

THE 2010 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



Final Report

A cooperative study conducted by:

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

The 2010 Waterfowl Hunting Season in Minnesota: A Study of Hunters' Opinions and Activities

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Acknowledgements

This study was a cooperative effort supported by the Minnesota Department of Natural Resources, Division of Fish and Wildlife (DNR) and the U.S. Geological Survey through the Minnesota Cooperative Fish and Wildlife Research Unit at the University of Minnesota. We thank Rick Nordby for his assistance in working with the electronic licensing system. We also thank the many waterfowl hunters who took the time to complete the survey and helped to further our understanding of this important clientele.

Suggested Citation

Schroeder, S. A., Lawrence, J. S., and Cordts, S. D. (2012). The 2010 Waterfowl Hunting Season in Minnesota: A Study of Hunters' Opinions and Activities. University of Minnesota, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology.

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Executive Summary

This study of the 2010 Minnesota waterfowl-hunting season was conducted to assess waterfowl hunters’:

- participation and activities,
- satisfaction,
- motivations,
- constraints,
- identification and involvement with the activity, and
- attitudes about waterfowl management and Youth Waterfowl Hunting Day.

The survey was distributed to 4,000 waterfowl hunters; 1,946 completed surveys were used for this analysis. After adjusting for undeliverable surveys and invalid respondents, the response rate was 50%.

Experiences

Just less than 9 of 10 survey respondents (88%) hunted waterfowl during the 2010 Minnesota season. Respondents who had hunted in 2010 were asked if they had hunted for ducks, Canada geese during the early September and regular season, and other geese. Responses ranged from 92% for ducks to only 6% for other geese (Figure S-1).

Hunters reported bagging an average of 9.7 ducks, 5.9 Canada geese, and 3.0 “other” geese over the course of the 2010 Minnesota season. Respondents hunted an average of 6.7 days on weekends and holidays, and 4.8 days during the week. Approximately two-thirds of waterfowl hunters statewide hunted opening Saturday (60%) or Sunday (62%).

Survey recipients were asked how many days they hunted in each of seven former DNR regions. About one in five of respondents reported hunting most frequently in the Southwest (21%) or West-Central (21%) regions. Less than 15% of the state waterfowl hunters reported that they most often hunted in the Northeast (8%), Southeast (8%), Northwest (11%) or Metro regions (13%) (Figure S-2).

Figure S-1: Percentage of Hunters Participating in Activities in 2010

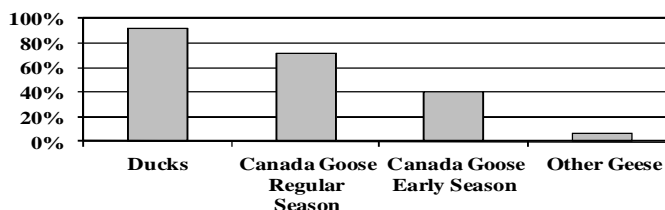
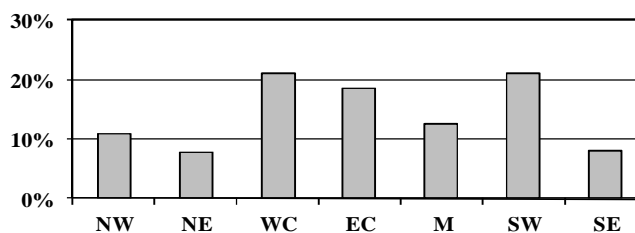


Figure S-2: Most Frequent Hunting Destination in 2010

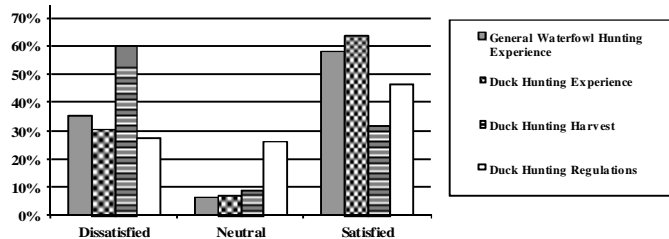


Satisfaction

Over half of hunters (58%) reported being satisfied with their general waterfowl-hunting experience. Younger hunters and hunters who have been hunting for fewer years reported higher levels of satisfaction.

Over half of respondents were satisfied with their 2010 duck-hunting experience (Figure S-3). However, about 60% of respondents were dissatisfied with their duck-hunting harvest. Satisfaction with duck-hunting regulations fell between satisfaction levels for experience and harvest. About one in four respondents felt neither satisfied nor dissatisfied about the duck-hunting regulations, compared to less than 10% for duck-hunting experience or harvest. There was a significant positive relationship between the number of ducks bagged and satisfaction with duck-hunting harvest.

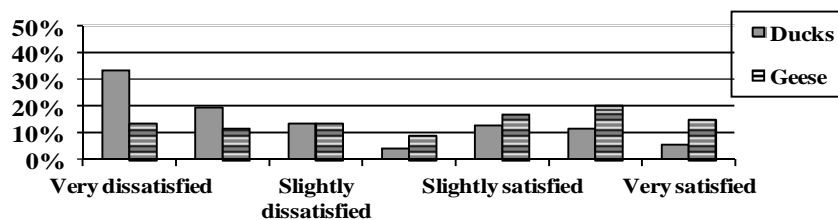
Figure S-3: Satisfaction With Duck Hunting in 2010



About two-thirds of goose hunters were satisfied with their general goose-hunting experience. About 40% of respondents were satisfied with their goose harvest. About half of goose hunters indicated they were satisfied with goose-hunting regulations. The number of geese bagged appears to have a slight positive influence on satisfaction with goose-hunting harvest.

Hunters were also asked about their satisfaction with the number of ducks and geese seen in the field. Results are shown in Figure S-4.

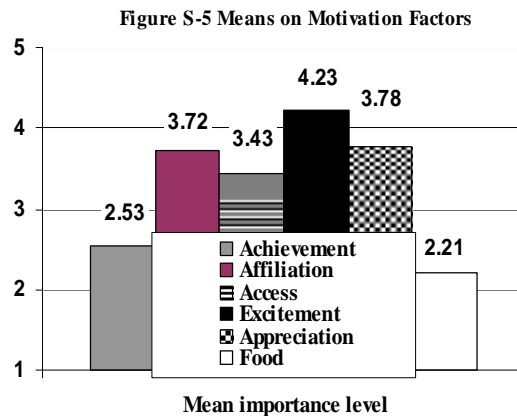
Figure S-4: Satisfaction With the Number of Ducks and Geese Seen in the Field



Hunters were asked to compare the 2010 waterfowl season to the 2009 season. Nearly one-third of respondents indicated that their general waterfowl hunting experience was better in 2010 than in 2009, while 46.5% felt it was worse, and 24% felt neither year was better than the other. Results were similar for duck hunting experience. A slightly smaller proportion of respondents indicated that duck hunting harvest was better in 2010. The large majority of respondents (68%) felt that 2010 duck regulations were neither better nor worse than 2009 regulations. About one-fourth (26%) of respondents felt that the number of ducks seen in 2010 was better than in 2009, while over half (56%) felt the number was worse.

Motivations for Waterfowl Hunting

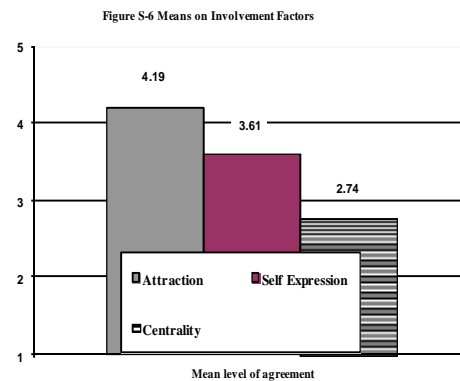
Survey recipients rated the importance of 26 diverse motivations for waterfowl hunting. Respondents' most important motivations for waterfowl hunting were enjoying nature and the outdoors, the excitement of hunting, good behavior among other waterfowl hunters, getting away from crowds of people, and the challenge of making a successful shot. The least important motivations were getting food for the family and getting the limit. Exploratory factor analysis identified six motivational factors associated with waterfowl hunting (Figure S-5). Over half of respondents indicated that waterfowl hunting was one of their most important recreational activities.



Importance of and Identification with Waterfowl Hunting

Respondents were asked how important waterfowl hunting was to them. The majority of respondents (48%) indicated that it was “one of my most important recreational activities.” Over one-fourth (29%) indicated that it was “no more important than my other recreational activities,” while 10% indicated that it was “my most important recreational activity.” Less than 10% selected the other options.

Respondents were asked to indicate how much they identified as waterfowl hunters. Two-thirds (66.3%) responded “I am a waterfowl hunter,” 16% indicated that “I go waterfowl hunting, but I do not really consider myself a waterfowl hunter. Less than 10% indicated that they were either in the process of becoming waterfowl hunters, and about 10% indicated that used to be, but no longer consider themselves waterfowl hunters.



Involvement Waterfowl Hunting

Respondents rated their involvement in waterfowl hunting. Respondents agreed strongly that (a) waterfowl hunting is interesting to me, (b) waterfowl hunting is important to me, (c) the decision to go waterfowl hunting is primarily my own, (d) I am knowledgeable about waterfowl hunting, (e) waterfowl hunting is one of the most enjoyable things I do, (f) I have acquired equipment that I can only use for waterfowl hunting, and (g) I enjoy discussing waterfowl hunting with friends. One item was

rated between strongly disagree and disagree: I do not really know much about waterfowl hunting.

Based on a three-facet factor analysis of involvement items that included attraction, centrality, and self-expression factors, we found that respondents agreed most strongly with items in the attraction factor ($\bar{x} = 4.19/5$), then the self-expression factor ($\bar{x} = 3.61$), and less with items in the centrality factor ($\bar{x} = 2.74$) (Figure S-6).

Youth Waterfowl Hunting Day

Youth Waterfowl Hunting Day has been somewhat controversial in Minnesota (Smith, 2002). However, survey results show continued support for the day. Overall, 62% of respondents support the youth hunt, with 38% strongly supporting it. Support for the youth hunt is slightly less than in 2000, when 66% of respondents supported the youth hunt with 44% strongly supporting it; however, youth hunt support has not changed since 2002.

Study respondents were asked if they took any youths hunting on Minnesota's 2010 Youth Waterfowl Hunting Day, and 12% reported participating. Those respondents who participated in Youth Waterfowl Hunting Day reported escorting an average of 1.60 youth hunters. Based on the percentages provided by the survey, it is estimated that 14,069 youths participated in the youth waterfowl hunt in 2010. On average, 2.71 ducks and 0.54 geese were harvested by each mentored group of youths.

Management Strategies

Respondents were asked to indicate their opinion about the 6-duck bag limit, 1-hen mallard bag limit, and 2-wood duck bag limit. About two-thirds of respondents felt the 6-duck bag limit was about right, with 5.2% indicating that it was too low, 15% too high, and 12% had no opinion. Nearly 6 in 10 respondents felt the 1-hen mallard bag limit was about right, compared to 17% too low, 24% too high, and 11% no opinion. Over half of respondents felt the 2-wood duck bag limit was about right, compared to 27% who felt it was too low, 7.5% who thought it was too high, and 11% who had no opinion.

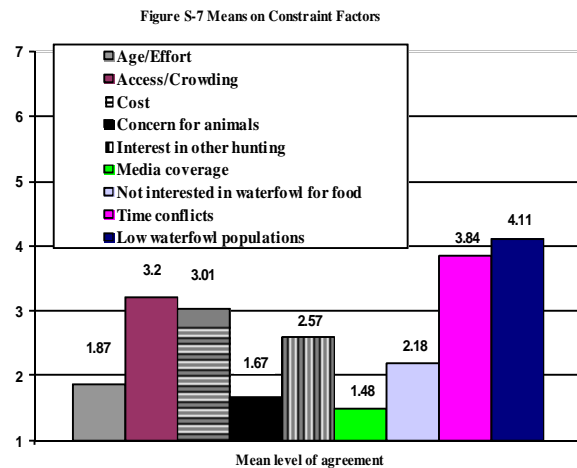
Respondents were asked to indicate their level of support for six management strategies. Over half of respondents opposed, with 29% supporting, ending shooting hours at 4 pm for the first part of the season. Nearly three-fourths of respondents supported moist soil management, with only 7.1% opposing. About 42% of respondents supported limiting the use of mud motors on certain public hunting areas, while 41.4% were neutral and 17% opposed. Nearly 4 in 10 respondents supported restrictions on open water hunting, while 33% were neutral and 28% opposed. Over half of respondents opposed restrictions on hunting within 100 yards of surface water during the early Canada Goose season, with 21% supporting this restriction and 25% neutral. About 6 in 10 respondents supported providing easier access to waterfowl hunting sites on Wildlife Management areas, with only 8.1% opposed, and 31% neutral.

Season Dates and Zones

Respondents were asked to view a map and select the area of the state where season dates were most important to them. The largest proportion (24%) selected the west-central region, followed by east-central (20%), southwest (19%), northeast (11%), northwest (11%) and southeast (8.7%); about 5% had no preference. Study participants were asked to select a straight season, a split season, or no preference for a 60-day duck season in 2011. Statewide, 46% preferred a straight season (Saturday Oct. 1 to Tuesday, Nov. 29), 36% preferred a split season (Saturday Sept. 24 to Sunday Sept. 25, close 5 days and reopen Saturday Oct. 1 to Sunday Nov. 27), and 17% had no preference. Survey participants were asked to select their 3 preferred 10-day time periods, in the case of a 30-day duck season. Statewide, the most preferred time periods were: Early October (Oct. 1-10) (preferred by 53% of respondents) and Late October (Oct. 21-31) (52%), followed by Mid-October (Oct. 11-20) (41%), although there were significant differences in date preferences by region.

Constraints to Minnesota Waterfowl Hunting and Constraint Negotiation

Respondents answered a number of questions related to constraints to waterfowl hunting participation. First, respondents were asked if it was true or false that if they wanted to hunt for waterfowl in Minnesota, that they could easily go. Nearly 80% said this was true, while only 13% said this was false. Next, respondents rated the level of limitation raised by 32 constraint items. Only two items were rated above the midpoint on the scale—waterfowl populations too low and work commitments. We identified nine constraint factors: (a) age/effort, (b) access/crowding, (c) cost, (d) concern for animal welfare, (e) busy life, (f) other hunting interests, (g) media coverage, (h) lack of interest in waterfowl for food, and (i) low waterfowl populations. Time conflicts and low waterfowl populations were the factors seen as most limiting to waterfowl hunting participation (Figure S-7).

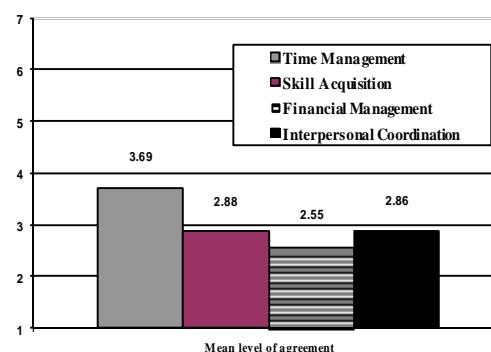


Respondents rated their use of 13 strategies to negotiate constraints to waterfowl hunting participation. Only one strategy was rated above the midpoint on the scale: getting the equipment together beforehand so I could get out of the house on time.

We conducted a factor analysis of the constraint negotiation items based on four factors originally developed by Hubbard and Mannell (2001).

Respondents reported greater use of (a) time management strategies ($\bar{x} = 3.69$), compared to (b) skill acquisition ($\bar{x} = 2.88$), (c) financial ($\bar{x} = 2.55$), and (d) interpersonal coordination strategies ($\bar{x} = 2.86$) (Figure S-8).

Figure S-8 Means on Constraint Negotiation Factors



Comparison with Earlier Study Results

Participation levels in different hunts in 2010 were similar to 2002 and 2005. A somewhat smaller proportion of respondents reported hunting during the opening weekend of the season. Satisfaction was somewhat higher than in 2005, but still lower than in 2000 and 2002. Reported membership in Ducks Unlimited and Delta Waterfowl was slightly higher in 2010 than in previous years, while reported membership in the Minnesota Waterfowl Association was slightly lower.

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Introduction

Minnesota has generally been in the top three states for number of waterfowl hunters in the United States. In recent years we have expanded efforts to obtain quantitative information about opinions and motivations for this important clientele. Minnesota participated in the North American Duck Hunter Survey (Ringelman 1997), and Minnesota hunter responses were compared to those in other States (Lawrence and Ringelman 2001). More recently, reports documenting hunter activity and opinions following the 2000, 2002, 2005, and 2007 waterfowl hunting seasons were completed (Fulton et al. 2002, Schroeder et al. 2004, 2007a, 2008). In addition, a series of surveys looking at hunter recruitment and retention were completed following the 2005 waterfowl hunting season (Schroeder et al. 2007b,c,d) and a study of former waterfowl hunters was completed following the 2009 season (Schroeder et al., 2011). Information from these reports has been used to inform management decisions.

Development of annual waterfowl-hunting regulations must be within the frameworks established by the U.S. Fish and Wildlife Service. However, Minnesota and other states have some latitude to adjust season structure based on state characteristics and hunter preferences. A Saturday opening day, a youth waterfowl hunt, and customized regulations are examples of regulations that can be modified by hunter preference. Hunter surveys like the one described in this report provide a better understanding of where the DNR Division of Fish and Wildlife needs to focus information and education efforts.

Study Purpose and Objectives

This study was conducted to provide ongoing information on waterfowl hunter demographics and attitudes in Minnesota. Its overall purpose was to measure hunter satisfaction, and to identify hunter preferences and opinions on various waterfowl hunting, management, and regulatory issues.

The specific objectives of this study were to:

1. Describe hunter effort in Minnesota in 2010 including: species and seasons hunted; number of days hunted; effort during weekdays, weekends, and opening weekend; and management regions hunted.
2. Describe hunting satisfaction with waterfowl (duck and goose) hunting in Minnesota in 2010, and changes in satisfaction since 2009, and quality of hunters' best, first, and last days of the hunting season, and factors that may affect satisfaction with Minnesota waterfowl hunting.
3. Examine the importance of various experiences preferences (motivations) for Minnesota waterfowl hunters' participation in waterfowl hunting during 2010.
4. Examine constraints to waterfowl hunting in Minnesota, and use of constraint negotiation strategies to maintain participation.
5. Examine Minnesota waterfowl hunters' identification and involvement with waterfowl hunting.
6. Determine Minnesota waterfowl hunters' opinions concerning bag limits and other management strategies for maintaining waterfowl numbers;
7. Determine Minnesota waterfowl hunters' opinions on season dates and split seasons.

8. Determine Minnesota waterfowl hunters' support for and participation in Youth Waterfowl Hunting Day;
9. Determine general characteristics of waterfowl hunters in Minnesota.
10. Examine trends in waterfowl hunters' characteristics and opinions over time.

The questions used to address each objective are provided in the survey instruments (Appendix A) and discussed in more detail in the subsequent sections.

Methods

Sampling

The population of interest in this study included all Minnesota residents 18 years of age and older who hunted waterfowl in the state during 2010. The sampling frame used to draw the study sample was the Minnesota Department of Natural Resources (DNR) Electronic Licensing System (ELS). A stratified random sample of Minnesota residents in the ELS was drawn. The sample included individuals who had purchased a state waterfowl stamp in Minnesota. State waterfowl stamps are required to hunt waterfowl for all Minnesota residents age 18-64 and all non-residents, except, those hunting on their own property, those hunting on a licensed commercial shooting preserve, resident disabled veterans, or residents on military leave. We excluded non-residents and individuals under age 18 who had purchased a state waterfowl stamp.

The study sample was stratified by residence of individuals (determined by ZIP code) in five regions. The target sample size was $n = 400$ for each region ($n = 2,000$ statewide). An initial stratified random sample of 4,000 individuals, 800 from each of the five regions, was drawn from the ELS. We stratified based on the six former DNR regions to select the samples for the 2000 and 2002 waterfowl hunter surveys (Fulton et al. 2002, Schroeder et al. 2004); but, for this survey we used the current four DNR regions (as of 2005) and separated the Central region into Twin Cities Metro (METRO) and non-Metro (NONMETRO) portions for five strata (Fig. I-1). Some sampling discrepancies, which were identified after completion of data collection, are detailed in Appendix 2.



Figure I-1

Data Collection

Data were collected using a mail-back survey following a process outlined by Dillman (2000) 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 February and June, 2011. In the initial

contact, a cover letter, survey questionnaire, and business-reply envelope were mailed to all potential study participants. The personalized cover letter explained the purpose of the study and made a personal appeal for respondents to complete and return the survey questionnaire. Approximately 4 weeks later, a second letter with another copy of the survey and business-reply envelope was sent to all study participants who had not responded to the first mailing. Four 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. About 6 weeks later, we distributed a shortened one-page, two-sided survey to assess nonresponse bias.

Survey Instrument

The data collection instrument was a 12-page self-administered survey with 11 pages of questions (Appendix A). The questionnaire addressed the following topics:

- Part 1: Background and length of experience as a waterfowl hunter;
- Part 2: Hunting experiences during the 2010 Minnesota waterfowl-hunting seasons, including: species hunted, days hunted, region most often hunted, and hunting public and private land;
- Part 3: Satisfaction with duck and goose hunting including general experience, harvest, and regulations, comparison of 2009 and 2010 hunting satisfaction for ducks and geese; satisfaction with the number of ducks and geese seen in the field, and quality of best, first, and last hunting days of the season;
- Part 4: Motivations for waterfowl hunting;
- Part 5: Waterfowl hunting constraints and constraint negotiation;
- Part 6: Factors that might affect waterfowl hunting satisfaction;
- Part 7: General waterfowl hunting information including involvement and investment in waterfowl hunting, and opinions on bag limits;
- Part 8: Opinions concerning waterfowl management issues and special regulations;
- Part 9: Waterfowl Hunting Zones including zones and season dates;
- Part 10: Youth Waterfowl Hunting Day;
- Part 11: Minnesota DNR waterfowl management; and
- Part 12: Background information about group membership and hunting outside Minnesota.

We mailed half the sample an alternative version of the survey where Part 11 on Minnesota DNR waterfowl management was moved to the beginning of the survey (Part 2) and subsequent sections were moved later (Appendix A, Version B).

Additional information concerning age and gender of respondents was obtained from the ELS database.

Data Entry and Analysis

Data were keypunched and then analyzed on a PC using the Statistical Program for the Social Sciences (SPSS for Windows 17.0). We computed basic descriptive statistics and frequencies for the statewide results. Regional results were compared using one-way analysis of variance and cross-tabulations.

Survey Response Rate

Of the 4,000 questionnaires mailed, 142 were undeliverable, sent to a deceased person, or otherwise invalid. Of the remaining 3,858 surveys, a total of 1,946 were returned, resulting in a response rate of 50%. An additional 219 shortened surveys, used to gauge nonresponse, were returned for a total response rate of 56%. Response rates for each region are summarized in Table I-1. Please note that the chart of response rates for each management region does not include five surveys that were returned without identification numbers. These five surveys were included in statewide results but could not be included in regional analyses.

Table I-1: Response rates for each management region

	Initial sample size	Number invalid	Valid sample size	Full surveys completed and returned	Full survey response rate %	Shortened surveys used to gauge non-response	Total surveys returned	Total survey response rate
Central: Metro	800	19	781	401	51.3%	55	456	58.4%
Central: Non-metro	800	21	779	381	48.9%	40	421	54.0%
Northwest	800	28	772	382	49.5%	37	419	54.3%
Northeast	800	40	760	380	50.0%	33	413	54.3%
South	800	34	766	397	51.8%	54	451	58.9%

The average age of respondents ($\bar{x} = 45.4$) was significantly older than the overall sample of waterfowl hunters ($\bar{x} = 37.4$) ($t = 18.853^{***}$). People over 40 returned the survey at a significantly higher rate than younger people. Weights correcting this age bias were calculated and applied to the data. While there were a few statistically significant differences between the weighted and unweighted data, weighting the data did not change results beyond the margin of error for the survey and the effect size of all differences were minimal. For this reason, data were not weighted for age bias in any of the results reported here (see section 9 for respondent/sample age comparison).

Population Estimates

Statewide Estimates

The study sample was drawn using a stratified random sample with region of residence defining the five study strata. For this reason the data had to be weighted to reflect the proportion of the population residing in each region when making statewide estimates. Table I-2 summarizes the statewide population proportions for each region.

Regional Estimates

At the regional level, estimates were calculated based either on the region of residence or on the region most often hunted depending on the specific question asked. Estimates calculated based on the region of the state that respondents most often hunted waterfowl were made for participation in hunting seasons, birds bagged, days hunted, and satisfaction and motivation questions. For these estimates, the data were first weighted to reflect the proportion of hunters from each region based on residence (Table I-2).

Table I-2: Proportion of state waterfowl stamp purchasers by region of residence in Minnesota.

Region of residence	Proportion of state waterfowl stamp purchasers in each region age ≥ 18	
	Frequency ¹	Proportion
Central: Metro	26,032	34.05%
Central: Non-metro	13,601	17.79%
Northwest	13,448	17.59%
Northeast	7,951	10.40%
South	15,431	20.18%
Statewide ²	76,463	

¹ Source: DNR license database

² The statewide total is not equal to the total number of waterfowl stamps sold. It excludes nonresident hunters (n = 3,502); individual <18 years of age who were not required to purchase a waterfowl stamp (n = 4,430), duplicate stamp purchases (n = 1,235) and others (n = 2,345).

Section 1: Experiences During the 2010 Waterfowl Hunt

Results for Part 2 of the waterfowl hunter survey are reviewed below. This section of the survey focused on hunting experiences during the 2010 Minnesota waterfowl-hunting seasons. Only individuals who hunted waterfowl in Minnesota in 2010 completed this section of the survey.

Regional estimates for participation in various seasons are presented both by region of residence and region most often hunted. Regional estimates for harvest, days hunted, and hunting on private and public lands, are based on the region most often hunted. Other regional estimates are based on the hunters' region of residence.

Waterfowl Seasons Hunted in Minnesota in 2010

Respondents were first asked to report if they had actually hunted for waterfowl in Minnesota in 2010. Statewide 88% of the survey respondents indicated that they had hunted waterfowl in 2010. There were no significant differences in participation rates by region of residence (Table 1-1). Respondents who had hunted in 2010 were next asked if they had hunted for ducks, and Canada Geese during the early September and regular seasons. At the statewide level, 92% of actual waterfowl hunters in 2010 indicated they had hunted ducks while 71% had hunted Canada Geese during the regular season. Approximately, 4 out of 10 respondents hunted Canada Geese during the early season. Just over 5% of respondents hunted "other" geese (6.4%). Statewide, 22% of respondents hunted ducks exclusively and 7.6% hunted geese exclusively.

There was no significant difference, by region, in the proportion of hunters who hunted for ducks. Chi-square significance tests indicated that a smaller proportion of waterfowl hunters residing in the metropolitan area or the northeast region hunted for Canada Geese during the early September goose season. A smaller proportion of hunters from the northeast region hunted for Canada Geese during the regular season (Table 1-1). In the northeast, hunters pursued Canada Geese less than in other regions (Table 1-2).

Harvest

For each season in which they hunted, respondents were asked to report the number of ducks or geese they personally bagged. The statewide estimate of the average number of ducks each hunter harvested during the season was 9.71 (Table 1-4). Hunters reported an average of 5.21 geese during the early season and 3.45 during the regular season. For both Canada goose seasons combined, hunters bagged a total of 5.92 Canada Geese for the year. On average, hunters harvested 3.02 "other" geese.

Results of ANOVA indicate that, on average, hunters residing in the metropolitan and northeast regions, and to a lesser extent the non-metropolitan central region, harvested significantly fewer Canada Geese than residents of other regions (Table 1-4). Based on the average harvest estimates (Table 1-4) and the estimated hunters participating in different hunts (Table 1-3), the estimated statewide harvests and harvest by region are reported in Table 1-5.

Section 1: Experiences During the 2010 Waterfowl Hunt

Average Number of Days Hunting Weekends and Weekdays

Next, respondents were asked to report the number of days they hunted on weekends or holidays and weekdays. On average, hunters spent more days hunting on weekends and holidays (6.71 days) than during the week (4.82 days) (Table 1-6).

Hunting Opening Weekend

Just less than two-thirds of waterfowl hunters statewide hunted opening Saturday (60%) or Sunday (62%) during the 2010 duck season (Table 1-7). There was no significant difference by region of residence in participation in hunting during opening weekend. However, a smaller proportion of individuals hunting in the southeast region and a larger proportion of individuals hunting in the southwest region hunted during opening weekend (Table 1-8).

Areas Hunted

Respondents were asked to indicate the number of areas they hunted during the season. Just over half of respondents (51%) indicated they hunted 2-5 different areas during the fall, 41.1% hunted the same area every time they hunted, and just 8.2% hunted more than 5 areas during the fall (Table 1-9). Over one-third of respondents (38%) hunted mostly on public land, while 43% hunted mostly on privately owned areas, and 18% hunted public and private land about the same (Table 1-10).

Regions Hunted

Respondents were asked to indicate the number of days they hunted in each of seven regions (Figure 1-1) (Table 1-11). The southwest (21%), west-central (21%) and east-central regions (19%) were hunted most often by the largest proportions of waterfowl hunters. Less than 10% of the state waterfowl hunters reported that they hunted most often in the northeast (7.7%) or southeast (8.0%) regions (Table 1-12).

Use of Battery-Operated, Spinning-Wing Decoys

Respondents were asked to indicate whether they used battery-operated, spinning-wing decoys during the 2010 waterfowl season in Minnesota. About one-fourth (27%) used these decoys (Table 1-13).

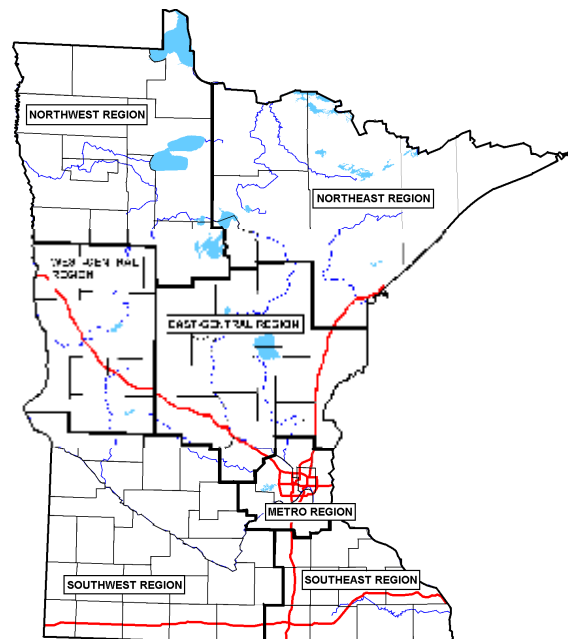


Figure 1-1

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-1: Proportion of hunters participating in different waterfowl hunts by region of residence

Region of residence	% of hunters ¹ indicating they hunted in Minnesota in 2010				
	% Who actually hunted in 2010	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide ²	87.5%	91.8%	40.9%	71.1%	6.4%
METRO	86.5%	91.9%	31.4%	68.6%	4.6%
NE	85.9%	93.1%	31.3%	56.4%	7.2%
NONMETRO	88.6%	90.6%	45.5%	71.6%	5.3%
NW	88.7%	92.3%	51.9%	74.6%	10.0%
S	88.0%	91.3%	48.0%	79.7%	7.0%
	$\chi^2=2.288$ n.s. CV=0.034	$\chi^2=1.690$ n.s. CV=0.031	$\chi^2=52.000$ *** CV=0.175	$\chi^2=49.039$ *** CV=0.170	$\chi^2=9.536$ * CV=0.075

¹ % for species reflects only % of respondents that actually hunted waterfowl during 2010.

² A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-2: Proportion of hunters participating in different waterfowl hunts in each region

Area most often hunted ²	% of hunters ¹ indicating they hunted in Minnesota in 2010			
	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	91.8%	40.9%	71.1%	6.4%
NW	90.0%	42.1%	69.4%	13.4%
NE	93.6%	29.3%	49.5%	6.4%
EC	93.0%	46.5%	67.6%	4.9%
WC	94.5%	42.6%	74.9%	6.7%
SW	92.2%	41.7%	79.0%	7.2%
SE	88.8%	29.1%	72.4%	2.2%
M	86.6%	52.9%	70.9%	5.8%
	$\chi^2=13.437$ * CV=0.089	$\chi^2=32.818$ *** CV=0.139	$\chi^2=56.070$ *** CV=0.181	$\chi^2=21.037$ ** CV=0.111

¹ % for species reflects only % of respondents that actually hunted waterfowl during 2010.

² A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-3: Estimate of the number of hunters participating in different waterfowl hunts

Region of residence	N	Actually hunted in 2010	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	76,463	66,905	61,418	27,364	47,569	4,282
METRO	26,032	22,518	20,694	7,071	15,447	1,036
NE	7,951	6,830	6,359	2,138	3,852	492
NONMETRO	13,601	12,050	10,918	5,483	8,628	639
NW	13,448	11,928	11,010	6,191	8,899	1,193
S	15,431	13,579	12,398	6,518	10,823	951

Table 1-4: Average number of birds bagged statewide and by region of residence

Region of residence	Average number of birds bagged in Minnesota in 2005 per hunter for that specific season				
	Ducks	Canada Geese Early September	Canada Geese Regular Season	Total Canada Geese All Seasons ¹	Other Geese
Statewide ²	9.71	5.21	3.45	5.92	3.02
METRO	8.68	4.56	2.54	4.38	1.27
NE	9.34	4.99	2.22	4.44	2.52
NONMETRO	9.40	4.63	3.49	5.70	1.65
NW	10.66	5.91	4.59	7.80	3.59
S	11.08	5.83	4.23	7.21	5.25
	F=2.393* η=0.079	F=1.045 n.s. η=0.078	F=5.304*** η=0.136	F= 5.274*** η=0.129	F=0.784 n.s. η=0.168

¹ Total number of Canada Geese bagged was not asked directly on the survey. This number was calculated as a sum of the number of geese bagged in early September and regular Canada Goose seasons.

