resources Walk-In Access User Study

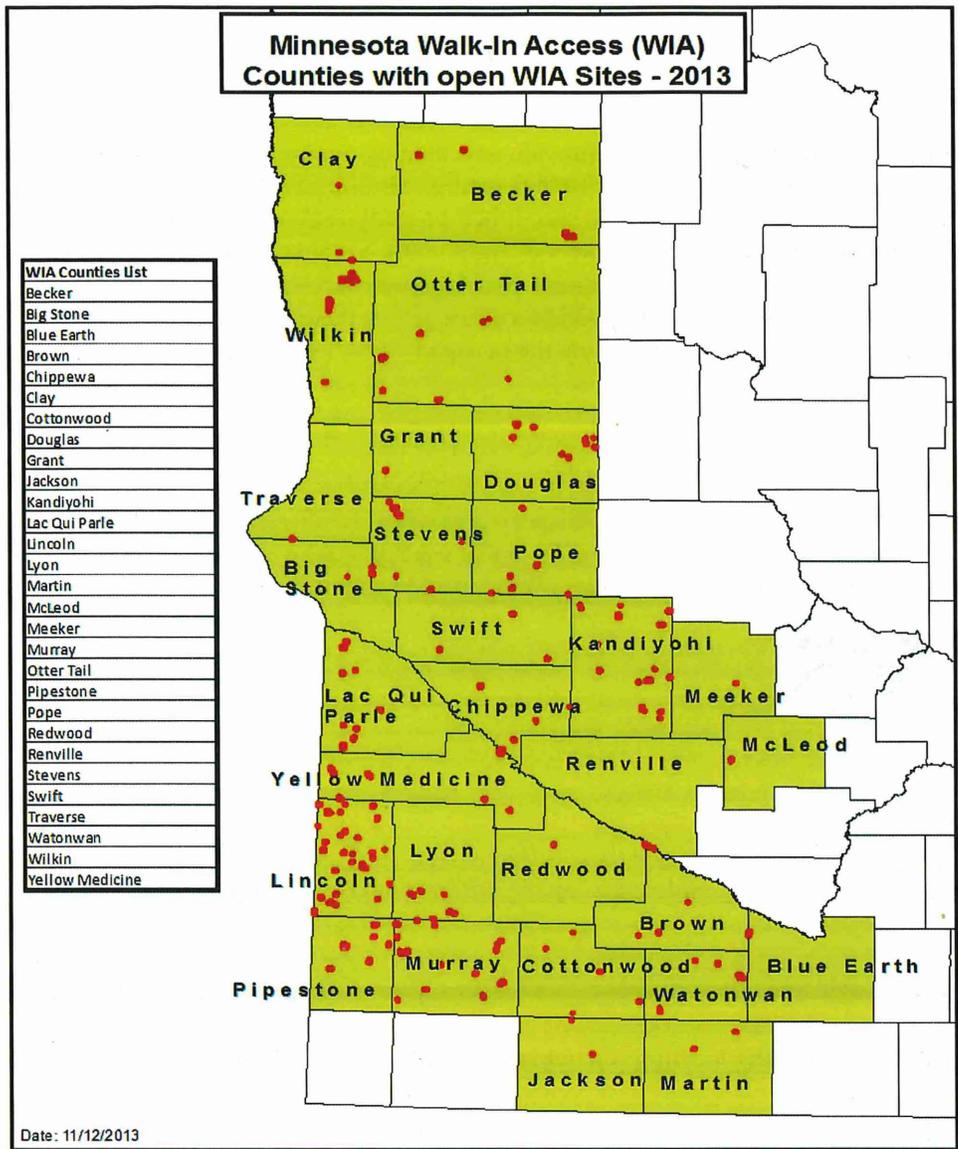


A cooperative study conducted by the University of Minnesota for the Minnesota
Department of Natural Resources

Your help on this study is greatly appreciated!

Please return your completed questionnaire in the enclosed envelope. The envelope is self-addressed and no postage is required. Thanks!

