THE 2011 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 2011 Waterfowl Hunting Season in Minnesota: A Study of Hunters' Opinions and Activities

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Executive Summary

This study of the 2011 Minnesota waterfowl-hunting season was conducted to assess waterfowl hunters':

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

The survey was distributed to 3,600 waterfowl hunters; 1,815 completed surveys were used for this analysis. After adjusting for undeliverable surveys and invalid respondents, the response rate was 51.7%. An additional 264 shortened surveys used to gauge nonresponse were also received for a total response rate of 59.2%.

Experiences

Just less than 9 of 10 survey respondents (88.4%) hunted waterfowl during the 2011 Minnesota season. Respondents who had hunted in 2011 were asked if they had hunted for ducks, Canada Geese during the early and regular seasons, and other geese. Responses ranged from 93% for ducks to only 6% for other geese (Figure S-1).

Hunters reported bagging an average of 10.2 ducks, 6.0 Canada geese, and 1.1 "other" geese over the course of the 2011 Minnesota season. Respondents hunted an average of 6.8 days on weekends and holidays, and 4.3 days during the week. Approximately two-thirds of waterfowl hunters statewide hunted opening Saturday (65%) or Sunday (60%). A similar proportion (61%) hunted during the second weekend of the season.

Figure S-1: Percentage of Hunters Participating in Activities in 2011

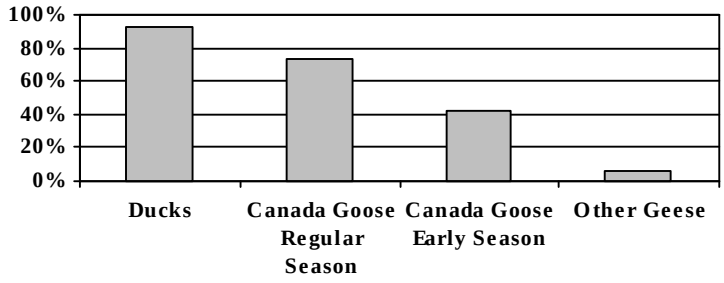
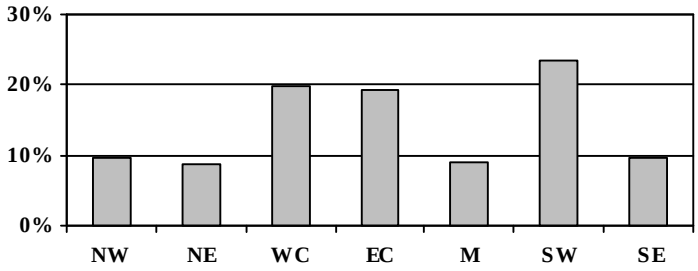


Figure S-2: Most Frequent Hunting Destination in 2011



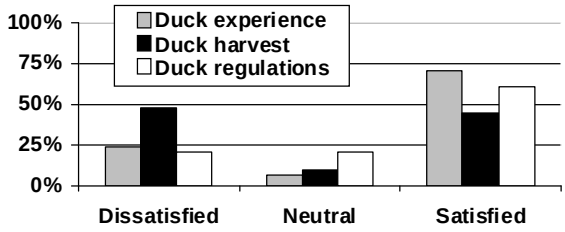
Survey recipients were asked which zones they hunted in. About two-thirds (66.1%) hunted only in the south duck zone, with 24% hunting only in the north duck zone, and 10% hunting in both zones. Survey recipients were asked how many days they hunted in each of seven former DNR regions. Nearly one in four respondents reported hunting most frequently in the southwest (24%), and about one in five hunted most frequently in the west-central (20%) and east-central regions (19%). About one in ten state waterfowl hunters reported that they hunted most often in the northeast (9%), northwest (10%), southeast (9%) or metropolitan (9%) regions (Figure S-2).

Satisfaction

Over two-thirds of hunters (68.1%) 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.

About two-thirds of respondents were satisfied with their 2011 duck-hunting experience (Figure S-3). Nearly half of respondents were satisfied with their duck-hunting harvest, with nearly half dissatisfied. Satisfaction with duck-hunting regulations was between satisfaction levels for experience and harvest. About one in five 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.

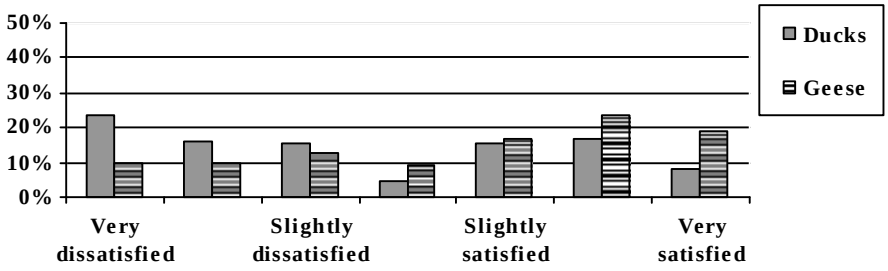
Figure S-3: Satisfaction With Duck Hunting in 2011



About two-thirds of goose hunters were satisfied with their general goose-hunting experience. Nearly half (46.9%) respondents were satisfied with their goose harvest. Nearly two-thirds of goose hunters indicated they were satisfied with goose-hunting regulations. The number of geese bagged appears to have a 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

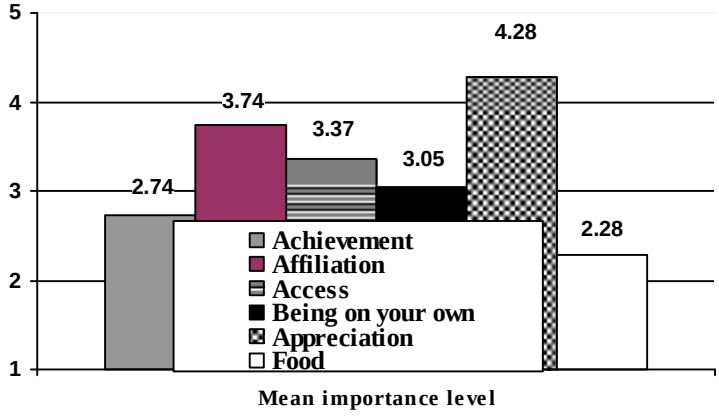


Hunters were asked to compare the 2011 waterfowl season to the 2010 season. More than one-third of respondents indicated that their general waterfowl hunting experience was better in 2011 than in 2010, while 39.2% felt it was worse, and 29.7% felt neither year was better than the other. Results were similar for duck hunting experience. A slightly smaller proportion of respondents indicated that duck hunting harvest was better in 2011. Nearly half of respondents (46.1%) felt that 2011 duck regulations were neither better nor worse than 2010 regulations, however this was a substantially smaller proportion than the nearly two-thirds that indicated this comparing the 2009 to the 2010 season regulations. More than one-third (37%) thought the 2011 regulations were better than the 2010 regulation, with only 16.8% thinking they were worse. About one-third (34.1%) of respondents felt that the number of ducks seen in 2011 was better than in 2010, while about half (48.7%) felt the number was worse.