² A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-5: Estimates of harvest statewide and by region of residence

Region of residence ¹	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	595,727	142,217	164,344	12,931
NW	179,621	32,241	39,235	1,315
NE	59,389	10,667	8,551	1,239
METRO	102,626	25,386	30,112	1,053
S	117,365	36,587	40,844	4,282
NONMETRO	137,368	38,000	45,779	4,990

¹Estimates were only calculated for the statewide harvest and region of residence because a large percentage of hunters hunt in multiple regions, thus total seasonal harvest could not be identified at the regional level.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-6: Average number of days hunting on weekends and weekdays

Area most often hunted ¹	Mean number of days hunted during 2010 waterfowl season		
	Weekends/Holidays	Weekdays (Monday-Friday)	Total
Statewide	6.71	4.82	10.66
EC	6.55	4.52	10.30
M	7.23	5.85	11.95
NE	5.77	4.75	9.63
NW	5.94	4.62	9.77
SE	7.44	6.69	13.00
SW	7.37	5.12	11.70
	F=3.637** η=0.115	F=2.215* η=0.095	F=3.144** η=0.106

¹ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-7: Participation in hunting on opening Saturday and Sunday by region of residence

Region of residence	% hunting opening weekend in Minnesota	
	Opening Saturday (October 2, 2010)	First Sunday (October 3, 2010)
Statewide	60.1%	62.3%
METRO	62.0%	61.2%
NE	56.5%	61.7%
NONMETRO	54.0%	59.1%
NW	62.5%	67.5%
S	62.3%	63.0%
	$\chi^2=8.662$ n.s. CV=0.072	$\chi^2=5.621$ n.s. CV=0.058

¹ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-8: Participation in hunting on opening Saturday and Sunday by region most often hunted

Area most often hunted ¹	% hunting opening weekend in Minnesota	
	Opening Saturday (October 2, 2010)	First Sunday (October 3, 2010)
Statewide	60.1%	62.3%
EC	59.3%	68.9%
M	55.6%	59.4%
NE	57.5%	58.8%
NW	57.7%	63.9%
SE	48.9%	50.4%
SW	62.3%	61.7%
	$\chi^2=13.438^*$ CV=0.089	$\chi^2=16.560^*$ CV=0.099

¹ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-9: Hunting different locations for waterfowl

Residence of hunter	n	% of hunters indicating that during the regular 2010 duck and goose season in Minnesota they hunted...		
		The same area every time they hunted during the fall	2-5 different areas during the fall	More than 5 areas during the fall
Statewide ¹	1679	41.1%	50.7%	8.2%
METRO	342	49.7%	45.6%	4.7%
NE	331	42.6%	51.1%	6.3%
NONMETRO	336	36.0%	56.5%	7.4%
NW	336	35.4%	53.0%	11.6%
S	339	35.4%	51.6%	13.0%
$\chi^2=37.688^{***}$, CV=0.105				

¹ A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-10: Hunting public and private land for waterfowl

Residence of hunter	n	% of hunters indicating that during the 2010 waterfowl season in Minnesota they hunted...		
		Mostly on privately owned areas	Mostly on public access areas	Public and private about the same
Statewide ¹	1669	43.2%	37.7%	17.8%
METRO	342	40.6%	45.6%	13.7%
NE	332	24.1%	58.1%	17.8%
NONMETRO	334	47.0%	35.9%	17.1%
NW	338	53.8%	23.4%	22.8%
S	338	47.3%	30.8%	21.9%
$\chi^2=114.751^{***}$, CV=0.183				

¹ A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-11: Regional distribution of hunting across Minnesota

Residence of hunter	Mean number of days hunting by region						
	NW	NE	EC	WC	SW	SE	M
Statewide ¹	1.08	0.74	1.77	2.25	2.32	1.05	0.96
METRO	0.63	0.52	1.46	2.13	1.22	0.37	5.84
NE	1.79	4.62	2.55	0.29	0.22	0.00	0.24
NONMETRO	0.36	0.23	4.70	1.43	0.50	3.17	0.82
NW	3.23	0.16	0.59	5.67	0.99	0.04	0.14
S	0.22	0.04	0.29	1.16	8.12	1.70	1.04
	F=24.499*** $\eta=0.258$	F=87.065*** $\eta=0.449$	F=40.587*** $\eta=0.325$	F=46.787*** $\eta=0.346$	F=116.273*** $\eta=0.502$	F=24.611*** $\eta=0.258$	F=22.594*** $\eta=0.419$

¹ A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 1: Experiences During the 2010 Waterfowl Hunt

Table 1-12: Regional distribution of hunting across Minnesota

Residence of hunter	% of hunters indicating the region they MOST OFTEN hunted (i.e. greater than or equal to the number of days in other regions) in Minnesota in 2010						
	NW	NE	EC	WC	SW	SE	M
Statewide ¹	11.0%	7.7%	18.5%	21.1%	21.1%	8.0%	12.6%
METRO	8.6%	8.1%	21.3%	22.5%	17.6%	17.6%	21.0%
NE	19.1%	46.3%	25.4%	4.2%	2.1%	51.3%	0.9%
NONMETRO	4.1%	2.1%	46.3%	15.5%	6.7%	27.9%	1.8%
NW	29.5%	0.9%	4.7%	52.8%	8.0%	3.8%	0.3%
S	2.0%	0.9%	2.9%	9.0%	64.8%	18.0%	2.6%
	$\chi^2=165.734^{***}$ CV=0.310	$\chi^2=507.444^{***}$ CV=0.542	$\chi^2=265.424^{***}$ CV=0.392	$\chi^2=306.289^{***}$ CV=0.421	$\chi^2=567.720^{***}$ CV=0.573	$\chi^2=232.525^{***}$ CV=0.367	$\chi^2=211.736^{***}$ CV=0.350

¹ A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 1-13: Use of battery-operated, spinning-wing decoys when hunting during the 2010 season

Residence of hunter	n	% of hunters indicating that during the 2010 waterfowl season in Minnesota they used a battery-operated, spinning-wing decoy...	
		No	Yes
Statewide ¹	1669	72.7%	27.3%
METRO	341	73.9%	26.1%
NE	328	78.7%	21.3%
NONMETRO	333	67.6%	32.4%
NW	334	76.9%	23.1%
S	337	68.2%	31.8%
		$\chi^2= 16.968^{**}$, CV=0.101	

¹ A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Study participants were asked to rate their satisfaction with their general waterfowl-hunting experience on a 7-point scale where 1 = very dissatisfied, 2 = moderately dissatisfied, 3 = slightly dissatisfied, 4 = neither, 5 = slightly satisfied, 6 = moderately satisfied, and 7 = very satisfied. They were also asked to rate hunting experiences, harvest, and hunting regulations for ducks and geese separately using the same response scale. Estimates at the regional level for these satisfaction questions are based on the region the respondents indicated that they most often hunted.

Satisfaction With the General Waterfowl Hunting Experience

Statewide about half of hunters (58%) reported being satisfied with their general waterfowl-hunting experience, with 35% expressing dissatisfaction. Statewide the overall mean satisfaction score was 4.41. There were no significant differences in the mean satisfaction level or pattern of responses by region hunted most frequently or region of residence (Tables 2-1 and 2-2).

Younger hunters, and hunters who have been hunting for fewer years reported higher levels of satisfaction with the general waterfowl-hunting experience. There was a significant negative relationship ($r = -0.206$, $p < 0.001$) between age and satisfaction. This means that older hunters reported less satisfaction than younger hunters. Likewise, there was a significant negative relationship ($r = -0.229$, $p < 0.001$) between years of waterfowl-hunting experience and satisfaction. More avid waterfowl hunters reported slightly higher mean levels of general satisfaction compared to intermediate hunters (Table 2-3). There was no significant difference in general satisfaction between hunters who used battery-operated, spinning-wing decoys and those who did not use them (Table 2-4).

Satisfaction With Duck Hunting

Statewide

Statewide nearly two-thirds (64%) of duck hunters were satisfied (slightly, moderately, or very) with their duck-hunting experience in 2010; of these 61% were very satisfied. Conversely, 30% of respondents were dissatisfied (slightly, moderately, or very), with 9.3% very dissatisfied with their duck-hunting experience. Nearly one-third (32%) of respondents were satisfied with their duck-hunting harvest, while 60% were dissatisfied with their duck harvest. Only 6.2% were very satisfied with their duck harvest. Satisfaction with duck-hunting regulations was higher than satisfaction with harvest, with 47% of respondents reporting satisfaction with the regulations, including 35% of respondents who were moderately or very satisfied. However, nearly one-fourth of respondents (26%) felt neither satisfied nor dissatisfied about the duck-hunting regulations, compared to only 6.4% who felt neutral about the duck-hunting experience and only 8.2% who felt neutral about the duck-hunting harvest. (Tables 2-5, 2-6, 2-7).

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The mean score for duck-harvest satisfaction ($\bar{x} = 3.29/5$) was significantly lower than the mean scores for experience ($\bar{x} = 4.64$, $t = 30.533$, $p < 0.001$) or regulations ($\bar{x} = 4.45$, $t = 22.908$, $p < 0.001$). The mean satisfaction score for experience was significantly higher than for regulations ($t = 3.790$, $p < 0.001$).

There was a significant positive relationship ($r = 0.381$, $p < 0.001$) between the number of ducks bagged and the satisfaction with the duck-hunting harvest. As the number of ducks bagged increases, satisfaction increases.

Regional

Respondents who hunted most frequently in the southeast region of the state reported higher satisfaction with the duck-hunting harvest in 2010 (Table 2-6). There were no differences in mean satisfaction scores for duck-hunting experience or regulations across the regions. (Tables 2-5, 2-7).

Satisfaction With Goose Hunting

Statewide

Statewide most goose hunters were satisfied (65%) with their general goose-hunting experience, with slightly less than half reporting that they were moderately (27%) or very (19%) satisfied (Table 2-8). Most goose hunters were less satisfied with their harvest, however. A total of 43% reported being dissatisfied with their harvest with 10% moderately dissatisfied and 17% very dissatisfied (Table 2-9). About half (54%) of the goose hunters indicated they were satisfied with the goose-hunting regulations with 22% moderately satisfied and 18% very satisfied (Table 2-10).

There was a statistically significant correlation ($r = 0.352$, $p < 0.001$) between the total number of geese bagged in 2010 and satisfaction with the goose-hunting harvest. The number of geese bagged appears to have a moderate positive influence on satisfaction with goose-hunting harvest.

Regional

There were no significant differences among regions for satisfaction with goose-hunting experience or goose-hunting regulations. Goose hunters' satisfaction with goose-hunting harvest, however, varied slightly from region to region ($F = 3.882$, $p < 0.01$) (Table 2-9). On average, goose hunters in the southeast region were more satisfied with goose-hunting harvest, compared to respondents who hunted primarily in other regions.

Comparison of Duck Hunting and Goose Hunting

We compared mean satisfaction levels for duck and goose hunting (Table 2-11). Statewide, respondents were significantly less satisfied with duck hunting than goose hunting for (a)

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experience (4.64 vs. 4.86) ($t = 4.469, p < 0.001$), (b) harvest (3.29 vs. 3.92) ($t = 12.635, p < 0.001$), and (c) regulations (4.45 vs. 4.73) ($t = 6.207, p < 0.05$).

Satisfaction With the Number of Ducks and Geese Seen in the Field

Hunters were asked about how satisfied they were with the number of ducks and geese seen in the field during the 2010 season. Responses were recorded on a 7-point scale on which 1 = very dissatisfied, 2 = moderately dissatisfied, 3 = slightly dissatisfied, 4 = neither, 5 = slightly satisfied, 6 = moderately satisfied, and 7 = very satisfied.

Nearly one-third (30%) of respondents were satisfied with the number of ducks that they saw in the field, and 5.4% were very satisfied (Table 2-12). Respondents who hunted most frequently in the Northwest and East Central regions reported slightly lower levels of satisfaction with the number of ducks seen in the field. Over half of the respondents (55%) were satisfied with the number of geese that they saw in the field, including 16% who were very satisfied (Table 2-13). Respondents who hunted most frequently in the southeast and metro regions were more satisfied with the number of geese seen in the field.

Different Hunting Days

Hunters were asked to report the number of 2010 waterfowl hunting days that: (a) were “good” (Table 2-14), (b) they shot their daily bag limit of 6 ducks (Table 2-15), and (c) that they shot no ducks (Table 2-16). Statewide, on average, respondents had 3.90 days that they described as good, 0.80 days that they bagged the duck bag limit, and 4.12 days that they bagged no ducks.

Respondents were also asked to rate the best, first and last days of their hunting season. Responses were recorded on a 5-point scale on which 1 = poor, 2 = below average, 3 = average, 4 = above average, and 5 = excellent. Responses were well distributed along the 5-point rating scale for the “best” waterfowl-hunting day of the year: 16% poor, 20% below average, 28% average, 19% above average, and 17% excellent ($M = 3.01$) (Table 2-17). Ratings for the first day of the season were lower: 34% poor, 28% below average, 23% average, 9.5% above average, and 6.2% excellent ($M = 2.26$) (Table 2-28). Ratings of the last day of the season were similar to the first day: 38% poor, 26% below average, 21% average, 10% above average, and 5.8% excellent ($M = 2.20$) (Table 2-29). On average, hunters shot 3.22 ducks and 1.68 geese on their best hunting day, 1.74 ducks and 0.82 geese on their first hunting day, and 1.25 ducks and 0.69 geese on their last hunting day (Tables 2-30, 2-31, and 2-32). About three-fourths of respondents indicated that their best hunting day was in October (Table 2-33). Nearly all (93%) indicated that their first hunting day was in October (Table 2-34), and 52% indicated that their last hunting day was in November with 37% last hunting in October (Table 2-35).

Changes in Satisfaction Levels

Hunters were asked to compare the 2010 waterfowl season to the 2009 season. Specifically, they rated their general waterfowl hunting experience, and both duck and goose hunting experience, harvest, regulations, and number of ducks/geese seen. Responses were recorded on a 7-point scale on which 1 = 2010 much worse, 2 = 2010 somewhat worse, 3 = 2010 slightly worse, 4 =

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neither, and 5 = 2010 slightly better, 6 = 2010 somewhat better, 7 = 2010 much better, or 9 = did not hunt in 2009.

Nearly one-third of respondents (29%) indicated that their general waterfowl hunting experience was better (slightly, somewhat, or much) in 2010 than in 2009, while 47% felt it was worse, and 24% felt neither year was better than the other (Table 2-26). Results were similar for duck hunting experience, with 30% of respondents indicating that 2010 was better, 39% worse, and 32% neither (Table 2-27). A slightly smaller proportion of respondents indicated that duck hunting harvest was better in 2010 (25%), compared to 54% who felt that 2010 was worse, and 21% who indicated that neither year was better than the other. The large majority of respondents (68%) felt that 2010 duck regulations were neither better nor worse than 2009 regulations (Table 2-28). About one-fourth (27%) of respondents felt that the number of ducks seen in 2010 was better than in 2009, while over half (56%) felt the number was worse (Table 2-30).

One-third of respondents (33%) indicated that their goose hunting experience was better in 2010 than in 2009, while 29% felt it was worse, and 38% felt neither year was better than the other (Table 2-31). Results for goose hunting harvest had 29% of respondents indicating that 2010 was better, 42% worse, and 29% neither (Table 2-32). Like duck regulations, the large majority of respondents (65%) felt that 2010 goose regulations were neither better nor worse than 2009 regulations (Table 2-33). About one-third (34%) of respondents felt that the number of ducks seen in 2010 was better than in 2009, while over one-third (38%) felt the number was worse (Table 2-34). Total years of hunting experience in Minnesota was negatively correlated with all measures satisfaction for the 2010 season relative to the 2009 season.

Changes That Might Improve Satisfaction With Minnesota Waterfowl Hunting

Hunters were asked how certain changes might improve their satisfaction with waterfowl hunting in Minnesota, with responses ranging from 1 = not at all to 7 = very much.

On average, respondents rated items related to quality duck-hunting as the changes that would most improve their satisfaction with Minnesota waterfowl hunting. In particular, “a dramatic increase in duck populations in Minnesota” (M = 6.03), “better duck-hunting opportunities in Minnesota” (M = 5.61), and “better waterfowl habitat in Minnesota” (M = 5.53) were factors that might most improve satisfaction, while “more support for waterfowl from my family” (M = 2.55) and “improved health, physical ability to waterfowl hunt” (M = 2.20) were least likely to improve satisfaction (Tables 2-35 to 2-47).

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Table 2-1: Satisfaction with the general waterfowl-hunting experience for the 2010 season by area most often hunted.

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1535	11.4%	12.0%	11.9%	6.5%	17.7%	28.3%	12.2%	4.41
NW	195	9.2%	15.8%	13.3%	6.1%	12.2%	28.6%	14.8%	4.42
NE	170	10.9%	16.1%	9.2%	8.6%	19.0%	24.1%	12.1%	4.31
EC	304	12.7%	11.4%	14.3%	5.8%	20.8%	25.3%	9.7%	4.23
WC	309	11.3%	10.0%	12.9%	8.0%	15.1%	28.6%	14.1%	4.48
SW	301	14.4%	11.1%	8.5%	5.2%	20.7%	27.9%	12.1%	4.40
SE	118	11.5%	10.7%	11.5%	3.3%	15.6%	34.4%	13.1%	4.59
M	145	7.5%	8.2%	8.8%	12.2%	16.3%	33.3%	13.6%	4.77
$\chi^2 = 48.682$ n.s., Cramer's V = 0.073									

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F = 1.521 n.s. for one-way ANOVA comparing means among regions. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-2: Satisfaction with the general waterfowl-hunting experience for the 2010 season by region of residence.

Region of residence	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1535	11.4%	12.0%	11.9%	6.5%	17.7%	28.3%	12.2%	4.41
METRO	309	10.0%	14.2%	14.2%	4.5%	18.4%	28.2%	10.4%	4.33
NE	302	10.3%	13.6%	10.9%	7.9%	18.2%	27.8%	11.3%	4.39
NONMETRO	309	12.0%	9.7%	11.0%	4.9%	20.1%	26.2%	16.2%	4.55
NW	308	11.7%	9.7%	13.3%	9.1%	13.0%	31.2%	12.0%	4.44
S	314	13.4%	11.5%	8.0%	8.0%	18.5%	28.3%	12.4%	4.41
$\chi^2 = 32.143$ n.s., Cramer's V = 0.072									

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F = 0.507 n.s. $\eta = 0.039$ for one-way ANOVA comparing means among regions. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-3: Satisfaction with the general waterfowl-hunting experience by hunting involvement level

2010 Waterfowl-hunting involvement ²	n	% of hunters ¹ indicating that level of satisfaction:			Mean ³
		Slightly, moderately, or very dissatisfied	Neither satisfied nor dissatisfied	Slightly, moderately, or very satisfied	
Novice (0-5 days afield) ⁴	510	37.3%	9.6%	53.1%	2.16
Intermediate (6-19 days afield)	770	34.5%	5.2%	60.3%	2.26
Avid (20+ days afield)	236	32.2%	3.0%	64.8%	2.33
$\chi^2 = 20.268^{***}$, Cramer's V = 0.082					

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

³ F = 3.053*, $\eta = 0.063$ for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

⁴ Categories as defined by Humburg et al., 2002.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-4: Satisfaction with the general waterfowl-hunting experience by use of battery-operated, spinning-wing decoys

Use of battery-operated, spinning-wing decoys ²	n	% of hunters ¹ indicating that level of satisfaction:			Mean ³
		Slightly, moderately, or very dissatisfied	Neither satisfied nor dissatisfied	Slightly, moderately, or very satisfied	
Battery-operated spinning-wing decoy nonusers	1090	36.1%	7.0%	57.0%	2.21
Battery-operated spinning-wing decoy users	424	33.3%	5.4%	61.3%	2.28
$\chi^2 = 2.789$ n.s., Cramer's V = 0.043					

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

³ t = 1.326 n.s. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-5: Satisfaction with the duck-hunting experience for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ³
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1532	9.3%	10.9%	9.8%	6.4%	19.8%	27.6%	16.2%	4.64
NW	186	9.1%	13.4%	12.9%	5.9%	14.0%	24.7%	19.9%	4.56
NE	175	7.4%	9.7%	9.1%	6.9%	21.7%	26.3%	18.9%	4.80
EC	297	9.1%	11.8%	10.1%	6.4%	23.6%	26.9%	12.1%	4.53
WC	318	8.8%	13.2%	10.1%	6.6%	17.0%	27.0%	17.3%	4.60
SW	304	10.9%	7.6%	9.2%	6.9%	20.7%	27.6%	17.1%	4.70
SE	118	9.3%	12.7%	6.8%	6.8%	16.9%	30.5%	16.9%	4.69
M	139	9.4%	7.9%	7.9%	7.2%	22.3%	30.2%	15.1%	4.76
$\chi^2 = 28.332$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² $F = 0.598$ n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2-6: Satisfaction with the duck-hunting harvest for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1532	25.7%	16.8%	17.2%	8.2%	14.0%	12.1%	6.2%	3.29
NW	185	27.0%	21.6%	18.4%	7.0%	8.1%	10.8%	7.0%	3.08
NE	173	29.5%	13.9%	18.5%	8.7%	14.5%	8.7%	6.4%	3.16
EC	299	29.4%	16.1%	16.1%	9.7%	13.7%	10.0%	5.0%	3.12
WC	319	24.5%	17.9%	18.2%	7.8%	11.6%	13.5%	6.6%	3.31
SW	304	21.7%	18.1%	16.4%	8.2%	15.8%	12.5%	7.2%	3.45
SE	117	16.2%	14.5%	21.4%	7.7%	10.3%	22.2%	7.7%	3.79
M	139	28.8%	11.5%	14.4%	8.6%	22.3%	9.4%	5.0%	3.32
$\chi^2 = 51.351^*$, Cramer's $V = 0.075$									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² $F = 2.437^*$, $\eta = 0.097$. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-7: Satisfaction with the duck-hunting regulations for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1516	7.2%	8.2%	12.2%	25.6%	11.6%	22.0%	13.2%	4.45
NW	187	10.2%	5.3%	13.9%	26.7%	10.7%	18.7%	14.4%	4.36
NE	174	10.3%	10.3%	7.5%	25.9%	13.2%	19.0%	13.8%	4.33
EC	291	9.3%	9.6%	11.0%	26.5%	10.3%	25.1%	8.2%	4.27
WC	316	5.1%	8.2%	13.6%	27.5%	10.4%	23.1%	12.0%	4.47
SW	302	5.6%	6.3%	10.6%	22.5%	16.6%	22.5%	15.9%	4.69
SE	113	5.3%	8.0%	11.5%	25.7%	10.6%	23.0%	15.9%	4.61
M	136	5.9%	6.6%	14.7%	27.9%	12.5%	17.6%	14.7%	4.46
$\chi^2 = 43.325$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 1.847 n.s. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-8: Satisfaction with the goose-hunting experience for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1274	6.9%	6.9%	9.1%	11.9%	19.6%	27.0%	18.6%	4.86
NW	161	4.3%	6.8%	8.1%	9.3%	21.1%	29.2%	21.1%	5.08
NE	101	5.0%	5.9%	9.9%	16.8%	17.8%	25.7%	18.8%	4.89
EC	236	6.4%	7.2%	8.9%	12.7%	22.5%	28.8%	13.6%	4.78
WC	271	7.4%	8.5%	9.6%	11.8%	15.1%	29.2%	18.5%	4.80
SW	272	8.1%	9.6%	8.1%	9.9%	20.2%	24.3%	19.9%	4.77
SE	98	7.1%	6.1%	5.1%	13.3%	17.3%	24.5%	26.5%	5.07
M	128	3.9%	.8%	7.8%	14.1%	22.7%	27.3%	23.4%	5.27
$\chi^2 = 37.003$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2010.

² F = 1.898 n.s. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-9: Satisfaction with the goose-hunting harvest for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1275	17.1%	10.1%	16.0%	14.7%	15.4%	16.1%	10.5%	3.92
NW	161	10.6%	11.8%	16.8%	13.0%	18.0%	17.4%	12.4%	4.18
NE	103	20.4%	12.6%	16.5%	15.5%	15.5%	12.6%	6.8%	3.58
EC	235	20.0%	12.3%	15.7%	13.6%	14.0%	16.2%	8.1%	3.70
WC	271	17.7%	10.0%	17.7%	13.3%	13.3%	17.3%	10.7%	3.89
SW	271	16.6%	9.6%	17.7%	14.8%	14.8%	17.0%	9.6%	3.91
SE	99	11.1%	6.1%	10.1%	18.2%	17.2%	17.2%	20.2%	4.57
M	130	13.8%	6.9%	12.3%	17.7%	18.5%	16.9%	13.8%	4.26
$\chi^2 = 37.809$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2010.

² $F = 3.882^{**}$, $\eta = 0.135$. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2-10: Satisfaction with the goose-hunting regulations for the 2010 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1272	5.9%	6.6%	7.3%	26.5%	14.0%	22.0%	17.6%	4.73
NW	162	5.6%	6.8%	8.6%	24.1%	16.0%	19.1%	19.8%	4.75
NE	103	8.7%	4.9%	4.9%	31.1%	17.5%	15.5%	17.5%	4.60
EC	236	5.9%	7.6%	5.9%	28.4%	14.8%	25.0%	12.3%	4.63
WC	269	5.9%	5.6%	7.1%	29.4%	13.8%	21.9%	16.4%	4.71
SW	271	5.5%	6.6%	8.1%	22.1%	14.4%	24.7%	18.5%	4.81
SE	99	5.1%	7.1%	9.1%	24.2%	10.1%	23.2%	21.2%	4.82
M	127	3.1%	5.5%	7.9%	29.1%	13.4%	19.7%	21.3%	4.88
$\chi^2 = 25.668$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2010.

² $F = 0.565$ n.s. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-11: Comparison of duck-hunting and goose-hunting satisfaction

Satisfaction with... ^{1,2}	N ³	Mean ⁴
Duck-hunting experience	1532	4.64
Goose-hunting experience		4.86
t=4.469***		
Duck-hunting harvest	1532	3.29
Goose-hunting harvest		3.92
t=12.635***		
Duck-hunting regulations	1516	4.45
Goose-hunting regulations		4.73
t=6.207***		

¹ This table does not include those respondents who did not hunt ducks and geese in Minnesota in 2010. Results presented in this table include only individuals who responded to both questions

² A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

³ Sample size for duck-hunting satisfaction. Average rating of duck satisfaction compared to average rating of goose satisfaction using one sample t-test.

⁴ Means are based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-12: Satisfaction with number of ducks seen in the field during the 2010 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1516	33.5%	19.3%	13.5%	3.8%	12.5%	11.9%	5.4%	3.00
NW	183	32.2%	29.0%	11.5%	2.2%	12.6%	8.2%	4.4%	2.76
NE	176	39.2%	13.6%	16.5%	4.5%	11.9%	9.1%	5.1%	2.84
EC	295	36.6%	21.4%	13.6%	2.7%	11.5%	10.5%	3.7%	2.78
WC	310	33.9%	15.5%	12.3%	4.2%	16.1%	11.0%	7.1%	3.15
SW	304	33.6%	21.1%	13.2%	3.9%	8.6%	13.2%	6.6%	2.99
SE	115	25.2%	16.5%	13.0%	4.3%	13.0%	20.9%	7.0%	3.54
M	137	29.2%	14.6%	15.3%	5.8%	16.1%	13.9%	5.1%	3.27
$\chi^2 = 55.752^*$, Cramer's V = 0.078									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 3.479** $\eta = 0.116$. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-13: Satisfaction with number of geese seen in the field during the 2010 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1275	12.0%	11.2%	14.1%	7.5%	17.4%	21.7%	16.1%	4.36
NW	161	11.2%	11.8%	14.9%	5.6%	18.0%	22.4%	16.1%	4.39
NE	100	13.0%	17.0%	17.0%	9.0%	16.0%	18.0%	10.0%	3.92
EC	233	14.2%	13.3%	18.5%	3.9%	16.3%	20.6%	13.3%	4.10
WC	267	12.7%	11.2%	12.7%	7.9%	18.4%	21.3%	15.7%	4.35
SW	275	11.6%	10.2%	12.4%	8.4%	18.2%	24.7%	14.5%	4.44
SE	99	10.1%	7.1%	8.1%	8.1%	9.1%	29.3%	28.3%	5.00
M	129	7.0%	6.2%	12.4%	10.1%	22.5%	22.5%	19.4%	4.80
$\chi^2 = 51.807^*$, Cramer's V = 0.083									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2010.

² F = 4.276***, $\eta = 0.141$. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-14: Number of days described as “good” waterfowl hunting days.

Area most often hunted	n	Mean number of days
Statewide ¹	1555	3.90
NW	196	3.89
NE	169	3.21
EC	303	3.34
WC	312	4.06
SW	314	4.19
SE	119	5.18
M	138	4.91
F = 2.598*, $\eta = 0.100$		

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-15: Number of days shot daily bag limit of ducks.

Area most often hunted	n	Mean number of days
Statewide ¹	1161	0.80
NW	137	0.97
NE	130	0.56
EC	223	0.59
WC	236	0.95
SW	236	0.77
SE	89	1.00
M	103	1.02
		F= 1.884 n.s., $\eta=0.099$

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-16: Number of days shot 0 ducks.

Area most often hunted	n	Mean number of days
Statewide ¹	1171	4.12
NW	140	2.99
NE	137	4.23
EC	222	4.76
WC	234	3.89
SW	238	4.38
SE	92	3.93
M	100	4.70
		F= 2.642*, $\eta=0.116$

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-17: Rating of best waterfowl hunting day of the season

Area most often hunted	n	% of hunters rating:					Mean ¹
		Poor	Below average	Average	Above Average	Excellent	
Statewide ²	1588	16.2%	19.7%	28.4%	18.7%	17.0%	3.01
NW	204	16.7%	17.6%	31.4%	18.1%	16.2%	3.00
NE	180	23.3%	15.6%	32.2%	13.9%	15.0%	2.82
EC	305	17.0%	24.3%	25.6%	21.0%	12.1%	2.87
WC	320	13.8%	20.6%	29.7%	16.9%	19.1%	3.07
SW	313	15.7%	19.8%	25.9%	17.3%	21.4%	3.09
SE	127	15.7%	12.6%	29.1%	26.8%	15.7%	3.14
M	146	12.3%	16.4%	30.8%	19.2%	21.2%	3.21
$\chi^2 = 40.421^*$, Cramer's V = 0.080							

¹ F = 2.305*, $\eta = 0.093$. Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-18: Rating of first waterfowl hunting day of the season

Area most often hunted	n	% of hunters rating:					Mean ¹
		Poor	Below average	Average	Above Average	Excellent	
Statewide ²	1554	33.8%	27.9%	22.6%	9.5%	6.2%	2.26
NW	201	34.8%	26.9%	26.4%	7.0%	5.0%	2.20
NE	177	41.2%	20.3%	22.6%	7.9%	7.9%	2.21
EC	293	35.5%	31.7%	19.1%	8.5%	5.1%	2.16
WC	312	30.4%	27.6%	21.8%	11.9%	8.3%	2.40
SW	308	35.7%	29.2%	20.8%	7.8%	6.5%	2.20
SE	127	31.5%	26.0%	22.8%	15.0%	4.7%	2.35
M	141	27.0%	28.4%	29.8%	8.5%	6.4%	2.39
$\chi^2 = 32.493$ n.s., Cramer's V = 0.072							

¹ F = 1.701 n.s. Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-19: Rating of last waterfowl hunting day of the season

Area most often hunted	n	% of hunters rating:					Mean ¹
		Poor	Below average	Average	Above Average	Excellent	
Statewide ²	1521	38.0%	25.7%	20.5%	10.1%	5.8%	2.20
NW	198	34.8%	28.3%	22.7%	10.6%	3.5%	2.20
NE	173	49.7%	17.9%	20.2%	8.7%	3.5%	1.98
EC	288	41.0%	27.4%	17.7%	7.6%	6.3%	2.11
WC	301	39.2%	21.3%	20.9%	11.0%	7.6%	2.27
SW	305	33.8%	29.8%	21.3%	9.2%	5.9%	2.24
SE	119	26.9%	24.4%	25.2%	16.0%	7.6%	2.53
M	140	35.7%	27.1%	21.4%	11.4%	4.3%	2.21
$\chi^2 = 38.868^*$, Cramer's V = 0.080							

¹ F = 2.**, $\eta = 0.106$. Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-20: Number of ducks and geese shot on best day.

Area most often hunted	Mean number of ducks	Mean number of geese
Statewide ¹	3.22	1.68
NW	3.29	1.86
NE	2.99	0.79
EC	2.76	1.47
WC	3.48	1.92
SW	3.40	1.39
SE	3.30	1.09
M	3.20	2.75
F=1.122 n.s.		F=1.689 n.s.

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-21: Number of ducks and geese shot on first day.

Area most often hunted	Mean number of ducks	Mean number of geese
Statewide ¹	1.74	0.82
NW	1.49	1.40
NE	1.62	0.40
EC	1.41	0.60
WC	2.06	0.74
SW	1.90	0.67
SE	1.66	0.62
M	1.74	1.75
	F=2.904**, $\eta=0.115$	F=1.844 n.s.

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-22: Number of ducks and geese shot on last day.

Area most often hunted	Mean number of ducks	Mean number of geese
Statewide ¹	1.25	0.69
NW	1.24	0.77
NE	1.05	0.07
EC	1.21	0.62
WC	1.18	0.83
SW	1.17	0.58
SE	1.47	0.64
M	1.54	1.08
	F=0.653 n.s.	F=2.441*, $\eta=0.124$

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-23: Month of best waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking:		
		October	November	December
Statewide ²	1385	76.7%	20.9%	2.4%
NW	170	86.5%	13.5%	0.0%
NE	148	83.8%	15.5%	0.7%
EC	262	85.5%	13.0%	1.5%
WC	283	77.0%	21.9%	1.1%
SW	280	70.7%	26.4%	2.9%
SE	111	54.1%	36.9%	9.0%
M	129	77.5%	19.4%	3.1%
$\chi^2 = 79.604^{***}$, Cramer's V = 0.170				

¹ F = . Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-24: Month of first waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking:		
		October	November	December
Statewide ²	1288	93.4%	5.8%	0.8%
NW	157	95.5%	4.5%	0.0%
NE	135	97.0%	3.0%	0.0%
EC	239	96.2%	2.9%	0.8%
WC	268	94.4%	5.6%	0.0%
SW	264	91.3%	8.0%	0.8%
SE	105	84.8%	11.4%	3.8%
M	121	93.4%	5.8%	0.8%
$\chi^2 = 33.942^{**}$, Cramer's V = 0.115				

¹ F = . Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-25: Month of last waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking:		
		October	November	December
Statewide ²	1274	37.0%	51.8%	11.1%
NW	155	56.1%	41.3%	2.6%
NE	137	51.1%	48.2%	0.7%
EC	243	45.7%	46.1%	8.2%
WC	260	41.2%	50.0%	8.8%
SW	254	28.7%	57.9%	13.4%
SE	100	11.0%	62.0%	27.0%
M	122	25.4%	54.1%	20.5%
$\chi^2 = 125.285^{***}$, Cramer's V = 0.222				

¹ F = . Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-26: Comparison of 2010 general waterfowl hunting experience to 2009.