Minnesota Cooperative Fish and Wildlife Research Unit,
Department of Fisheries, Wildlife and Conservation Biology
University of Minnesota
St. Paul, Minnesota 55108-6124



- Walk-In Access Sites (WIAs)



Please Read First!

The goal of the Walk-In Access (WIA) program is to provide new hunting opportunities on private land that is already enrolled in existing conservation programs or lands with high quality wildlife cover. The WIA program is entirely voluntary for landowners. Most landowners choose to enroll their property for two or three years. WIA started in 2011 as a three-year pilot program funded by the U.S. Department of Agriculture Voluntary Public Access Program.

The map on the preceding page identifies the counties and locations where there are currently Walk-In Access sites (WIAs). The Walk-In Access lands can be recognized by the hexagon “WIA” signs that are a bright green color.



These

signs are distinctly different from that used on public lands in the area such as State Wildlife Management Areas (WMAs) and Federal Waterfowl Productions Areas (WPAs)



Please pay special attention to your experiences on these different land units as you answer the questions on this survey. The purpose of the survey is to gauge your experiences on the different land types in order to assess their value to you as a user.

First we would like to know about your hunting participation in the area in Minnesota where there are Walk-In Access sites (WIAs).

Q1. During the past fall and winter 2013-14, did you hunt either public or private land in any of the counties in Minnesota listed on the map on the facing page? (Check one box below)

- YES
- NO → Skip to Q11

Q2. Which counties did you hunt in most often? (Please list up to 3):

1) _____

2) _____

3) _____

Q3. During the past year how many days did you hunt for the following species in the area of Minnesota that contains Walk-In Access sites (WIAs)? (Please write in number of days for each below. Leave blank if 0 days)

| | TOTAL DAYS HUNTED ON WALK IN-ACCESS AREAS (WIAs)  | TOTAL DAYS HUNTED ON PUBLIC LAND SUCH AS WMAs & WPAs IN THIS AREA   | TOTAL DAYS HUNTED ON PRIVATE LAND IN THIS AREA |
|------------------------|--|--|---|
| Firearm Deer | _____ DAYS | _____ DAYS | _____ DAYS |
| Muzzleloader Deer | _____ DAYS | _____ DAYS | _____ DAYS |
| Archery Deer | _____ DAYS | _____ DAYS | _____ DAYS |
| Spring Turkey | _____ DAYS | _____ DAYS | _____ DAYS |
| Fall Turkey | _____ DAYS | _____ DAYS | _____ DAYS |
| Ducks | _____ DAYS | _____ DAYS | _____ DAYS |
| Geese | _____ DAYS | _____ DAYS | _____ DAYS |
| Pheasant | _____ DAYS | _____ DAYS | _____ DAYS |
| Dove | _____ DAYS | _____ DAYS | _____ DAYS |
| Rabbits | _____ DAYS | _____ DAYS | _____ DAYS |
| Squirrel | _____ DAYS | _____ DAYS | _____ DAYS |
| Other (LIST): _____ | _____ DAYS | _____ DAYS | _____ DAYS |

Q4. During the past hunting season how satisfied or dissatisfied were you with your GENERAL HUNTING EXPERIENCES in this area of Minnesota? (Please circle one number for each below)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT THIS SPECIES |
|-------------------|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|----------------------------------|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Pheasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Dove | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Rabbits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Squirrel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q5. During the past hunting season how satisfied or dissatisfied were you with your HARVEST IN GENERAL in this area of Minnesota? (Please circle one number for each below)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT THIS SPECIES |
|-------------------|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|---------------------------|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Pheasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Dove | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Rabbits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Squirrel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q6. During the past hunting season how CROWDED DID YOU FEEL at the different kinds of places you hunted in this area of Minnesota, WHERE 1 “IS NOT AT ALL CROWDED” and 9 “IS EXTREMELY CROWDED”?

| | NOT AT ALL CROWDED | | SOMEWHAT CROWDED | | | MODERATELY CROWDED | | EXTREMELY CROWDED | | DIDN'T HUNT |
|---------------------------|--------------------|---|------------------|---|---|--------------------|---|-------------------|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| WIAs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | NA |
| Public lands (WMAs, WPAs) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | NA |
| Private lands | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | NA |

Q7. During the past year did you ever hunt on a Walk-In Access (WIA) site for any species in Minnesota?