Motivations for and Involvement With 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, good behavior among other waterfowl hunters, the excitement of hunting, 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. The importance of these six factors is shown in Figure S-5. Over half of respondents indicated that waterfowl hunting was one of their most important recreational activities, about two-thirds identified as being waterfowl hunters. Respondents rated the importance of individuals and groups to their participation in waterfowl hunting. On average, friends were rated the most important followed by a parent. Nearly two-thirds (62.5%) indicated that friends were very or extremely important to their participation in waterfowl hunting. Slightly less than half (43.4%) of respondents indicated that a parent was very or extremely important.

Figure S-5 Means on Motivation Factors



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, 63% of respondents support the youth hunt, with 39% strongly supporting it.

Study respondents were asked if they took any youths hunting on Minnesota's 2011 Youth Waterfowl Hunting Day, and 11.5% reported participating. Those respondents who participated in Youth Waterfowl Hunting Day reported escorting an average of 1.94 youths. Based on the percentages provided by the survey, it is estimated that 15,881 youths participated in the youth waterfowl hunt in 2011.

Management Strategies

Respondents were asked to indicate their opinion about the 6-duck bag limit, 2-hen mallard bag limit, and 3-wood duck bag limit. About two-thirds of respondents felt the 6-duck bag limit was about right, with 3.4% indicating that it was too low, 18.2% too high, and 11.9% no opinion. More than 6 in 10 respondents felt the 2-hen mallard bag limit was about right, compared to 3.5% too low, 22.6% too high, and 11.6% no opinion. Nearly two-thirds of respondents felt the 3-wood duck bag limit was about right, compared to 7.7% who felt it was too low, 15.5% who thought it was too high, and 11.4% who had no opinion.

Respondents were asked to rate their agreement with four statements related to crowding on public hunting areas. Respondents were evenly split in their agreement (40.0%) and disagreement (39.9%) that the public hunting areas they used were not crowded. About half of respondents (50.5%) agreed that the public hunting areas they used were too crowded on opening weekend but usually not after that, while only about one-fourth (24.9%) disagreed. Respondents were fairly evenly split in their agreement (30.3%) and disagreement (39.4%) that the public hunting areas they used were too crowded most of the time.

About two-thirds of respondents (65.8%) disagreed that the DNR should use a drawing or lottery to limit waterfowl hunter numbers in some public hunting areas. There were significant regional differences for several items in perceptions of crowding on public hunting areas, with greater crowding perceived in the southern and metropolitan regions.

Respondents were asked to indicate their level of support for six management strategies. About three-fourths (77.3%) of respondents supported beginning shooting hours one-half hour before sunrise on opening day, with only 12.9% opposing. Nearly two-thirds (63.0%) of respondents supported opening last year's regular waterfowl season one week earlier, with less than 20% opposed. Nearly half of respondents (44.9%) supported using a North and South duck zone during last year's season, with 11% opposing. About one-third (32.7%) of respondents supported using a split season in the South Duck Zone during last year's waterfowl season. About half (45.4%) of respondents opposed and 34.1% supported ending shooting hours at 4 pm for the first part of the season. More than one-third (37.6%) of respondents supported restrictions on open water hunting during the regular waterfowl season, with 26.3% opposed. More than four in ten respondents (43.8%) supported open water hunting on a few larger lakes or rivers during the regular waterfowl season, with 15.3% opposed and 40.9% neutral.

Season Dates and Splits

Respondents were asked to select the area of the state where season dates were most important to them using the map shown. The largest proportion (41.6%) selected the west-central region, followed by north (26.4%), south (17.6%), and southeast (8.6%). About 6% had no preference. Study participants were asked to select between a straight season, one of two split seasons, or no preference for a 60-day duck season in 2012. Statewide, 38.3% preferred a straight season (Saturday Sept. 22 to Tuesday, Nov. 20), 26.6% preferred a split season with a later split (Saturday Sept. 29 to Sunday Sept. 30, close 5 days and reopen Saturday Oct. 6 to Sunday Dec. 2), 20.1% preferred a split season with an earlier split (Saturday Sept. 22 to Sunday Sept. 23, close 5 days and reopen Saturday Sept. 29 to Sunday Nov. 25), and 15.0% had no preference. Study participants were asked to select between a straight season, one of two split seasons, or no preference for a 30-day duck season in 2012. Statewide, 34.8% preferred a straight season (Saturday Sept. 29 to Sunday, Oct. 28), 31.9% preferred a split season with a late split (Saturday Sept. 29 to Sunday Oct. 7, close 10 days and reopen Thursday Oct. 18 to Wednesday, Nov. 7), 16.7% preferred a split season with an earlier split (Saturday Sept. 29 to Sunday Sept. 30, close 5 days and reopen Saturday Oct. 6 to Friday, Nov. 2), and 16.6% had no preference. Study participants were asked to select between two straight September goose seasons of different lengths, or no preference for a September goose season. Choices for the September goose season were fairly evenly divided. Statewide, 37.2% had no preference, while 35.1% preferred the longer Saturday Sept. 1 to Friday, Sept. 21 season, and 27.7% preferred the shorter Saturday Sept. 1 to Sunday Sept. 16 season.

Comparison with Earlier Study Results

Respondents reported significantly higher satisfaction levels for the 2011 season than for the 2005, 2007 or 2010 seasons. Satisfaction was not significantly different from the 2000 and 2002 seasons. Six identical measures of trust in the Minnesota Department of Natural Resources were asked in both 2010 and 2011, and two identical measures were asked in 2002. Average trust was significantly higher in 2011 than 2010 for several measures, and average trust in 2011 was significantly lower than 2002 for the two measures that were consistent between those years. Reported memberships in Ducks Unlimited, Delta Waterfowl, the Minnesota Waterfowl Association, and local sportsmen's clubs were higher in 2011 than in previous study years.

Table of Contents

List of Tables

Introduction

Minnesota has generally been in the top 3 states for number of waterfowl hunters in the United States. In recent years, the Minnesota Department of Natural Resources (MNDNR) has 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, 2007, and 2010 waterfowl hunting seasons were completed (Fulton et al. 2002, Schroeder et al. 2004, 2007*a*, 2008, 2012). In addition, a series of surveys looking at hunter recruitment and retention were completed following the 2005 waterfowl hunting season (Schroeder et al. 2007*b,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.

We originally planned on completing the statewide survey at 3 year intervals, but have made exceptions. We conducted a survey in 2002 instead of 2003 to obtain current estimates of spinning-wing decoy use, and a limited survey was conducted following the 2007 waterfowl hunting season to evaluate changes in daily bag limits. We conducted a survey following the 2010 waterfowl season, but changes in waterfowl hunting regulations in 2011 necessitated the need for an additional hunter survey. Specifically, the duck season opened 1 week earlier, the wood duck daily bag limit was increased from 2 to 3, and the hen mallard daily bag limit was increased from 1 to 2. In addition, 2011 was the first year Minnesota used zones for duck seasons. In 2012 we have the opportunity to add an additional zone. Thus, the survey provides opinions on how hunters perceived the 2011 zones, and obtain recommendations for 2012.