Residence of hunter	n	% of hunters indicating that their general waterfowl hunting experience in 2010 was _____ than 2009:							Mean ¹
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ²	1473	10.9%	14.1%	21.5%	24.4%	16.4%	8.1%	4.6%	3.64
METRO	297	10.8%	15.2%	21.5%	21.9%	17.5%	9.1%	4.0%	3.64
NE	290	13.1%	15.2%	25.5%	27.9%	11.0%	4.8%	2.4%	3.33
NONMETRO	291	12.0%	10.0%	17.9%	29.2%	17.5%	6.2%	7.2%	3.78
NW	301	10.0%	16.9%	22.3%	24.6%	12.6%	10.0%	3.7%	3.57
S	301	9.6%	13.0%	21.9%	22.3%	19.9%	8.0%	5.3%	3.75
$\chi^2 = 43.159^{**}$, Cramer's V = 0.085									

¹ F = 3.801**, $\eta = 0.101$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-27: Comparison of 2010 duck hunting experience to 2009.

Residence of hunter	N	% of hunters ¹ indicating that their duck hunting experience in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1411	9.0%	11.3%	18.5%	31.8%	15.4%	9.1%	5.0%	3.81
METRO	285	9.1%	12.3%	18.6%	30.9%	16.1%	8.8%	4.2%	3.76
NE	277	9.7%	10.5%	20.9%	39.0%	11.6%	5.4%	2.9%	3.60
NONMETRO	277	9.4%	9.4%	15.9%	34.7%	15.2%	8.3%	7.2%	3.91
NW	286	9.4%	11.9%	19.2%	33.2%	14.0%	8.4%	3.8%	3.71
S	291	7.6%	11.3%	18.6%	25.8%	17.5%	12.7%	6.5%	3.99
$\chi^2 = 33.058$ n.s., Cramer's V = 0.076									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 2.907*, $\eta = 0.090$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-28: Comparison of 2010 duck hunting harvest to 2009.

Residence of hunter	n	% of hunters ¹ indicating that their duck hunting harvest in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1408	17.0%	15.3%	21.4%	21.3%	14.1%	6.1%	4.9%	3.38
METRO	285	15.1%	17.2%	23.2%	21.1%	13.0%	6.3%	4.2%	3.35
NE	277	18.4%	15.5%	26.0%	21.3%	12.6%	3.2%	2.9%	3.16
NONMETRO	276	19.2%	11.6%	17.4%	20.7%	17.4%	6.2%	7.6%	3.54
NW	286	18.9%	15.7%	20.3%	25.9%	9.8%	5.6%	3.8%	3.24
S	289	15.6%	14.9%	20.4%	18.3%	17.6%	7.6%	5.5%	3.53
$\chi^2 = 36.999^*$, Cramer's V = 0.081									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 2.967*, $\eta = 0.091$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-29: Comparison of 2010 duck hunting regulations to 2009.

Residence of hunter	N	% of hunters ¹ indicating that the duck hunting regulations in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1391	3.9%	6.8%	8.1%	67.7%	7.1%	4.0%	2.3%	3.89
METRO	282	3.5%	7.8%	9.9%	67.4%	5.7%	2.5%	3.2%	3.84
NE	273	5.9%	5.1%	8.8%	71.8%	4.0%	2.9%	1.5%	3.78
NONMETRO	273	4.4%	5.9%	7.7%	68.1%	7.7%	2.2%	4.0%	3.92
NW	281	3.6%	4.6%	6.8%	68.3%	8.2%	6.4%	2.1%	4.01
S	286	3.5%	8.7%	6.3%	65.4%	9.4%	6.6%		3.88
$\chi^2 = 45.274^{**}$, Cramer's V = 0.090									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 1.825 n.s., $\eta = 0.072$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-30: Comparison of 2010 ducks seen to 2009.

Residence of hunter	N	% of hunters ¹ indicating that the number of ducks seen in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1352	18.8%	17.4%	20.2%	17.0%	13.6%	7.5%	5.5%	3.34
METRO	274	17.2%	20.8%	20.1%	16.4%	13.5%	8.0%	4.0%	3.28
NE	270	22.2%	15.6%	25.2%	18.1%	11.9%	4.1%	3.0%	3.06
NONMETRO	258	18.2%	14.0%	18.6%	20.2%	12.8%	8.9%	7.4%	3.52
NW	279	22.2%	18.3%	18.3%	17.6%	11.1%	7.2%	5.4%	3.20
S	277	17.0%	14.8%	20.9%	14.1%	17.7%	7.6%	7.9%	3.55
$\chi^2 = 35.698$ n.s., Cramer's V = 0.081									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 3.892**, $\eta = 0.107$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-31: Comparison of 2010 goose hunting experience to 2009.

Residence of hunter	n	% of hunters ¹ indicating that their goose hunting experience in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1180	6.6%	8.3%	14.4%	37.5%	17.6%	9.4%	6.2%	4.04
METRO	226	7.5%	9.3%	14.6%	35.4%	17.7%	8.8%	6.6%	4.00
NE	184	6.0%	4.9%	19.0%	42.4%	17.4%	7.6%	2.7%	3.94
NONMETRO	243	7.0%	8.2%	15.6%	37.4%	18.1%	7.0%	6.6%	3.99
NW	257	5.4%	10.1%	13.2%	37.7%	17.1%	11.7%	4.7%	4.05
S	263	6.1%	6.5%	12.5%	38.4%	17.5%	11.0%	8.0%	4.20
$\chi^2 = 21.650$ n.s., Cramer's V = 0.068									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 1.120 n.s., $\eta = 0.062$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-32: Comparison of 2010 goose hunting harvest to 2009.

Residence of hunter	N	% of hunters ¹ indicating that their goose hunting harvest in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1179	11.6%	13.2%	17.5%	28.8%	16.0%	7.6%	5.3%	3.68
METRO	226	14.6%	14.2%	14.2%	29.2%	16.4%	5.8%	5.8%	3.59
NE	183	13.1%	10.4%	21.3%	29.5%	16.9%	7.7%	1.1%	3.54
NONMETRO	244	9.0%	10.7%	21.3%	27.5%	18.0%	6.6%	7.0%	3.82
NW	257	9.7%	15.6%	18.3%	30.7%	11.7%	9.7%	4.3%	3.65
S	262	10.7%	13.0%	16.8%	27.5%	17.2%	9.2%	5.7%	3.78
$\chi^2 = 29.178$ n.s., Cramer's V = 0.079									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 1.298 n.s., $\eta = 0.067$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-33: Comparison of 2010 goose hunting regulations to 2009.

Residence of hunter	N	% of hunters ¹ indicating that the goose hunting regulations in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1174	3.5%	4.6%	7.2%	64.7%	8.7%	5.8%	5.4%	4.10
METRO	226	3.1%	5.8%	7.5%	65.9%	6.2%	4.9%	6.6%	4.08
NE	182	2.2%	3.8%	9.9%	69.8%	7.7%	5.5%	1.1%	3.98
NONMETRO	242	3.7%	5.0%	8.3%	64.0%	7.0%	5.4%	6.6%	4.08
NW	255	3.9%	2.7%	5.9%	65.9%	10.6%	5.9%	5.1%	4.15
S	261	3.8%	4.6%	6.1%	60.5%	12.6%	7.7%	4.6%	4.15
$\chi^2 = 26.795$ n.s., Cramer's V = 0.076									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 0.759 n.s., $\eta = 0.051$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-34: Comparison of 2010 geese seen to 2009.

Residence of hunter	N	% of hunters ¹ indicating that the number of geese seen in 2010 was _____ than 2009:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1177	8.1%	13.2%	16.8%	27.9%	16.8%	10.2%	7.0%	3.91
METRO	225	7.1%	17.8%	16.0%	24.0%	17.8%	10.2%	7.1%	3.87
NE	184	10.3%	13.6%	17.9%	28.8%	19.0%	8.2%	2.2%	3.66
NONMETRO	242	8.3%	10.7%	18.2%	31.0%	16.9%	7.0%	7.9%	3.90
NW	257	9.7%	12.5%	17.1%	26.5%	16.7%	10.5%	7.0%	3.88
S	263	7.2%	9.1%	16.0%	31.9%	14.4%	13.3%	8.0%	4.09
$\chi^2 = 28.696$ n.s., Cramer's V = 0.078									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2010.

² F = 2.012 n.s., $\eta = 0.083$. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.

³ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-35: Factors might improve your satisfaction with waterfowl hunting in Minnesota.

Factor	n	% of hunters indicating:							Mean ¹
		Not at all						Very much	
A dramatic increase in duck populations in Minnesota.	1881	2.7%	1.5%	2.1%	8.1%	11.1%	18.6%	55.9%	6.03
Better duck-hunting opportunities in Minnesota.	1880	5.7%	2.4%	2.6%	10.8%	13.8%	22.0%	42.7%	5.61
Better waterfowl habitat in Minnesota.	1875	6.7%	2.3%	3.7%	10.9%	13.5%	20.1%	42.7%	5.53
More public land to hunt waterfowl in Minnesota	1876	11.8%	6.3%	6.8%	14.7%	16.8%	15.8%	27.7%	4.76
More opportunities to hunt geese in Minnesota.	1867	14.2%	6.1%	6.1%	17.6%	16.0%	14.7%	25.2%	4.60
Improved access for waterfowl hunting on public land in Minnesota.	1875	11.5%	7.4%	9.2%	18.3%	17.2%	14.6%	21.7%	4.53
Another family member who wanted to go waterfowl hunting in Minnesota	1875	17.4%	6.2%	5.9%	15.2%	14.2%	17.5%	23.6%	4.50
Improved access for waterfowl hunting on private land in Minnesota.	1875	14.7%	8.4%	9.4%	15.0%	14.1%	13.6%	24.3%	4.44
A son or daughter who wanted to go waterfowl hunting in Minnesota	1867	21.3%	5.8%	4.3%	13.6%	13.3%	15.9%	25.9%	4.43
Less crowding at waterfowl hunting areas in Minnesota.	1872	13.6%	7.1%	9.4%	18.3%	16.9%	14.4%	20.4%	4.42
More support for waterfowl hunting from my family.	1861	47.4%	13.2%	9.3%	13.0%	7.1%	4.4%	5.7%	2.55
Improved health, physical ability to waterfowl hunt.	1870	56.8%	13.7%	6.8%	10.0%	5.0%	3.2%	4.4%	2.20

¹ F = . Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-36: Factors might improve your satisfaction with waterfowl hunting in Minnesota: A dramatic increase in duck populations in Minnesota.

Residence of hunter	n	% of hunters indicating:							Mean ¹
		Not at all						Very much	
Statewide ²	1881	2.7%	1.5%	2.1%	8.1%	11.1%	18.6%	55.9%	6.03
METRO	344	2.3%	0.9%	1.7%	7.6%	11.9%	19.8%	55.8%	6.09
NE	328	2.4%	1.5%	1.8%	6.7%	10.1%	21.6%	55.8%	6.08
NONMETRO	328	4.0%	1.5%	3.7%	7.0%	11.9%	19.5%	52.4%	5.87
NW	333	1.8%	1.2%	1.8%	11.4%	14.4%	17.1%	52.3%	5.98
S	336	2.4%	2.1%	1.5%	8.3%	8.3%	16.7%	60.7%	6.07
$\chi^2 = 27.888$ n.s., Cramer's V = 0.065									

¹ F = 1.360 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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**Table 2-37: Factors might improve your satisfaction with waterfowl hunting in Minnesota:
Improved access for waterfowl hunting on public land in Minnesota.**

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1875	11.5%	7.4%	9.2%	18.3%	17.2%	14.6%	21.7%	4.53
METRO	341	9.1%	6.5%	8.2%	16.7%	19.4%	16.4%	23.8%	4.80
NE	327	12.5%	10.1%	8.6%	17.7%	17.1%	14.4%	19.6%	4.41
NONMETRO	329	11.2%	7.0%	9.4%	21.3%	17.9%	13.7%	19.5%	4.47
NW	333	16.5%	9.6%	9.9%	19.8%	14.4%	13.2%	16.5%	4.17
S	335	11.3%	7.2%	11.9%	16.7%	17.0%	13.1%	22.7%	4.51
$\chi^2 = 28.574$ n.s., Cramer's V = 0.066									

¹ F = 4.726***, $\eta = 0.111$. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

**Table 2-38: Factors might improve your satisfaction with waterfowl hunting in Minnesota:
Improved access for waterfowl hunting on private land in Minnesota.**

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1875	14.7%	8.4%	9.4%	15.0%	14.1%	13.6%	24.3%	4.44
METRO	342	12.0%	7.3%	10.8%	13.7%	14.6%	13.7%	27.8%	4.71
NE	327	19.3%	9.5%	9.5%	15.3%	13.1%	12.5%	20.8%	4.17
NONMETRO	328	14.3%	9.5%	7.9%	14.6%	16.8%	11.9%	25.0%	4.46
NW	333	18.6%	8.1%	7.8%	21.0%	15.0%	12.3%	17.1%	4.17
S	335	14.9%	9.0%	11.3%	16.4%	11.9%	14.9%	21.5%	4.33
$\chi^2 = 34.423$ n.s., Cramer's V = 0.072									

¹ F = 3.660**, $\eta = 0.098$. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-39: Factors might improve your satisfaction with waterfowl hunting in Minnesota: More public land to hunt waterfowl in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1876	11.8%	6.3%	6.8%	14.7%	16.8%	15.8%	27.7%	4.76
METRO	342	9.4%	4.4%	6.1%	11.1%	17.8%	20.2%	31.0%	5.13
NE	327	13.8%	7.0%	7.3%	14.7%	18.3%	12.2%	26.6%	4.57
NONMETRO	328	9.8%	8.2%	7.9%	16.2%	16.2%	14.3%	27.4%	4.72
NW	333	16.8%	9.3%	6.6%	19.5%	17.1%	12.6%	18.0%	4.24
S	335	12.5%	6.3%	6.3%	17.0%	15.2%	14.3%	28.4%	4.74
$\chi^2 = 49.200^{**}$, Cramer's V = 0.086									

¹ F = 8.604***, $\eta = 0.149$. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-40: Factors might improve your satisfaction with waterfowl hunting in Minnesota: A son or daughter who wanted to go waterfowl hunting in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1867	21.3%	5.8%	4.3%	13.6%	13.3%	15.9%	25.9%	4.43
METRO	341	20.5%	6.7%	3.5%	13.8%	13.8%	16.7%	24.9%	4.45
NE	324	19.4%	3.7%	4.3%	14.5%	11.7%	18.5%	27.8%	4.59
NONMETRO	327	22.9%	6.4%	4.3%	14.4%	15.6%	12.2%	24.2%	4.33
NW	331	22.4%	5.4%	3.0%	11.2%	16.9%	14.2%	26.9%	4.44
S	332	22.9%	4.8%	4.5%	13.0%	10.5%	17.5%	26.8%	4.39
$\chi^2 = 21.645$ n.s., Cramer's V = 0.057									

¹ F = 1.074 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 2-41: Factors might improve your satisfaction with waterfowl hunting in Minnesota: Another family member who wanted to go waterfowl hunting in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1875	17.4%	6.2%	5.9%	15.2%	14.2%	17.5%	23.6%	4.50
METRO	342	17.8%	6.7%	5.6%	12.9%	14.6%	18.1%	24.3%	4.53
NE	326	15.6%	4.6%	5.8%	14.1%	15.0%	18.7%	26.1%	4.61
NONMETRO	328	17.4%	7.0%	5.5%	20.1%	14.0%	14.6%	21.3%	4.42
NW	333	16.8%	6.0%	6.3%	14.1%	16.5%	15.0%	25.2%	4.49
S	335	19.1%	5.1%	6.3%	17.0%	12.5%	17.6%	22.4%	4.44
$\chi^2 = 18.086$ n.s., Cramer's V = 0.052									

¹ F = 0.766 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-42: Factors might improve your satisfaction with waterfowl hunting in Minnesota: Less crowding at waterfowl hunting areas in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1872	13.6%	7.1%	9.4%	18.3%	16.9%	14.4%	20.4%	4.42
METRO	342	12.0%	6.4%	9.6%	18.1%	16.1%	15.5%	22.2%	4.59
NE	327	13.8%	8.6%	11.9%	14.7%	16.5%	12.2%	22.3%	4.32
NONMETRO	329	13.1%	8.2%	10.3%	17.3%	16.7%	13.7%	20.7%	4.40
NW	330	17.0%	8.2%	7.3%	21.5%	16.1%	16.1%	13.9%	4.16
S	333	14.1%	5.1%	10.5%	17.1%	18.3%	13.2%	21.6%	4.45
$\chi^2 = 26.937$ n.s., Cramer's V = 0.064									

¹ F = 2.066 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-43: Factors might improve your satisfaction with waterfowl hunting in Minnesota: More support for waterfowl hunting from my family.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1861	47.4%	13.2%	9.3%	13.0%	7.1%	4.4%	5.7%	2.55
METRO	338	45.9%	13.9%	10.7%	10.4%	6.5%	5.3%	7.4%	2.60
NE	326	50.9%	11.0%	6.1%	15.3%	6.4%	3.1%	7.1%	2.52
NONMETRO	327	47.4%	12.5%	10.7%	15.6%	5.2%	2.4%	6.1%	2.51
NW	330	46.1%	13.3%	6.4%	14.5%	10.0%	4.8%	4.8%	2.64
S	333	46.8%	15.0%	10.8%	12.6%	7.2%	3.6%	3.9%	2.44
$\chi^2 = 32.865$ n.s., Cramer's V = 0.070									

¹ F = 0.667 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-44: Factors might improve your satisfaction with waterfowl hunting in Minnesota: Improved health, physical ability to waterfowl hunt.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1870	56.8%	13.7%	6.8%	10.0%	5.0%	3.2%	4.4%	2.20
METRO	342	59.1%	14.6%	7.6%	9.1%	5.0%	1.8%	2.9%	2.04
NE	325	56.6%	14.2%	5.5%	9.2%	5.5%	3.1%	5.8%	2.26
NONMETRO	327	57.2%	11.0%	8.6%	9.5%	6.1%	2.4%	5.2%	2.26
NW	331	52.6%	14.8%	5.4%	15.1%	5.1%	3.0%	3.9%	2.35
S	333	56.2%	14.1%	6.6%	9.6%	3.9%	5.1%	4.5%	2.26
$\chi^2 = 27.964$ n.s., Cramer's V = 0.065									

¹ F = 1.291 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-45: Factors might improve your satisfaction with waterfowl hunting in Minnesota: Better waterfowl habitat in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1875	6.7%	2.3%	3.7%	10.9%	13.5%	20.1%	42.7%	5.53
METRO	344	5.5%	2.0%	3.5%	8.4%	14.8%	20.1%	45.6%	5.67
NE	325	4.9%	3.1%	3.4%	16.0%	12.0%	18.8%	41.8%	5.47
NONMETRO	327	7.3%	2.4%	5.8%	8.9%	12.5%	19.6%	43.4%	5.47
NW	333	7.5%	3.0%	4.5%	14.1%	15.9%	21.3%	33.6%	5.23
S	335	5.7%	2.1%	3.6%	9.9%	9.6%	22.4%	46.9%	5.65
$\chi^2 = 37.229$ n.s., Cramer's V = 0.075									

¹ F = 2.983*, $\eta = 0.088$. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 2-46: Factors might improve your satisfaction with waterfowl hunting in Minnesota: More opportunities to hunt geese in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1867	14.2%	6.1%	6.1%	17.6%	16.0%	14.7%	25.2%	4.60
METRO	340	13.2%	5.9%	5.9%	15.3%	16.2%	15.0%	28.5%	4.73
NE	323	15.2%	4.6%	6.8%	19.2%	15.8%	14.2%	24.1%	4.48
NONMETRO	329	15.5%	4.6%	8.5%	16.1%	17.0%	12.2%	26.1%	4.48
NW	330	13.0%	7.9%	7.3%	20.9%	13.6%	17.9%	19.4%	4.43
S	336	11.3%	7.1%	3.6%	19.3%	17.9%	15.2%	25.6%	4.69
$\chi^2 = 30.884$ n.s., Cramer's V = 0.068									

¹ F = 1.327 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 2: Satisfaction With the 2010 Waterfowl Hunt

Table 2-47: Factors might improve your satisfaction with waterfowl hunting in Minnesota: Better duck-hunting opportunities in Minnesota.

Residence of hunter	n	% of hunters indicating:						Very much	Mean ¹
		Not at all							
Statewide ²	1880	5.7%	2.4%	2.6%	10.8%	13.8%	22.0%	42.7%	5.61
METRO	343	4.7%	2.9%	2.3%	9.3%	13.1%	24.2%	43.4%	5.70
NE	326	5.5%	3.7%	2.5%	10.4%	16.9%	20.2%	40.8%	5.51
NONMETRO	330	6.1%	2.1%	4.8%	9.7%	13.6%	18.8%	44.8%	5.57
NW	333	6.9%	3.0%	1.5%	13.8%	12.6%	26.7%	35.4%	5.47
S	336	3.3%	2.1%	3.0%	11.9%	14.6%	19.9%	45.2%	5.67
$\chi^2 = 33.095$ n.s., Cramer's V = 0.070									

¹ F = 1.014 n.s. Mean is based on the following scale: 1 = not at all likely to improve, 7 = very much likely to improve.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 3: Opinions on Youth Waterfowl Hunting Day

All study participants were provided with a brief background statement about Youth Waterfowl Hunting Day before their opinions concerning this issue were assessed (See Appendix A, Part X of the study instrument).

Support/Opposition to Youth Waterfowl Hunting Day

Respondents were asked if they support or oppose the concept of Youth Waterfowl Hunting Day on the following scale: “strongly support,” “support,” “undecided or neutral,” “oppose,” and “strongly oppose”. Results are summarized in Table 3-1. Statewide, 62% of respondents supported the youth hunting day with 38% strongly supporting it. In contrast, 26% opposed the hunt, with 17% strongly opposing it. There was a significant negative correlation between age and support for Youth Waterfowl Hunting Day ($r = -0.203, p < 0.001$). This means that older hunters reported less support for the youth hunt than younger hunters. There was no significant difference among regions in support for Youth Waterfowl Hunting Day.

Participation in Youth Waterfowl Hunting Day in 2010

All study respondents were asked if they took any youths hunting on Youth Waterfowl Hunting Day in Minnesota in 2010 (Table 3-2). Statewide, 11% of respondents reported participating in the youth hunt. Respondents that mentored youth on Youth Waterfowl Hunting Day were asked how many youths they took hunting and the number of ducks and geese that were harvested. Statewide, mentors took an average 1.60 youths hunting on Youth Waterfowl Hunting Day (Table 3-3). Based on the percentages provided by the survey, it is estimated that 13,335 youths participated in the youth hunt in 2010 (Table 3-5). On average, 2.71 ducks and 0.54 geese were harvested by each mentored group of youths (Table 3-4). Based on these averages, estimates of total harvest for the mentored youth groups are reported in Table 3-6.

In 2010, 5,500 youth obtained the required “no cost” small game license and were HIP certified, which is a requirement to hunt on Youth Waterfowl Day. This was the first year that the youth license was required. This number is substantially less than the 13,335 youths estimated from the waterfowl hunter survey. We are uncertain if this is due to exaggeration bias or if not all youth obtained the free license this first year. Data from future years will be required to help understand this discrepancy.

Section 3: Opinions on Youth Waterfowl Hunting Day

Table 3-1: Do you support or oppose the concept of Youth Waterfowl Hunting Day?

Residence of hunter	n	% of hunters indicating that they _____ the concept of Youth Waterfowl Hunting Day:					Mean ¹
		Strongly oppose	Oppose	Undecided/neutral	Support	Strongly support	
Statewide ²	1878	16.5%	9.7%	11.4%	24.5%	37.9%	3.58
METRO	389	17.7%	8.5%	10.0%	25.4%	38.3%	3.58
NE	378	13.8%	10.6%	13.5%	23.5%	38.6%	3.63
NONMETRO	369	17.6%	8.4%	14.1%	22.0%	37.9%	3.54
NW	372	15.9%	11.3%	11.6%	22.8%	38.4%	3.57
S	374	15.2%	11.0%	10.2%	27.3%	36.4%	3.59
$\chi^2 = 13.197$ n.s., Cramer's V=0.042							

¹F = 0.166 n.s., $\eta = 0.019$ Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided; 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 3-2: Participation in 2010 Youth Waterfowl Hunting Day

Residence of hunter	n	% of all hunters who indicated that they took youth hunting on YWHD in 2010
Statewide ¹	1854	10.9%
METRO	386	8.8%
NE	371	10.5%
NONMETRO	361	10.8%
NW	367	13.6%
S	370	11.1%
		$\chi^2 = 4.597$ n.s., Cramer's V = 0.050

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 3-3: Number of youth taken hunting on 2010 Youth Waterfowl Hunting Day

Residence of hunter	n	Mean number of youth
Statewide ¹	190	1.60
METRO	33	1.70
NE	38	1.71
NONMETRO	38	1.39
NW	47	1.70
S	39	1.46
		F = 1.485 n.s., $\eta = 0.174$

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 3: Opinions on Youth Waterfowl Hunting Day

Table 3-4: Waterfowl taken during 2010 Youth Waterfowl Hunting Day

Residence of hunter	n	Mean number of ducks taken on Youth Waterfowl Hunting Day	n	Mean number of geese taken on Youth Waterfowl Hunting Day
Statewide ¹	190	2.71	141	.54
METRO	34	2.26	24	.71
NE	38	3.55	27	.44
NONMETRO	38	2.11	28	.29
NW	47	3.38	35	.69
S	38	2.74	31	.45
		F = 1.695 n.s., $\eta = 0.186$		F = 0.486 n.s., $\eta = 0.117$

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 3-5: Estimate of the number of youth participating in Youth Waterfowl Hunting Day

Residence of hunter	Total adult hunters for entire season	% of adult hunters as mentors in the 2010 YWHD	Total mentors in the 2010 YWHD	Average # of youth with a mentor	Estimate of total youth participating in YWHD
Statewide ^{1,2}	76,463	10.9%	8,334	1.60	13,335
METRO	26,032	8.8%	2,291	1.70	3,895
NE	7,951	10.5%	835	1.71	1,428
NONMETRO	13,601	10.8%	1,469	1.39	2,042
NW	13,448	13.6%	1,829	1.70	3,109
S	15,431	11.1%	1,713	1.46	2,501

¹ Statewide estimates and the sum of regional estimates differ due to rounding. These estimates are based on mentors who purchased a state waterfowl stamp, required for most waterfowl hunters 18-64 years of age. Mentors 65+ years of age are not included in the estimates unless they purchased a duck stamp.
The number of respondents varies due to the use of multiple questions. Please refer to the preceding tables for this information.

Section 3: Opinions on Youth Waterfowl Hunting Day

Table 3-6: Estimated duck/goose harvest by youths on Youth Waterfowl Hunting Day

Residence of hunter	Total adult hunters for entire season	% of adult hunters as mentors in the 2010 YWHD	Estimated number of YWHD hunting groups	Average # of ducks harvested by youth groups on YWHD	Average # of geese harvested by youth groups on YWHD	Estimate of total ducks harvested by youth on YWHD	Estimate of total geese harvested by youth on YWHD
Statewide ^{1,2}	76,463	10.9%	8,334	2.71	.54	22,585	4,500
METRO	26,032	8.8%	2,291	2.26	.71	5,178	1,627
NE	7,951	10.5%	835	3.55	.44	2,964	367
NONMETRO	13,601	10.8%	1,469	2.11	.29	3,100	426
NW	13,448	13.6%	1,829	3.38	.69	6,182	1,262
S	15,431	11.1%	1,713	2.74	.45	4,694	771

¹ Statewide estimates and the sum of regional estimates differ due to rounding. These estimates are based on mentors who purchased a duck stamp license (18-64 years of age). HIP participant mentors 65+ years of age are not included in the estimates. The number of respondents varies due to the use of multiple questions. Please refer to the preceding tables for this information.

Table 3-7: Participation in Youth Waterfowl Hunting Day as a youth

Residence of hunter	n	% of all hunters who indicated that they participated in YWHD as a youth
Statewide ¹	1819	10.7%
METRO	379	9.5%
NE	359	8.6%
NONMETRO	353	10.2%
NW	364	11.5%
S	363	13.8%
		$\chi^2= 6.111$ n.s., Cramer's V = 0.058

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 3: Opinions on Youth Waterfowl Hunting Day

Table 3-8: For those who participated in Youth Waterfowl Hunting Day as a youth, importance of Youth Waterfowl Hunting Day to becoming a waterfowl hunter.

Residence of hunter	n	% of hunters indicating ____ important:					Mean ¹
		Not at all	Slightly	Somewhat	Quite	Very	
Statewide ²	190	12.6%	10.0%	16.3%	19.5%	41.6%	3.65
METRO	34	14.7%	11.8%	17.6%	14.7%	41.2%	3.56
NE	31	3.2%	19.4%	22.6%	25.8%	29.0%	3.58
NONMETRO	36	16.7%	2.8%	16.7%	13.9%	50.0%	3.78
NW	42	4.8%	14.3%	16.7%	28.6%	35.7%	3.76
S	48	16.7%	6.3%	12.5%	18.8%	45.8%	3.71
$\chi^2 = 18.268$ n.s., Cramer's V=0.155							

¹F = 0.185 n.s., $\eta=0.063$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided; 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 4: Opinions on Management and Special Regulations

Opinions About Duck Bag Limits

Respondents were asked to indicate their opinion about the 6-duck total bag limit, 1-hen mallard bag limit, and 2-wood duck bag limit. Possible responses to these questions were: too low, about right, too high, and no opinion. Statewide, about two-thirds of respondents (66%) felt the 6-duck bag limit was about right, with 5.1% indicating that it was too low, 15% too high, and had 13% no opinion (Table 4-1). There was no significant difference among regions in opinion of the 6-duck bag limit. Statewide, 57% of respondents felt the 1-hen mallard bag limit was about right, compared to 18% too low, 13% too high, and 12% had no opinion (Table 4-2). Larger proportions of respondents from northern Minnesota felt the 1-hen mallard limit was too low, while a smaller proportion of respondents from the southern region felt it was too low. Statewide, 55% of respondents felt the 2-wood duck bag limit was about right, compared to 26% who felt it was too low, 7.8% who thought it was too high, and 11% had no opinion (Table 4-3). There was no significant difference among regions in opinion of the 2-wood duck bag limit.

Waterfowl Management Strategies and Special Regulations

Respondents were asked to indicate their level of support for six management strategies on a 5-point scale on which 1 = strongly oppose, 2 = oppose, 3 = undecided, 4 = support, and 5 = strongly support. Slightly over half (52%) of respondents opposed and 29% supported ending shooting hours at 4 pm for the first part of the season (Table 4-4). There was no significant difference by region in support for ending shooting hours at 4 pm. Nearly three-fourths (70%) of respondents supported moist soil management, with only 7.1% opposing (Table 4-5). There was no significant difference by region in support for moist soil management. Statewide, 42% of respondents supported limiting the use of mud motors on certain public hunting areas, while 42% were neutral and 16% opposed (Table 4-6). There was no significant difference by region in support for limiting use of mud motors. Statewide, 38% of respondents supported restrictions on open water hunting, while 33% were neutral and 29% opposed (Table 4-7). Respondents from the metropolitan and south regions were somewhat more supportive. Over half of respondents opposed restrictions on hunting within 100 yards of surface water during the early Canada Goose season, with 20% supporting this restriction and 25% neutral (Table 4-8). Statewide, 62% supported providing easier access to waterfowl hunting sites on Wildlife Management areas, with only 7.8% opposed, and 30% neutral (Table 4-9). There was no significant difference by region in support for easier access on WMAs.

Section 4: Opinions on Management and Special Regulations

Table 4-1: Opinion on 6 duck bag limit

Residence of hunter	n	% of hunters indicating that the bag limit was:			
		Too low	About right	Too high	No opinion
Statewide ¹	1820	5.1%	66.3%	15.4%	13.1%
METRO	381	5.0%	66.9%	15.0%	13.1%
NE	367	6.3%	70.0%	10.4%	13.4%
NONMETRO	357	4.5%	67.2%	16.2%	12.0%
NW	360	4.7%	66.7%	14.4%	14.2%
S	357	5.6%	61.9%	19.3%	13.2%
		$\chi^2=14.092$ n.s., Cramer's V=0.051			

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4-2: Opinion on 1 hen mallard bag limit

Residence of hunter	n	% of hunters indicating that the bag limit was:			
		Too low	About right	Too high	No opinion
Statewide ¹	1872	18.2%	56.9%	13.3%	11.6%
METRO	387	16.0%	58.9%	13.4%	11.6%
NE	379	23.5%	53.3%	9.2%	14.0%
NONMETRO	366	19.4%	56.0%	13.4%	11.2%
NW	373	23.1%	52.8%	11.8%	12.3%
S	373	13.4%	60.1%	16.4%	10.2%
		$\chi^2=28.468^{**}$, Cramer's V=0.071			

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4-3: Opinion on 2 wood duck bag limit

Residence of hunter	n	% of hunters indicating that the bag limit was:			
		Too low	About right	Too high	No opinion
Statewide ¹	1873	25.9%	55.1%	7.8%	11.2%
METRO	386	22.0%	59.6%	7.0%	11.4%
NE	380	22.6%	55.5%	8.7%	13.2%
NONMETRO	369	32.2%	47.4%	8.1%	12.2%
NW	372	25.5%	55.1%	8.3%	11.0%
S	373	29.0%	54.2%	8.0%	8.8%
		$\chi^2=20.231$ n.s., Cramer's V=0.060			

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 4: Opinions on Management and Special Regulations

Table 4-4: Ending shooting hours at 4 pm for the first part of Minnesota’s waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1852	23.2%	28.3%	19.4%	20.1%	9.0%	2.63
METRO	383	23.8%	29.5%	19.8%	17.8%	9.1%	2.59
NE	375	25.6%	32.0%	15.7%	18.9%	7.7%	2.51
NONMETRO	365	24.7%	29.6%	19.7%	18.1%	7.9%	2.55
NW	369	23.6%	26.0%	20.6%	20.1%	9.8%	2.66
S	366	19.1%	25.1%	19.4%	26.8%	9.6%	2.83
$\chi^2= 22.417$ n.s., Cramer's V=0.055							

¹ F = 3.451**, $\eta = 0.086$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4-5: Moist soil management (i.e. management to simulate a seasonal wetland by artificially adding and removing water to maximize food production for waterfowl).

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1794	2.2%	4.9%	22.4%	41.1%	29.3%	3.91
METRO	372	2.7%	3.5%	20.2%	41.4%	32.3%	3.97
NE	365	2.2%	5.2%	26.3%	38.6%	27.7%	3.84
NONMETRO	353	0.8%	5.1%	22.4%	42.8%	28.9%	3.94
NW	356	3.1%	5.9%	25.6%	39.0%	26.4%	3.80
S	354	1.7%	6.2%	21.5%	42.4%	28.2%	3.89
$\chi^2= 16.448$ n.s., Cramer's V=0.048							

¹ F = 1.945 n.s., $\eta = 0.066$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 4: Opinions on Management and Special Regulations

Table 4-6: Limiting use of mud motors on certain public hunting areas.