- NO → PLEASE SKIP TO QUESTION Q11
- YES → PLEASE ANSWER QUESTIONS Q8 THROUGH Q10

Q8. Overall how satisfied are you with your experiences at Walk-In Access sites (WIAs) in Minnesota? (Please check one below)

- VERY DISSATISFIED
- MODERATELY DISSATISFIED
- SLIGHTLY DISSATISFIED
- NEITHER
- SLIGHTLY SATISFIED
- MODERATELY SATISFIED
- VERY SATISFIED

Q9. During the past hunting season how satisfied or dissatisfied were you with your GENERAL HUNTING EXPERIENCES SPECIFICALLY at Walk-In Access sites (WIAs) in Minnesota? (Circle one number for each row)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT THIS SPECIES |
|-------------------|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|---------------------------|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Pheasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Dove | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Rabbits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Squirrel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Other (list): | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q10. During the past hunting season how satisfied or dissatisfied were you with your HARVEST SPECIFICALLY at Walk-In Access sites (WIAs) in Minnesota? (Circle one number for each row)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT THIS SPECIES |
|-------------------|-------------------|-------------------------|-----------------------|---------|--------------------|----------------------|----------------|---------------------------|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Pheasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Dove | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Rabbits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Squirrel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Other (list): | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q11. We would like to find out some of your beliefs about using Walk in Access sites (WIAs) in Minnesota. Please indicate the level to which you disagree or agree. (Circle one number for each row)

| | Extremely Disagree | Moderately Disagree | Slightly Disagree | Neutral | Slightly Agree | Moderately Agree | Extremely Agree |
|--|---------------------------|----------------------------|--------------------------|----------------|-----------------------|-------------------------|------------------------|
| WIAs provide me with an important place to hunt deer. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide me with an important place to hunt pheasant. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide me with an important place to hunt small game other than waterfowl and pheasants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide me with an important place to hunt waterfowl. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The quality of hunting on WIAs is not as good as other locations. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| There are NOT enough WIAs near me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs are too crowded. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide a place to take kids hunting. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Most of the WIAs I know about are too small. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Most of the WIAs I know about are too far away. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I understand the rules for using WIAs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide an easy place to go hunting. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIAs provide high quality hunting experiences. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The number of WIA sites should be increased. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| WIA sites should be expanded to other areas of the state. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hunting on WIAs is better than hunting on public lands I have access to. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hunting on WIAs is better than hunting on private lands that I have access to. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q12. Next we would like to find out to what extent different habitat disturbances associated with agricultural production had negative impacts on hunting quality on WIAs. Please indicate to what degree you believe each of the following had a NEGATIVE IMPACT ON HUNTING QUALITY (Circle one number for each row.)

| | Not at all | | | Moderately Negative | | | Extremely Negative |
|---|------------|---|---|---------------------|---|---|--------------------|
| The amount of haying | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of grazing | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of mowing | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of farming of small grain crops (wheat, rye, oats) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of burning | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of farming of row crops such as corn or soybeans | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The amount of plowed land | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| OTHER (DESCRIBE): | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q13. Overall how would you rate the condition of the WIAs for hunting? (Check one)

- Poor
- Fair
- Good
- Excellent

Q14. The Walk-In Access program contracts with private landowners to allow public access for hunting. The contracts do not preclude the landowner from permitting other activities that will NOT impact hunting. In the following table, please rate the degree to which you think the listed recreation activities would impede your ability to hunt. (Circle one number for each row)

| | Not at all Impede | | | Moderately Impede | | | Greatly Impede |
|---------------------|-------------------|---|---|-------------------|---|---|----------------|
| Camping | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Dog training | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Horseback riding | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hiking | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Skeet/trap shooting | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Target shooting | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Other (Describe): | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q15. Next, we are interested in how you locate and hunt WIAs. Below we list possible ways to find WIAs. For each please tell us how important that source of information is to you for LOCATING WIAs. (Circle one number for each row)