Study Purpose and Objectives

This study was conducted to identify hunter preferences/opinion on daily bag limits and zones relative to their satisfaction, success, and opinions/preferences on other waterfowl hunting and management issues. These results will be compared to results from previous Minnesota surveys and other hunter surveys. Results will describe how preferences/opinions vary based upon hunter characteristics. This survey also provides 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 2011 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 2011, and changes in satisfaction since 2010, 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 2011.
4. Examine Minnesota waterfowl hunters' identification and involvement with waterfowl hunting.
5. Determine Minnesota waterfowl hunters' opinions concerning bag limits and other management strategies for maintaining waterfowl numbers;
6. Determine Minnesota waterfowl hunters' opinions on season dates and split seasons.
7. Determine Minnesota waterfowl hunters' support for and participation in Youth Waterfowl Hunting Day;
8. Determine general characteristics of waterfowl hunters in Minnesota.

9. 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 2011. 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 for the 2011 season. The study sample was stratified by residence of individuals (determined by ZIP code) in four regions. The target sample size was n = 400 for each region (n = 1,600 statewide). An initial stratified random sample of 3,600 individuals, 900 from each of the four regions, was drawn from the ELS. We stratified based on the 6 former DNR regions to select the samples for the 2000 and 2002 waterfowl hunter surveys (Fulton et al. 2002, Schroeder et al. 2004). For the 2005 and 2010 season surveys, we used the current 4 DNR regions (as of 2005) and separated the Central region into Twin Cities Metro (METRO) and non-Metro (NONMETRO) portions for 5 strata. In 2011, we stratified the sample based upon 3 proposed duck zones (North, Central, South) and the Twin Cities Metropolitan area (Fig. 1). Some sampling discrepancies were identified after initiation of data collection. In the initial sample of 3,600 individuals, the regions of 47 (1.3%) individuals were misidentified; 19 of these individuals responded to the survey (0.9% of respondents). Details about misidentified individuals are included in Appendix 2.

Figure 1. Proposed duck zones and counties assigned to North, Central, South, and Metro strata for the 2011 Minnesota Waterfowl Hunter Survey.

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 January and April 2012. 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 3 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. Three 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.

The response rate to the 2010 waterfowl hunter survey (50%, Schroeder et al. 2012) was less than earlier Minnesota surveys of waterfowl hunters (63-68%, Schroeder et al. 2004, 2007, 2008), therefore we adapted survey methodology to increase the response rate. All survey cover letters were manually signed, in contrast to the electronic signature we had used for the 2010 survey. In addition, we reduced the length of the survey slightly to reduce the time obligation for respondents.

Survey Instrument

The data collection instrument was a 12-page self-administered survey with 10 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 2011 Minnesota waterfowl-hunting seasons, including: species hunted, days hunted, and management zones/region(s) hunted;
Part 3:	Satisfaction with duck and goose hunting including general experience, harvest, and regulations, comparison of 2010 and 2011 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:	General waterfowl hunting information including involvement and investment in waterfowl hunting, and opinions on bag limits;
Part 6:	Opinions concerning waterfowl management issues and special regulations;
Part 7:	Waterfowl Hunting Zones including zones and season dates;
Part 8:	Youth Waterfowl Hunting Day;
Part 9:	Minnesota DNR waterfowl management; and
Part 10:	Sociodemographics and information about group membership and hunting outside Minnesota.

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

Data Entry and Analysis

Data were keypunched and the data were analyzed on a PC using the Statistical Program for the Social Sciences (SPSS for Windows 19). 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 3,600 questionnaires mailed, 86 were undeliverable or otherwise invalid. Of the remaining 3,514 surveys, a total of 1,815 were returned, resulting in a response rate of 51.7%. An additional 264 shortened or late full-length surveys, used to gauge nonresponse, were returned for a total response rate of 59.2%. 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 4 surveys that were returned without identification numbers. These 4 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	900	18	882	446	50.57%	54	500	56.69%
Metro	900	16	884	486	54.98%	48	534	60.41%
North	900	35	865	435	50.29%	67	502	58.03%
South	900	17	883	448	50.74%	74	522	59.12%

The average age of respondents ($\bar{x} = 45.1$) was significantly older than the population of waterfowl hunters ($\bar{x} = 39.8$) (t = 16.603***). 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 8 for respondent/study population age comparison).

Population Estimates

Statewide Estimates

The study sample was drawn using a stratified random sample with region of residence defining the four 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 (proportions listed in Table I-2).

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

Region of residence	Proportion of resident state waterfowl stamp purchasers in each region age 18 and older	
	Frequency[1]	Proportion
CENTRAL	21,343	26.51%
METRO	26,747	33.22%
NORTH	17,485	21.72%
SOUTH	14,945	18.56%
Statewide[2]	80,520	100%

[1] Source: DNR license database

[2] The statewide total is not equal to the total number of waterfowl stamps sold (89,675 stamps). The number in the table reflects the sample population for the study, which excluded nonresident stamp buyers and individuals less than 18 years of age. The number shown in the table reflects the customer count rather than the stamp count. Customers can purchase more than one stamp.

Section 1: Experiences During the 2011 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 2011 Minnesota waterfowl-hunting seasons. Only individuals who hunted waterfowl in Minnesota in 2011 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 participation, 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 2011

Respondents were first asked to report if they had actually hunted for waterfowl in Minnesota in 2011. Statewide 88.4% of the survey respondents indicated that they had hunted waterfowl in 2011. There were no significant differences in participation rates by region of residence (Table 1-1). Respondents who had hunted in 2011 were next asked if they had hunted for ducks, and Canada Geese during the early September and regular seasons. At the statewide level, 93.3% of actual waterfowl hunters in 2011 indicated they had hunted ducks while 72.9% 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, 19.5% of respondents hunted ducks exclusively and 6.0% hunted geese exclusively.

There was no significant difference, by region of residence or region most hunted, in the proportion of hunters who hunted for ducks. A smaller proportion of waterfowl hunters residing in the metropolitan area hunted for Canada Geese during the early goose season. Those who hunted most in the northeast participated in the early goose season least while those hunting in the east-central and metro regions participated the most; only about 30% of those who hunted most frequently in the northeast participated compared to just over half of individuals who hunted most frequently in in the east-central and metro regions. A greater proportion of hunters residing in the southern region (Table 1-1), and a smaller proportion of individuals who hunted most frequently in the northeast (Table 1-2), hunted for Canada Geese during the regular season

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 10.17 (Table 1-4). Hunters reported an average of 5.39 geese during the early season and 3.50 during the regular season. For both Canada Goose seasons combined, hunters bagged a total of 6.01 Canada Geese for the year. On average, hunters harvested 1.08 "other" geese.

Results of ANOVA indicate that, on average, hunters residing in the metropolitan and to a lesser extent the non-metropolitan central region, shot significantly fewer ducks 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 2011 Waterfowl Hunt

Average Number of Days Hunting Weekends and Weekdays

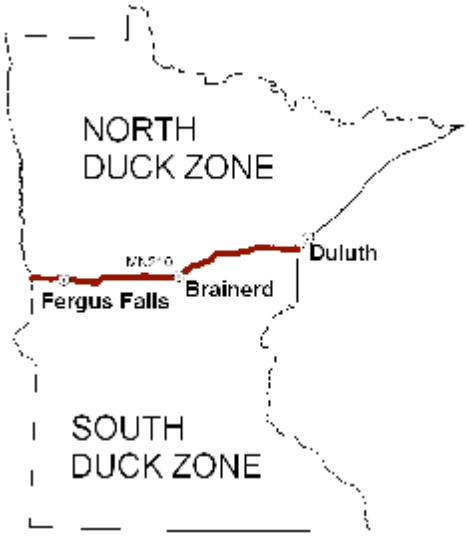
Next, respondents were asked to report the number of days they hunted on weekends or holidays and weekdays. On average, hunters spent more days hunting on weekends and holidays (6.76 days) than during the week (4.28 days) (Table 1-6).