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1783	6.5%	10.0%	41.7%	24.6%	17.2%	3.36
METRO	368	7.3%	7.6%	42.9%	23.9%	18.2%	3.38
NE	369	6.0%	8.4%	43.6%	23.0%	19.0%	3.41
NONMETRO	350	6.0%	15.7%	36.9%	25.1%	16.3%	3.30
NW	349	4.9%	10.6%	43.6%	26.6%	14.3%	3.35
S	356	7.0%	9.6%	41.0%	24.4%	18.0%	3.37
$\chi^2=22.917$ n.s., Cramer's V=0.057							

¹ F = 0.490 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4-7: Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1827	7.6%	21.2%	33.0%	23.5%	14.8%	3.17
METRO	382	7.6%	20.9%	32.5%	20.4%	18.6%	3.21
NE	369	9.2%	23.6%	34.1%	20.1%	13.0%	3.04
NONMETRO	358	7.5%	22.1%	30.2%	27.4%	12.8%	3.16
NW	358	7.3%	23.5%	36.9%	22.9%	9.5%	3.04
S	362	6.9%	17.4%	32.3%	27.6%	15.7%	3.28
$\chi^2=29.140^*$, Cramer's V=0.063							

¹ F = 3.183*, $\eta = 0.083$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 4: Opinions on Management and Special Regulations

Table 4-8: Restrictions on hunting within 100 yards of surface water during the early (Sept.) Canada goose season.

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1793	23.4%	31.2%	25.2%	9.9%	10.3%	2.52
METRO	371	20.8%	30.5%	32.6%	7.3%	8.9%	2.53
NE	358	17.3%	30.2%	31.3%	10.1%	11.2%	2.68
NONMETRO	350	26.9%	31.7%	20.9%	10.0%	10.6%	2.46
NW	359	26.2%	32.6%	20.3%	11.4%	9.5%	2.45
S	358	25.7%	31.3%	17.6%	12.8%	12.6%	2.55
$\chi^2=47.903^{***}$, Cramer's V=0.082							

¹ F = 1.888 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 4-9: Providing easier access to waterfowl hunting sites on Wildlife Management areas.

Residence of hunter	n	% of hunters indicating that they _____ this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1832	2.9%	4.9%	30.5%	34.9%	26.8%	3.78
METRO	379	2.6%	4.5%	28.0%	33.8%	31.1%	3.86
NE	373	1.6%	5.9%	32.4%	37.3%	22.8%	3.74
NONMETRO	360	1.9%	5.0%	30.8%	35.0%	27.2%	3.81
NW	367	3.0%	4.4%	36.8%	34.1%	21.8%	3.67
S	360	4.7%	5.6%	27.8%	36.4%	25.6%	3.72
$\chi^2=24.562$ n.s., Cramer's V=0.058							

¹ F = 2.121 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 5: Opinions on Zones

Most Important Area of State for Duck Hunting

Respondents were asked to select the area of the state where season dates were most important to them using the map shown (Appendix A, Part IX). The largest proportion (24%) selected the west-central region, followed by southwest (19%), east-central (19%), northeast (12%), northwest (11%) and southeast (8.8%). About 6% had no preference (Table 5-1).

Preference for Season Dates for a 60-day Duck Season

Study participants were asked to select a straight season, a split season, or no preference for a 60-day duck season in 2011. Statewide, 45.6% preferred a straight season (Saturday Oct. 1 to Tuesday, Nov. 29), 36% preferred a split season (Saturday Sept. 24 to Sunday Sept. 25, close 5 days and reopen Saturday Oct. 1 to Sunday Nov. 27), and 18.7% had no preference (Table 5-2). There was no significant difference by region.

Preferred Dates for 30-day Season

Survey participants were asked to select their 3 preferred 10-day time periods, in the case of a 30-day duck season. Statewide, the most preferred time periods were: Early October (Oct. 1-10) (53%), Late October (Oct. 21-31) (52%), and Mid-October (Oct. 11-20) (39%), although there were significant differences in date preferences by region (Table 5-3).

Section 5: Opinions on Zones

Table 5-1: Area of the state where the timing of open duck hunting and season dates are most important to you.

Residence of hunter	n	% of hunters indicating:						
		NW	NE	WC	EC	SW	SE	No preference
Statewide ²	1829	10.7%	12.0%	24.3%	19.1%	19.2%	8.8%	6.0%
METRO	374	7.0%	11.2%	24.1%	22.7%	16.8%	8.3%	9.9%
NE	367	11.2%	59.1%	6.5%	18.3%	0.8%	0.0%	4.1%
NONMETRO	362	4.1%	5.0%	18.8%	39.8%	2.5%	25.1%	4.7%
NW	366	32.8%	4.9%	49.7%	5.5%	4.1%	0.3%	2.7%
S	367	2.7%	0.5%	16.1%	6.8%	62.1%	7.1%	4.6%
$\chi^2=1822.404^{***}$, Cramer's V=0.498								

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 5-2: Preference for season dates for a 60-day duck season in 2011.

Residence of hunter	n	% of hunters indicating that they prefer:		
		Saturday Oct. 1 to Tuesday, Nov. 29	Saturday Sept. 24 to Sunday Sept 25, close 5 days and reopen Saturday Oct. 1 to Sunday Nov. 27	No preference
Statewide ¹	1862	45.6%	35.6%	18.7%
METRO	388	43.8%	36.3%	19.8%
NE	371	43.4%	39.4%	17.3%
NONMETRO	365	47.1%	34.5%	18.4%
NW	370	44.3%	37.6%	18.1%
S	369	49.9%	31.7%	18.4%
$\chi^2=6.712$ n.s., Cramer's V=0.042				

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 5: Opinions on Zones

Table 5-3: If the duck season length needed to be shortened to only 30 days, which three 10-day periods would you most prefer to have the season open in your preferred hunting area (selected above).

Residence of hunter	n	% of hunters indicating that they prefer:						
		Early Oct. Oct 1-10	Mid Oct. Oct 11-20	Late Oct. Oct 21-31	Early Nov. Nov 1-10	Mid Nov. Nov 11-20	Late Nov. Nov 21-30	No preference
Statewide ¹	1944	52.8%	39.1%	52.4%	30.9%	21.0%	14.7%	9.9%
METRO	401	50.6%	38.7%	52.9%	31.4%	22.4%	13.2%	11.5%
NE	390	61.0%	46.7%	55.4%	23.1%	12.3%	7.2%	9.7%
NONMETRO	385	52.7%	37.7%	52.2%	30.9%	17.9%	17.1%	9.6%
NW	382	60.5%	45.8%	58.1%	27.2%	17.5%	12.6%	7.3%
S	391	45.5%	30.9%	45.0%	37.3%	29.2%	20.7%	9.7%
		$\chi^2=27.591^{***}$ V=0.119	$\chi^2=27.145^{***}$ V=0.118	$\chi^2=14.932^{**}$ V=0.088	$\chi^2=20.864^{***}$ V=0.103	$\chi^2=39.016^{***}$ V=0.141	$\chi^2=33.370^{***}$ V=0.131	$\chi^2=3.904$ n.s. V=0.045

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Motivations

Respondents were asked to report how important 26 aspects of waterfowl hunting were to them using the scale: 1 = not at all important to 5 = extremely important (Table 6-1). Five items were rated very to extremely important: (a) enjoying nature and the outdoors ($\bar{x} = 4.4$), (b) the excitement of hunting ($\bar{x} = 4.4$), (c) good behavior among other waterfowl hunters ($\bar{x} = 4.4$), (d) getting away from crowds of people ($\bar{x} = 4.3$), and (e) the challenge of making a successful shot ($\bar{x} = 4.1$). Means and frequencies for all 26 motivations are presented in Tables 6-2 through 6-27.

The importance of some motivations differed by region of residence. Most regional differences related to the importance of achievement-related motivations. Respondents from the northwest, northeast, and non-metro central regions rated the importance of “getting food for my family” lower (Table 6-4) and “getting my own food” (Table 6-25) higher than respondents from the metro and south regions. Respondents from the northwest and south regions rated “bagging ducks and geese” (Table 6-8), “getting my limit” (Table 6-15) and “hunting areas open to the public” (Table 6-18) slightly lower than other respondents did. Respondents from the northeast region rated “reducing tension and stress” somewhat less important than respondents from other regions did (Table 6-20).

An exploratory factor analysis of the 26 experience items produced six motivational factors: (a) achievement; ($\bar{x} = 2.53$), (b) affiliation ($\bar{x} = 3.72$), (c) access ($\bar{x} = 3.43$), (d) excitement ($\bar{x} = 4.23$), (e) appreciation ($\bar{x} = 3.78$), and (f) food ($\bar{x} = 2.21$).

Importance of and Identification with Waterfowl Hunting

Respondents were asked how important waterfowl hunting was to them. The majority of respondents (48%) indicated that it was “one of my most important recreational activities.” Over one-fourth (29%) indicated that it was “no more important than my other recreational activities,” while 10% indicated that it was “my most important recreational activity.” Less than 10% selected the other options (Table 6-28).

Respondents were asked to indicate how much they identified as waterfowl hunters. Two-thirds (66.3%) responded “I am a waterfowl hunter,” 16.4% indicated that “I go waterfowl hunting, but I do not really consider myself a waterfowl hunter. Less than 10% indicated that they were in the process of becoming waterfowl hunters, and about 10% indicated that they used to be, but no longer consider themselves waterfowl hunters (Table 6-29).

Involvement Waterfowl Hunting

Section 6: Motivations for and Involvement in Waterfowl Hunting

Respondents were asked to rate their agreement with 21 items addressing their involvement in waterfowl hunting using the scale: 1 = strongly disagree to 5 = strongly agree (Table 6-30). Respondents agreed to strongly agreed with 7 items: (a) waterfowl hunting is interesting to me ($\bar{x} = 4.4$), (b) waterfowl hunting is important to me ($\bar{x} = 4.2$), (c) the decision to go waterfowl hunting is primarily my own ($\bar{x} = 4.2$), (d) I am knowledgeable about waterfowl hunting ($\bar{x} = 4.1$), (e) waterfowl hunting is one of the most enjoyable things I do ($\bar{x} = 4.1$), (f) I have acquired equipment that I can only use for waterfowl hunting ($\bar{x} = 4.1$), and (g) I enjoy discussing waterfowl hunting with friends ($\bar{x} = 4.0$). One item was rated between strongly disagree and disagree: I do not really know much about waterfowl hunting ($\bar{x} = 1.8$). Means and frequencies for all 26 involvement items are presented in Tables 6-31 through 6-51.

Mean level of agreement with one involvement item differed by region of residence. Respondents from the metro region agreed less that “most of my friends are in some way connected with waterfowl hunting” (Table 6-36).

We conducted a three-facet factor analysis of involvement items based on a well-accepted conceptualization of recreation involvement including attraction, centrality, and self-expression factors (Gahwiler & Havitz, 1998; Kyle et al., 2004; Kyle et al., 2003). Respondents agreed most strongly with items in the attraction factor ($\bar{x} = 4.19$), then the self-expression factor ($\bar{x} = 3.61$), and less with items in the centrality factor ($\bar{x} = 2.74$).

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-1: Motivations for waterfowl hunting: Importance of...

	Mean ²
Enjoying nature and the outdoors	4.44
The excitement of hunting	4.35
Good behavior among other waterfowl hunters	4.32
Getting away from crowds of people	4.15
The challenge of making a successful shot	4.12
Being with friends	3.99
Seeing a lot of ducks and geese	3.93
Being with family	3.89
Reducing tension and stress	3.76
Hunting areas open to the public	3.73
Thinking about personal values	3.50
Sharing my hunting skills and knowledge	3.49
Developing my skills and abilities	3.41
Using my hunting equipment (decoys, boats, etc.)	3.41
Hunting with a dog	3.38
Having a long duck season	3.30
Access to a lot of different hunting areas	3.26
Bagging ducks and geese	3.09
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	2.99
Shooting a gun	2.91
Being on my own	2.77
Killing waterfowl	2.42
Getting my own food	2.30
A large daily duck bag limit	2.18
Getting food for my family	2.12
Getting my limit	2.06

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

Table 6-2: Motivations for waterfowl hunting: Importance of... Enjoying nature and the outdoors.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1662	0.1%	0.9%	5.9%	41.2%	51.9%	4.44
METRO	341	0.0%	0.6%	4.7%	43.7%	51.0%	4.45
NE	329	0.3%	1.8%	9.1%	42.2%	46.5%	4.33
NONMETRO	328	0.0%	1.8%	6.4%	35.1%	56.7%	4.47
NW	331	0.3%	0.6%	5.4%	41.7%	52.0%	4.44
S	337	0.3%	0.6%	6.2%	41.2%	51.6%	4.43
$\chi^2=20.423$ n.s., Cramer's V=0.055							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.203 n.s., $\eta=0.073$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-3: Motivations for waterfowl hunting: Importance of... Getting away from crowds of people.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1656	2.4%	3.4%	12.9%	39.2%	42.1%	4.15
METRO	340	3.2%	2.4%	12.6%	41.8%	40.0%	4.13
NE	325	3.1%	2.8%	15.7%	35.1%	43.4%	4.13
NONMETRO	327	0.9%	3.1%	14.1%	34.6%	47.4%	4.24
NW	329	1.5%	5.5%	10.0%	42.6%	40.4%	4.15
S	337	2.7%	3.9%	13.4%	38.3%	41.8%	4.13
$\chi^2=23.438$ n.s., Cramer's V=0.059							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.946 n.s., $\eta=0.048$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-4: Motivations for waterfowl hunting: Importance of... Getting food for my family.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1647	40.9%	23.3%	23.7%	6.9%	5.2%	2.12
METRO	337	48.7%	22.6%	20.2%	4.5%	4.2%	1.93
NE	323	34.7%	25.1%	25.7%	9.6%	5.0%	2.25
NONMETRO	324	36.7%	25.0%	22.8%	9.3%	6.2%	2.23
NW	329	32.2%	20.1%	30.4%	10.0%	7.3%	2.40
S	337	42.7%	24.9%	23.1%	4.7%	4.5%	2.03
$\chi^2=43.554$ ***, Cramer's V=0.081							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=8.543***, $\eta=0.143$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-5: Motivations for waterfowl hunting: Importance of... Shooting a gun.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1637	15.2%	21.4%	32.3%	19.8%	11.4%	2.91
METRO	333	15.6%	23.7%	33.3%	17.1%	10.2%	2.83
NE	327	16.2%	18.0%	33.6%	22.9%	9.2%	2.91
NONMETRO	321	15.9%	19.3%	29.6%	21.2%	14.0%	2.98
NW	327	11.6%	19.0%	34.9%	23.2%	11.3%	3.04
S	336	16.4%	23.2%	29.8%	18.5%	12.2%	2.87
$\chi^2=18.884$ n.s., Cramer's V=0.054							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.622 n.s., $\eta=0.063$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-6: Motivations for waterfowl hunting: Importance of... A large daily duck bag limit.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1638	32.1%	30.9%	26.7%	7.3%	3.0%	2.18
METRO	338	30.5%	32.5%	26.3%	8.3%	2.4%	2.20
NE	320	28.1%	26.3%	35.3%	8.1%	2.2%	2.30
NONMETRO	319	31.0%	30.4%	26.6%	7.8%	4.1%	2.24
NW	326	32.2%	31.9%	25.8%	6.7%	3.4%	2.17
S	335	37.6%	30.1%	23.6%	5.4%	3.3%	2.07
$\chi^2=22.606$ n.s., Cramer's V=0.059							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.190 n.s., $\eta=0.073$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-7: Motivations for waterfowl hunting: Importance of... Access to a lot of different hunting areas.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1648	12.0%	15.3%	24.7%	30.4%	17.7%	3.26
METRO	337	12.8%	15.7%	27.0%	29.1%	15.4%	3.19
NE	322	12.1%	14.3%	24.5%	29.5%	19.6%	3.30
NONMETRO	324	11.4%	15.1%	18.8%	33.6%	21.0%	3.38
NW	330	9.1%	17.6%	23.6%	32.4%	17.3%	3.31
S	337	13.6%	13.1%	27.3%	28.2%	17.8%	3.23
$\chi^2=17.847$ n.s., Cramer's V=0.052							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.128 n.s., $\eta=0.052$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-8: Motivations for waterfowl hunting: Importance of... Bagging ducks and geese.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1644	5.6%	19.5%	42.7%	24.3%	7.9%	3.09
METRO	337	4.2%	18.7%	44.2%	26.4%	6.5%	3.12
NE	320	5.6%	17.8%	41.6%	26.3%	8.8%	3.15
NONMETRO	326	4.3%	19.0%	39.9%	26.4%	10.4%	3.20
NW	327	7.0%	18.0%	46.2%	20.8%	8.0%	3.05
S	335	8.1%	23.3%	40.3%	20.9%	7.5%	2.96
$\chi^2=20.772$ n.s., Cramer's V=0.056							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.801*, $\eta=0.082$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-9: Motivations for waterfowl hunting: Importance of... Being on my own.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1647	24.7%	17.3%	25.5%	21.0%	11.6%	2.77
METRO	337	26.7%	20.5%	23.4%	19.6%	9.8%	2.65
NE	321	24.0%	15.0%	27.4%	22.4%	11.2%	2.82
NONMETRO	326	24.5%	15.3%	23.0%	22.7%	14.4%	2.87
NW	330	24.5%	19.1%	20.0%	22.4%	13.9%	2.82
S	335	22.1%	13.1%	34.9%	19.7%	10.1%	2.83
$\chi^2=32.894^{**}$, Cramer's V=0.071							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.321 n.s., $\eta=0.057$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-10: Motivations for waterfowl hunting: Importance of... Being with friends.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1648	2.1%	5.6%	17.3%	40.7%	34.2%	3.99
METRO	337	1.5%	5.0%	14.5%	40.1%	38.9%	4.10
NE	325	2.8%	5.2%	17.2%	44.3%	30.5%	3.94
NONMETRO	325	3.1%	6.5%	15.1%	40.0%	35.4%	3.98
NW	329	2.7%	6.1%	20.7%	36.2%	34.3%	3.93
S	336	1.5%	5.7%	20.8%	44.6%	27.4%	3.91
$\chi^2=22.857$ n.s., Cramer's V=0.059							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.990 n.s., $\eta=0.069$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-11: Motivations for waterfowl hunting: Importance of... Developing my skills and abilities.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1638	7.2%	11.7%	31.4%	32.1%	17.7%	3.41
METRO	336	7.7%	9.2%	27.7%	37.5%	17.9%	3.49
NE	322	8.7%	8.7%	36.3%	31.1%	15.2%	3.35
NONMETRO	324	7.1%	13.0%	29.6%	30.9%	19.4%	3.43
NW	327	4.9%	11.9%	37.3%	28.7%	17.1%	3.41
S	332	7.5%	16.0%	31.6%	27.4%	17.5%	3.31
$\chi^2=28.674^*$, Cramer's V=0.066							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.171 n.s., $\eta=0.053$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-12: Motivations for waterfowl hunting: Importance of ... Being with family.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1628	5.6%	8.2%	15.4%	32.6%	38.1%	3.89
METRO	332	6.3%	8.7%	14.5%	30.1%	40.4%	3.89
NE	321	4.4%	8.7%	16.2%	37.4%	33.3%	3.87
NONMETRO	320	5.9%	8.8%	16.3%	31.9%	37.2%	3.86
NW	325	4.0%	7.1%	14.2%	34.2%	40.6%	4.00
S	334	6.3%	7.8%	16.8%	33.5%	35.6%	3.84
$\chi^2=11.337$ n.s., Cramer's V=0.042							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.012 n.s., $\eta=0.050$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-13: Motivations for waterfowl hunting: Importance of... Killing waterfowl.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1642	24.4%	29.3%	30.2%	12.0%	4.2%	2.42
METRO	337	23.7%	28.8%	32.0%	10.7%	4.7%	2.44
NE	320	21.6%	25.6%	34.4%	16.3%	2.2%	2.52
NONMETRO	326	21.5%	33.1%	25.8%	13.2%	6.4%	2.50
NW	328	24.7%	28.0%	32.6%	11.6%	3.0%	2.40
S	332	29.2%	29.8%	26.5%	11.1%	3.3%	2.30
$\chi^2=28.751^*$, Cramer's V=0.067							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.148 n.s., $\eta=0.072$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-14: Motivations for waterfowl hunting: Importance of... Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1655	13.6%	19.5%	32.1%	23.3%	11.4%	2.99
METRO	339	11.8%	20.4%	30.1%	24.2%	13.6%	3.07
NE	324	13.6%	17.9%	35.2%	23.8%	9.6%	2.98
NONMETRO	329	17.0%	17.9%	31.0%	24.0%	10.0%	2.92
NW	330	12.7%	22.1%	31.5%	22.1%	11.5%	2.98
S	336	14.6%	18.2%	35.4%	22.0%	9.8%	2.94
$\chi^2=12.863$ n.s., Cramer's V=0.044							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.806 n.s., $\eta=0.044$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-15: Motivations for waterfowl hunting: Importance of... Getting my limit.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1650	37.4%	31.3%	22.5%	5.8%	2.9%	2.06
METRO	338	36.7%	30.8%	21.6%	7.4%	3.6%	2.10
NE	323	32.2%	30.7%	28.5%	5.3%	3.4%	2.17
NONMETRO	327	37.0%	30.9%	21.7%	6.1%	4.3%	2.10
NW	330	37.0%	31.8%	23.6%	4.8%	2.7%	2.05
S	334	42.2%	32.6%	20.4%	4.2%	0.6%	1.88
$\chi^2=23.301$ n.s., Cramer's V=0.059							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=3.610**, $\eta=0.093$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-16: Motivations for waterfowl hunting: Importance of... Good behavior among other waterfowl hunters.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1638	1.2%	3.1%	9.0%	35.7%	50.9%	4.32
METRO	336	1.5%	2.7%	5.4%	36.0%	54.5%	4.39
NE	323	1.5%	3.4%	11.1%	37.5%	46.4%	4.24
NONMETRO	322	0.6%	3.7%	9.0%	36.0%	50.6%	4.32
NW	326	0.6%	3.4%	8.6%	36.8%	50.6%	4.33
S	334	1.8%	2.7%	14.4%	33.2%	47.9%	4.23
$\chi^2=23.026$ n.s., Cramer's V=0.059							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.166 n.s., $\eta=0.073$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-17: Motivations for waterfowl hunting: Importance of... Having a long duck season.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1650	9.1%	14.8%	30.1%	28.7%	17.3%	3.30
METRO	338	10.7%	14.8%	29.3%	30.2%	15.1%	3.24
NE	321	7.8%	16.2%	33.0%	26.2%	16.8%	3.28
NONMETRO	327	10.1%	11.0%	29.1%	28.7%	21.1%	3.40
NW	331	6.0%	15.4%	32.3%	29.9%	16.3%	3.35
S	335	9.3%	17.0%	29.0%	26.3%	18.5%	3.28
$\chi^2=17.522$ n.s., Cramer's V=0.051							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.938 n.s., $\eta=0.048$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-18: Motivations for waterfowl hunting: Importance of... Hunting areas open to the public.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1647	7.7%	8.8%	17.9%	33.6%	32.0%	3.73
METRO	337	5.9%	7.1%	18.1%	34.7%	34.1%	3.84
NE	318	5.0%	8.8%	17.3%	36.5%	32.4%	3.82
NONMETRO	326	7.7%	9.8%	15.6%	34.4%	32.5%	3.74
NW	330	10.9%	10.0%	18.8%	29.4%	30.9%	3.59
S	337	9.2%	9.8%	19.0%	33.2%	28.8%	3.63
$\chi^2=17.530$ n.s., Cramer's V=0.052							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.812*, $\eta=0.082$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-19: Motivations for waterfowl hunting: Importance of... Hunting with a dog.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1650	16.9%	11.7%	18.2%	23.2%	29.9%	3.38
METRO	337	17.5%	13.1%	16.0%	21.4%	32.0%	3.37
NE	323	18.0%	13.9%	22.3%	21.4%	24.5%	3.20
NONMETRO	327	15.9%	10.4%	20.8%	23.5%	29.4%	3.40
NW	330	16.7%	12.1%	13.6%	26.4%	31.2%	3.43
S	336	16.4%	9.2%	21.7%	24.1%	28.6%	3.39
$\chi^2=21.471$ n.s., Cramer's V=0.057							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.281 n.s., $\eta=0.056$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-20: Motivations for waterfowl hunting: Importance of... Reducing tension and stress.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1650	5.3%	8.4%	21.5%	34.2%	30.6%	3.76
METRO	338	4.7%	8.0%	22.8%	34.0%	30.5%	3.78
NE	326	9.5%	7.7%	23.9%	34.4%	24.5%	3.57
NONMETRO	323	4.3%	8.4%	21.7%	33.7%	31.9%	3.80
NW	329	5.2%	11.2%	18.5%	35.3%	29.8%	3.73
S	337	5.0%	7.1%	20.5%	33.8%	33.5%	3.84
$\chi^2=22.146$ n.s., Cramer's V=0.058							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=2.811*, $\eta=0.082$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-21: Motivations for waterfowl hunting: Importance of... Seeing a lot of ducks and geese.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1654	0.8%	4.4%	25.9%	39.0%	29.8%	3.93
METRO	338	0.9%	3.8%	25.7%	37.9%	31.7%	3.96
NE	326	0.0%	6.7%	25.8%	38.0%	29.4%	3.90
NONMETRO	328	0.3%	4.6%	23.5%	39.9%	31.7%	3.98
NW	328	0.9%	3.0%	27.4%	40.5%	28.0%	3.92
S	338	1.2%	5.3%	27.2%	39.3%	26.9%	3.86
$\chi^2=14.172$ n.s., Cramer's V=0.046							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.005 n.s., $\eta=0.049$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-22: Motivations for waterfowl hunting: Importance of... Sharing my hunting skills and knowledge.

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1651	5.8%	11.8%	29.7%	33.0%	19.8%	3.49
METRO	339	5.6%	14.7%	26.0%	33.9%	19.8%	3.47
NE	325	5.8%	11.4%	34.5%	31.7%	16.6%	3.42
NONMETRO	326	5.2%	9.8%	29.8%	34.0%	21.2%	3.56
NW	329	4.0%	9.1%	32.2%	36.8%	17.9%	3.56
S	335	8.1%	11.0%	31.0%	28.1%	21.8%	3.44
$\chi^2=22.577$ n.s., Cramer's V=0.058							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.143 n.s., $\eta=0.053$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-23: Motivations for waterfowl hunting: Importance of... Thinking about personal values.

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1644	6.8%	9.5%	30.3%	34.0%	19.4%	3.50
METRO	335	7.8%	9.3%	29.6%	33.4%	20.0%	3.49
NE	321	6.2%	9.0%	34.6%	34.6%	15.6%	3.44
NONMETRO	328	5.5%	10.4%	29.6%	34.1%	20.4%	3.54
NW	328	7.3%	8.2%	28.4%	37.2%	18.9%	3.52
S	335	6.3%	10.7%	31.6%	31.6%	19.7%	3.48
$\chi^2=9.832$ n.s., Cramer's V=0.039							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.370 n.s., $\eta=0.030$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-24: Motivations for waterfowl hunting: Importance of... Using my hunting equipment (decoys, boats, etc.).

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1649	5.1%	14.4%	31.0%	33.6%	15.9%	3.41
METRO	339	5.9%	13.3%	31.6%	34.8%	14.5%	3.39
NE	322	7.1%	13.0%	34.2%	32.0%	13.7%	3.32
NONMETRO	326	4.3%	13.5%	29.4%	34.0%	18.7%	3.49
NW	329	4.0%	14.0%	32.5%	32.5%	17.0%	3.45
S	334	4.5%	18.3%	28.4%	32.9%	15.9%	3.37
$\chi^2=14.996$ n.s., Cramer's V=0.048							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=1.278 n.s., $\eta=0.056$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-25: Motivations for waterfowl hunting: Importance of... Getting my own food.

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1635	33.9%	25.3%	24.2%	10.2%	6.3%	2.30
METRO	334	39.2%	24.9%	21.9%	9.0%	5.1%	2.16
NE	322	28.0%	23.6%	29.2%	12.4%	6.8%	2.47
NONMETRO	325	29.8%	26.5%	23.7%	12.9%	7.1%	2.41
NW	328	27.1%	25.9%	26.5%	11.9%	8.5%	2.49
S	330	37.9%	25.5%	23.9%	7.3%	5.5%	2.17
$\chi^2=29.339^*$, Cramer's V=0.067							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=5.863***, $\eta=0.119$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-26: Motivations for waterfowl hunting: Importance of... The excitement of hunting.

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1648	0.6%	1.2%	10.0%	39.2%	48.9%	4.35
METRO	338	0.3%	1.8%	9.2%	41.1%	47.6%	4.34
NE	325	0.3%	1.8%	9.2%	41.5%	47.1%	4.33
NONMETRO	326	0.3%	0.6%	9.8%	38.0%	51.2%	4.39
NW	327	1.8%	0.3%	9.5%	36.7%	51.7%	4.36
S	335	0.6%	1.2%	12.5%	38.2%	47.5%	4.31
$\chi^2=19.543$ n.s., Cramer's V=0.054							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.585 n.s., $\eta=0.038$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4 = very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-27: Motivations for waterfowl hunting: Importance of... The challenge of making a successful shot.

Regions	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1661	0.7%	3.1%	17.3%	41.9%	37.0%	4.12
METRO	340	0.3%	2.1%	18.2%	41.2%	38.2%	4.15
NE	327	1.5%	3.7%	15.0%	45.9%	33.9%	4.07
NONMETRO	329	0.3%	4.6%	15.8%	40.7%	38.6%	4.13
NW	330	0.6%	1.5%	19.1%	41.2%	37.6%	4.14
S	338	1.2%	4.7%	16.6%	42.9%	34.6%	4.05
$\chi^2=19.080$ n.s., Cramer's V=0.054							

¹ This table does not include those respondents who did not hunt in Minnesota in 2010.

² F=0.887 n.s., $\eta=0.046$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

³ A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-28: How important is waterfowl hunting to you?

Residence of hunter	N	% of hunters indicating...					Mean ¹
		...my most important recreational activity	...one of my most important recreational activities	...no more important than my other recreational activities	...less important than my other recreational activities	...one of my least important recreational activities.	
Statewide ²	1875	10.0%	47.6%	29.0%	11.2%	2.2%	2.48
METRO	390	10.3%	47.2%	30.0%	10.3%	2.3%	2.47
NE	376	10.4%	44.4%	28.5%	15.2%	1.6%	2.53
NONMETRO	371	11.9%	45.0%	29.6%	10.5%	3.0%	2.48
NW	370	8.6%	49.5%	28.4%	11.6%	1.9%	2.49
S	370	8.6%	50.5%	27.6%	11.1%	2.2%	2.48
$\chi^2=12.405$ n.s., Cramer's V= 0.041							

¹ F=0.289 n.s., $\eta=0.028$. Mean is based on the following scale: 1= my most important recreational activity, 2= one of my most important recreational activities, 3= no more important than my other recreational activities, 4= less important than my other recreational activities, 5= one of my least important recreational activities.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-29: How would you describe your identification with the activity of waterfowl hunting?

Residence of hunter	N	% of hunters indicating...			
		I go waterfowl hunting, but I do not really consider myself a waterfowl hunter.	I am in the process of becoming a waterfowl hunter.	I used to be a waterfowl hunter, but I no longer consider myself one.	I am a waterfowl hunter.
Statewide ¹	1872	16.4%	6.4%	10.9%	66.3%
METRO	389	16.2%	8.2%	9.5%	66.1%
NE	378	14.8%	6.3%	12.2%	66.7%
NONMETRO	372	18.0%	7.0%	9.1%	65.9%
NW	368	14.4%	5.4%	13.9%	66.3%
S	368	17.9%	3.5%	11.7%	66.8%
$\chi^2=15.330$ n.s., Cramer's V= 0.052					

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-30: Involvement in waterfowl hunting: Level of agreement/disagreement that...