| How important are the following for LOCATING WIAs... | Not at all Important | Slightly Important | Moderately Important | Very Important | Extremely Important |
|---|-----------------------------|---------------------------|-----------------------------|-----------------------|----------------------------|
| The DNR website on WIAs in general | 1 | 2 | 3 | 4 | 5 |
| The printable WIA hunting atlas from the website | 1 | 2 | 3 | 4 | 5 |
| Hardcopy of the WIA hunting atlas | 1 | 2 | 3 | 4 | 5 |
| GPS data download for WIAs | 1 | 2 | 3 | 4 | 5 |
| The DNR Recreation Compass information for WIAs | 1 | 2 | 3 | 4 | 5 |
| Google maps for WIAs | 1 | 2 | 3 | 4 | 5 |
| Google Earth data for WIAs | 1 | 2 | 3 | 4 | 5 |
| WIA detail maps | 1 | 2 | 3 | 4 | 5 |
| Just spot the WIA boundary signs in the field | 1 | 2 | 3 | 4 | 5 |

Q16. Now, for each, please tell us how important that source of information is to you for HUNTING WIAs. (Circle one number for each row)

| How important are the following for HUNTING WIAs... | Not at all Important | Slightly Important | Moderately Important | Very Important | Extremely Important |
|--|-----------------------------|---------------------------|-----------------------------|-----------------------|----------------------------|
| The DNR website on WIAs in general | 1 | 2 | 3 | 4 | 5 |
| The printable WIA hunting atlas from the website | 1 | 2 | 3 | 4 | 5 |
| Hardcopy of the WIA hunting atlas | 1 | 2 | 3 | 4 | 5 |
| GPS data download for WIAs | 1 | 2 | 3 | 4 | 5 |
| The DNR Recreation Compass information for WIAs | 1 | 2 | 3 | 4 | 5 |
| Google maps for WIAs | 1 | 2 | 3 | 4 | 5 |
| Google Earth data for WIAs | 1 | 2 | 3 | 4 | 5 |
| WIA detail maps | 1 | 2 | 3 | 4 | 5 |
| Just spot the WIA boundary signs in the field | 1 | 2 | 3 | 4 | 5 |

Q17. The DNR continues to seek permanent funding to continue the Walk-In Access (WIA) program in 2015 and beyond. While a small fee was charged in 2013 as a temporary measure, one way of permanently funding the program is by charging a user fee for accessing Walk-In Access sites.

In general do you support or oppose charging a fee to access the Walk-In Access sites (Please check one response below).

- STRONGLY OPPOSE
- MODERATELY OPPOSE
- SLIGHTLY OPPOSE
- NEITHER
- SLIGHTLY SUPPORT
- MODERATELY SUPPORT
- STRONGLY SUPPORT

Q18. Would you personally be willing to pay a fee to access Walk-In Access sites? (Check yes or no)

- NO → **PLEASE SKIP TO QUESTION Q21**
- YES



Q19. What is the most you personally would be willing to pay each year to have access to Walk-In Access sites in Minnesota?

\$ _____

Q20. How certain are you that you would actually be willing to pay this amount next year, if such a fee were created to allow access to Walk-In Access sites? (Circle one number)

| | | | | | | | | | | |
|-----------------------|---|---|---|---|-----------------------|---|--|--|--|----------------------|
| Not at all Certain | | | | | Moderately Certain | | | | | Extremely Certain |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | | |

Finally, we have a few questions about you:

Q21. We are interested in knowing what type of hunting is most important to you. Please rate how important each hunting activity listed below is to you. (Circle one number for each).

| | Not at all important | | | Moderately Important | | | Extremely Important | DO NOT HUNT |
|-------------------|-------------------------|---|---|-------------------------|---|---|------------------------|----------------|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q21. Continued. Please rate how important each hunting activity listed below is to you. (Circle one number for each).