Hunting Opening Weekends

Just less than two-thirds of waterfowl hunters statewide hunted opening Saturday (64.7%) or Sunday (60.3%) during the 2011 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 northern regions, southeast region and metro region hunted during opening weekend (Table 1-8). Just less than two-thirds of waterfowl hunters statewide hunted during the second weekend of the season (Tables 1-9 and 1-10). A smaller proportion of hunters living in the metro region hunted during the second weekend of the season (Table 1-10).

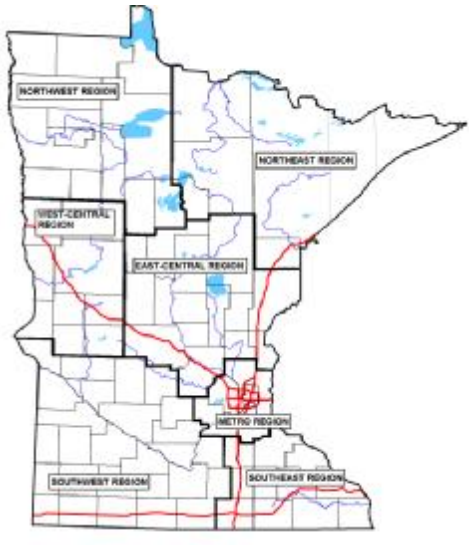
Zones Hunted

Respondents were asked to indicate which zones they hunted in during the season (see map). About two-thirds (65.9%) hunted only in the South Duck Zone. About one-quarter (24.0%) hunted only in the North Duck Zone, and 10.1% hunted in both zones (Table 1-11). Respondents were asked if they hunted the North Zone between Monday, September 26 and Friday, September 30 during the 2011 season. Slightly more than a third of respondents who had hunted the North Zone reported hunting during those dates (Table 1-12).



Regions Hunted

Respondents were asked to indicate the number of days they hunted in each of seven regions (see map) (Table 1-13). The southwest (23.6%), west-central (19.9%) and east-central regions (19.2%) 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 (8.8%), northwest (9.7%), southeast (9.7%) or metropolitan (9.1%) regions (Table 1-14).



Shooting and Retrieving Wood Ducks and Mallards

Respondents were asked how many days during the season that they shot and retrieved at least 1 wood duck, and of those days how many they had shot and retrieved 3 wood ducks (Table 1-15). Similarly, respondents were asked how many days during the season that they shot and retrieved at least 1 hen mallard, and of those days how many they had shot and retrieved 2 hen mallards (Table 1-16). On average, statewide, respondents shot at least 1 wood duck on 2.17 days and shot and retrieved 3 woods ducks on 0.49 days (Table 1-15). Respondents from the

southern region reported higher number of days bagging 1 or 3 wood ducks. On average, statewide, respondents shot at least 1 hen mallard on 1.59 days and 2 hen mallards on 0.50 days (Table 1-16). There was no significant difference by region of residence in the number of days bagging hen mallards.

Section 1: Experiences During the 2011 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 2011				
	%Who actually hunted in 2011	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide[2]	88.4%	93.3%	42.7%	72.9%	6.4%
CENTRAL	90.0%	94.6%	47.7%	72.8%	5.2%
METRO	87.1%	91.9%	34.4%	71.5%	4.9%
NORTH	88.2%	93.3%	46.1%	68.8%	8.8%
SOUTH	88.9%	94.1%	45.3%	79.9%	8.0%
	χ^2=1.896 n.s. CV=0.033	χ^2=2.673 n.s. CV=0.042	χ^2=15.732** CV=0.106	χ^2=12.632** CV=0.093	χ^2=5.886 n.s. CV=0.068

[1] % for species reflects only % of respondents that actually hunted waterfowl during 2011.
[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 2011			
	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	93.3%	42.7%	72.9%	6.4%
NW	93.6%	42.5%	66.4%	7.5%
NE	98.4%	29.9%	58.1%	9.2%
EC	93.5%	51.5%	74.6%	3.0%
WC	95.2%	39.4%	77.0%	7.0%
SW	94.8%	42.9%	78.2%	8.8%
SE	89.9%	40.3%	76.7%	5.6%
M	91.7%	51.6%	82.5%	2.5%
	χ^2=12.008 n.s. CV=0.092	χ^2=19.695** CV=0.122	χ^2=29.462*** CV=0.146	χ^2=10.352 n.s. CV=0.094

[1] % for species reflects only % of respondents that actually hunted waterfowl during 2005
[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

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

Region of residence	N	Actually hunted in 2011	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	80,520[1,2]	71,180	66,411	30,394	51,890	4,556
CENTRAL	21,343	19,208	18,171	9,163	13,984	999
METRO	26,747	23,297	21,410	8,014	16,657	1,142
NORTH	17,485	15,422	14,389	7,109	10,610	1,357
SOUTH	14,945	13,286	12,502	6,019	10,616	1,063

[1] Source: DNR license database
[2] The statewide total is not equal to the total number of waterfowl stamps sold. The number reflects the sample population for the study, which excluded nonresident stamp buyers and individuals less than 18 years of age. This number reflects the customer count rather than the stamp count. Customers can purchase more than one stamp.

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 2011 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]	10.17	5.39	3.50	6.01	1.08
CENTRAL	9.80	5.97	3.79	7.00	0.47
METRO	8.79	4.47	3.10	4.84	1.43
NORTH	11.51	5.40	3.30	5.94	1.14
SOUTH	11.46	5.72	3.92	6.60	1.11
	F=4.842** η=0.101	F=0.551 n.s. η=0.052	F=0.710 n.s. η=0.045	F=1.288 n.s. η=0.058	F=0.446 n.s. η=0.118

[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 Canada geese bagged in all seasons, including hunters who hunted in one to three of the possible seasons for Canada Geese.
[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 1-5: Estimates of harvest statewide and by region of residence

Region of residence	Ducks	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	675,400	163,824	181,615	4,920
CENTRAL	178,076	54,703	52,999	470
METRO	188,194	35,823	51,637	1,633
NORTH	165,617	38,389	35,013	1,547
SOUTH	143,273	34,429	41,615	1,180

Estimates 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 2011 waterfowl season		
	Weekends/Holidays	Weekdays (Monday-Friday)	Total
Statewide	6.76	4.28	10.28
NW	6.21	4.47	9.96
NE	5.66	4.98	10.09
EC	6.55	4.08	10.01
WC	7.18	4.17	10.51
SW	7.38	4.26	11.00
SE	7.47	4.26	10.99
M	6.76	5.07	11.05
	F=2.833* η=0.109	F=0.536 n.s. η=0.051	F=0.566 n.s. η=0.049