	Mean ¹
Waterfowl hunting is interesting to me.	4.39
The decision to go waterfowl hunting is primarily my own.	4.19
Waterfowl hunting is important to me.	4.16
I am knowledgeable about waterfowl hunting.	4.09
I have acquired equipment that I can only use for waterfowl hunting.	4.08
Waterfowl hunting is one of the most enjoyable things I do.	4.04
I enjoy discussing waterfowl hunting with my friends.	4.03
I consider myself an educated consumer regarding waterfowl hunting.	3.93
When I am waterfowl hunting I am really myself.	3.82
I have close friendships based on a common interest in waterfowl hunting.	3.61
When I waterfowl hunt, others see me the way I want them to see me.	3.60
I have a preference for waterfowl hunting over other leisure activities.	3.43
You can tell a lot about a person when you see them waterfowl hunting.	3.41
Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.	3.15
Even if close friends recommend other recreational activities, I prefer waterfowl hunting.	3.11
Most of my friends are in some way connected with waterfowl hunting.	3.06
Waterfowl hunting has a central role in my life.	2.78
A lot of my life is organized around waterfowl hunting.	2.75
I find a lot of my life organized around waterfowl-hunting activities.	2.69
The decision to go waterfowl hunting is not entirely my own.	2.35
I do not really know much about waterfowl hunting.	1.78

¹ Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

Table 6-31: Involvement in waterfowl hunting: Agreement/disagreement that... Waterfowl hunting is one of the most enjoyable things I do.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1873	1.6%	5.3%	18.3%	36.9%	37.9%	4.04
METRO	390	1.5%	5.9%	14.9%	37.2%	40.5%	4.09
NE	378	1.9%	4.2%	19.6%	32.3%	42.1%	4.08
NONMETRO	370	1.6%	5.9%	19.2%	36.8%	36.5%	4.01
NW	367	1.4%	5.2%	20.7%	39.2%	33.5%	3.98
S	371	1.6%	4.3%	20.5%	37.2%	36.4%	4.02
$\chi^2=14.302$ n.s.; Cramer's V=0.044							

¹ F=0.961 n.s., $\eta=0.045$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-32: Involvement in waterfowl hunting: Agreement/disagreement that... I am knowledgeable about waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1875	0.5%	3.7%	16.3%	45.6%	33.9%	4.09
METRO	391	0.3%	4.9%	17.6%	41.9%	35.3%	4.07
NE	377	0.8%	3.4%	14.6%	42.2%	39.0%	4.15
NONMETRO	372	0.8%	4.3%	16.7%	43.5%	34.7%	4.07
NW	367	0.8%	2.2%	15.8%	50.7%	30.5%	4.08
S	370	0.3%	2.4%	14.9%	51.4%	31.1%	4.11
$\chi^2=22.018$ n.s.; Cramer's V=0.054							

¹ F=0.648 n.s., $\eta=0.037$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-33: Involvement in waterfowl hunting: Agreement/disagreement that... The decision to go waterfowl hunting is primarily my own.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1845	1.5%	5.6%	10.4%	37.6%	44.9%	4.19
METRO	382	2.4%	6.8%	8.4%	33.0%	49.5%	4.20
NE	374	2.1%	3.7%	8.8%	36.6%	48.7%	4.26
NONMETRO	363	0.6%	4.4%	10.5%	41.6%	43.0%	4.22
NW	364	1.1%	7.4%	9.6%	45.1%	36.8%	4.09
S	367	0.8%	3.8%	15.3%	36.0%	44.1%	4.19
$\chi^2=43.917$ ***; Cramer's V=0.077							

¹ F=1.707 n.s., $\eta=0.061$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-34: Involvement in waterfowl hunting: Agreement/disagreement that... A lot of my life is organized around waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1866	14.6%	29.4%	31.3%	15.7%	9.0%	2.75
METRO	388	15.7%	32.7%	28.9%	14.2%	8.5%	2.67
NE	374	15.5%	24.1%	34.8%	15.8%	9.9%	2.80
NONMETRO	371	14.8%	29.6%	29.1%	15.9%	10.5%	2.78
NW	367	13.1%	29.4%	31.6%	18.0%	7.9%	2.78
S	368	13.0%	26.4%	35.6%	16.0%	9.0%	2.82
$\chi^2=15.718$ n.s.; Cramer's V=0.046							

¹ F=0.962 n.s., $\eta=0.045$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-35: Involvement in waterfowl hunting: Agreement/disagreement that... Waterfowl hunting has a central role in my life.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1855	17.4%	25.1%	28.7%	19.6%	9.1%	2.78
METRO	388	19.8%	27.1%	26.3%	17.3%	9.5%	2.70
NE	370	16.5%	22.7%	29.7%	20.8%	10.3%	2.86
NONMETRO	364	17.6%	22.8%	30.2%	20.1%	9.3%	2.81
NW	363	15.7%	27.8%	25.9%	22.6%	8.0%	2.79
S	370	15.1%	22.7%	33.5%	20.0%	8.6%	2.84
$\chi^2=16.139$ n.s.; Cramer's V=0.047							

¹ F=1.053 n.s., $\eta=0.048$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-36: Involvement in waterfowl hunting: Agreement/disagreement that... Most of my friends are in some way connected with waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1856	11.4%	22.1%	25.9%	29.8%	10.7%	3.06
METRO	386	15.3%	24.9%	27.2%	24.1%	8.5%	2.86
NE	373	12.1%	20.4%	32.2%	25.7%	9.7%	3.01
NONMETRO	364	12.6%	17.9%	25.3%	29.7%	14.6%	3.16
NW	366	5.5%	22.1%	24.9%	38.3%	9.3%	3.24
S	370	8.6%	22.2%	21.6%	34.6%	13.0%	3.21
$\chi^2=59.734^{***}$; Cramer's V=0.090							

¹ F=7.045***, $\eta=0.122$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-37: Involvement in waterfowl hunting: Agreement/disagreement that... When I waterfowl hunt, others see me the way I want them to see me.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1846	6.1%	6.4%	29.3%	37.7%	20.5%	3.60
METRO	381	6.3%	6.3%	29.7%	37.5%	20.2%	3.59
NE	372	6.5%	6.2%	32.0%	35.5%	19.9%	3.56
NONMETRO	369	6.8%	6.5%	29.0%	36.9%	20.9%	3.59
NW	363	3.9%	6.1%	28.7%	41.0%	20.4%	3.68
S	366	6.8%	7.1%	27.9%	37.2%	21.0%	3.58
$\chi^2=7.157$ n.s.; Cramer's V=0.031							

¹ F=0.676 n.s., $\eta=0.038$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-38: Involvement in waterfowl hunting: Agreement/disagreement that... I do not really know much about waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1866	47.6%	34.9%	11.1%	4.6%	1.8%	1.78
METRO	390	50.3%	32.3%	11.3%	4.4%	1.8%	1.75
NE	371	48.0%	33.4%	11.6%	5.4%	1.6%	1.79
NONMETRO	369	45.8%	34.4%	12.2%	5.7%	1.9%	1.83
NW	364	46.4%	37.9%	11.0%	3.3%	1.4%	1.75
S	371	45.6%	38.0%	9.7%	4.6%	2.2%	1.80
$\chi^2=8.799$ n.s.; Cramer's V=0.034							

¹ F=0.512 n.s., $\eta=0.033$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-39: Involvement in waterfowl hunting: Agreement/disagreement that... I consider myself an educated consumer regarding waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1863	1.8%	5.9%	17.3%	47.0%	28.0%	3.93
METRO	389	1.5%	6.7%	15.9%	44.5%	31.4%	3.97
NE	375	2.4%	4.5%	19.5%	44.0%	29.6%	3.94
NONMETRO	368	2.2%	6.5%	17.7%	44.0%	29.6%	3.92
NW	363	2.5%	5.0%	20.4%	49.6%	22.6%	3.85
S	370	1.1%	5.4%	15.7%	53.2%	24.6%	3.95
$\chi^2=21.968$ n.s.; Cramer's V=0.054							

¹ F=0.983 n.s., $\eta=0.046$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-40: Involvement in waterfowl hunting: Agreement/disagreement that... Waterfowl hunting is interesting to me.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1871	0.6%	0.8%	6.5%	43.7%	48.4%	4.39
METRO	389	0.3%	0.5%	5.7%	42.2%	51.4%	4.44
NE	377	0.8%	0.8%	6.4%	44.8%	47.2%	4.37
NONMETRO	370	0.5%	1.1%	7.6%	43.5%	47.3%	4.36
NW	367	0.8%	0.5%	7.4%	47.4%	43.9%	4.33
S	371	0.8%	1.1%	6.5%	42.9%	48.8%	4.38
$\chi^2=8.057$ n.s.; Cramer's V=0.033							

¹ F=1.259 n.s., $\eta=0.052$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-41: Involvement in waterfowl hunting: Agreement/disagreement that... Waterfowl hunting is important to me.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1860	0.9%	3.4%	15.3%	36.8%	39.5%	4.16
METRO	387	0.8%	3.1%	13.4%	41.3%	41.3%	4.19
NE	373	1.6%	3.8%	20.9%	31.1%	42.6%	4.09
NONMETRO	371	1.1%	3.8%	19.1%	35.6%	40.4%	4.11
NW	363	0.8%	3.0%	14.3%	43.0%	38.8%	4.16
S	368	0.8%	3.5%	16.6%	35.9%	43.2%	4.17
$\chi^2=21.426$ n.s.; Cramer's V=0.054							

¹ F=0.892 n.s., $\eta=0.044$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-42: Involvement in waterfowl hunting: Agreement/disagreement that... You can tell a lot about a person when you see them waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1864	5.6%	10.5%	35.8%	33.8%	14.4%	3.41
METRO	388	6.4%	9.5%	34.8%	32.2%	17.0%	3.44
NE	375	5.3%	10.1%	38.7%	29.3%	16.5%	3.42
NONMETRO	370	5.4%	11.6%	37.0%	35.9%	10.0%	3.34
NW	362	4.7%	9.7%	38.4%	34.0%	13.3%	3.41
S	371	5.1%	11.9%	32.6%	36.9%	13.5%	3.42
$\chi^2=18.274$ n.s.; Cramer's V=0.049							

¹ F=0.559 n.s., $\eta=0.035$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-43: Involvement in waterfowl hunting: Agreement/disagreement that... When I am waterfowl hunting I am really myself.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1859	2.1%	3.4%	29.2%	40.9%	24.4%	3.82
METRO	386	2.6%	3.9%	31.1%	36.8%	25.6%	3.79
NE	374	2.4%	4.5%	29.4%	38.2%	25.4%	3.80
NONMETRO	370	2.4%	1.9%	27.0%	45.7%	23.0%	3.85
NW	363	1.1%	1.7%	30.3%	43.5%	23.4%	3.87
S	369	1.6%	4.9%	26.6%	42.8%	24.1%	3.83
$\chi^2=20.873$ n.s.; Cramer's V=0.053							

¹ F=0.475 n.s., $\eta=0.032$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-44: Involvement in waterfowl hunting: Agreement/disagreement that... I enjoy discussing waterfowl hunting with my friends.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1868	1.3%	2.8%	16.6%	50.2%	29.1%	4.03
METRO	390	1.0%	3.1%	18.2%	45.9%	31.8%	4.04
NE	376	1.9%	2.7%	16.2%	48.7%	30.6%	4.03
NONMETRO	370	1.9%	3.5%	15.7%	49.7%	29.2%	4.01
NW	365	1.1%	1.9%	17.0%	56.4%	23.6%	3.99
S	369	1.4%	2.4%	14.4%	53.4%	28.5%	4.05
$\chi^2=15.875$ n.s.; Cramer's V=0.046							

¹ F=0.314 n.s., $\eta=0.026$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-45: Involvement in waterfowl hunting: Agreement/disagreement that... The decision to go waterfowl hunting is not entirely my own.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1865	33.3%	26.3%	17.0%	18.5%	4.9%	2.35
METRO	389	36.0%	25.2%	13.4%	20.1%	5.4%	2.34
NE	374	36.9%	23.5%	16.6%	17.4%	5.6%	2.31
NONMETRO	371	29.9%	26.1%	22.1%	16.7%	5.1%	2.41
NW	362	30.1%	30.4%	17.4%	18.8%	3.3%	2.35
S	370	32.7%	26.5%	18.4%	17.6%	4.9%	2.35
$\chi^2=20.889$ n.s.; Cramer's V=0.053							

¹ F=0.308 n.s., $\eta=0.026$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-46: Involvement in waterfowl hunting: Agreement/disagreement that... I have a preference for waterfowl hunting over other leisure activities.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1859	4.6%	14.4%	30.4%	34.8%	15.7%	3.43
METRO	386	4.9%	14.0%	28.5%	38.3%	14.2%	3.43
NE	377	3.7%	15.6%	31.0%	29.4%	20.2%	3.47
NONMETRO	371	4.6%	15.4%	27.0%	35.0%	18.1%	3.47
NW	364	3.8%	12.9%	35.2%	34.3%	13.7%	3.41
S	366	5.2%	15.0%	32.5%	32.0%	15.3%	3.37
$\chi^2=19.621$ n.s.; Cramer's V=0.051							

¹ F=0.523 n.s., $\eta=0.034$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-47: Involvement in waterfowl hunting: Agreement/disagreement that... I find a lot of my life organized around waterfowl-hunting activities.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1849	13.4%	33.3%	31.0%	15.8%	6.5%	2.69
METRO	386	15.3%	33.9%	29.8%	15.8%	5.2%	2.62
NE	373	15.0%	32.4%	30.0%	15.5%	7.0%	2.67
NONMETRO	368	13.3%	32.1%	33.2%	14.1%	7.3%	2.70
NW	359	10.6%	37.9%	27.9%	17.3%	6.4%	2.71
S	365	11.8%	29.9%	34.2%	16.2%	7.9%	2.79
$\chi^2=15.343$ n.s.; Cramer's V=0.046							

¹ F=1.199 n.s., $\eta=0.051$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 6-48: Involvement in waterfowl hunting: Agreement/disagreement that... Even if close friends recommend other recreational activities, I prefer waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1862	7.2%	22.7%	33.6%	24.9%	11.6%	3.11
METRO	387	8.5%	21.7%	33.6%	24.5%	11.6%	3.09
NE	378	7.4%	23.0%	32.0%	23.5%	14.0%	3.14
NONMETRO	368	7.9%	18.8%	35.9%	23.9%	13.6%	3.17
NW	364	4.4%	29.4%	30.5%	26.1%	9.6%	3.07
S	369	6.8%	22.0%	35.0%	26.3%	10.0%	3.11
$\chi^2=23.236$ n.s.; Cramer's V=0.056							

¹ F= 0.427 n.s., $\eta=0.030$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-49: Involvement in waterfowl hunting: Agreement/disagreement that... I have acquired equipment that I can only use for waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1857	3.2%	6.8%	8.8%	41.4%	39.8%	4.08
METRO	387	3.1%	7.0%	7.2%	39.3%	43.4%	4.13
NE	376	3.5%	6.6%	6.1%	40.7%	43.1%	4.13
NONMETRO	370	3.8%	8.4%	9.7%	38.6%	39.5%	4.02
NW	364	3.6%	7.1%	9.3%	46.2%	33.8%	3.99
S	364	2.2%	4.9%	11.8%	43.7%	37.4%	4.09
$\chi^2=23.112$ n.s.; Cramer's V=0.056							

¹ F=1.472 n.s., $\eta=0.056$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 6: Motivations for and Involvement in Waterfowl Hunting

Table 6-50: Involvement in waterfowl hunting: Agreement/disagreement that... I have close friendships based on a common interest in waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1863	5.3%	10.9%	24.1%	36.8%	22.9%	3.61
METRO	388	7.2%	10.6%	21.4%	36.6%	24.2%	3.60
NE	376	4.8%	11.4%	25.5%	33.2%	25.0%	3.62
NONMETRO	371	7.8%	12.1%	24.3%	33.7%	22.1%	3.50
NW	363	3.9%	10.5%	28.1%	38.3%	19.3%	3.59
S	368	1.4%	10.3%	24.2%	40.8%	23.4%	3.74
$\chi^2=31.971^*$; Cramer's V=0.065							

¹ F=2.334 n.s., $\eta=0.071$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 6-51: Involvement in waterfowl hunting: Agreement/disagreement that... Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1864	9.6%	21.1%	30.3%	22.8%	16.2%	3.15
METRO	388	10.8%	19.6%	29.4%	21.4%	18.8%	3.18
NE	378	10.6%	19.0%	33.1%	23.3%	14.0%	3.11
NONMETRO	371	10.8%	23.5%	27.5%	23.2%	15.1%	3.08
NW	362	7.7%	22.1%	32.0%	24.6%	13.5%	3.14
S	369	7.3%	21.7%	31.4%	23.3%	16.3%	3.20
$\chi^2=14.856$ n.s.; Cramer's V=0.045							

¹ F=0.555 n.s., $\eta=0.035$. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Constraints to Waterfowl Hunting

Respondents answered a number of questions related to constraints to waterfowl hunting participation. First, they responded to a general question about the ease of going waterfowl hunting in the state. Statewide, nearly 80% of respondents indicated that it was true that if they wanted to hunt for waterfowl in Minnesota, that they could easily go, while only 13.4% said this was false (Table 7-1). Next, respondents rated 32 constraint items on the scale 1 = not at all limiting to 7 very limiting (Table 7-2). Only two items were rated above the midpoint on the scale: (a) waterfowl populations too low ($\bar{x} = 4.81$) and (b) work commitments ($\bar{x} = 4.27$). Means and frequencies for all 32 constraints are presented in Tables 7-2 through 7-34.

The amount that some constraints limited participation differed by region of residence. Respondents from the metro regions rated several items as more limiting, including: (a) family commitments (Table 7-3), (b) access to public land for hunting (Table 7-6), (c) crowding at hunting areas (Table 7-7), and (d) no hunting opportunities near my home (Table 7-24). Metro respondents rated the cost of licenses (Table 7-9) and age (Table 7-22) as less limiting than respondents from other regions did. Respondents from the metro and northeast regions rated no desire (Table 7-15) or need (Table 7-16) for waterfowl for food, and “the type of people that hunt waterfowl” (Table 7-20) as less limiting on their participation. Respondents from the south and metro regions rated the timing of the waterfowl migration (Table 7-25) as more limiting to their participation than did respondents from the other regions.

An exploratory factor analysis of the 32 constraint items produced nine constraint factors: (a) age/effort ($\bar{x} = 1.87$), (b) access/crowding ($\bar{x} = 3.20$), (c) cost ($\bar{x} = 3.01$), (d) concern for animal welfare ($\bar{x} = 1.67$), (e) busy life ($\bar{x} = 3.84$), (f) other hunting interests ($\bar{x} = 2.57$), (g) media coverage ($\bar{x} = 1.48$), (h) lack of interest in waterfowl for food ($\bar{x} = 2.18$), and (i) low waterfowl populations ($\bar{x} = 4.11$).

Constraint Negotiation to Maintain Waterfowl-Hunting Participation

Respondents rated their use of 13 strategies to negotiate constraints to waterfowl hunting participation on the scale 1 = not at all to 7 = very much (Table 7-35). Only one strategy was rated above the midpoint on the scale: getting the equipment together beforehand so I could get out of the house on time ($\bar{x} = 4.11$). Means and frequencies for the 13 strategies are presented in Tables 7-36 through 7-48.

The amount of use of constraint negotiation strategies differed by region of residence for only two strategies. Respondents from the northwest and south regions reported greater use of “getting work done earlier or staying up later to increase time for waterfowl hunting” (Table 7-41). Respondents from the metro region reported greater use of “asking for help to gain waterfowl hunting skills” (Table 7-42).

We conducted a factor analysis of the constraint negotiation items based on four factors originally developed by Hubbard and Mannell (2001): (a) time management ($\bar{x} = 3.69$), (b) skill acquisition ($\bar{x} = 2.88$), (c) financial ($\bar{x} = 2.55$), and (d) interpersonal coordination strategies ($\bar{x} = 2.86$).

Section 7: Constraints and Constraint Negotiation

Table 7-1: If I want to hunt for waterfowl in Minnesota, I can easily go.

Residence of hunter	n	Definitely false	Moderately false	Slightly false	Neutral	Slightly true	Moderately true	Definitely true	Mean ¹
Statewide ²	1814	1.9%	5.7%	5.8%	7.4%	13.7%	25.7%	39.9%	5.62
METRO	378	2.4%	8.2%	5.8%	6.9%	16.7%	25.7%	34.4%	5.42
NE	367	1.6%	4.9%	4.6%	7.9%	14.4%	25.1%	41.4%	5.69
NONMETRO	361	2.8%	4.7%	6.1%	7.8%	13.0%	24.4%	41.3%	5.62
NW	354	1.1%	4.5%	4.0%	7.3%	10.2%	24.9%	48.0%	5.88
S	357	0.8%	3.6%	7.6%	7.8%	12.0%	28.0%	40.1%	5.71
$\chi^2=35.655$ n.s., Cramer's V=0.070									

¹ F=4.063**, $\eta=0.094$ Mean is based on the scale: 1 = definitely false, 2 = moderately false, 3 = slightly false, 4 = neutral, 5 = slightly true, 6 = moderately true, 7 = definitely true.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-2: Constraints to waterfowl hunting: Amount that the following factors limited your waterfowl hunting in Minnesota in the past 5 years...

	Mean ¹
Waterfowl populations too low	4.81
Work commitments	4.27
Crowding at hunting areas	3.69
Family commitments	3.63
Not enough leisure time	3.63
Access to private land for hunting	3.47
Interest in other recreational activities	3.45
The timing of the waterfowl migration	3.41
Travel costs	3.33
Cost of equipment	3.08
Prefer other types of hunting	2.96
Cost of licenses	2.90
Access to public land for hunting	2.89
No hunting opportunities near my home	2.78
Waterfowl hunting regulations too restrictive	2.70
Availability of waterfowl hunting partners	2.60
The amount of effort required to go hunting	2.38
No need for waterfowl as food	2.21
The type of people that hunt waterfowl	2.15
Amount of planning required to go hunting	2.15
No desire for waterfowl as food	2.14
Having the right kind of equipment	2.02
Concern over wounding waterfowl	1.90
Age	1.86
Having the right breed of dog	1.86
Having to get up too early in the morning	1.73
Personal concern for animal pain & distress	1.61
Waterfowl hunting is too difficult	1.56
Poor health	1.51
Articles I read in local newspapers or magazines	1.51
Other people's concern for animals' pain and distress	1.49
Articles I read in national magazines	1.44

¹ Mean is based on the scale: 1 = not at all to 7 = very.

Section 7: Constraints and Constraint Negotiation

Table 7-3: Constraints to waterfowl hunting: Amount that... Family commitments... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1878	19.5%	15.3%	12.7%	17.5%	14.1%	12.2%	8.6%	3.63
METRO	386	19.2%	14.0%	12.7%	14.5%	12.4%	16.1%	11.1%	3.80
NE	378	23.5%	15.6%	14.0%	18.0%	13.5%	9.0%	6.3%	3.35
NONMETRO	371	18.3%	15.1%	13.2%	17.5%	16.4%	11.1%	8.4%	3.65
NW	374	18.7%	16.0%	10.7%	22.5%	16.0%	10.7%	5.3%	3.55
S	376	19.7%	17.0%	13.3%	17.8%	13.6%	9.8%	8.8%	3.53
$\chi^2=36.443$ n.s., Cramer's V=0.070									

¹ F=2.874*, $\eta=0.078$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-4: Constraints to waterfowl hunting: Amount that... Work commitments... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1867	15.0%	10.3%	8.7%	15.0%	15.7%	20.1%	15.2%	4.27
METRO	387	16.3%	11.4%	8.5%	12.1%	13.4%	22.7%	15.5%	4.25
NE	377	15.4%	11.4%	10.6%	17.2%	12.5%	18.3%	14.6%	4.13
NONMETRO	366	12.8%	10.9%	9.8%	16.1%	18.0%	17.2%	15.0%	4.27
NW	369	15.7%	8.9%	7.0%	16.5%	19.0%	18.2%	14.6%	4.27
S	372	13.7%	8.3%	8.6%	16.4%	16.1%	21.0%	15.9%	4.39
$\chi^2=24.282$ n.s., Cramer's V=0.057									

¹ F=0.784 n.s., $\eta=0.041$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-5: Constraints to waterfowl hunting: Amount that... Access to private land for hunting... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1844	32.2%	10.7%	9.7%	10.9%	11.5%	12.6%	12.5%	3.47
METRO	386	32.4%	10.1%	8.5%	9.1%	11.7%	13.0%	15.3%	3.58
NE	370	37.8%	8.9%	10.5%	10.8%	10.0%	11.4%	10.5%	3.22
NONMETRO	361	29.1%	10.5%	9.1%	12.2%	11.6%	13.9%	13.6%	3.63
NW	361	33.5%	12.2%	11.4%	11.1%	11.4%	10.8%	9.7%	3.26
S	366	30.3%	11.5%	10.1%	12.8%	12.0%	13.1%	10.1%	3.45
$\chi^2=22.368$ n.s., Cramer's V=0.055									

¹ F=2.524 n.s., $\eta=0.074$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-6: Constraints to waterfowl hunting: Amount that... Access to public land for hunting... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1865	36.3%	14.1%	13.6%	13.8%	10.1%	6.7%	5.4%	2.89
METRO	388	31.4%	13.4%	14.9%	13.9%	11.6%	8.0%	6.7%	3.12
NE	375	40.3%	14.1%	13.6%	12.8%	8.8%	6.4%	4.0%	2.71
NONMETRO	365	37.0%	12.9%	13.2%	15.3%	10.1%	5.5%	6.0%	2.89
NW	368	42.9%	14.9%	12.8%	12.2%	8.7%	4.6%	3.8%	2.58
S	372	36.3%	15.9%	12.4%	14.0%	9.4%	7.5%	4.6%	2.85
$\chi^2=23.503$ n.s., Cramer's V=0.056									

¹ F=4.430**, $\eta=0.097$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-7: Constraints to waterfowl hunting: Amount that... Crowding at hunting areas... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1854	22.5%	12.1%	12.5%	14.3%	14.8%	13.2%	10.5%	3.69
METRO	383	18.8%	11.0%	14.1%	12.8%	15.4%	14.4%	13.6%	3.92
NE	370	24.1%	15.9%	10.0%	15.7%	15.1%	12.2%	7.0%	3.46
NONMETRO	366	22.1%	10.9%	12.8%	15.3%	14.8%	12.3%	11.7%	3.73
NW	368	29.3%	13.0%	10.9%	17.4%	14.4%	9.0%	6.0%	3.25
S	371	22.4%	12.1%	12.4%	12.4%	14.0%	16.4%	10.2%	3.74
$\chi^2=47.079^{***}$, Cramer's V=0.080									

¹ F=6.380***, $\eta=0.117$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-8: Constraints to waterfowl hunting: Amount that... Cost of equipment... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1872	28.1%	17.4%	14.7%	15.3%	11.7%	8.4%	4.4%	3.08
METRO	388	27.8%	20.9%	17.3%	12.6%	10.6%	7.7%	3.1%	2.93
NE	377	27.9%	14.3%	13.0%	17.5%	13.5%	7.7%	6.1%	3.22
NONMETRO	369	27.6%	17.3%	13.6%	17.6%	10.0%	8.7%	5.1%	3.12
NW	368	27.4%	15.2%	14.4%	15.8%	12.5%	10.1%	4.6%	3.19
S	374	29.7%	15.2%	12.6%	16.0%	13.6%	8.0%	4.8%	3.12
$\chi^2=23.582$ n.s., Cramer's V=0.056									

¹ F=1.457 n.s., $\eta=0.056$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-9: Constraints to waterfowl hunting: Amount that... Cost of licenses... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	31.0%	19.5%	14.2%	14.7%	9.9%	5.8%	4.9%	2.90
METRO	386	33.4%	23.6%	14.2%	12.4%	9.1%	4.1%	3.1%	2.65
NE	376	30.3%	15.4%	14.9%	17.6%	10.6%	5.9%	5.3%	3.02
NONMETRO	369	28.7%	20.3%	14.4%	12.7%	11.1%	7.0%	5.7%	3.01
NW	369	30.4%	15.2%	13.8%	14.6%	12.2%	7.6%	6.2%	3.11
S	374	29.7%	17.9%	14.2%	18.7%	8.0%	5.9%	5.6%	2.98
$\chi^2=32.572$ n.s., Cramer's V=0.066									

¹ F=3.551*, $\eta=0.087$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-10: Constraints to waterfowl hunting: Amount that... Travel costs... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	24.9%	15.4%	14.2%	15.9%	12.9%	10.2%	6.5%	3.33
METRO	387	23.5%	15.2%	17.8%	16.0%	13.2%	8.0%	6.2%	3.29
NE	374	22.2%	14.7%	12.3%	17.4%	13.9%	12.8%	6.7%	3.51
NONMETRO	371	24.0%	14.0%	13.5%	16.4%	13.2%	11.3%	7.5%	3.45
NW	370	29.7%	16.5%	10.3%	15.4%	13.5%	9.5%	5.1%	3.15
S	370	25.4%	16.2%	13.2%	14.9%	11.1%	12.2%	7.0%	3.35
$\chi^2=24.468$ n.s., Cramer's V=0.057									

¹ F=1.976 n.s., $\eta=0.065$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-11: Constraints to waterfowl hunting: Amount that... Waterfowl hunting regulations too restrictive... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	34.3%	21.7%	13.6%	14.0%	6.9%	5.3%	4.2%	2.70
METRO	386	34.7%	23.8%	13.5%	11.9%	6.0%	6.5%	3.6%	2.65
NE	373	30.8%	20.6%	16.6%	13.1%	6.4%	6.7%	5.6%	2.86
NONMETRO	370	36.5%	22.2%	13.5%	12.4%	8.6%	3.5%	3.2%	2.58
NW	369	32.8%	20.6%	11.4%	17.6%	8.4%	5.1%	4.1%	2.80
S	375	34.7%	19.2%	14.4%	16.0%	5.9%	4.3%	5.6%	2.74
$\chi^2=28.079$ n.s., Cramer's V=0.061									

¹ F=1.570 n.s., $\eta=0.058$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 7-12: Constraints to waterfowl hunting: Amount that... Availability of waterfowl hunting partners... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	38.6%	17.9%	13.5%	14.8%	7.8%	5.6%	1.9%	2.60
METRO	388	37.1%	16.5%	15.7%	14.7%	8.0%	5.2%	2.8%	2.67
NE	376	34.6%	19.1%	14.1%	16.0%	6.6%	6.4%	3.2%	2.73
NONMETRO	370	40.3%	20.0%	13.5%	13.0%	6.8%	5.1%	1.4%	2.47
NW	366	39.1%	19.4%	11.7%	15.0%	9.0%	4.9%	0.8%	2.54
S	372	41.4%	16.4%	10.8%	15.6%	7.8%	7.0%	1.1%	2.57
$\chi^2=24.411$ n.s., Cramer's V=0.057									

¹ F=1.439 n.s., $\eta=0.055$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-13: Constraints to waterfowl hunting: Amount that... Interest in other recreational activities... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1855	21.2%	14.4%	14.4%	19.1%	13.8%	12.6%	4.4%	3.45
METRO	384	21.4%	14.3%	14.1%	18.8%	13.5%	14.3%	3.6%	3.46
NE	368	19.6%	13.9%	13.3%	21.5%	13.9%	11.7%	6.3%	3.56
NONMETRO	368	20.7%	15.8%	13.3%	16.6%	15.8%	12.2%	5.7%	3.51
NW	366	18.3%	15.6%	14.5%	22.7%	15.6%	10.7%	2.7%	3.45
S	371	25.1%	12.4%	16.4%	17.8%	11.1%	12.1%	5.1%	3.34
$\chi^2=25.963$ n.s., Cramer's V=0.059									

¹ F=0.728 n.s., $\eta=0.040$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-14: Constraints to waterfowl hunting: Amount that... Waterfowl populations too low... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1861	9.7%	7.9%	9.4%	13.0%	12.8%	19.2%	28.1%	4.81
METRO	386	7.8%	7.0%	7.3%	15.5%	11.9%	22.3%	28.2%	4.97
NE	375	9.3%	9.9%	7.7%	13.1%	12.3%	17.9%	29.9%	4.82
NONMETRO	369	11.1%	9.5%	11.9%	12.5%	13.6%	16.0%	25.5%	4.58
NW	368	12.2%	7.1%	9.8%	11.1%	14.1%	19.3%	26.4%	4.71
S	367	9.8%	7.6%	11.2%	10.6%	12.5%	17.4%	30.8%	4.84
$\chi^2=27.194$ n.s., Cramer's V=0.060									

¹ F=1.956 n.s., $\eta=0.065$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-15: Constraints to waterfowl hunting: Amount that... No desire for waterfowl as food... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1828	50.8%	19.3%	8.7%	13.2%	3.5%	2.6%	1.8%	2.14
METRO	380	52.9%	20.8%	7.1%	12.4%	2.9%	2.4%	1.6%	2.05
NE	364	53.8%	21.2%	9.1%	11.3%	2.2%	1.6%	0.8%	1.95
NONMETRO	358	50.0%	21.2%	9.5%	8.9%	4.5%	3.9%	2.0%	2.16
NW	361	49.6%	15.5%	8.0%	16.6%	3.9%	3.0%	3.3%	2.32
S	366	47.5%	17.2%	11.2%	16.7%	3.8%	2.2%	1.4%	2.24
$\chi^2=38.606^*$, Cramer's V=0.073									

¹ F=3.502**, $\eta=0.087$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-16: Constraints to waterfowl hunting: Amount that... No need for waterfowl as food... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1865	51.9%	17.3%	7.7%	13.3%	3.8%	3.2%	2.9%	2.21
METRO	386	56.5%	17.4%	5.7%	11.9%	3.9%	2.8%	1.8%	2.05
NE	373	52.3%	19.6%	8.8%	11.5%	1.9%	3.2%	2.7%	2.12
NONMETRO	371	50.9%	20.8%	6.5%	12.1%	4.0%	3.0%	2.7%	2.17
NW	368	47.0%	15.8%	10.9%	14.1%	3.8%	3.3%	5.2%	2.42
S	370	49.2%	14.3%	8.6%	16.8%	4.3%	3.8%	3.0%	2.36
$\chi^2=35.065$ n.s., Cramer's V=0.069									

¹ F=3.601**, $\eta=0.088$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-17: Constraints to waterfowl hunting: Amount that... Personal concern for animal pain & distress... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1866	72.5%	12.7%	5.0%	5.0%	1.9%	1.5%	1.3%	1.61
METRO	387	74.2%	11.1%	5.7%	4.4%	1.6%	1.8%	1.3%	1.59
NE	374	69.8%	13.1%	4.8%	7.2%	2.4%	1.6%	1.1%	1.68
NONMETRO	369	71.8%	15.2%	4.9%	4.3%	.5%	1.9%	1.4%	1.58
NW	368	73.6%	14.1%	3.5%	4.9%	2.7%	0.8%	0.3%	1.52
S	371	70.9%	11.9%	5.4%	5.7%	2.7%	1.1%	2.4%	1.70
$\chi^2=25.655$ n.s., Cramer's V=0.059									

¹ F=1.370 n.s., $\eta=0.054$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-18: Constraints to waterfowl hunting: Amount that... Other people's concern for animals' pain and distress... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1861	77.7%	10.7%	3.7%	4.5%	0.8%	1.2%	1.3%	1.49
METRO	386	78.0%	11.1%	3.4%	4.1%	0.8%	1.8%	0.8%	1.47
NE	375	75.7%	10.7%	4.5%	5.1%	1.6%	0.5%	1.9%	1.55
NONMETRO	370	77.8%	12.2%	3.2%	3.8%	0.5%	1.4%	1.1%	1.45
NW	366	79.2%	9.3%	4.1%	4.9%	0.8%	0.8%	0.8%	1.45
S	368	76.6%	9.8%	4.1%	5.2%	.8%	0.8%	2.7%	1.57
$\chi^2=17.945$ n.s., Cramer's V=0.049									

¹ F=0.924 n.s., $\eta=0.045$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-19: Constraints to waterfowl hunting: Amount that... Not enough leisure time... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1853	23.1%	10.9%	12.8%	16.6%	15.1%	12.5%	8.8%	3.63
METRO	384	23.2%	12.5%	13.0%	15.4%	15.1%	12.0%	8.9%	3.58
NE	373	25.7%	11.0%	9.4%	21.2%	13.7%	11.5%	7.5%	3.51
NONMETRO	364	20.6%	12.6%	13.5%	20.3%	13.7%	11.0%	8.2%	3.60
NW	367	23.2%	8.4%	13.6%	15.5%	16.9%	12.8%	9.5%	3.71
S	369	23.8%	8.9%	13.0%	14.1%	15.7%	14.9%	9.5%	3.72
$\chi^2=25.841$ n.s., Cramer's V=0.059									