| | Not at all important | 1 | 2 | 3 | Moderately Important | 4 | 5 | 6 | Extremely Important | 7 | 8 | DO NOT HUNT | 9 |
|--------------|----------------------|---|---|---|----------------------|---|---|---|---------------------|---|---|-------------|---|
| Rabbits | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | |
| Squirrel | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | |
| Other (list) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | |

Q22. Which one activity listed in Q21 would you say is MOST important to you? (Please list below):

Q23. Please indicate how much you agree or disagree with the following statements about your MOST important hunting activity. (Please circle one response for each):

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| This hunting activity is one of the most enjoyable things I do. | 1 | 2 | 3 | 4 | 5 |
| I am knowledgeable about this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| The decision to go hunting is primarily my own. | 1 | 2 | 3 | 4 | 5 |
| A lot of my life is organized around this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| This hunting activity has a central role in my life. | 1 | 2 | 3 | 4 | 5 |
| Most of my friends are in some way connected with this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| When I participate in this hunting activity, others see me the way I want them to see me. | 1 | 2 | 3 | 4 | 5 |
| I do not really know much about this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| I consider myself an educated consumer regarding this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| This hunting activity is interesting to me. | 1 | 2 | 3 | 4 | 5 |
| This hunting activity is important to me. | 1 | 2 | 3 | 4 | 5 |
| You can tell a lot about a person when you see them engaged in this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| When I am participating in this hunting activity I am really myself. | 1 | 2 | 3 | 4 | 5 |
| I enjoy discussing this hunting activity with my friends. | 1 | 2 | 3 | 4 | 5 |
| The decision to go hunting is not entirely my own. | 1 | 2 | 3 | 4 | 5 |
| I have a preference for this hunting activity over other leisure activities. | 1 | 2 | 3 | 4 | 5 |
| I find a lot of my life organized around this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| Even if close friends recommend other recreational activities, I prefer this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| I have acquired equipment that I can only use for this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| I have close friendships based on a common interest in this hunting activity. | 1 | 2 | 3 | 4 | 5 |
| Compared to other hunters, I own a lot of equipment for this activity. | 1 | 2 | 3 | 4 | 5 |

Q24. How many years have you lived in Minnesota? (Write in number of years)

_____ YEARS

Q25. What year did you first hunt in Minnesota? (Write in year)

_____ CALENDAR YEAR (For Example: 1977)

Q26. How many total years have you hunted in Minnesota?

_____ YEARS

The following questions are completely voluntary and will only be used to help us assess the WIA program and the characteristics of those who are using it.

Q27. What was your annual household income from all sources, before taxes, in 2013? (Please check only one)

- | | | |
|---|---|---|
| <input type="checkbox"/> Less than \$10,000 | <input type="checkbox"/> \$60,000 to \$69,999 | <input type="checkbox"/> \$150,000 to \$174,999 |
| <input type="checkbox"/> \$10,000 to \$19,999 | <input type="checkbox"/> \$70,000 to \$79,999 | <input type="checkbox"/> \$175,000 to \$199,999 |
| <input type="checkbox"/> \$20,000 to \$29,999 | <input type="checkbox"/> \$80,000 to \$89,999 | <input type="checkbox"/> \$200,000 to \$224,999 |
| <input type="checkbox"/> \$30,000 to \$39,999 | <input type="checkbox"/> \$90,000 to \$99,999 | <input type="checkbox"/> \$225,000 to \$249,999 |
| <input type="checkbox"/> \$40,000 to \$49,999 | <input type="checkbox"/> \$100,000 to \$124,999 | <input type="checkbox"/> \$250,000 or more |
| <input type="checkbox"/> \$50,000 to \$59,999 | <input type="checkbox"/> \$125,000 to \$149,999 | |

Q28. Which of the following best describes your race? (Check all that apply)

- African American/black
- Asian
- Pacific Islander
- American Indian or Alaskan Native
- Caucasian/white
- Other

Q29. Do you consider yourself Hispanic/Latino/Spanish? (Check one)

- Yes
- No

Q30. What is the highest level of education you have completed? (Check one)

- | | |
|---|---|
| <input type="checkbox"/> Grade school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Four-year college (bachelor's) degree |
| <input type="checkbox"/> High school diploma or GED | <input type="checkbox"/> Some graduate school |
| <input type="checkbox"/> Some vocational or technical school | <input type="checkbox"/> Graduate (master's or doctoral) degree |
| <input type="checkbox"/> Vocational/technical school (associate's) degree | |

Thanks for your help! Please return your survey in the enclosed, self-addressed, reply envelope. No postage is required.