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

Region of residence	% hunting opening weekend in Minnesota	
	Opening Saturday (Sept. 24, 2011)	First Sunday (Sept. 25, 2011)
Statewide	64.7%	60.4%
CENTRAL	69.2%	65.3%
METRO	61.1%	57.2%
NORTH	63.1%	61.1%
SOUTH	66.6%	58.3%
	χ^2=6.570 n.s. CV=0.065	χ^2=6.366 n.s. CV=0.064

[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 (Sept. 24, 2011)	First Sunday (Sept. 25, 2011)
Statewide	64.7%	60.4%
NW	55.3%	54.2%
NE	56.3%	56.2%
EC	68.5%	64.8%
WC	71.5%	63.4%
SW	69.2%	66.1%
SE	60.8%	53.5%
M	60.2%	56.9%
	χ^2=21.934** CV=0.124	χ^2=15.019* CV=0.102

[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 1-9: Participation in hunting on second Saturday and Sunday by region of residence

Region of residence	% hunting second weekend in Minnesota (October 1 - 2)
Statewide	61.4%
CENTRAL	66.8%
METRO	54.3%
NORTH	64.9%
SOUTH	61.6%
	χ^2=14.947** 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

Table 1-10: Participation in hunting on second Saturday and Sunday by region most often hunted

Area most often hunted[1]	% hunting second weekend in Minnesota (October 1 - 2)
Statewide	61.4%
NW	58.7%
NE	61.5%
EC	65.7%
WC	65.0%
SW	61.8%
SE	56.4%
M	62.4%
	χ^2=5.274 n.s. CV=0.061

[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 1-11: Hunting North and South Zones during the 2011 Minnesota Season

Residence of hunter	n	% of hunters… Hunted only in the North duck zone	Hunted only in the South duck zone	Hunted in both the North and South duck zones
Statewide[1]	1503	24.0%	65.9%	10.1%
CENTRAL	403	12.4%	76.2%	11.4%
METRO	486	15.0%	73.3%	11.7%
NORTH	334	69.2%	19.8%	11.1%
SOUTH	281	2.5%	92.9%	4.6%
		χ^2=536.952*** CV=0.423		

[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 1-12: Hunting North Zone from Monday, September 26 through Friday, September 30 during the 2011 Minnesota Season

Residence of hunter	n	% of hunters indicating that hunted North Zone from Monday, September 26 through Friday, September 30 during the 2011 Minnesota Season … % No	% Yes	% Did not hunt the North Zone
Statewide[1]	1463	22.3%	12.1%	65.5%
CENTRAL	403	17.4%	6.5%	76.0%
METRO	486	19.6%	7.0%	73.4%
NORTH	334	46.5%	34.0%	19.5%
SOUTH	281	4.9%	2.6%	92.5%
		χ^2=444.437***, CV=0.390		

[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: 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]	0.93	0.90	1.86	1.97	2.41	0.99	0.98
CENTRAL	0.44	0.45	4.38	2.32	2.15	0.17	0.35
METRO	0.46	0.52	1.35	1.78	1.65	0.45	2.52
NORTH	2.77	2.69	1.02	3.08	0.86	0.08	0.05
SOUTH	0.28	0.10	0.14	0.49	5.96	4.18	0.27
	F=42.035*** η=0.275	F=41.532*** η=0.273	F=58.396*** η=0.319	F=17.324*** η=0.180	F=56.377*** η=0.314	F=87.895*** η=0.382	F=44.708*** η=0.283

[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 1-14: 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 2011						
	NW	NE	EC	WC	SW	SE	M
Statewide[1]	9.7%	8.8%	19.2%	19.9%	23.6%	9.7%	9.1%
CENTRAL	2.6%	4.8%	27.0%	14.3%	12.2%	0.3%	2.9%
METRO	3.3%	2.3%	10.3%	10.8%	10.5%	2.5%	12.3%
NORTH	15.7%	17.8%	6.3%	18.9%	6.0%	0.5%	0.3%
SOUTH	1.5%	0.5%	0.5%	2.6%	31.6%	23.2%	1.0%
	χ^2=94.572*** CV=0.247	χ^2=121.650*** CV=0.280	χ^2=152.684*** CV=0.314	χ^2=54.217*** CV=0.187	χ^2=116.639*** CV=0.274	χ^2=230.222*** CV=0.385	χ^2=90.980*** CV=0.242

[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 1-15: Bagging wood ducks during 2011 Minnesota waterfowl-hunting season

Residence of hunter	n	Mean number of days bagged at least 1 wood duck	Range	Of those days, mean number of days bagging 3 wood ducks	Range
Statewide[1]	1547	2.17	0-55	0.49	0-30
CENTRAL	378	2.25	0-20	0.53	0-9
METRO	399	1.95	0-55	0.34	0-8
NORTH	381	1.92	0-15	0.50	0-12
SOUTH	392	2.72	0-30	0.68	0-30
		F=4.820** η=0.096		F=3.492* η=0.082	

[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 1-16: Bagging hen mallards during 2011 Minnesota waterfowl-hunting season

Residence of hunter	n	Mean number of days bagged at least 1 hen mallard	Range	Of those days, mean number of days bagging 2 hen mallards	Range
Statewide[1]	1547	1.59	0-30	0.50	0-30
CENTRAL	378	1.53	0-20	0.46	0-13
METRO	399	1.39	0-20	0.47	0-14
NORTH	381	1.87	0-30	0.65	0-30
SOUTH	392	1.68	0-25	0.42	0-10
		F=1.888 n.s. η=0.060		F=1.407 n.s. η=0.052	

[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 2011 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 two-thirds of hunters (68.1%) reported being satisfied with their general waterfowl-hunting experience, with 26.5% expressing dissatisfaction. Statewide the overall mean satisfaction score was 4.82. 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 ($r = -0.187$, $p<0.001$) between age and satisfaction. This means that older hunters reported less satisfaction than younger hunters. Likewise, there was a significant negative relationship ($r = -0.200$, $p<0.001$) between years of waterfowl-hunting experience and satisfaction. Using Humburg et al.'s (2002) avidity categories, we found that more avid waterfowl hunters reported slightly higher mean levels of general satisfaction compared to novice or intermediate hunters (Table 2-3). Age was significantly related to avidity. More avid hunters were significantly younger; the mean age for novice hunters was 46 years, intermediate hunters 44 years, and avid hunters 43 years ($F = 5.470$, $p < 0.01$).

Satisfaction With Duck Hunting

Statewide

Statewide about two-thirds (69.9%) of duck hunters were satisfied (slightly, moderately, or very) with their duck-hunting experience in 2011; of these 20.6% were very satisfied. Conversely, 23.7% of respondents were dissatisfied (slightly, moderately, or very), with 8.1% very dissatisfied with their duck-hunting experience. Nearly one-half (44.1%) of respondents were satisfied with their duck-hunting harvest, but a slightly larger proportion (46.9%) of the respondents were dissatisfied with their duck harvest. Nearly one in ten hunters (9.2%) were very satisfied with their duck harvest. Satisfaction with duck-hunting regulations was higher than satisfaction with harvest, with 60.5% of respondents reporting satisfaction with the regulations, including 48.1% of respondents who were moderately or very satisfied. However, about one-fifth of respondents (19.6%) felt neither satisfied nor dissatisfied about the duck-hunting regulations, compared to only 6.3% who felt neutral about the duck-hunting experience and only 9.0% who felt neutral about the duck-hunting harvest. (Tables 2-4, 2-5, 2-6).