¹ F=0.757 n.s., $\eta=0.040$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-20: Constraints to waterfowl hunting: Amount that... The type of people that hunt waterfowl... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1862	51.5%	19.2%	8.1%	12.2%	4.6%	2.3%	2.1%	2.15
METRO	387	53.5%	19.6%	8.5%	10.6%	4.9%	2.1%	0.8%	2.03
NE	373	53.4%	21.2%	8.8%	9.1%	3.2%	2.4%	1.9%	2.02
NONMETRO	369	50.4%	19.2%	8.9%	13.3%	3.5%	1.9%	2.7%	2.17
NW	367	52.3%	18.3%	7.9%	12.5%	5.4%	1.4%	2.2%	2.13
S	369	47.2%	18.2%	6.5%	15.4%	4.9%	4.1%	3.8%	2.40
$\chi^2=30.318$ n.s., Cramer's V=0.064									

¹ F=3.658**, $\eta=0.088$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-21: Constraints to waterfowl hunting: Amount that... Amount of planning required to go hunting... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1872	45.8%	22.5%	13.6%	10.4%	5.1%	1.7%	0.9%	2.15
METRO	389	47.0%	23.1%	13.1%	8.2%	4.4%	3.1%	1.0%	2.13
NE	377	45.6%	21.0%	14.6%	10.3%	7.2%	0.8%	0.5%	2.17
NONMETRO	370	45.4%	25.1%	14.3%	8.9%	4.3%	0.8%	1.1%	2.08
NW	368	47.0%	21.7%	11.1%	13.3%	5.2%	1.1%	0.5%	2.13
S	371	42.9%	20.8%	15.6%	13.2%	5.7%	1.1%	0.8%	2.25
$\chi^2=29.688$ n.s., Cramer's V=0.063									

¹ F=0.704 n.s., $\eta=0.039$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-22: Constraints to waterfowl hunting: Amount that... Age... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1873	62.2%	16.0%	6.8%	7.3%	4.8%	2.0%	0.9%	1.86
METRO	387	64.6%	17.8%	6.7%	5.2%	4.1%	1.3%	0.3%	1.71
NE	377	60.7%	17.5%	6.9%	8.2%	2.9%	2.9%	0.8%	1.87
NONMETRO	371	62.5%	15.6%	5.9%	8.4%	3.8%	1.6%	2.2%	1.89
NW	370	62.2%	14.3%	7.8%	8.1%	6.5%	0.8%	0.3%	1.86
S	373	58.4%	13.9%	7.0%	8.8%	6.4%	4.0%	1.3%	2.08
$\chi^2=40.032^*$, Cramer's V=0.073									

¹ F=3.331*, $\eta=0.084$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-23: Constraints to waterfowl hunting: Amount that... The amount of effort required to go hunting... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	41.8%	21.7%	11.7%	11.6%	8.9%	3.4%	0.9%	2.38
METRO	384	41.1%	24.5%	11.2%	10.7%	8.3%	3.6%	0.5%	2.34
NE	376	42.3%	17.6%	14.6%	12.0%	9.8%	3.2%	0.5%	2.41
NONMETRO	373	43.2%	21.7%	13.1%	10.7%	7.8%	1.6%	1.9%	2.31
NW	369	41.7%	22.8%	9.2%	13.3%	9.2%	3.0%	0.8%	2.38
S	372	41.7%	18.0%	11.8%	12.1%	10.2%	5.1%	1.1%	2.51
$\chi^2=27.217$ n.s., Cramer's V=0.060									

¹ F=0.940 n.s., $\eta=0.045$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-24: Constraints to waterfowl hunting: Amount that... No hunting opportunities near my home... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1865	41.0%	14.6%	11.1%	11.2%	8.5%	8.3%	5.3%	2.78
METRO	385	30.6%	13.5%	10.9%	11.4%	10.6%	12.5%	10.4%	3.37
NE	375	45.3%	16.8%	13.6%	9.1%	6.7%	6.4%	2.1%	2.43
NONMETRO	370	41.9%	13.5%	11.9%	12.4%	9.7%	7.6%	3.0%	2.69
NW	368	50.0%	17.4%	7.9%	11.4%	6.0%	4.9%	2.4%	2.30
S	372	47.8%	14.0%	12.1%	10.5%	7.0%	5.6%	3.0%	2.44
$\chi^2=102.617^{***}$, Cramer's V=0.117									

¹ F=20.631***, $\eta=0.206$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-25: Constraints to waterfowl hunting: Amount that... The timing of the waterfowl migration... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1859	27.1%	14.2%	11.1%	16.2%	10.8%	11.5%	9.2%	3.46
METRO	382	24.1%	14.1%	12.0%	17.8%	8.9%	12.0%	11.0%	3.53
NE	375	29.6%	13.1%	13.6%	14.9%	10.9%	9.1%	8.8%	3.27
NONMETRO	370	28.1%	14.1%	11.9%	16.8%	12.4%	10.5%	6.2%	3.28
NW	368	31.8%	17.7%	10.9%	14.1%	8.2%	10.3%	7.1%	3.08
S	371	25.6%	11.9%	7.8%	15.4%	14.8%	13.7%	10.8%	3.66
$\chi^2=40.149^*$, Cramer's V=0.073									

¹ F=4.826**, $\eta=0.101$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-26: Constraints to waterfowl hunting: Amount that... Poor health... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1863	76.9%	10.8%	3.4%	5.0%	2.1%	1.0%	0.8%	1.51
METRO	387	80.1%	9.6%	4.1%	3.4%	1.6%	0.3%	1.0%	1.42
NE	377	73.7%	13.0%	5.3%	3.2%	2.7%	0.8%	1.3%	1.56
NONMETRO	368	75.0%	13.0%	1.9%	4.9%	2.4%	1.9%	0.8%	1.56
NW	365	75.9%	12.9%	3.0%	5.8%	2.2%	0.3%	0.0%	1.46
S	370	75.7%	7.8%	2.7%	8.4%	2.4%	2.2%	0.8%	1.64
$\chi^2=46.784^{**}$, Cramer's V=0.079									

¹ F=2.131 n.s., $\eta=0.068$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-27: Constraints to waterfowl hunting: Amount that... Prefer other types of hunting... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1862	33.4%	15.1%	12.6%	16.4%	10.2%	8.0%	4.3%	2.96
METRO	383	37.1%	14.6%	13.8%	12.8%	8.9%	8.6%	4.2%	2.84
NE	374	36.4%	13.1%	11.5%	17.6%	10.4%	8.6%	2.4%	2.88
NONMETRO	367	28.3%	18.8%	11.2%	18.0%	11.2%	6.8%	5.7%	3.08
NW	370	30.5%	15.9%	12.7%	20.8%	11.1%	6.5%	2.4%	2.95
S	374	32.9%	13.1%	12.3%	16.3%	10.4%	8.8%	6.1%	3.09
$\chi^2=35.370$ n.s., Cramer's V=0.069									

¹ F=1.428 n.s., $\eta=0.055$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-28: Constraints to waterfowl hunting: Amount that... Having the right kind of equipment... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1873	56.1%	18.4%	8.3%	8.1%	4.6%	2.8%	1.8%	2.02
METRO	388	60.1%	18.0%	6.7%	4.9%	5.2%	3.6%	1.5%	1.94
NE	377	57.0%	15.4%	8.8%	9.0%	6.4%	1.9%	1.6%	2.04
NONMETRO	370	49.5%	20.8%	9.5%	11.6%	4.1%	2.7%	1.9%	2.16
NW	369	54.2%	20.6%	7.0%	10.3%	4.3%	2.2%	1.4%	2.02
S	373	56.3%	16.4%	11.0%	8.0%	3.2%	2.4%	2.7%	2.03
$\chi^2=35.460$ n.s., Cramer's V=0.069									

¹ F=0.995 n.s., $\eta=0.046$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-29: Constraints to waterfowl hunting: Amount that... Having the right breed of dog... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	69.3%	11.1%	3.6%	6.4%	3.6%	2.6%	3.5%	1.86
METRO	387	70.3%	11.1%	2.8%	5.7%	3.9%	2.3%	3.9%	1.84
NE	375	71.2%	10.1%	4.5%	5.6%	3.7%	2.1%	2.7%	1.78
NONMETRO	368	66.6%	13.3%	4.3%	5.7%	3.5%	3.8%	2.7%	1.89
NW	371	66.8%	11.6%	3.5%	8.1%	2.7%	3.8%	3.5%	1.94
S	371	71.2%	8.9%	4.0%	7.0%	3.8%	1.3%	3.8%	1.82
$\chi^2=18.455$ n.s., Cramer's V=0.050									

¹ F=0.538 n.s., $\eta=0.034$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-30: Constraints to waterfowl hunting: Amount that... Having to get up too early in the morning... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1873	67.2%	14.7%	5.4%	6.5%	2.8%	2.2%	1.0%	1.73
METRO	387	68.7%	17.1%	3.4%	5.4%	2.3%	2.1%	1.0%	1.66
NE	376	68.4%	12.8%	7.7%	5.3%	3.2%	2.4%	0.3%	1.70
NONMETRO	372	65.3%	15.3%	6.2%	7.8%	1.9%	2.7%	0.8%	1.77
NW	370	67.8%	13.8%	5.1%	6.2%	3.8%	2.2%	1.1%	1.75
S	373	65.7%	12.1%	7.2%	8.3%	3.2%	1.9%	1.6%	1.83
$\chi^2=24.416$ n.s., Cramer's V=0.057									

¹ F=0.928 n.s., $\eta=0.044$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-31: Constraints to waterfowl hunting: Amount that... Concern over wounding waterfowl... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1864	62.7%	15.6%	6.4%	6.7%	3.6%	2.9%	2.1%	1.90
METRO	385	64.4%	15.6%	6.5%	6.2%	2.6%	3.6%	1.0%	1.82
NE	375	61.9%	16.5%	8.0%	5.1%	4.0%	2.1%	2.4%	1.89
NONMETRO	372	63.7%	16.4%	6.5%	5.6%	3.0%	2.2%	2.7%	1.85
NW	365	62.5%	15.3%	6.3%	6.0%	5.2%	3.3%	1.4%	1.92
S	372	59.4%	14.8%	5.6%	9.9%	4.0%	2.2%	4.0%	2.07
$\chi^2=27.918$ n.s., Cramer's V=0.061									

¹ F=1.546 n.s., $\eta=0.058$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-32: Constraints to waterfowl hunting: Amount that... Waterfowl hunting is too difficult... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	70.5%	16.2%	4.6%	5.8%	2.2%	0.5%	0.3%	1.56
METRO	385	70.6%	17.1%	3.9%	5.5%	2.1%	0.5%	0.3%	1.54
NE	378	72.2%	13.8%	5.3%	5.0%	2.9%	0.5%	0.3%	1.55
NONMETRO	371	69.8%	17.8%	3.8%	5.7%	1.9%	0.5%	0.5%	1.56
NW	371	69.8%	18.9%	4.6%	4.9%	1.6%	0.3%	0.0%	1.50
S	371	70.4%	12.1%	6.2%	7.8%	2.7%	0.5%	0.3%	1.63
$\chi^2=19.225$ n.s., Cramer's V=0.051									

¹ F=0.708 n.s., $\eta=0.039$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-33: Constraints to waterfowl hunting: Amount that... Articles I read in national magazines... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	77.2%	11.4%	4.0%	5.7%	0.8%	0.4%	0.4%	1.44
METRO	385	79.2%	10.1%	4.9%	4.2%	0.5%	0.5%	0.5%	1.40
NE	374	77.3%	10.4%	4.5%	5.6%	0.8%	0.8%	0.5%	1.47
NONMETRO	372	74.5%	13.2%	4.3%	5.9%	1.6%	0.0%	0.5%	1.49
NW	370	77.6%	13.0%	2.7%	5.7%	0.5%	0.5%	0.0%	1.40
S	372	76.1%	11.0%	3.2%	8.3%	0.8%	0.3%	0.3%	1.49
$\chi^2=21.333$ n.s., Cramer's V=0.053									

¹ F=0.754 n.s., $\eta=0.040$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-34: Constraints to waterfowl hunting: Amount that... Articles I read in local newspapers or magazines... limited waterfowl hunting in Minnesota in past 5 years.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1879	74.6%	12.4%	4.2%	6.0%	1.7%	0.9%	0.3%	1.51
METRO	389	74.3%	12.3%	5.4%	5.4%	1.0%	1.5%	0.0%	1.51
NE	377	73.7%	11.4%	5.8%	5.6%	2.4%	0.8%	0.3%	1.55
NONMETRO	372	73.1%	14.0%	3.8%	5.6%	2.2%	0.3%	1.1%	1.55
NW	370	77.6%	13.0%	2.4%	5.7%	0.8%	0.5%	0.0%	1.41
S	375	74.1%	11.2%	3.5%	7.7%	2.7%	0.5%	0.3%	1.56
$\chi^2=31.593$ n.s., Cramer's V=0.065									

¹ F=1.285 n.s., $\eta=0.052$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-35: Use of strategies to negotiation constraints to waterfowl hunting.

	Mean ¹
Getting the equipment together beforehand so I could get out of the house on time.	4.11
Cutting short hunting outings to make time for other responsibilities.	3.53
Getting work done earlier or staying up later to increase time for waterfowl hunting.	3.43
Learning new ways to hunt waterfowl.	3.35
Waterfowl hunting with people who had similar work schedules.	3.05
Living within my means financially to save money for waterfowl hunting.	2.88
Budgeting to save money for waterfowl hunting.	2.84
Finding people with similar interests in waterfowl hunting.	2.84
Improvising with the hunting equipment that I had.	2.77
Trying to find people to waterfowl hunt with.	2.66
Asking for help to gain waterfowl hunting skills.	2.40
Having others take on more responsibilities around the house so that I could get out waterfowl hunting.	2.04
Borrowing other hunters' equipment.	1.70

¹ Mean is based on the scale: 1 = not at all to 7 = very much.

Table 7-36: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Budgeting to save money for waterfowl hunting.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1873	34.0%	16.5%	13.9%	16.4%	9.6%	4.7%	4.8%	2.84
METRO	388	38.9%	14.4%	13.1%	13.4%	10.6%	4.9%	4.6%	2.76
NE	374	33.7%	14.4%	16.0%	17.1%	10.7%	4.5%	3.5%	2.84
NONMETRO	373	28.4%	14.7%	18.5%	20.6%	7.8%	4.8%	5.1%	2.99
NW	367	31.3%	20.2%	11.4%	17.7%	9.0%	5.2%	5.2%	2.89
S	374	33.2%	19.8%	12.0%	16.3%	9.6%	3.7%	5.3%	2.82
$\chi^2=35.152$ n.s., Cramer's V=0.068									

¹ F=0.942 n.s., $\eta=0.045$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-37: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Learning new ways to hunt waterfowl.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	20.8%	15.6%	15.2%	20.6%	15.7%	7.7%	4.3%	3.35
METRO	388	21.9%	13.4%	17.3%	18.8%	18.3%	7.2%	3.1%	3.32
NE	374	20.6%	15.2%	18.2%	20.3%	13.4%	8.8%	3.5%	3.31
NONMETRO	371	22.6%	18.1%	12.9%	20.2%	13.5%	7.0%	5.7%	3.27
NW	366	17.5%	18.9%	12.8%	24.6%	14.5%	7.7%	4.1%	3.39
S	371	20.5%	14.6%	14.3%	20.8%	15.6%	8.6%	5.7%	3.45
$\chi^2= 27.799$ n.s., Cramer's V=0.061									

¹ F=0.592 n.s., $\eta=0.036$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-38: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Trying to find people to waterfowl hunt with.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1825	36.4%	17.7%	14.8%	15.7%	8.1%	4.3%	3.0%	2.66
METRO	379	35.9%	20.1%	14.5%	12.7%	8.7%	4.5%	3.7%	2.66
NE	360	35.0%	18.6%	16.4%	15.0%	7.5%	4.7%	2.8%	2.67
NONMETRO	365	38.9%	15.9%	12.3%	16.7%	8.5%	4.1%	3.6%	2.67
NW	360	35.0%	18.1%	14.7%	17.8%	7.5%	4.2%	2.8%	2.68
S	361	36.8%	14.7%	16.6%	18.6%	7.8%	3.9%	1.7%	2.64
$\chi^2= 17.297$ n.s., Cramer's V=0.049									

¹ F=0.031 n.s., $\eta=0.008$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-39: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Living within my means financially to save money for waterfowl hunting.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	33.2%	17.0%	12.5%	18.0%	9.8%	4.5%	5.1%	2.88
METRO	387	36.7%	15.8%	11.4%	14.7%	11.9%	4.4%	5.2%	2.83
NE	374	33.4%	17.4%	14.2%	17.6%	8.6%	4.8%	4.0%	2.81
NONMETRO	373	29.0%	17.2%	12.1%	22.5%	8.0%	4.6%	6.7%	3.04
NW	365	32.1%	18.4%	14.2%	18.9%	8.2%	4.4%	3.8%	2.81
S	372	31.7%	17.5%	12.4%	19.1%	9.7%	4.6%	5.1%	2.92
$\chi^2= 21.105$ n.s., Cramer's V=0.053									

¹ F=1.115 n.s., $\eta=0.049$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-40: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Cutting short hunting outings to make time for other responsibilities.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1868	17.9%	14.8%	15.3%	21.5%	14.4%	10.7%	5.4%	3.53
METRO	387	17.1%	17.1%	12.7%	23.0%	12.4%	11.9%	5.9%	3.56
NE	375	20.5%	13.3%	16.8%	19.7%	14.4%	9.9%	5.3%	3.45
NONMETRO	371	19.7%	15.1%	16.4%	21.3%	15.9%	8.6%	3.0%	3.36
NW	366	17.5%	12.8%	16.7%	22.7%	16.4%	8.7%	5.2%	3.55
S	373	16.9%	13.1%	16.9%	18.8%	14.7%	12.6%	7.0%	3.67
$\chi^2= 24.551$ n.s., Cramer's V=0.057									

¹ F=1.583 n.s., $\eta=0.058$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-41: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Getting work done earlier or staying up later to increase time for waterfowl hunting.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1867	23.2%	14.7%	12.3%	18.9%	13.7%	11.0%	6.2%	3.43
METRO	386	26.2%	15.0%	13.7%	15.0%	13.5%	10.9%	5.7%	3.30
NE	375	29.1%	13.9%	10.9%	19.2%	12.8%	8.5%	5.6%	3.21
NONMETRO	371	21.3%	16.2%	13.2%	18.3%	14.3%	11.1%	5.7%	3.44
NW	366	18.0%	14.2%	12.0%	23.2%	16.4%	9.8%	6.3%	3.60
S	373	21.2%	13.7%	9.9%	22.0%	11.8%	13.4%	8.0%	3.62
$\chi^2= 34.986$, Cramer's V=0.068									

¹ F=3.448**, $\eta=0.086$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-42: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Asking for help to gain waterfowl hunting skills.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1858	43.2%	19.4%	11.8%	12.9%	7.2%	3.7%	1.9%	2.40
METRO	384	42.2%	19.5%	9.9%	12.8%	8.9%	4.2%	2.6%	2.49
NE	375	49.6%	18.7%	10.7%	12.5%	5.6%	2.1%	0.8%	2.15
NONMETRO	369	45.5%	17.9%	13.0%	11.1%	6.2%	4.3%	1.9%	2.35
NW	364	42.3%	20.9%	12.6%	14.0%	5.2%	3.6%	1.4%	2.35
S	371	40.2%	19.4%	13.7%	14.0%	7.8%	3.2%	1.6%	2.46
$\chi^2= 23.233$ n.s., Cramer's V=0.056									

¹ F=2.640*, $\eta=0.075$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 7-43: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Finding people with similar interests in waterfowl hunting.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1860	34.9%	16.3%	12.4%	16.5%	9.9%	5.8%	4.1%	2.84
METRO	386	35.5%	17.1%	13.7%	14.0%	9.8%	6.7%	3.1%	2.78
NE	371	37.5%	17.3%	9.7%	14.3%	10.5%	5.7%	5.1%	2.81
NONMETRO	370	36.8%	16.2%	10.8%	18.6%	7.3%	5.4%	4.9%	2.79
NW	366	32.2%	16.4%	12.0%	16.7%	11.7%	6.0%	4.9%	2.97
S	369	33.1%	14.6%	13.6%	19.8%	10.6%	4.6%	3.8%	2.89
$\chi^2 = 21.207$ n.s., Cramer's V=0.053									

¹ F=0.725 n.s., $\eta=0.039$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-44: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Waterfowl hunting with people who had similar work schedules.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1865	32.0%	14.9%	12.5%	15.8%	11.8%	7.6%	5.5%	3.05
METRO	386	32.9%	15.8%	15.3%	11.4%	11.4%	6.7%	6.5%	2.99
NE	373	36.2%	14.7%	7.8%	16.1%	10.7%	9.4%	5.1%	2.99
NONMETRO	372	29.0%	13.7%	11.0%	19.1%	12.6%	8.3%	6.2%	3.22
NW	365	29.6%	15.6%	12.6%	17.0%	12.6%	8.5%	4.1%	3.09
S	372	33.1%	13.7%	11.3%	19.1%	11.6%	6.7%	4.6%	3.01
$\chi^2 = 30.205$ n.s., Cramer's V=0.064									

¹ F=1.049 n.s., $\eta=0.047$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-45: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Having others take on more responsibilities around the house so that I could get out waterfowl hunting.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1869	55.0%	18.3%	9.2%	9.2%	4.1%	2.3%	2.0%	2.04
METRO	387	54.3%	19.6%	8.8%	7.8%	4.1%	3.1%	2.3%	2.06
NE	374	60.4%	17.6%	7.5%	5.9%	5.1%	1.9%	1.6%	1.90
NONMETRO	373	56.8%	18.0%	7.8%	10.5%	2.7%	2.1%	2.1%	1.99
NW	365	52.1%	19.2%	10.7%	11.5%	4.1%	1.4%	1.1%	2.05
S	373	54.2%	16.1%	10.7%	10.2%	4.8%	1.9%	2.1%	2.10
$\chi^2 = 25.004$ n.s., Cramer's V=0.058									

¹ F=1.067 n.s., $\eta=0.048$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Constraints and Constraint Negotiation

Table 7-46: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Borrowing other hunters' equipment.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1855	68.3%	14.5%	6.0%	5.3%	3.4%	1.2%	1.3%	1.70
METRO	384	68.5%	14.8%	4.4%	4.7%	4.4%	1.8%	1.3%	1.72
NE	371	72.0%	13.2%	6.5%	3.5%	1.9%	1.1%	1.9%	1.61
NONMETRO	369	69.1%	14.9%	6.2%	5.4%	2.2%	0.5%	1.6%	1.65
NW	363	66.1%	12.7%	9.1%	5.5%	4.4%	1.4%	0.8%	1.77
S	371	67.1%	15.9%	5.7%	7.0%	2.4%	0.5%	1.3%	1.69
$\chi^2= 27.891$ n.s., Cramer's V=0.061									

¹ F=0.867 n.s., $\eta=0.043$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-47: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Improvising with the hunting equipment that I had.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1858	40.5%	13.3%	11.0%	14.5%	9.6%	6.9%	4.1%	2.77
METRO	386	45.1%	12.2%	10.6%	13.7%	8.5%	6.5%	3.4%	2.61
NE	367	41.4%	12.8%	10.4%	13.9%	9.3%	5.7%	6.5%	2.80
NONMETRO	370	37.3%	14.1%	9.7%	14.1%	11.9%	8.4%	4.6%	2.93
NW	362	36.2%	15.5%	11.9%	13.5%	11.0%	8.6%	3.3%	2.87
S	373	38.9%	13.1%	12.3%	17.2%	8.3%	5.6%	4.6%	2.78
$\chi^2= 24.292$ n.s., Cramer's V=0.057									

¹ F=1.480 n.s., $\eta=0.056$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 7-48: Constraint negotiation: Amount that you used the following strategy to maintain your waterfowl hunting participation and satisfaction... Getting the equipment together beforehand so I could get out of the house on time.

Regions	N	Not at all						Very	Mean ¹
Statewide ²	1866	24.3%	8.2%	7.6%	10.7%	12.2%	15.4%	21.6%	4.11
METRO	386	24.1%	8.0%	7.0%	9.3%	11.7%	15.8%	24.1%	4.20
NE	373	24.7%	8.3%	7.0%	11.3%	11.8%	17.2%	19.8%	4.08
NONMETRO	372	23.4%	7.3%	8.6%	10.2%	12.1%	15.9%	22.6%	4.18
NW	365	26.8%	8.2%	6.8%	10.1%	13.4%	14.8%	19.7%	3.98
S	373	23.1%	9.4%	8.6%	13.7%	12.3%	13.9%	19.0%	4.01
$\chi^2= 13.320$ n.s., Cramer's V=0.042									

¹ F=0.702 n.s., $\eta=0.039$ Mean is based on the scale: 1 = not at all to 7 = very.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 8: Trust in Minnesota Department of Natural Resources

Trust in the Minnesota Department of Natural Resources

Respondents were asked to rate their agreement with six items addressing their trust in the Minnesota Department of Natural Resources using the scale 1 (strongly disagree) to 5 (strongly agree). Mean responses were close to the neutral point on the scale for all items (Table 8-1). Trust in the DNR did not differ significantly by region of residence. Means and frequencies for the 6 trust statements strategies are presented in Tables 8-2 through 8-7.

In this study, we employed two versions of our survey—one with the questions addressing trust in the Minnesota Department of Natural Resources near the front of the survey and one with the trust questions toward the back of the survey. Respondents reported very slightly higher trust in the Minnesota Department of Natural Resources when the questions were asked toward the front of the survey. For two questions the difference in trust was statistically significant: (a) the Minnesota DNR does a good job of managing waterfowl in Minnesota ($\bar{x} = 2.95$ trust questions in front versus $\bar{x} = 2.85$ trust questions in back; $t = 2.143$, $p < 0.05$), and (b) the Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs ($\bar{x} = 3.48$ trust questions in front versus $\bar{x} = 3.41$ trust questions in back; $t = 1.986$, $p < 0.05$).

Section 8: Trust in the Minnesota Department of Natural Resources

Table 8-1: Mean statewide results: Trust in the Minnesota Department of Natural Resources.

Trust item	N	Mean ^{1,2}
The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.	1865	3.44
The Minnesota DNR will make decisions about waterfowl management in a way that is fair.	1860	3.17
When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.	1869	3.13
The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.	1865	3.12
The Minnesota DNR listens to waterfowl hunters' concerns.	1867	2.93
The Minnesota DNR does a good job of managing waterfowl in Minnesota.	1873	2.90

¹Grand mean= $F=$, $\eta^2=0$. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree.

² A stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population.

Table 8-2: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR does a good job of managing waterfowl in Minnesota.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1873	11.4%	22.9%	33.4%	28.7%	3.5%	2.90
METRO	387	11.1%	24.5%	32.0%	28.9%	3.4%	2.89
NE	376	11.2%	19.7%	37.5%	28.2%	3.5%	2.93
NONMETRO	370	10.5%	24.3%	31.6%	28.4%	5.1%	2.93
NW	370	11.6%	20.0%	37.8%	27.3%	3.2%	2.91
S	374	12.8%	23.3%	31.3%	29.9%	2.7%	2.86
$\chi^2=13.563$ n.s., Cramer's V=0.043							

¹ $F=0.287$ n.s., $\eta=0.025$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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Table 8-3: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1869	5.9%	16.4%	40.9%	32.5%	4.5%	3.13
METRO	386	4.7%	16.3%	40.2%	35.5%	3.4%	3.17
NE	376	5.3%	13.8%	39.9%	35.1%	5.9%	3.22
NONMETRO	370	7.3%	18.4%	37.6%	30.3%	6.5%	3.10
NW	370	6.5%	17.0%	44.1%	28.9%	3.5%	3.06
S	372	6.5%	15.3%	42.7%	30.9%	4.6%	3.12
$\chi^2=18.045$ n.s., Cramer's V=0.049							

¹ F=1.648 n.s., $\eta=0.059$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 8-4: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1865	6.6%	19.7%	33.9%	34.9%	4.9%	3.12
METRO	385	4.7%	22.9%	31.7%	37.1%	3.6%	3.12
NE	376	8.0%	15.4%	33.0%	38.0%	5.6%	3.18
NONMETRO	369	7.0%	21.4%	33.1%	30.9%	7.6%	3.11
NW	368	7.3%	18.2%	37.5%	32.6%	4.3%	3.08
S	372	8.3%	16.4%	35.8%	34.9%	4.6%	3.11
$\chi^2=25.752$ n.s., Cramer's V=0.059							

¹ F=0.459 n.s., $\eta=0.031$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 8-5: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR will make decisions about waterfowl management in a way that is fair.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1860	5.1%	16.9%	38.0%	35.5%	4.4%	3.17
METRO	385	3.1%	19.0%	36.9%	37.1%	3.9%	3.20
NE	377	5.6%	18.0%	35.5%	35.5%	5.3%	3.17
NONMETRO	368	6.0%	17.1%	38.0%	32.9%	6.0%	3.16
NW	366	6.3%	15.0%	40.7%	34.2%	3.8%	3.14
S	369	6.5%	14.4%	39.0%	36.3%	3.8%	3.17
$\chi^2=14.806$, Cramer's V=0.045							

¹ F=0.173 n.s., $\eta=0.019$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 8-6: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1865	2.5%	5.3%	45.4%	38.8%	8.0%	3.44
METRO	385	1.6%	4.2%	47.8%	39.2%	7.3%	3.46
NE	377	4.2%	7.2%	39.8%	39.0%	9.8%	3.43
NONMETRO	368	2.7%	4.9%	44.8%	38.9%	8.7%	3.46
NW	371	2.4%	5.9%	45.3%	39.1%	7.3%	3.43
S	370	3.2%	6.2%	44.9%	37.6%	8.1%	3.41
$\chi^2=14.136$ n.s., Cramer's V=0.043							

¹ F=0.279 n.s., $\eta=0.024$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 8-7: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR listens to waterfowl hunters' concerns.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1867	9.1%	22.3%	38.5%	26.5%	3.6%	2.93
METRO	385	7.8%	21.6%	37.9%	28.6%	4.2%	3.00
NE	377	9.0%	21.0%	40.1%	25.7%	4.2%	2.95
NONMETRO	369	11.1%	23.8%	36.3%	23.8%	4.9%	2.88
NW	370	8.6%	22.4%	43.2%	23.2%	2.4%	2.88
S	372	9.9%	22.8%	36.3%	28.8%	2.2%	2.90
$\chi^2=16.626$ n.s., Cramer's $V=0.047$							

¹ F=1.009 n.s., $\eta=0.046$ Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

² A stratified sample based on region was drawn. Statewide data is weighted to reflect regional proportions in the population. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Information from the Electronic Licensing System database indicates that over one-third (34%) of the Minnesota residents who purchased a state duck stamp live in the Twin Cities Metropolitan area. Less than one in ten Minnesota duck stamp purchasers reside in the Northeast region. See Table 9-1.

Hunter Age

The median age of the study population of Minnesota duck stamp purchasers was 39 years. The median age of 45.5 years for study respondents was higher than the age of the population. Those under the age of 40 tended to respond at a lower rate than those over the age of 40 leading to this slight age bias in the sample. (See Tables 9-2 and 9-3.) The bias in age of the respondents did not substantively affect any estimates reported previously in this document, and thus, data were not weighted in calculating those estimates.

Years of Waterfowl Hunting

At the beginning of the survey instrument, respondents were asked to report the year they first hunted waterfowl in the state of Minnesota, how many total years they have hunted waterfowl in Minnesota, and how many years since 2005 that they hunted for waterfowl in the state. Please note that because responses to these questions are strongly correlated to age, the data presented in Tables 9-5, 9-6, and 9-7 are weighted to correct for the age bias for these results.

Statewide nearly 14.3% of respondents began hunting waterfowl in 2000 or more recently (Table 9-5). On average, waterfowl hunters in Minnesota have been hunting in the state for 27.7 years. The median of 30.0 indicates that half of the hunters have hunted 30 or more years in the state (Table 9-6). Across the regions, hunters in the Northeast region ($\bar{x} = 30.9$; median = 34.5) tended to have slightly more years of hunting experience in Minnesota, while hunters from the metropolitan region had fewer years of experience ($\bar{x} = 26.2$; median = 26.5).

Statewide a majority (69%) of the waterfowl hunters hunted for waterfowl in Minnesota every year during the past 5 years (Table 9-7). Of the 8.4% of respondents who did not hunt waterfowl during any of the years between 2005 and 2009, approximately two-thirds (73.0%) hunted waterfowl during 2010. This would be expected because we drew a sample of those who purchased duck stamps in 2010.

Membership in Conservation and Hunting Organizations

More than half (52%) of the waterfowl hunters reported that they belonged to a conservation/hunting organization. More than one-third (39%) of respondents reported membership in Ducks Unlimited and 6.1% reported membership in Minnesota Waterfowl Association (Table 9-8).

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Hunting Outside of Minnesota

Approximately one in five (18%) Minnesota waterfowl hunters hunted outside the state in 2010, with hunters residing in the non-metro region (23%) most likely to hunt elsewhere (Table 9-9). Respondents from the Northwest region were the least likely to have hunted outside of Minnesota during 2010 (13%). North Dakota was the most popular destination for Minnesota hunters; 9.4% of respondents and 54% of respondents who hunted outside the state hunted there. On average, respondents who hunted in North Dakota hunted for 6.3 days and bagged 18.9 ducks in that state (Table 9-10).

Sources for Waterfowl Hunting Information

Respondents most frequently selected “friends, family, and other individuals” (65%) as a resource for waterfowl hunting information (Table 9-11). Between 40 and 49% of respondents selected weekly/monthly outdoor publications, the DNR Web site, and DNR publications as sources of waterfowl hunting information. About one-fourth of respondents indicated that TV/radio and other (non-DNR) Web sites were resources. Similarly, about one-fourth indicated that the *Minneapolis Star Tribune* was a resource for waterfowl hunting information. However, only 6.6% of respondents selected the *St. Paul Pioneer Press* as a resource for waterfowl hunting information.

Differences Between Early and Late Respondents

We assessed differences between individuals who responded in the first 3 full survey mailings and those who responded to the shortened survey used to gauge nonresponse. Overall, late respondents had been hunting for slightly fewer years ($\bar{x} = 22.5$ years) than early respondents had ($\bar{x} = 27.7$ years) ($t = 14.743^{***}$). Similarly, late respondents had been hunting for fewer years in Minnesota ($\bar{x} = 17.8$ years) than early respondents ($\bar{x} = 23.9$ years) ($t = 17.771^{***}$). Among respondents who had hunted in 2010 in either survey, late respondents had hunted waterfowl fewer days in Minnesota in 2010 ($\bar{x} = 9.9$ days late respondents vs. $\bar{x} = 10.7$ days early respondents) ($t = 3.190^{**}$). Compared to early respondents, late respondents reported greater satisfaction with the general waterfowl hunting experience ($\bar{x} = 4.6$ versus 4.4) ($t = 4.355^{***}$) and the duck harvest ($\bar{x} = 3.6$ versus 3.3) ($t = 6.630^{***}$).