Appendix B: Non-response Survey Instrument

FOLLOW-UP SURVEY FOR WALK-IN ACCESS USERS

During the past couple of months we have contacted you to complete a survey about the Minnesota DNR's Walk-In Access Program. We are sending you this shortened survey because we are concerned that people who have not yet completed a survey might differ from those that have. We would greatly appreciate in this study and ask that you complete and return this very short survey.

The goal of the WIA Program is to provide new hunting opportunities on private. We appreciate your help in trying to better manage and improve the WIA Program!

Thanks,

David C. Fulton, Adj. Professor
Department of Fisheries, Wildlife, & Conservation Biology
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Q1. During the past year did you ever hunt on a Walk-In Access (WIA) site for any species in Minnesota?

- NO → PLEASE SKIP TO QUESTION Q5
 YES → PLEASE ANSWER QUESTIONS Q2 THROUGH Q4

Q2. Overall how satisfied are you with your experiences at Walk-In Access sites (WIAs) in Minnesota?
(Please check one below)

- VERY DISSATISFIED
 MODERATELY DISSATISFIED
 SLIGHTLY DISSATISFIED
 NEITHER
 SLIGHTLY SATISFIED
 MODERATELY SATISFIED
 VERY SATISFIED

Q3. Overall how would you rate the condition of the WIAs for hunting? (Check one)

- Poor
 Fair
 Good
 Excellent

Q4. During the past hunting season how satisfied or dissatisfied were you with your GENERAL HUNTING EXPERIENCES SPECIFICALLY at Walk-In Access sites (WIAs) in Minnesota? (Circle one number for each row)

| | Very dissatisfied | Moderately dissatisfied | Slightly dissatisfied | Neither | Slightly satisfied | Moderately satisfied | Very satisfied | DID NOT HUNT THIS SPECIES At WIAs |
|-------------------|----------------------|----------------------------|--------------------------|---------|-----------------------|-------------------------|-------------------|--|
| Firearm Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Muzzleloader Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Archery Deer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Spring Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Fall Turkey | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Ducks | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Geese | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |
| Pheasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 9 |

Q5. The DNR continues to seek permanent funding to continue the Walk-In Access (WIA) program in 2015 and beyond. While a small fee was charged in 2013 as a temporary measure, one way of permanently funding the program is by charging a user fee for accessing Walk-In Access sites.

In general do you support or oppose charging a fee to access the Walk-In Access sites (Please check one response below).

- STRONGLY OPPOSE
- MODERATELY OPPOSE
- SLIGHTLY OPPOSE
- NEITHER
- SLIGHTLY SUPPORT
- MODERATELY SUPPORT
- STRONGLY SUPPORT

Q6. Would you personally be willing to pay a fee to access Walk-In Access sites? (Check yes or no)

- NO
- YES

Q7. What is the most you personally would be willing to pay each year to have access to Walk-In Access sites in Minnesota?

\$ _____

Thanks for your help! Please return your survey in the enclosed, self-addressed, reply envelope. No postage is required.

Appendix C: WIA Donator Postcard Survey Instrument

Q1. Did you hunt on any Walk-In Access (WIAs) areas in Minnesota in the past 12 months?

- YES. *(If yes, please answer Q2.)*
- NO

Q2. What did you hunt for (Check all that apply):

- Deer with firearm
- Deer with muzzleloader
- Deer with bow
- Turkey-fall
- Turkey-spring
- Ducks
- Geese
- Pheasant
- Other (please list):