The mean score for duck-harvest satisfaction ($\bar{x}$ = 3.84) was significantly lower than the mean scores for experience ($\bar{x}$ = 4.94, t = 20.724, p < 0.001) or regulations ($\bar{x}$ = 4.90, t =19.963, p < 0.001). The mean satisfaction score for experience did not significantly differ from satisfaction with regulations (t =0.989 n.s.).

There was a significant positive relationship (r = 0.328, 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

There were no significant differences in mean satisfaction ratings among regions. Differences in patterns of response were subtle.

Satisfaction With Goose Hunting

Statewide

Statewide most goose hunters were satisfied (67.4%) with their general goose-hunting experience, with slightly less than half reporting that they were moderately (27.9%) or very (21.8%) satisfied (Table 2-7). Most goose hunters were less satisfied with their harvest, however. A total of 35.0% reported being dissatisfied with their harvest with 9.4% moderately dissatisfied and 13.1% very dissatisfied (Table 2-8). Nearly two-thirds (61.6%) of the goose hunters indicated they were satisfied with the goose-hunting regulations with 26.7% moderately satisfied and 22.3% very satisfied (Table 2-9).

There was a statistically significant correlation (r = 0.257, p<0.001) between the total number of geese bagged in 2011 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, harvest, or regulations.

Comparison of Duck Hunting and Goose Hunting

We compared mean satisfaction levels for duck and goose hunting (Table 2-10). Statewide, respondents were slightly, but only in the case of harvest significantly, less satisfied with duck hunting than goose hunting for (a) experience (4.94 vs. 5.03) (t = 1.661 n.s.), (b) harvest (3.84 vs. 4.19) (t = 6.454, p<0.001), and (c) regulations (4.90 vs. 5.00) (t = 1.994 n.s.).

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 2011 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.

About 40.1% of respondents were satisfied with the number of ducks that they saw in the field, and 8.1% were very satisfied (Table 2-11). There was no significant difference among regions in the mean level of

satisfaction with number of ducks seen in the field. Well more than half of respondents (59.4%) were satisfied with the number of geese that they saw in the field, including 19.0% who were very satisfied (Table 2-12). There was no significant difference among regions in the mean level of satisfaction with number of geese seen in the field.

Different Hunting Days

Hunters were asked to report the number of 2011 waterfowl hunting days that: (a) were "good" (Table 2-13), (b) they shot their daily bag limit of ducks (Table 2-14), and (c) that they shot no ducks (Table 2-15). Statewide, on average, respondents had 4.07 days that they described as good, 0.84 days that they bagged the duck bag limit, and 3.61 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: 13.1% poor, 15.2% below average, 27.8% average, 21.6% above average, and 22.3% excellent (Mean (M) = 3.25) (Table 2-16). Ratings for the first day of the season were lower: 20.4% poor, 24.6% below average, 27.3% average, 14.4% above average, and 13.4% excellent (M = 2.76) (Table 2-17). Ratings of the last day of the season were lower than the first day: 34.5% poor, 23.9% below average, 24.7% average, 10.6% above average, and 6.2% excellent (M = 2.30) (Table 2-18). On average, hunters shot 3.23 ducks and 1.29 geese on their best hunting day, 2.36 ducks and 0.76 geese on their first hunting day, and 1.20 ducks and 0.52 geese on their last hunting day (Tables 2-19, 2-20, and 2-21). Respondents were fairly evenly split between reporting their best hunting day being in September (42.8%) versus October (43.2%) (Table 2-22). About two-thirds (67.6%) indicated that their first hunting day was in September (Table 2-23), and respondents were closely split between reporting their last hunting day in October (42.2%) versus November (39.5%) (Table 2-44).

Changes in Satisfaction Levels

Hunters were asked to compare the 2011 waterfowl season to the 2010 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 = 2011 much worse, 2 = 2011 somewhat worse, 3 = 2011 slightly worse, 4 = neither, and 5 = 2011 slightly better, 6 = 2011 somewhat better, 7 = 2011 much better, or 9 = did not hunt in 2010.

Over one-third of respondents (37.9%) indicated that their general waterfowl hunting experience was better (slightly, somewhat, or much) in 2011 than in 2010, while 39.2% felt it was worse, and 23.0% felt neither year was better than the other (Table 2-25). Results were similar for duck hunting experience, with 37.4% of respondents indicating that 2011 was better, 32.9% worse, and 29.7% neither (Table 2-26). A slightly smaller proportion of respondents indicated that duck hunting harvest was better in 2011 (32.6%), compared to 47.2% who felt that 2011 was worse, and 20.3% who indicated that neither year was better than the other (Table 2-27). Many respondents (46.1%) felt that 2011 duck regulations were neither better nor worse than 2010 regulations (Table 2-28). About one-third (34.1%) of respondents felt that the number of ducks seen in 2011 was better than in 2010, while about half (48.7%) felt the number was worse (Table 2-29).

About one-third of respondents (33.6%) indicated that their goose hunting experience was better in 2011 than in 2010, while 27.1% felt it was worse, and 29.4% felt neither year was better than the other (Table 2-30). Results for goose hunting harvest had 28.8% of respondents indicating that 2011 was better, 36.7% worse, and 34.5% neither (Table 2-31). Like duck regulations, many respondents (56.7%) felt that 2011 goose regulations were neither better nor worse than 2010 regulations (Table 2-32). Over one-third

(39.3%) of respondents felt that the number of geese seen in 2011 was better than in 2010, while about one-third (31.4%) felt the number was worse (Table 2-33). Total years of hunting experience in Minnesota was significantly negatively correlated with most measures of satisfaction with the 2011 season relative to the 2010 season.

Section 2: Satisfaction With the 2011 Waterfowl Hunt

Table 2-1: Satisfaction with the general waterfowl-hunting experience for the 2011 season by area most often hunted.

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1401	8.5%	8.8%	9.2%	5.4%	18.4%	32.7%	17.0%	4.82
NW	134	6.7%	8.2%	14.9%	6.7%	13.4%	28.4%	21.6%	4.84
NE	118	15.3%	5.9%	7.6%	5.9%	15.3%	29.7%	20.3%	4.70
EC	236	6.4%	8.1%	8.9%	6.4%	18.6%	36.0%	15.7%	4.94
WC	240	8.3%	8.8%	9.6%	3.3%	20.4%	35.0%	14.6%	4.82
SW	331	8.5%	9.1%	9.7%	5.1%	19.3%	32.6%	15.7%	4.79
SE	159	8.2%	11.9%	6.9%	7.5%	15.7%	33.3%	16.4%	4.76
M	102	8.8%	10.8%	8.8%	3.9%	17.6%	35.3%	14.7%	4.75
		χ^2 = 32.278 n.s., Cramer's V = 0.064							

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.286 n.s. η = 0.036 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 2011 season by region of residence.