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Table 9-1: Residence of waterfowl stamp buyers

Region of residence	Proportion of state waterfowl stamp purchasers in each region age 18-64	
	# of licensed MN waterfowl hunters ¹	% of all MN waterfowl hunters
Central: Metro	26,032	34.05%
Central: Non-metro	13,601	17.79%
Northwest	13,448	17.59%
Northeast	7,951	10.40%
South	15,431	20.18%
Statewide ²	76,463	100%

¹ Source: DNR license database

² The statewide total is not equal to the total number of waterfowl stamps sold. This number reflects the customer count rather than the stamp count. Customers can purchase more than one stamp.

Table 9-2: Age of study population and survey respondents

Residence of hunter	n	20 – 29	30 – 39	40 – 49	50 - 59	60 - 64	65 +	Mean age
Study sample ¹	4,000	1,128	823	831	782	287	149	41.3
Statewide	1,932	346	364	437	490	202	93	45.2
METRO	400	61	90	91	102	41	15	44.9
NE	382	61	57	74	107	62	21	47.4
NONMETRO	381	74	67	94	102	22	22	44.6
NW	379	77	61	84	98	41	18	45.1
S	391	78	71	89	86	46	21	44.9

Table 9-3: Proportion of population and respondents by age category

Residence of hunter	n	20 – 29	30 – 39	40 – 49	50 - 59	60 - 64	65 +
Study sample ¹	4,000	28.2%	20.6%	20.8%	19.6%	7.2%	3.7%
Statewide	1,932	17.9%	18.8%	22.6%	25.4%	10.5%	4.8%
METRO	400	15.3%	22.5%	22.8%	25.5%	10.3%	3.8%
NE	382	16.0%	14.9%	19.4%	18.0%	16.2%	5.5%
NONMETRO	381	19.4%	17.6%	24.7%	26.8%	5.8%	5.8%
NW	379	20.3%	16.1%	22.2%	25.9%	10.8%	4.7%
S	391	19.9%	18.2%	22.8%	22.0%	11.8%	5.4%

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Table 9-4: Proportion of respondents from different age categories who actually hunted waterfowl in Minnesota in the year 2010

Age category	N	% No	% Yes
20-29	345	4.3%	95.7%
30-39	364	11.5%	88.5%
40-49	437	12.1%	87.9%
50-59	490	15.1%	84.9%
60-64	202	14.9%	85.1%
65+	93	29.0%	71.0%
		$\chi^2=48.684^{***}$, Cramer's V=0.159	

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 9-5: What year the hunter first hunted waterfowl

Year/decade	% of hunters from that area who indicated that they first hunted waterfowl (not necessarily in Minnesota) in that year or decade:					
	Statewide ¹	Metro	NE	Non-metro	NW	S
N	1,845	382	372	369	357	369
2010	2.0%	1.8%	2.2%	2.2%	2.2%	1.9%
2000-2009	14.3%	17.5%	11.3%	16.5%	11.5%	10.8%
1990's	19.9%	20.7%	16.9%	20.1%	16.8%	22.8%
1980's	17.6%	17.5%	15.1%	16.8%	19.0%	18.7%
1970's	22.7%	22.0%	19.4%	23.0%	25.8%	22.5%
1960's	18.3%	16.5%	28.8%	16.3%	20.4%	16.0%
1950's	4.8%	3.4%	6.2%	4.9%	4.2%	6.8%
1940's	0.4%	0.5%	0.3%	0.3%	0.0%	0.5%

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

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Table 9-6: Number of years hunting waterfowl

# of years	% of hunters from that area who indicated that they have been hunting for _____ years: ¹					
	Statewide ²	Metro	NE	Non-metro	NW	S
N	1,817	377	367	361	351	365
1	1.3%	1.6%	0.5%	1.1%	1.1%	1.4%
2	1.4%	1.9%	0.5%	2.5%	0.9%	0.5%
3	1.1%	1.9%	1.1%	1.1%	0.0%	0.5%
4	0.8%	0.8%	0.8%	1.9%	0.6%	0.0%
5	1.8%	2.7%	1.9%	2.2%	0.9%	0.5%
6	1.4%	1.6%	0.3%	1.4%	0.9%	1.9%
7	1.1%	0.8%	1.4%	0.6%	1.7%	1.6%
8	1.2%	1.1%	1.1%	1.7%	1.1%	1.1%
9	1.2%	1.1%	0.8%	1.9%	1.1%	0.8%
10 – 19	20.7%	21.2%	18.5%	20.5%	18.8%	22.7%
20 – 29	17.0%	17.8%	13.4%	15.8%	17.7%	18.4%
30 – 39	24.0%	25.5%	19.6%	25.2%	26.2%	20.8%
40 – 49	19.4%	15.9%	29.7%	16.3%	22.5%	19.7%
50 – 59	6.6%	5.3%	8.4%	6.6%	6.0%	8.2%
60 – 69	0.7%	0.5%	1.1%	1.1%	0.0%	0.8%
70 +	0.5%	0.5%	0.8%	0.0%	0.6%	0.8%
Mean	27.69	26.25	30.88	26.67	29.09	28.17
Median	30.00	26.50	34.50	27.00	31.00	29.00

¹Actual number years were collected for each hunter and used in computation of the means and medians. Data are presented in categorical form in the table for 10+ years to simplify the table.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

Table 9-7: Hunting in the last five years

Residence of hunter	% of hunters who hunted that particular year:						
	2009	2008	2007	2006	2005	Hunted every year	Did not hunt during any of these years
Statewide ¹	84.8%	82.4%	80.2%	79.2%	78.1%	69.2%	8.4%
Metro ²	84.3%	81.5%	78.6%	77.6%	76.6%	66.3%	8.7%
NE	82.6%	79.2%	78.5%	76.4%	75.4%	66.4%	10.0%
Non-metro	85.2%	83.4%	80.5%	77.7%	74.5%	64.9%	7.0%
NW	85.1%	82.2%	81.9%	82.7%	82.5%	73.3%	9.2%
S	86.4%	84.7%	82.1%	81.6%	81.3%	75.7%	9.7%
	$\chi^2=2.460$ n.s.	$\chi^2=4.441$ n.s.	$\chi^2=3.063$ n.s.	$\chi^2=7.272$ n.s.	$\chi^2=11.687^*$	$\chi^2=17.048^{**}$ Cramer's V=0.094	$\chi^2=5.900$ n.s.

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Table 9-8: Membership in hunting-related groups

Hunting-related group	% of hunters indicating membership in that group:					
	No Groups ¹	Ducks Unlimited	Delta Waterfowl	MN Waterfowl Assn.	Local sportsmen's club	Other
Statewide ²	47.6%	39.0%	5.4%	6.1%	20.9%	21.3%
METRO	52.1%	40.6%	6.7%	7.7%	10.0%	22.4%
NE	50.8%	35.1%	6.7%	1.8%	17.2%	16.4%
NONMETRO	49.1%	36.4%	3.1%	4.9%	22.9%	19.7%
NW	46.1%	37.4%	3.9%	3.9%	26.7%	20.9%
S	38.4%	41.9%	5.9%	8.4%	34.8%	23.5%

¹“Not a member of any conservation/hunting organization” was not a direct question. It was determined by counting those respondents who did not indicate they were members of any of the group categories.

² A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

Table 9-9: Did you hunt for waterfowl in a state or province other than Minnesota in 2010?

Residence of hunter	n	Yes
Statewide ¹	1883	17.9%
METRO	391	19.4%
NE	376	17.0%
NONMETRO	370	22.7%
NW	367	12.8%
S	381	16.0%
		$\chi^2=14.110^{**}$, Cramer's V=0.087

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 9-10: Most popular hunted areas outside of Minnesota for hunting waterfowl

Residence of hunter	Most popular hunted area outside of MN	% of all respondents who hunted that area in 2010	% of all respondents who hunted outside MN who hunted that area in 2010	Average # of days spent hunting that area in 2010	Average # of ducks bagged hunting in that area in 2010
Statewide ¹	North Dakota	9.4%	53.6%	6.3	18.9
METRO	North Dakota	10.2%	52.6%	6.3	18.5
NE	North Dakota	9.0%	54.7%	6.4	15.9
NONMETRO	North Dakota	11.4%	52.4%	6.2	20.5
NW	North Dakota	7.6%	61.7%	6.5	17.0
S	North Dakota	7.9%	50.8%	6.6	21.5

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

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Table 9-11: Sources for waterfowl hunting information.

		% of respondents who use the following sources to get information about waterfowl hunting...								
Residence of hunter	N	DNR pubs	DNR web site	Other web sites	Mpls STRB	St. Paul Pioneer Press	Other newspapers	Outdoor pubs	TV/radio	Friends, family, other individuals
Statewide ¹	1701	43.9%	46.7%	25.2%	23.1%	6.6%	17.6%	49.1%	27.6%	65.1%
METRO	401	39.2%	52.4%	26.9%	36.7%	12.2%	9.2%	48.4%	28.9%	64.6%
NE	390	46.2%	38.5%	19.5%	12.3%	2.6%	27.9%	44.4%	24.1%	62.1%
NONMETRO	385	40.5%	48.6%	26.0%	16.1%	5.2%	22.6%	49.6%	24.4%	62.9%
NW	382	49.0%	39.3%	18.8%	15.4%	.5%	18.3%	41.4%	28.3%	64.4%
S	391	42.7%	41.2%	23.3%	21.2%	4.1%	23.8%	56.0%	28.4%	67.8%
		10.315*	24.254***	11.896*	91.075***	65.983***	49.571***	19.291**	4.408	3.281 n.s.
		V=0.073	V=0.112	V=0.078	V=0.216	V=0.184	V=0.159	V=0.99	V=0.048	V=0.041
$\chi^2=47.615^{***}$, Cramer's V=0.100										

¹ A stratified sample based on region of residence was drawn. Statewide data in this table is weighted to reflect regional proportions in the population.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

In this section, we compare results from this 2010 waterfowl hunter survey to previous studies of Minnesota waterfowl hunters. In 2000, 2002 and 2005, similar studies of Minnesota waterfowl hunters were completed (Fulton et al. 2002; Schroeder et al., 2004, Schroeder et al., 2007). An abbreviated survey was also conducted for the 2007 season (Schroeder et al., 2008). Some of the questions asked in these previous surveys are either identical or similar to questions asked in the 2010 waterfowl study. For those questions, a comparison of responses is provided.

Respondent age, Years Hunting and Days Hunting During the Season

The average age of respondents to the 2000 survey was approximately 41 years; the average age of respondents to the survey of the 2002 season was 45 years; the average age of respondents to the survey of the 2005 season was 43 years; the average age of respondents to the 2007 season survey was 42 years, and the average age of respondents to the 2010 season survey was 45 (Table 10-1). There were also significant differences between the 2010 data and the earlier sets of data concerning the average number years hunting waterfowl (Table 10-2). Respondents for the 2010 season reported hunting waterfowl an average of 27.7 years. In 2005, they reported hunting waterfowl an average of 23.1 years compared to 22.5 in 2000, 26.9 in 2002, 23.1 years in 2005, and 25.1 years in 2007. The differences in age and years hunting waterfowl may reflect differences in sampling. The samples for the 2000 and 2002 seasons included both Minnesota duck stamp purchasers and individuals 16-18 and over 64 years of age who were not required to purchase a duck stamp but registered through the harvest information program (HIP). The samples for the 2005 and 2007 seasons did not include HIP registrants, and the sample for the 2010 season excluded both HIP registrants and license buyers less than 18 years of age (Table 10-3).

The average number of days spent hunting waterfowl also differed significantly when comparing 2010 results to the earlier surveys. Respondents reported hunting an average of 10.7 days in 2010, compared to an average of 10.2 in 2007 and 2005, 9.7 in 2002, and 11.5 in 2000 (Table 10-4).

Waterfowl Harvest

Reported number of ducks bagged per hunter in 2010 varied significantly from 2007, 2005, 2002, and 2000 (Table 10-5). Looking at the proportions of hunters who: bagged zero ducks, 1-10 ducks, or 11 or more ducks, results largely parallel those from the 2002 season.

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Hunting Participation and Satisfaction

There were some statistically significant differences in participation in the different waterfowl hunts, but differences do not appear substantive (Table 10-6).

A smaller proportion of 2010 season waterfowl hunters hunted on the opening Saturday (Table 10-7) or Sunday (Table 10-8) of the season.

A smaller proportion of respondents reported hunting outside of Minnesota during the 2010 season (18%) compared to the 2000 season (25%), but the proportion of respondents who hunted for waterfowl outside the state paralleled the 2002 and 2005 seasons (Table 10-10). It must be noted that question phrasing may have caused higher reporting of out-of-state hunting for the 2000 survey. The 2002, 2005, and 2010 surveys specified hunting out of state during that season. In the 2000 survey of waterfowl hunters, the question was phrased “Did you waterfowl hunt in a state or province other than Minnesota?” and did not specify the year. Therefore, respondents to the 2000 survey may have responded affirmatively to the question because they hunted outside of Minnesota in years prior to 2000.

Respondents reported significantly lower satisfaction levels for the 2010 season than for the 2007, 2002 or 2000 seasons, but significantly higher satisfaction levels than for the 2005 season (Table 10-11).

Youth Waterfowl Hunting Day

Based on a scale of 1 (strongly oppose) to 5 (strongly support), support for Youth Waterfowl Hunting Day in 2010 ($\bar{x} = 3.6$) was significantly lower than in 2000 ($\bar{x} = 3.8$), but similar to 2002 ($\bar{x} = 3.5$) and 2005 ($\bar{x} = 3.6$) (Table 10-12). In 2000, 44.1% of respondents indicated that they strongly supported Youth Waterfowl Hunting Day, compared to 36% of respondents in 2002, and 38% in both 2005 and 2010.

Battery-Operated, Spinning-Wing Decoys

Use of battery-operated, spinning-wing decoys increased significantly from 10% in 2000 to 26.1% in 2002, then declined to 24% in 2005, and increased to 27.3% in 2010 (Table 10-13).

Group Membership

Reported membership in Ducks Unlimited and Delta Waterfowl were slightly higher in 2010 than in previous study years. However, membership in the Minnesota Waterfowl Association was slightly lower. See Table 10-14.

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Table 10-1: Age of respondents: 2000, 2002, 2005, 2007, and 2010 findings

Study year	N ¹	Average age (years)	Range (years)	t-test, average compared to 2010
2000 hunters	2,454	41.4	16 - 88	t = 12.298***
2002 hunters	3,109	45.3	14 - 88	t = 0.476 n.s.
2005 hunters	2,568	43.2	16 - 90	t = 6.402***
2007 hunters	469	42.3	17 - 76	t = 9.350***
2010 hunters	1,932	45.2	20 - 87	

¹ In 2000, 2002, and 2005, a stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population. Respondents from 2000 and 2002 include duck stamp buyers and individuals aged 16-18 or over 64 years who are not required to purchase duck stamps but registered through the Harvest Information Program (HIP). The 2005 and 2007 samples did not include individuals from the HIP. The 2010 sample includes duck stamp buyers 18 years of age and older.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-2: Number of years hunting ducks/waterfowl: 2000, 2002, 2005, 2007, and 2010 surveys

Study year	N ¹	Average number of years hunting ducks/waterfowl ¹	t-test, average compared to 2010
2000 hunters	2,376	22.5	t = 14.715***
2002 hunters	3,034	26.9	t = 2.244*
2005 hunters	2,295	23.1	t = 13.014***
2007 hunters	461	25.1	t = 7.346***
2010 hunters	1,845	27.7	

¹ In 2000, 2002, and 2005, a stratified sample based on region of residence was drawn. Data in this table is weighted to reflect regional proportions in the population. Respondents from 2000 and 2002 include duck stamp buyers and individuals aged 16-18 or over 64 years who are not required to purchase duck stamps but registered through the Harvest Information Program (HIP). The 2005 and 2007 samples did not include individuals from the HIP. The 2010 sample includes duck stamp buyers 18 years of age and older.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-3: Frequency distributions of HIP registrants in sample and age of respondents: 2000, 2002, 2005, 2007, and 2010 surveys

Study year	Sample				Respondents							
	HIP registrants		Stamp buyers		<18 years		>64 years		18-64 years		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
2000 hunters	n.a.	n.a.	n.a.	n.a.	131	5.4%	207	8.5%	2,100	86.1%	2,438	100%
2002 hunters	824	17.2%	3,976	82.8%	103	3.3%	599	19.3%	2,407	77.4%	3,109	100%
2005 hunters	0	0%	4,000	100%	33	1.3%	257	10.0%	2,278	88.7%	2,568	100%
2007 hunters	0	0%	800	100%	2	1.0%	14	2.5%	479	96.8%	495	100%
2010 hunters	0	0%	4,000	100%	0	0.0%	93	4.8%	1,839	95.2%	1,932	100%

n.a. = not applicable

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Table 10-4 Number of days hunting waterfowl: 2000, 2002, 2005, 2007 and 2010 findings

Study year	n	Average number of days hunting waterfowl	t-test, average compared to 2010
2000 hunters	2,120	11.5	t=3.643***
2002 hunters	3,113	9.7	t=4.169***
2005 hunters	2,137	10.2	t=1.999*
2007 hunters	419	10.2	t=1.999*
2010 hunters	1,678	10.7	

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-5: Number of ducks bagged: 2000, 2002, 2005, 2007 and 2010 findings

Number bagged	2000 hunters (%)	2002 hunters (%)	2005 hunters (%)	2007 hunters (%)	2010 hunters (%)
N	1,959	2,027	1,960	370	1,514
Bagged none	14.7%	16.2%	17.1%	6.8%	13.5%
Bagged 1 – 10	53.4%	50.9%	59.8%	51.2%	56.1%
Bagged more than 10	31.9%	32.9%	23.1%	42.1%	30.4%
Chi-square analysis ¹	$\chi^2=6.074^*$	$\chi^2=22.153^{***}$	$\chi^2=55.913^{***}$	$\chi^2=198.267^{***}$	

¹Compares year in column to 2010 results.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-6: Waterfowl Hunting Activity: 2000, 2002, 2005, 2007 and 2010 findings

Study year	n	Hunt ducks	Hunt Canada geese regular season	Hunt Canada geese—early season	Hunt Canada geese—late season	Hunt geese—other
2000 hunters	2,191	92.6% ^a	72.3% ^a	38.5% ^a	9.0%	6.9% ^a
2002 hunters	2,650	93.5% ^b	73.1% ^b	41.9% ^b	13.9%	7.8% ^b
2005 hunters	2,098	92.5% ^c	72.9% ^c	43.6% ^c	13.4%	4.3% ^c
2007 hunters	416	90.4% ^d	69.2% ^d	38.0% ^d	10.1%	2.6% ^d
2010 hunters	1,701	91.8%	71.1%	40.9%		6.4%
Chi-square analysis ¹		^a n.s. ^b $\chi^2=9.024^{**}$ ^c n.s. ^d n.s.	^a $\chi^2=5.678^*$ ^b $\chi^2=10.383^{**}$ ^c $\chi^2=9.065^{**}$ ^d n.s.	^a n.s. ^b n.s. ^c $\chi^2=11.474^{**}$ ^d n.s.		^a n.s. ^b $\chi^2=5.361^*$ ^c $\chi^2=22.626^{***}$ ^d $\chi^2=117.809^{***}$

¹Chi-square test ^a compares 2000 to 2010 and ^b compares 2002 to 2010 and ^c compares 2005 to 2010, and ^d compares 2007 to 2010.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Table 10-7: Waterfowl Hunting, Opening Saturday: 2000, 2002, 2005 and 2010 findings

Study year	N	Hunt opening Saturday	Chi-square analysis, proportion compared to 2010
2000 hunters	2,191	63.2%	$\chi^2=9.541^{**}$
2002 hunters	2,745	64.4%	$\chi^2=18.003^{***}$
2005 hunters	2,118	63.0%	$\chi^2=8.400^{**}$
2010 hunters	1,690	60.1%	

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-8: Waterfowl Hunting, Opening Sunday: 2000, 2002, 2005 and 2010 findings

Study year	N	Hunt opening Sunday	Chi-square analysis, proportion compared to 2010
2000 hunters	2,191	69.7%	$\chi^2=53.782^{***}$
2002 hunters	2,745	67.4%	$\chi^2=24.743^{***}$
2005 hunters	2,120	64.9%	$\chi^2=6.350^*$
2010 hunters	1,689	62.3%	

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-9: Region Most Frequently Hunted: 2000, 2002, and 2005 findings

Study year	N	Region 1 NW	Region 2 NE	Region 3 EC	Region 4 SW	Region 5 SE	Region 6 M	Chi-square analysis ¹
2000 hunters	2,192	27.7%	6.7%	23.4%	27.7%	6.4%	8.1%	$\chi^2=336.058^{***}$
2002 hunters	2,650	28.3%	7.0%	23.3%	24.6%	9.4%	7.4%	$\chi^2=335.821^{***}$
2005 hunters	2,088	21.4%	7.5%	19.7%	26.2%	11.5%	13.7%	

¹ 2000 or 2002 compared to 2010.

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-10: Hunt Outside Minnesota: 2000, 2002, 2005 and 2010 findings

Study year	N	Hunt Outside Minnesota	Chi-square analysis, proportion compared to 2010
2000 hunters	2,399	24.7%	$\chi^2=48.320^{***}$
2002 hunters	3,035	18.6%	n.s.
2005 hunters	2,378	17.3%	n.s.
2010 hunters	1,662	18.0%	

2000 study asked "Did you waterfowl hunt in a state or province other than MN?"

2002/2005/2010 surveys asked "Did you hunt for waterfowl in a state or province other than MN in (year)?"

n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Table 10-11: Overall Satisfaction With Waterfowl Hunting: 2000, 2002, 2005, 2007 and 2010 findings

Study year	N	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Moderately satisfied	Very satisfied	Chi-square analysis ¹	Means
2000 hunters	1,788	8.8%	10.3%	11.4%	4.0%	15.3%	30.8%	19.5%	$\chi^2=110.885^{***}$	4.77 ²
2002 hunters	2,604	7.0%	8.9%	10.4%	5.5%	16.0%	35.0%	17.1%	$\chi^2=131.217^{***}$	4.88 ³
2005 hunters	1,997	14.1%	14.2%	12.5%	6.1%	16.8%	24.6%	11.7%	$\chi^2=27.770^{***}$	4.18
2007 hunters	417	9.4%	8.6%	12.5%	6.0%	18.5%	34.5%	10.6%	$\chi^2=65.900^{***}$	4.61
2010 hunters	1,535	11.4%	12.0%	11.9%	6.5%	17.7%	28.3%	12.2%		4.41

¹ Compared to 2010.

² 2000 compared to 2010, $t=7.144^{***}$

³ 2002 compared to 2010, $t=9.335^{***}$

⁴ 2005 compared to 2010, $t=4.610^{***}$

⁵ 2007 compared to 2010, $t=4.227^{***}$

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10-12 Support for Youth Waterfowl Hunting Day: 2000, 2002, 2005 and 2010 findings

Study year	n	Strongly oppose	Oppose	Neutral	Support	Strongly support	Chi-square analysis ¹	Means
2000 hunters	2,432	11.7%	9.4%	13.0%	21.7%	44.1%	$\chi^2=60.926^{***}$	3.77 ²
2002 hunters	3,027	17.0%	9.3%	12.7%	25.2%	35.8%	n.s.	3.53 ³
2005 hunters	2,357	17.3%	9.5%	10.5%	24.7%	37.9%	n.s.	3.56
2010 hunters	1,655	16.6%	9.7%	11.9%	23.9%	37.9%		3.57
							$\chi^2=155.028^{***}$	

¹ Compared to 2010.

² 2000 compared to 2010, $t=5.547^{***}$

³ 2002 compared to 2010, n.s.

⁴ 2005 compared to 2010, n.s.

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10-13: Use Battery-Operated, Spinning-Wing Decoys: 2000, 2002, 2005, and 2010 findings

Study year	Question	n	Use Battery-Operated, Spinning-Wing Decoys	Chi-square analysis, proportion compared to 2010
2000 hunters	Have you used battery-operated, rotating wing decoys when hunting?	2,440	10.3%	$\chi^2=594.355^{***}$
2002 hunters	Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the (year) waterfowl season?	3,015	26.1%	n.s.
2005 hunters		2,363	24.2%	$\chi^2=7.492^{**}$
2010 hunters		1,669	27.3%	

n.s. = not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Section 10: Comparison of 2000, 2002, 2005, 2007, and 2010 Minnesota Waterfowl Hunter Survey Findings

Table 10-14 Group Membership : 2000, 2002, 2005, 2007 and 2010 findings

Study year	n	Ducks Unlimited	Delta Waterfowl	Minnesota Waterfowl Association	Local sportsman's club	No memberships ¹
2000 hunters	2,454	35.6% ^a	Not asked	11.0% ^a	16.0% ^a	46.4% ^a
2002 hunters	2,635	36.8% ^b	2.9% ^b	10.5% ^b	22.3% ^b	43.9% ^b
2005 hunters	2,392	37.1%	3.5%	7.8%	20.3%	42.9%
2007 hunters	472	37.5%	3.2%	6.1%	25.8%	41.8%
2010 hunters	1,701	40.1%	5.4%	6.1%	21.2%	46.6%
Chi-square analysis ²		^a $\chi^2=15.762^{***}$ ^b $\chi^2=7.920^{**}$ ^c $\chi^2=6.392^*$ ^d n.s.	^b $\chi^2=53.211^{***}$ ^c $\chi^2=26.846^{***}$ ^d $\chi^2=41.254^{***}$	^a $\chi^2=56.783^{***}$ ^b $\chi^2=48.332^{***}$ ^c $\chi^2=11.460^{**}$ ^d n.s.	^a $\chi^2=28.398^{***}$ ^b $\chi^2=4.684^*$ ^c $\chi^2=n.s.$ ^d $\chi^2=39.497^{***}$	^a n.s. ^b $\chi^2=9.074^{**}$ ^c $\chi^2=15.491^{***}$ ^d $\chi^2=38.677^{***}$

¹“Not a member of any conservation/hunting organization” was not a direct question. It was determined by counting those respondents who did not indicate they were members of any of the group categories.

²Chi-square test ^a compares 2000 to 2010, ^b compares 2002 to 2010, ^c compares 2005 to 2010, ^d compares 2007 to 2010. n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

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Appendix A: Survey Instruments

THE 2010 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



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

Your help on this study is greatly appreciated!

[VERSION A]

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

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Part I. Your Waterfowl Hunting Background

Q1. In what year did you first hunt waterfowl, not necessarily in Minnesota? *If uncertain please estimate.*

_____ year *(If you have never hunted waterfowl, please enter '0' here, and return your survey.)*

Q2. How many years have you hunted waterfowl in Minnesota? *If uncertain please estimate.*

_____ years

Q3. For the previous 5 years, indicate which years you hunted waterfowl in Minnesota? *(Check all that apply.)*

- 2009
- 2008
- 2007
- 2006
- 2005
- I did not hunt during any of these years.

Q4. Did you hunt waterfowl in Minnesota during the 2010 season? *(Please check one.)*

- No. → *(Skip to Part V, question Q19.)*
- Yes. *(Please continue with Part II, Q5.)*

Part II. Your 2010 Minnesota Waterfowl Hunting Season

Next we have a few questions about your hunting experiences during the 2010 Minnesota waterfowl-hunting season.

(If you did not hunt waterfowl in Minnesota in 2010 please skip to question Q19.)

Q5. Please indicate whether you hunted for the following kinds of waterfowl in Minnesota in 2010. If you did hunt, estimate the total number of that kind of waterfowl you bagged (shot and retrieved).

During the 2010 waterfowl season, did you hunt in Minnesota for:	Please circle no or yes.		If yes, how many did you personally bag in Minnesota? <i>(Write in number bagged.)</i>
Ducks	no	yes	_____ducks
Canada Geese during:			
Early September Canada Goose Season	no	yes	_____geese
Regular Canada Goose Season	no	yes	_____geese
Other Geese (Snow Geese, etc.)	no	yes	_____geese

Q6. During the 2010 Minnesota waterfowl season, about how many days did you hunt on...

Weekend days or holidays: _____ days
 Weekdays (Monday-Friday): _____ days

Q7. Did you hunt the opening Saturday (October 2) of the 2010 Minnesota Season? *(Please check one.)*

- YES
- NO

Q8. Did you hunt the first Sunday (October 3) of the 2010 Minnesota Season? (Please check one.)

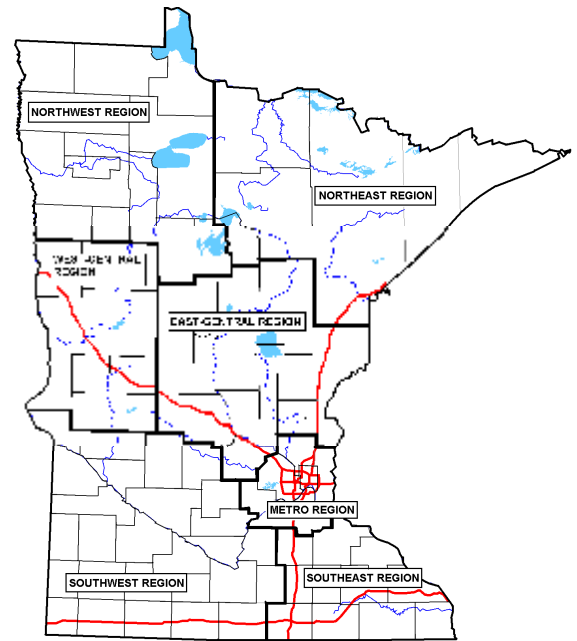
- YES
- NO

Q9. During the regular duck and goose season in Minnesota, I hunted waterfowl at (Please check one):

- The same area every time I hunted during the fall
- 2-5 different areas during the fall
- More than 5 areas during the fall

Q10. During the 2010 Minnesota waterfowl-hunting season, how many days did you hunt in each region? (See map.) Do not include days hunted during the special September goose season.

Region	Number of Days
Northwest region	days
Northeast region	days
East-central region	days
West-central region	days
Southwest region	days
Southeast region	days
Metro region	days



Q11. During the 2010 Minnesota waterfowl-hunting season, did you hunt... (Please check one.)

- Mostly on privately owned areas
- Mostly on public access areas (Wildlife Management Areas, Waterfowl Production Areas, public access waters)
- Public and private about the same

Q12. Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the 2010 waterfowl season? (Please check one.)

- No
- Yes

Part III. Your Hunting Satisfaction

Q13. During the 2010 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the following? (Circle one response for each. If you did not hunt ducks or geese please circle "9" in the far right column.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Did not hunt ducks/geese
General waterfowl hunting experience	1	2	3	4	5	6	7	9
DUCKS:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
GEESE:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9

Q14. During the 2010 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the number of ducks and geese you saw in the field? (Please circle one response for each.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Did not hunt
Number of ducks seen	1	2	3	4	5	6	7	9
Number of geese seen	1	2	3	4	5	6	7	9

Q15. During the 2010 Minnesota waterfowl season, about how many days that you hunted waterfowl...

...would you describe as "good" waterfowl hunting days: _____

...did you shoot your daily bag limit of ducks: _____

...did you shoot 0 ducks: _____

Q16. Please rate and describe the following hunting days for your 2010 Minnesota season:

	Poor	Below Average	Average	Above Average	Excellent	How many ducks/geese did you bag that day?	In what month was that day? (Check one.)
Your <u>best</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.
Your <u>first</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.
Your <u>last</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.

Q17. How did your 2010 waterfowl season compare with the 2009 waterfowl season? (Circle one response for each.)

Compared to 2009, rate your 2010 waterfowl season:	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Did not hunt in 2009
General waterfowl hunting experience	1	2	3	4	5	6	7	9
DUCKS:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
number of ducks seen	1	2	3	4	5	6	7	9
GEESE:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
number of geese seen	1	2	3	4	5	6	7	9

Part IV. Motivations for Waterfowl Hunting

Q18. Please tell us how important each of the following experiences was to your waterfowl hunting satisfaction during the 2010 season. (Please circle one response for each.)

	Not at all important	Slightly important	Somewhat important	Very important	Extremely important
Enjoying nature and the outdoors	1	2	3	4	5
Getting away from crowds of people	1	2	3	4	5
Getting food for my family	1	2	3	4	5
Shooting a gun	1	2	3	4	5
A large daily duck bag limit	1	2	3	4	5
Access to a lot of different hunting areas	1	2	3	4	5
Bagging ducks and geese	1	2	3	4	5
Being on my own	1	2	3	4	5
Being with friends	1	2	3	4	5
Developing my skills and abilities	1	2	3	4	5
Being with family	1	2	3	4	5
Killing waterfowl	1	2	3	4	5
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	1	2	3	4	5
Getting my limit	1	2	3	4	5
Good behavior among other waterfowl hunters	1	2	3	4	5
Having a long duck season	1	2	3	4	5
Hunting areas open to the public	1	2	3	4	5
Hunting with a dog	1	2	3	4	5
Reducing tension and stress	1	2	3	4	5
Seeing a lot of ducks and geese	1	2	3	4	5
Sharing my hunting skills and knowledge	1	2	3	4	5
Thinking about personal values	1	2	3	4	5
Using my hunting equipment (decoys, boats, etc.)	1	2	3	4	5
Getting my own food	1	2	3	4	5
The excitement of hunting	1	2	3	4	5
The challenge of making a successful shot	1	2	3	4	5

Part V. Waterfowl Hunting Constraints

Many factors may limit peoples' interest in waterfowl hunting and ability to hunt for waterfowl in Minnesota. We are interested in how easy it is for you to go waterfowl hunting in Minnesota. Please respond to these questions even if you did not hunt waterfowl in Minnesota in 2010. (Circle one response.)