Region of residence	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1401	8.5%	8.8%	9.2%	5.4%	18.4%	32.7%	17.0%	4.82
CENTRAL	342	7.9%	8.2%	10.5%	5.0%	18.4%	33.3%	16.7%	4.85
METRO	358	8.7%	9.2%	8.4%	5.0%	19.0%	31.8%	17.9%	4.84
NORTH	341	8.2%	8.2%	8.5%	5.0%	18.2%	33.7%	18.2%	4.91
SOUTH	366	9.6%	9.6%	9.6%	6.8%	17.5%	32.2%	14.8%	4.69
		χ^2 = 6.083 n.s., Cramer's V = 0.038							

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.855 n.s., η = 0.043 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

Section 2: Satisfaction With the 2011 Waterfowl Hunt

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

2011 Waterfowl-hunting involvement[2]	n	% of hunters[1] indicating that level of satisfaction: Slightly, moderately, or very dissatisfied	Neither satisfied nor dissatisfied	Slightly, moderately, or very satisfied	Mean[3]
Novice (0-5 days afield)[4]	490	27.1%	6.5%	66.3%	4.78
Intermediate (6-19 days afield)	705	27.5%	5.5%	67.0%	4.76
Avid (20+ days afield)	196	22.4%	2.0%	75.5%	5.15
	χ^2 = 8.769 n.s., Cramer's V = 0.056				

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 = 3.535*, η = 0.071 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 duck-hunting experience for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[3]
Statewide[3]	1427	8.1%	7.5%	8.1%	6.3%	18.6%	30.7%	20.6%	4.94
NW	131	6.1%	9.9%	16.0%	3.1%	16.0%	22.9%	26.0%	4.85
NE	125	12.0%	3.2%	10.4%	4.8%	10.4%	33.6%	25.6%	5.02
EC	237	6.8%	5.5%	7.6%	5.5%	21.1%	33.3%	20.3%	5.10
WC	259	5.0%	8.9%	7.7%	6.2%	22.0%	30.5%	19.7%	5.02
SW	343	9.9%	7.9%	6.4%	5.8%	19.2%	32.1%	18.7%	4.87
SE	152	8.6%	7.2%	8.6%	9.9%	15.1%	31.6%	19.1%	4.87
M	100	10.0%	12.0%	7.0%	10.0%	20.0%	25.0%	16.0%	4.57
	χ^2 = 55.818*, Cramer's V = 0.083								

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.179 n.s., η = 0.072 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

Section 2: Satisfaction With the 2011 Waterfowl Hunt

Table 2-5: Satisfaction with the duck-hunting harvest for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1421	17.9%	13.5%	15.5%	9.0%	17.6%	17.3%	9.2%	3.84
NW	130	18.5%	16.9%	15.4%	11.5%	11.5%	13.8%	12.3%	3.72
NE	126	30.2%	5.6%	14.3%	4.0%	15.9%	20.6%	9.5%	3.70
EC	237	15.2%	12.7%	14.8%	6.8%	24.1%	17.7%	8.9%	4.00
WC	258	14.0%	17.1%	15.9%	10.5%	17.4%	14.7%	10.5%	3.86
SW	343	16.6%	13.1%	17.5%	10.2%	16.9%	17.8%	7.9%	3.83
SE	150	21.3%	15.3%	10.7%	8.7%	16.0%	19.3%	8.7%	3.75
M	101	22.8%	13.9%	18.8%	9.9%	9.9%	14.9%	9.9%	3.54
		$\chi^2 = 55.282$*, Cramer's V = 0.083							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.834 n.s., $\eta = 0.061$ 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 regulations for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1403	6.3%	6.1%	7.5%	19.6%	12.4%	27.8%	20.3%	4.90
NW	126	2.4%	9.5%	9.5%	20.6%	13.5%	24.6%	19.8%	4.87
NE	125	5.6%	5.6%	7.2%	20.8%	8.8%	24.0%	28.0%	5.06
EC	234	3.8%	5.6%	7.3%	20.1%	13.7%	31.6%	17.9%	5.01
WC	257	4.7%	5.1%	9.7%	18.7%	13.2%	28.8%	19.8%	4.96
SW	337	6.8%	5.9%	4.5%	21.1%	14.2%	26.4%	21.1%	4.93
SE	150	12.0%	7.3%	10.0%	20.7%	6.0%	24.7%	19.3%	4.53
M	100	10.0%	8.0%	8.0%	20.0%	12.0%	23.0%	19.0%	4.61
		$\chi^2 = 45.019$ n.s., Cramer's V = 0.075							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.949 n.s.., $\eta = 0.094$ 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 2-7: Satisfaction with the goose-hunting experience for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1196	4.8%	6.5%	8.0%	13.3%	17.7%	27.9%	21.8%	5.03
NW	105	4.8%	6.7%	3.8%	13.3%	13.3%	29.5%	28.6%	5.27
NE	79	8.9%	2.5%	7.6%	12.7%	17.7%	24.1%	26.6%	5.06
EC	206	3.4%	6.8%	7.3%	12.6%	20.4%	26.7%	22.8%	5.11
WC	222	4.1%	5.9%	10.8%	14.0%	18.0%	29.3%	18.0%	4.96
SW	295	5.8%	7.5%	8.8%	12.5%	21.0%	25.8%	18.6%	4.87
SE	135	4.4%	3.7%	7.4%	13.3%	14.8%	32.6%	23.7%	5.23
M	87	4.6%	9.2%	6.9%	13.8%	16.1%	27.6%	21.8%	4.98
		χ^2 = 27.658 n.s., Cramer's V = 0.064							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.200 n.s., η = 0.080 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 harvest for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1186	13.1%	9.4%	12.5%	18.0%	16.6%	17.8%	12.5%	4.19
NW	103	11.7%	4.9%	15.5%	23.3%	13.6%	19.4%	11.7%	4.27
NE	80	13.8%	6.3%	11.3%	16.3%	18.8%	13.8%	20.0%	4.41
EC	205	14.6%	8.8%	13.2%	17.1%	17.6%	17.6%	11.2%	4.12
WC	219	15.1%	10.5%	12.3%	16.9%	16.9%	15.5%	12.8%	4.08
SW	293	11.9%	12.3%	13.0%	18.4%	17.4%	17.7%	9.2%	4.07
SE	133	10.5%	9.8%	9.0%	13.5%	17.3%	23.3%	16.5%	4.53
M	87	10.3%	12.6%	12.6%	18.4%	16.1%	17.2%	12.6%	4.20
		χ^2 = 27.892 n.s., Cramer's V = 0.064							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.298 n.s., η = 0.083 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 2-9: Satisfaction with the goose-hunting regulations for the 2011 season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1194	5.1%	5.9%	6.2%	21.2%	12.6%	26.7%	22.3%	5.00
NW	106	2.8%	4.7%	9.4%	20.8%	15.1%	23.6%	23.6%	5.06
NE	79	5.1%	1.3%	8.9%	25.3%	11.4%	20.3%	27.8%	5.09
EC	205	4.4%	3.4%	6.8%	21.0%	12.7%	30.7%	21.0%	5.10
WC	222	4.5%	5.4%	6.3%	23.9%	15.3%	27.0%	17.6%	4.91
SW	295	4.1%	7.5%	4.4%	22.4%	12.9%	26.8%	22.0%	5.01
SE	133	7.5%	6.0%	9.8%	15.0%	12.0%	26.3%	23.3%	4.90
M	87	5.7%	11.5%	3.4%	19.5%	10.3%	24.1%	25.3%	4.91
		χ^2 = 35.547 n.s., Cramer's V = 0.073							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.389 n.s., η = 0.046 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: Comparison of duck-hunting and goose-hunting satisfaction

Satisfaction with…[1,2]	Mean[3]
Duck-hunting experience	4.94
Goose-hunting experience	5.03
t=1.661 n.s.	
Duck-hunting harvest	3.84
Goose-hunting harvest	4.19
t=6.454***	
Duck-hunting regulations	4.90
Goose-hunting regulations	5.00
t=1.994 n.s.	