	Definitely False	Moderately False	Slightly False	Neutral	Slightly True	Moderately True	Definitely True
Q19. If I want to hunt for waterfowl in Minnesota, I can easily go.	1	2	3	4	5	6	7

Q20. How much did the following factors limit your waterfowl hunting in Minnesota during the past 5 years? Circle one response for each:

	HOW LIMITING?						
	Not at all						Very
Family commitments	1	2	3	4	5	6	7
Work commitments	1	2	3	4	5	6	7
Access to private land for hunting	1	2	3	4	5	6	7
Access to public land for hunting	1	2	3	4	5	6	7
Crowding at hunting areas	1	2	3	4	5	6	7
Cost of equipment	1	2	3	4	5	6	7
Cost of licenses	1	2	3	4	5	6	7
Travel costs	1	2	3	4	5	6	7
Waterfowl hunting regulations too restrictive	1	2	3	4	5	6	7
Availability of waterfowl hunting partners	1	2	3	4	5	6	7
Interest in other recreational activities	1	2	3	4	5	6	7
Waterfowl populations too low	1	2	3	4	5	6	7
No desire for waterfowl as food	1	2	3	4	5	6	7
No need for waterfowl as food	1	2	3	4	5	6	7
Personal concern for animal pain & distress	1	2	3	4	5	6	7
Other people's concern for animals' pain and distress	1	2	3	4	5	6	7
Not enough leisure time	1	2	3	4	5	6	7
The type of people that hunt waterfowl	1	2	3	4	5	6	7
Amount of planning required to go hunting	1	2	3	4	5	6	7
Age	1	2	3	4	5	6	7
The amount of effort required to go hunting	1	2	3	4	5	6	7
No hunting opportunities near my home	1	2	3	4	5	6	7
The timing of the waterfowl migration	1	2	3	4	5	6	7
Poor health	1	2	3	4	5	6	7
Prefer other types of hunting	1	2	3	4	5	6	7
Having the right kind of equipment	1	2	3	4	5	6	7
Having the right breed of dog	1	2	3	4	5	6	7
Having to get up too early in the morning	1	2	3	4	5	6	7
Concern over wounding waterfowl	1	2	3	4	5	6	7
Waterfowl hunting is too difficult	1	2	3	4	5	6	7
Articles I read in national magazines	1	2	3	4	5	6	7
Articles I read in local newspapers or magazines	1	2	3	4	5	6	7

Q21. Thinking about when you hunt for waterfowl in Minnesota, how much do you use the following strategies to maintain your waterfowl hunting participation and satisfaction. Circle one response for each:

When you hunt for waterfowl <u>in Minnesota...</u>	HOW MUCH YOU USE THE FOLLOWING STRATEGIES TO MAINTAIN YOUR PARTICIPATION IN WATERFOWL HUNTING?						
	Not at all						Very much
Budgeting to save money for waterfowl hunting.	1	2	3	4	5	6	7
Learning new ways to hunt waterfowl.	1	2	3	4	5	6	7
Trying to find people to waterfowl hunt with.	1	2	3	4	5	6	7
Living within my means financially to save money for waterfowl hunting.	1	2	3	4	5	6	7
Cutting short hunting outings to make time for other responsibilities.	1	2	3	4	5	6	7
Getting work done earlier or staying up later to increase time for waterfowl hunting.	1	2	3	4	5	6	7
Asking for help to gain waterfowl hunting skills.	1	2	3	4	5	6	7
Finding people with similar interests in waterfowl hunting.	1	2	3	4	5	6	7
Waterfowl hunting with people who had similar work schedules.	1	2	3	4	5	6	7
Having others take on more responsibilities around the house so that I could get out waterfowl hunting.	1	2	3	4	5	6	7
Borrowing other hunters' equipment.	1	2	3	4	5	6	7
Improvising with the hunting equipment that I had.	1	2	3	4	5	6	7
Getting the equipment together beforehand so I could get out of the house on time.	1	2	3	4	5	6	7

Part VI. Factors That Might Affect Waterfowl Hunting Satisfaction

Q22. We are interested in what factors might improve your satisfaction with waterfowl hunting in Minnesota. Circle one response for each:

	HOW MUCH WOULD THE FOLLOWING CHANGES IMPROVE YOUR SATISFACTION WITH WATERFOWL HUNTING IN MINNESOTA?						
	Not at all						Very Much
A dramatic increase in duck populations in Minnesota.	1	2	3	4	5	6	7
Improved access for waterfowl hunting on public land in Minnesota.	1	2	3	4	5	6	7
Improved access for waterfowl hunting on private land in Minnesota.	1	2	3	4	5	6	7
More public land to hunt waterfowl in Minnesota	1	2	3	4	5	6	7
A son or daughter who wanted to go waterfowl hunting in Minnesota	1	2	3	4	5	6	7
Another family member who wanted to go waterfowl hunting in Minnesota	1	2	3	4	5	6	7
Less crowding at waterfowl hunting areas in Minnesota.	1	2	3	4	5	6	7
More support for waterfowl hunting from my family.	1	2	3	4	5	6	7
Improved health, physical ability to waterfowl hunt.	1	2	3	4	5	6	7
Better waterfowl habitat in Minnesota.	1	2	3	4	5	6	7
More opportunities to hunt geese in Minnesota.	1	2	3	4	5	6	7
Better duck-hunting opportunities in Minnesota.	1	2	3	4	5	6	7

Part VII. General Waterfowl Hunting Information

Next we have a few general questions about waterfowl hunting. *Please respond to these questions even if you did not hunt waterfowl in Minnesota in 2010.*

Q23. How important is waterfowl hunting to you? (Please check one.)

- It is my most important recreational activity.
- It is one of my most important recreational activities.
- It is no more important than my other recreational activities.
- It is less important than my other recreational activities.
- It is one of my least important recreational activities.

Q24. How would you describe your identification with the activity of waterfowl hunting. (Please check one.)

- I go waterfowl hunting, but I do not really consider myself a waterfowl hunter.
- I am in the process of becoming a waterfowl hunter.
- I used to be a waterfowl hunter, but I no longer consider myself one.
- I am a waterfowl hunter.

Q25. Please indicate how much you agree or disagree with the following statements about waterfowl hunting. Circle one response for each:

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

Q26. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2010. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (6 ducks)?

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Q27. The U.S. Fish and Wildlife Service allowed states to have a 2 hen mallard daily bag limit in 2010. Which one statement best describes how you feel about the hen mallard daily bag limit in Minnesota (1 hen mallard)?

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Q28. The U.S. Fish and Wildlife Service allowed states to have a 3 wood duck daily bag limit in 2010. Which one statement best describes how you feel about the wood duck daily bag limit in Minnesota (2 wood ducks)?

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Part VIII. Waterfowl Management and Special Regulations

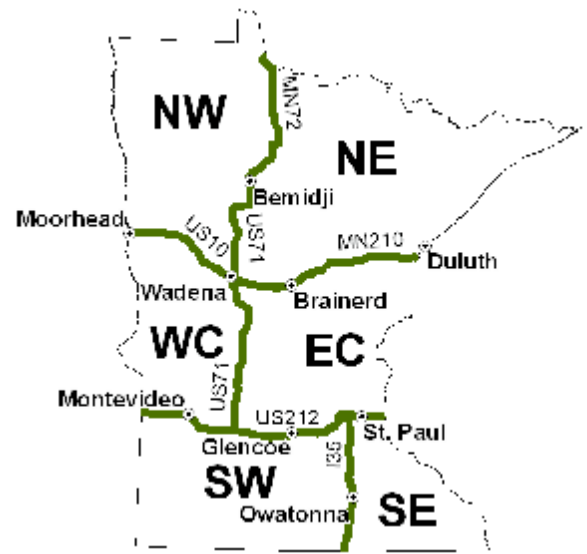
Q29. We would like to know if you oppose or support each of these different strategies: *(Please circle one for each.)*

	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support	Don't know
Ending shooting hours at 4 pm for the first part of Minnesota's waterfowl season	1	2	3	4	5	9
Moist soil management (i.e. management to simulate a seasonal wetland by artificially adding and removing water to maximize food production for waterfowl).	1	2	3	4	5	9
Limiting use of mud motors on certain public hunting areas	1	2	3	4	5	9
Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season	1	2	3	4	5	9
Restrictions on hunting within 100 yards of surface water during the early (Sept.) Canada goose season	1	2	3	4	5	9
Providing easier access to waterfowl hunting sites on Wildlife Management areas	1	2	3	4	5	9

Part IX. Waterfowl Hunting Zones

Q30. In which area of the state is the timing of open duck hunting and season dates most important to you?
(Please select one.)

- Northwest (NW)
- Northeast (NE)
- West central (WC)
- East central (EC)
- Southwest (SW)
- Southeast (SE)
- No preference



Q31. If the duck season length is 60 days in 2011, which season dates and structure would you most prefer to have the season open in the area you selected above? (Check one.)

- Saturday Oct. 1 to Tuesday, Nov. 29
- Saturday Sept. 24 to Sunday Sept. 25, close 5 days and reopen Saturday Oct. 1 to Sunday Nov. 27
- No preference

Q32. If the duck season length needed to be shortened to only 30 days, which three 10-day periods would you most prefer to have the season open in the area you selected above? (Check only 3 boxes.):

- Early October (October 1-10)
- Mid October (October 11-20)
- Late October (October 21-31)
- Early November (November 1-10)
- Mid November (November 11-20)
- Late November (November 21-30)
- No preference

Part X. Youth Waterfowl Hunting Day

Since 1996, the U.S. Fish and Wildlife Service has allowed states to select a Youth Waterfowl Hunting days outside the regular waterfowl season for youth age 15 and younger to take ducks and geese. During this event adults accompany youth, but may not hunt waterfowl themselves. Because of the season structure in Minnesota, Youth Waterfowl Hunting Day is held before the regular waterfowl season opening. Minnesota has offered a one-day Youth Waterfowl Hunt since 1996.

Q33. Do you support or oppose the concept of Youth Waterfowl Hunting Day? (Please check one.)

- Strongly oppose
- Oppose
- Undecided or neutral
- Support
- Strongly support

Q34. Last September (2010), did you take any youth hunting on Youth Waterfowl Hunting Day? (Please check one.)

- No → (Skip to Q37).
- Yes. (Please answer questions Q35-Q36.)

→ **Q35. If yes, how many youths did you take?** _____ youths

→ **Q36. How many total waterfowl did the youths harvest?** _____ ducks _____ geese

Q37. Did you participate in Youth Waterfowl Hunting Day as a youth? (Please check one.)

- No → (Skip to Q39).
- Yes (Please answer Q38.)

→ **Q38. If yes, how important was Youth Waterfowl Hunting Day to your becoming a waterfowl hunter?**

- Not at all important
- Slightly important
- Somewhat important
- Quite important
- Very important

Part XI. Minnesota DNR Waterfowl Management

Q39. How do you feel about the Minnesota Department of Natural Resources (DNR)? Please circle one response for each of the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The Minnesota DNR does a good job of managing waterfowl in Minnesota.	1	2	3	4	5
When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.	1	2	3	4	5
The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.	1	2	3	4	5
The Minnesota DNR will make decisions about waterfowl management in a way that is fair.	1	2	3	4	5
The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.	1	2	3	4	5
The Minnesota DNR listens to waterfowl hunters' concerns.	1	2	3	4	5

Part XII. About You

Q40. Are you currently a member of: (Check all that apply.)

- Ducks Unlimited
- Delta Waterfowl
- Minnesota Waterfowl Association
- Local sportsman's club
- Other national/statewide conservation/hunting organization(s) *Please specify:* _____

Q41. Where do you get information about waterfowl hunting? (Please check all that apply.)

- Minnesota DNR news releases and publications
- Minnesota DNR web site
- Other web sites (e.g. Waterfowl.com, Minnesotawaterfowler.com)
- Minneapolis Star Tribune
- St. Paul Pioneer Press
- Other newspapers
- Weekly/monthly outdoor publications (e.g Outdoor News)
- Television/radio
- Friends, family, and other individuals
- Other: _____

Q42. Did you hunt for waterfowl in a state or province other than Minnesota in 2010? (Please check one.)

- No
- Yes. (Please answer question Q43.)

Q43. If yes, list locations, number of days you hunted waterfowl, and number you personally bagged in that area during 2010:

STATE OR PROVINCE	NUMBER OF DAYS HUNTED WATERFOWL	NUMBER OF DUCKS YOU PERSONALLY BAGGED	NUMBER OF GEESE YOU PERSONALLY BAGGED
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese

Please write additional comments below or on additional sheets. Survey results will be available in the summer of 2011 on the Minnesota Department of Natural Resources Web site, www.dnr.state.mn.us. If you have a question about the survey, contact Sue at 612-624-3479. If you have a specific question that you want answered, please contact the Minnesota DNR at 1-888-MINNDNR.

THE 2010 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



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

Your help on this study is greatly appreciated!

[VERSION B]

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
(612) 624-3479
sas@umn.edu

Part I. Your Waterfowl Hunting Background

Q1. In what year did you first hunt waterfowl, not necessarily in Minnesota? *If uncertain please estimate.*

_____ year *(If you have never hunted waterfowl, please enter '0' here, and return your survey.)*

Q2. How many years have you hunted waterfowl in Minnesota? *If uncertain please estimate.*

_____ years

Q3. For the previous 5 years, indicate which years you hunted waterfowl in Minnesota? *(Check all that apply.)*

- 2009
- 2008
- 2007
- 2006
- 2005
- I did not hunt during any of these years.

Part II. Minnesota DNR Waterfowl Management

Q4. How do you feel about the Minnesota Department of Natural Resources (DNR)? *Please circle one response for each of the following statements:*

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The Minnesota DNR does a good job of managing waterfowl in Minnesota.	1	2	3	4	5
When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.	1	2	3	4	5
The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.	1	2	3	4	5
The Minnesota DNR will make decisions about waterfowl management in a way that is fair.	1	2	3	4	5
The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.	1	2	3	4	5
The Minnesota DNR listens to waterfowl hunters' concerns.	1	2	3	4	5

Part III. Your 2010 Minnesota Waterfowl Hunting Season

Next we have a few questions about your hunting experiences during the 2010 Minnesota waterfowl-hunting season.

Q5. Did you hunt waterfowl in Minnesota during the 2010 season? (Please check one.)

- No → (Skip to Part VI, question Q20.)
- Yes (Please continue with Q6.)

Q6. Please indicate whether you hunted for the following kinds of waterfowl in Minnesota in 2010. If you did hunt, estimate the total number of that kind of waterfowl you bagged (shot and retrieved).

During the 2010 waterfowl season, did you hunt in Minnesota for:	Please circle no or yes.		If yes, how many did you personally bag in Minnesota? (Write in number bagged.)
Ducks	no	yes	_____ducks
Canada Geese during:			
Early September Canada Goose Season	no	yes	_____geese
Regular Canada Goose Season	no	yes	_____geese
Other Geese (Snow Geese, etc.)	no	yes	_____geese

Q7. During the 2010 Minnesota waterfowl season, about how many days did you hunt on...

Weekend days or holidays: _____ days
 Weekdays (Monday-Friday): _____ days

Q8. Did you hunt the opening Saturday (October 2) of the 2010 Minnesota Season? (Please check one.)

- No
- Yes

Q9. Did you hunt the first Sunday (October 3) of the 2010 Minnesota Season? (Please check one.)

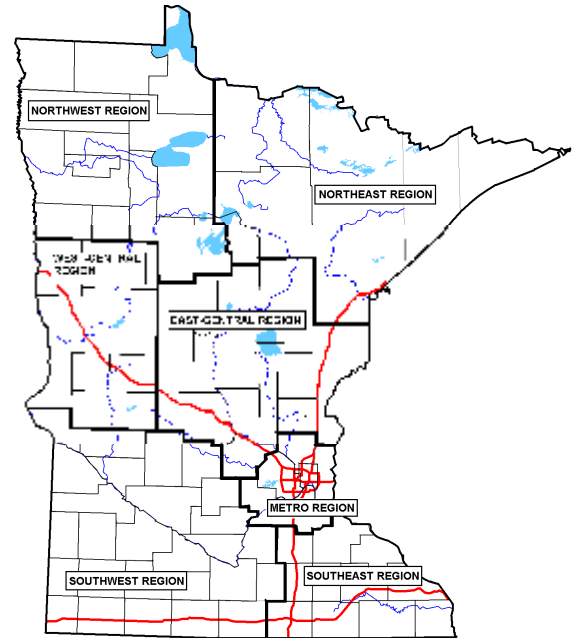
- No
- Yes

Q10. During the regular duck and goose season in Minnesota, I hunted waterfowl at (Please check one):

- The same area every time I hunted during the fall
- 2-5 different areas during the fall
- More than 5 areas during the fall

Q11. During the 2010 Minnesota waterfowl-hunting season, how many days did you hunt in each region? (See map.) Do not include days hunted during the special September goose season.

Region	Number of Days
Northwest region	days
Northeast region	days
East-central region	days
West-central region	days
Southwest region	days
Southeast region	days
Metro region	days



Q12. During the 2010 Minnesota waterfowl-hunting season, did you hunt... (Please check one.)

- Mostly on privately owned areas
- Mostly on public access areas (Wildlife Management Areas, Waterfowl Production Areas, public access waters)
- Public and private about the same

Q13. Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the 2010 waterfowl season? (Please check one.)

- No
- Yes

Part IV. Your Hunting Satisfaction

Q14. During the 2010 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the following? (Circle one response for each. If you did not hunt ducks or geese please circle "9" in the far right column.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Did not hunt ducks/geese
General waterfowl hunting experience	1	2	3	4	5	6	7	9
DUCKS:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
GEESE:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9

Q15. During the 2010 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the number of ducks and geese you saw in the field? (Please circle one response for each.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly	Moderately satisfied	Very satisfied	Did not hunt
Number of ducks <u>seen</u>	1	2	3	4	5	6	7	9
Number of geese <u>seen</u>	1	2	3	4	5	6	7	9

Q16. During the 2010 Minnesota waterfowl season, about how many days that you hunted waterfowl...

...would you describe as “good” waterfowl hunting days: _____

...did you shoot your daily bag limit of ducks: _____

...did you shoot 0 ducks: _____

Q17. Please rate and describe the following hunting days for your 2010 Minnesota season:

	Poor	Below Average	Average	Above Average	Excellent	How many ducks/geese did you bag that day?	In what month was that day? (Check one.)
Your <u>best</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.
Your <u>first</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.
Your <u>last</u> waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	<input type="checkbox"/> Oct. <input type="checkbox"/> Nov. <input type="checkbox"/> Dec.

Q18. How did your 2010 waterfowl season compare with the 2009 waterfowl season? (Circle one response for each.)

Compared to 2009, rate your 2010 waterfowl season:	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Did not hunt in 2009
General waterfowl hunting experience	1	2	3	4	5	6	7	9
DUCKS:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
number of ducks seen	1	2	3	4	5	6	7	9
GEESE:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
number of geese seen	1	2	3	4	5	6	7	9

Part V. Motivations for Waterfowl Hunting

Q19. Please tell us how important each of the following experiences was to your waterfowl hunting satisfaction during the 2010 season. (Please circle one response for each.)

	Not at all important	Slightly important	Somewhat important	Very important	Extremely important
Enjoying nature and the outdoors	1	2	3	4	5
Getting away from crowds of people	1	2	3	4	5
Getting food for my family	1	2	3	4	5
Shooting a gun	1	2	3	4	5
A large daily duck bag limit	1	2	3	4	5
Access to a lot of different hunting areas	1	2	3	4	5
Bagging ducks and geese	1	2	3	4	5
Being on my own	1	2	3	4	5
Being with friends	1	2	3	4	5
Developing my skills and abilities	1	2	3	4	5
Being with family	1	2	3	4	5
Killing waterfowl	1	2	3	4	5
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	1	2	3	4	5
Getting my limit	1	2	3	4	5
Good behavior among other waterfowl hunters	1	2	3	4	5
Having a long duck season	1	2	3	4	5
Hunting areas open to the public	1	2	3	4	5
Hunting with a dog	1	2	3	4	5
Reducing tension and stress	1	2	3	4	5
Seeing a lot of ducks and geese	1	2	3	4	5
Sharing my hunting skills and knowledge	1	2	3	4	5
Thinking about personal values	1	2	3	4	5
Using my hunting equipment (decoys, boats, etc.)	1	2	3	4	5
Getting my own food	1	2	3	4	5
The excitement of hunting	1	2	3	4	5
The challenge of making a successful shot	1	2	3	4	5

Part VI. Waterfowl Hunting Constraints

Many factors may limit peoples' interest in waterfowl hunting and ability to hunt for waterfowl in Minnesota. We are interested in how easy it is for you to go waterfowl hunting in Minnesota. Please respond to these questions even if you did not hunt waterfowl in Minnesota in 2010. (Circle one response.)

	Definitely False	Moderately False	Slightly False	Neutral	Slightly True	Moderately True	Definitely True
Q20. If I want to <u>hunt for waterfowl in Minnesota</u>, I can easily go.	1	2	3	4	5	6	7

Q21. How much did the following factors limit your waterfowl hunting in Minnesota during the past 5 years?
Circle one response for each:

	HOW LIMITING?						
	Not at all						Very
Family commitments	1	2	3	4	5	6	7
Work commitments	1	2	3	4	5	6	7
Access to private land for hunting	1	2	3	4	5	6	7
Access to public land for hunting	1	2	3	4	5	6	7
Crowding at hunting areas	1	2	3	4	5	6	7
Cost of equipment	1	2	3	4	5	6	7
Cost of licenses	1	2	3	4	5	6	7
Travel costs	1	2	3	4	5	6	7
Waterfowl hunting regulations too restrictive	1	2	3	4	5	6	7
Availability of waterfowl hunting partners	1	2	3	4	5	6	7
Interest in other recreational activities	1	2	3	4	5	6	7
Waterfowl populations too low	1	2	3	4	5	6	7
No desire for waterfowl as food	1	2	3	4	5	6	7
No need for waterfowl as food	1	2	3	4	5	6	7
Personal concern for animal pain & distress	1	2	3	4	5	6	7
Other people's concern for animals' pain and distress	1	2	3	4	5	6	7
Not enough leisure time	1	2	3	4	5	6	7
The type of people that hunt waterfowl	1	2	3	4	5	6	7
Amount of planning required to go hunting	1	2	3	4	5	6	7
Age	1	2	3	4	5	6	7
The amount of effort required to go hunting	1	2	3	4	5	6	7
No hunting opportunities near my home	1	2	3	4	5	6	7
The timing of the waterfowl migration	1	2	3	4	5	6	7
Poor health	1	2	3	4	5	6	7
Prefer other types of hunting	1	2	3	4	5	6	7
Having the right kind of equipment	1	2	3	4	5	6	7
Having the right breed of dog	1	2	3	4	5	6	7
Having to get up too early in the morning	1	2	3	4	5	6	7
Concern over wounding waterfowl	1	2	3	4	5	6	7
Waterfowl hunting is too difficult	1	2	3	4	5	6	7
Articles I read in national magazines	1	2	3	4	5	6	7
Articles I read in local newspapers or magazines	1	2	3	4	5	6	7

Q22. Thinking about when you hunt for waterfowl in Minnesota, how much do you use the following strategies to maintain your waterfowl hunting participation and satisfaction. *Circle one response for each:*

When you hunt for waterfowl <u>in Minnesota...</u>	HOW MUCH YOU USE THE FOLLOWING STRATEGIES TO MAINTAIN YOUR PARTICIPATION IN WATERFOWL HUNTING?						
	Not at all			Very much			
Budgeting to save money for waterfowl hunting	1	2	3	4	5	6	7
Learning new ways to hunt waterfowl	1	2	3	4	5	6	7
Trying to find people to waterfowl hunt with	1	2	3	4	5	6	7
Living within my means financially to save money for waterfowl hunting	1	2	3	4	5	6	7
Cutting short hunting outings to make time for other responsibilities	1	2	3	4	5	6	7
Getting work done earlier or staying up later to increase time for waterfowl hunting	1	2	3	4	5	6	7
Asking for help to gain waterfowl hunting skills	1	2	3	4	5	6	7
Finding people with similar interests in waterfowl hunting	1	2	3	4	5	6	7
Waterfowl hunting with people who had similar work schedules	1	2	3	4	5	6	7
Having others take on more responsibilities around the house so that I could get out waterfowl hunting	1	2	3	4	5	6	7
Borrowing other hunters' equipment	1	2	3	4	5	6	7
Improvising with the hunting equipment that I had	1	2	3	4	5	6	7
Getting the equipment together beforehand so I could get out of the house on time	1	2	3	4	5	6	7

Part VII. Factors That Might Affect Waterfowl Hunting Satisfaction

Q23. We are interested in what factors might improve your satisfaction with waterfowl hunting in Minnesota. *Circle one response for each:*

When you hunt for waterfowl <u>in Minnesota...</u>	HOW MUCH WOULD THE FOLLOWING CHANGES IMPROVE YOUR SATISFACTION WITH WATERFOWL HUNTING IN MINNESOTA?						
	Not at all			Very Much			
A dramatic increase in duck populations in Minnesota	1	2	3	4	5	6	7
Improved access for waterfowl hunting on public land in Minnesota	1	2	3	4	5	6	7
Improved access for waterfowl hunting on private land in Minnesota	1	2	3	4	5	6	7
More public land to hunt waterfowl in Minnesota	1	2	3	4	5	6	7
A son or daughter who wanted to go waterfowl hunting in Minnesota	1	2	3	4	5	6	7
Another family member who wanted to go waterfowl hunting in Minnesota	1	2	3	4	5	6	7
Less crowding at waterfowl hunting areas in Minnesota	1	2	3	4	5	6	7
More support for waterfowl hunting from my family	1	2	3	4	5	6	7
Improved health, physical ability to waterfowl hunt	1	2	3	4	5	6	7
Better waterfowl habitat in Minnesota	1	2	3	4	5	6	7
More opportunities to hunt geese in Minnesota	1	2	3	4	5	6	7
Better duck-hunting opportunities in Minnesota	1	2	3	4	5	6	7

Part VIII. General Waterfowl Hunting Information

Next we have a few general questions about waterfowl hunting. *Please respond to these questions even if you did not hunt waterfowl in Minnesota in 2010.*

Q24. How important is waterfowl hunting to you? (Please check one.)

- It is my most important recreational activity.
- It is one of my most important recreational activities.
- It is no more important than my other recreational activities.
- It is less important than my other recreational activities.
- It is one of my least important recreational activities.

Q25. How would you describe your identification with the activity of waterfowl hunting. (Please check one.)

- I go waterfowl hunting, but I do not really consider myself a waterfowl hunter.
- I am in the process of becoming a waterfowl hunter.
- I used to be a waterfowl hunter, but I no longer consider myself one.
- I am a waterfowl hunter.

Q26. Please indicate how much you agree or disagree with the following statements about waterfowl hunting. Circle one response for each:

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

Q27. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2010. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (6 ducks)? (Please check one.)

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Q28. The U.S. Fish and Wildlife Service allowed states to have a 2 hen mallard daily bag limit in 2010. Which one statement best describes how you feel about the hen mallard daily bag limit in Minnesota (1 hen mallard)? (Please check one.)

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Q29. The U.S. Fish and Wildlife Service allowed states to have a 3 wood duck daily bag limit in 2010. Which one statement best describes how you feel about the wood duck daily bag limit in Minnesota (2 wood ducks)? (Please check one.)

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

Part IX. Waterfowl Management and Special Regulations

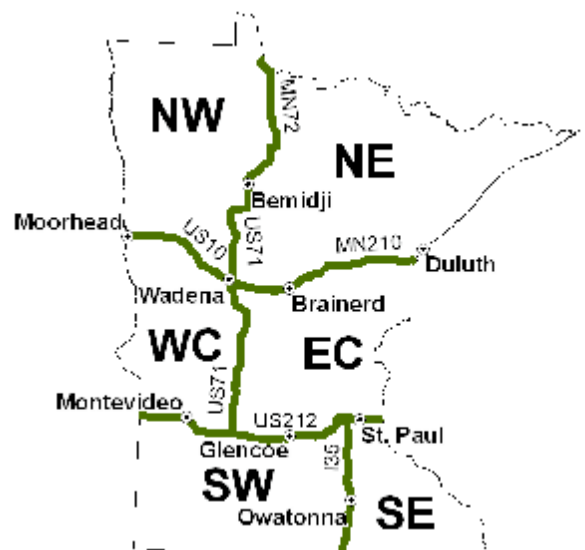
Q30. We would like to know if you oppose or support each of these different strategies: (Please circle one for each.)

	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support	Don't know
Ending shooting hours at 4 pm for the first part of Minnesota's waterfowl season	1	2	3	4	5	9
Moist soil management (i.e. management to simulate a seasonal wetland by artificially adding and removing water to maximize food production for waterfowl).	1	2	3	4	5	9
Limiting use of mud motors on certain public hunting areas	1	2	3	4	5	9
Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season	1	2	3	4	5	9
Restrictions on hunting within 100 yards of surface water during the early (Sept.) Canada goose season	1	2	3	4	5	9
Providing easier access to waterfowl hunting sites on Wildlife Management areas	1	2	3	4	5	9

Part X. Waterfowl Hunting Zones

Q31. In which area of the state is the timing of open duck hunting and season dates most important to you? (Please select only one area.)

- Northwest (NW)
- Northeast (NE)
- West central (WC)
- East central (EC)
- Southwest (SW)
- Southeast (SE)
- No preference



Q32. If the duck season length is 60 days in 2011, which season dates and structure would you most prefer to have the season open in the area you selected above? (Check one.)

- Saturday Oct. 1 to Tuesday, Nov. 29
- Saturday Sept. 24 to Sunday Sept. 25, close 5 days and reopen Saturday Oct. 1 to Sunday Nov. 27
- No preference

Q33. If the duck season length needed to be shortened to only 30 days, which three 10-day periods would you most prefer to have the season open in the area you selected above? (Check only 3 boxes.):

- Early October (October 1-10)
- Mid October (October 11-20)
- Late October (October 21-31)
- Early November (November 1-10)
- Mid November (November 11-20)
- Late November (November 21-30)
- No preference

Part XI. Youth Waterfowl Hunting Day

Since 1996, the U.S. Fish and Wildlife Service has allowed states to select a Youth Waterfowl Hunting days outside the regular waterfowl season for youth age 15 and younger to take ducks and geese. During this event adults accompany youth, but may not hunt waterfowl themselves. Because of the season structure in Minnesota, Youth Waterfowl Hunting Day is held before the regular waterfowl season opening. Minnesota has offered a one-day Youth Waterfowl Hunt since 1996.

Q34. Do you support or oppose the concept of Youth Waterfowl Hunting Day? (Please check one.)

- Strongly oppose
- Oppose
- Undecided or neutral
- Support
- Strongly support

Q35. Last September (2010), did you take any youth hunting on Youth Waterfowl Hunting Day? (Please check one.)

- No → (Skip to Q38).
- Yes (Please answer questions Q36-Q37.)

→ **Q36. If yes, how many youths did you take?** _____ youths

→ **Q37. How many total waterfowl did the youths harvest?** _____ ducks _____ geese

Q38. Did you participate in Youth Waterfowl Hunting Day as a youth? (Please check one.)

- No → (Skip to Q40).
- Yes (Please answer Q39.)

→ **Q39. If yes, how important was Youth Waterfowl Hunting Day to your becoming a waterfowl hunter?**

- Not at all important
- Slightly important
- Somewhat important
- Quite important
- Very important

Part XII. About You

Q40. Are you currently a member of: (Check all that apply.)

- Ducks Unlimited
- Delta Waterfowl
- Minnesota Waterfowl Association
- Local sportsman's club
- Other national/statewide conservation/hunting organization(s) *Please specify:* _____

Q41. Where do you get information about waterfowl hunting? (Please check all that apply.)

- Minnesota DNR news releases and publications
- Minnesota DNR web site
- Other web sites (e.g. Waterfowl.com, Minnesotawaterfowler.com)
- Minneapolis Star Tribune
- St. Paul Pioneer Press
- Other newspapers
- Weekly/monthly outdoor publications (e.g Outdoor News)
- Television/radio
- Friends, family, and other individuals
- Other: _____

Q42. Did you hunt for waterfowl in a state or province other than Minnesota in 2010? (Please check one.)

- No
- Yes (*Please answer question Q43.*)

→ **Q43. If yes, list locations, number of days you hunted waterfowl, and number you personally bagged in that area during 2010:**

STATE OR PROVINCE	NUMBER OF DAYS HUNTED WATERFOWL	NUMBER OF DUCKS YOU PERSONALLY BAGGED	NUMBER OF GEESE YOU PERSONALLY BAGGED
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese

Please write additional comments below or on additional sheets. Survey results will be available in the summer of 2011 on the Minnesota Department of Natural Resources Web site, www.dnr.state.mn.us. If you have a question about the survey, contact Sue at 612-624-3479. If you have a specific question that you want answered, please contact the Minnesota DNR at 1-888-MINNDNR.

Appendix B: Sampling Issues

During review of this report, after data collection was concluded, we observed some discrepancies between the desired sampling protocol and the actual sample. These discrepancies are shown in Figure A2-1. Specifically, individuals from Marshall County were included in the South stratum instead of Northwest stratum, individuals from McLeod County were included in Northwest instead of South, individuals from Cleveland in LeSueur County were coded to Metro instead of South. Other problems with the 2010 sample include Wright County, which was not included (but should have been a non-metro county), and Wadena County, which was included in both the Northwest zone and the non-metro strata. However, based on our estimates these discrepancies would affect only about 50 survey respondents. Therefore, results are presented based on the assigned sample stratum rather than corrected to represent the desired sampling protocol.

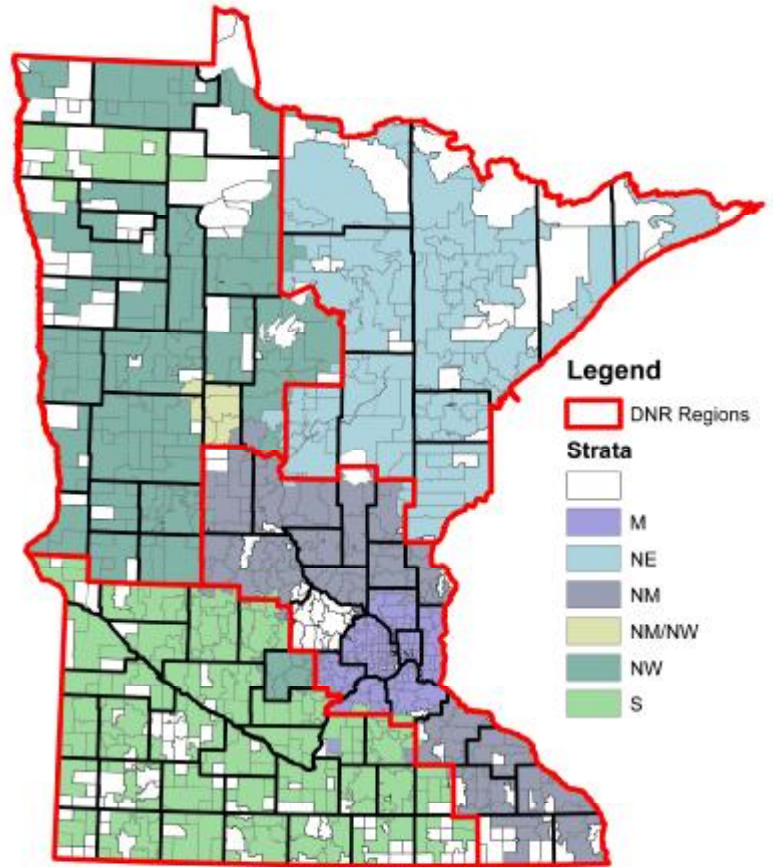


Figure A2-1.