[1] This table does not include those respondents who did not hunt ducks and geese in Minnesota in 2011.
[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] 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

Section 2: Satisfaction With the 2011 Waterfowl Hunt

Table 2-11: Satisfaction with number of ducks seen in the field during the 2011 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1445	23.5%	16.1%	15.3%	4.6%	15.8%	16.6%	8.1%	3.55
NW	131	29.0%	18.3%	11.5%	4.6%	9.2%	17.6%	9.9%	3.39
NE	124	32.3%	10.5%	13.7%	2.4%	16.1%	14.5%	10.5%	3.45
EC	239	17.2%	14.6%	18.0%	3.8%	18.8%	20.5%	7.1%	3.82
WC	262	22.1%	17.2%	13.0%	8.0%	19.5%	12.2%	8.0%	3.54
SW	348	24.4%	16.4%	19.0%	1.1%	15.5%	16.1%	7.5%	3.45
SE	155	26.5%	14.8%	16.1%	6.5%	9.7%	17.4%	9.0%	3.46
M	103	25.2%	22.3%	8.7%	8.7%	13.6%	15.5%	5.8%	3.33
		$\chi^2 = 68.298$**. Cramer's V = 0.091							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.205 n.s. η= 0.073 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 2-12: Satisfaction with number of geese seen in the field during the 2011 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters[1] indicating that level of satisfaction: Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Mean[2]
Statewide[3]	1301	9.5%	9.6%	12.5%	9.0%	16.6%	23.8%	19.0%	4.61
NW	107	8.4%	10.3%	10.3%	4.7%	15.0%	29.0%	22.4%	4.84
NE	99	20.2%	9.1%	8.1%	14.1%	14.1%	21.2%	13.1%	4.09
EC	221	10.0%	10.0%	9.0%	8.6%	21.3%	24.4%	16.7%	4.62
WC	233	7.3%	10.3%	13.7%	11.2%	14.2%	23.6%	19.7%	4.64
SW	321	9.3%	8.7%	14.3%	7.5%	19.0%	23.4%	17.8%	4.59
SE	150	8.7%	6.7%	12.0%	12.7%	14.7%	21.3%	24.0%	4.78
M	96	5.2%	10.4%	16.7%	6.3%	16.7%	26.0%	18.8%	4.72
		$\chi^2 = 46.752$ n.s., Cramer's V = 0.080							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 1.684 n.s. η=0.091 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 2-13: Number of days described as "good" waterfowl hunting days.

Area most often hunted	n	Mean number of days[1]
Statewide[2]	1492	4.07
NW	140	3.74
NE	123	4.14
EC	246	4.17
WC	265	4.06
SW	356	4.22
SE	166	4.04
M	109	4.55
		F= 0.249 n.s. η=0.033

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-14: Number of days shot daily bag limit of ducks.

Area most often hunted	n	Mean number of days[1]
Statewide[2]	1492	0.84
NW	137	0.92
NE	122	1.07
EC	238	0.75
WC	260	0.99
SW	352	0.84
SE	164	0.91
M	107	0.76
		F= 0.399 n.s. η=0.042

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-15: Number of days shot 0 ducks.

Area most often hunted	n	Mean number of days[1]
Statewide[2]	1446	3.61
NW	130	2.83
NE	125	4.74
EC	240	3.72
WC	256	3.28
SW	347	3.91
SE	162	3.35
M	105	4.10
		F= 2.634* η=0.107

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-16: Rating of <u>best</u> waterfowl hunting day of the season

Area most often hunted	n	% of hunters rating[1]: Poor	Below average	Average	Above Average	Excellent	Mean[2]
Statewide[3]	1443	13.1%	15.2%	27.8%	21.6%	22.3%	3.25
NW	131	12.2%	12.2%	29.8%	24.4%	21.4%	3.31
NE	120	24.2%	8.3%	24.2%	17.5%	25.8%	3.13
EC	238	9.7%	16.4%	31.1%	25.2%	17.6%	3.25
WC	266	11.7%	18.0%	29.3%	19.2%	21.8%	3.21
SW	337	12.5%	15.7%	27.9%	19.9%	24.0%	3.27
SE	163	12.9%	10.4%	20.9%	28.8%	27.0%	3.47
M	103	12.6%	16.5%	30.1%	18.4%	22.3%	3.21
		χ^2 = 41.215* Cramer's V = 0.087					

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.992 n.s. η = 0.066 Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.
[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 2011 Waterfowl Hunt

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

Area most often hunted	n	% of hunters rating[1]: Poor	Below average	Average	Above Average	Excellent	Mean[2]
Statewide[3]	1424	20.4%	24.6%	27.3%	14.4%	13.4%	2.76
NW	125	21.6%	25.6%	28.8%	10.4%	13.6%	2.69
NE	119	28.6%	24.4%	21.8%	13.4%	11.8%	2.55
EC	235	14.0%	25.1%	34.5%	15.7%	10.6%	2.84
WC	264	22.0%	22.3%	28.8%	14.8%	12.1%	2.73
SW	338	18.9%	24.0%	28.4%	13.3%	15.4%	2.82
SE	156	23.7%	23.1%	18.6%	16.7%	17.9%	2.82
M	102	20.6%	30.4%	22.5%	11.8%	14.7%	2.70
		χ^2 = 31.975 n.s. Cramer's V = 0.077					

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 0.954, η = 0.065. Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.
[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 2-18: Rating of last waterfowl hunting day of the season

Area most often hunted	n	% of hunters rating[1]: Poor	Below average	Average	Above Average	Excellent	Mean[2]
Statewide[3]	1388	34.5%	23.9%	24.7%	10.6%	6.2%	2.30
NW	119	26.9%	21.0%	34.5%	10.9%	6.7%	2.50
NE	115	47.0%	20.0%	16.5%	7.8%	8.7%	2.11
EC	224	33.5%	25.9%	25.4%	11.2%	4.0%	2.26
WC	256	28.9%	23.0%	29.7%	10.9%	7.4%	2.45
SW	335	37.3%	25.1%	23.9%	9.9%	3.9%	2.18
SE	159	31.4%	23.3%	20.8%	13.2%	11.3%	2.50
M	97	40.2%	27.8%	16.5%	8.2%	7.2%	2.14
		χ^2 = 43.603** Cramer's V = 0.091					

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[2] F = 3.141** η = 0.120 Mean is based on the following scale: 1 = poor; 2 = below average; 3 = average; 4 = above average; 5 = excellent.
[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 2-19: Number of ducks and geese shot on best day.

Area most often hunted[1]	Mean number of ducks	Mean number of geese
Statewide[2]	3.23	1.29
NW	3.29	1.42
NE	4.48	1.44
EC	2.78	1.30
WC	3.20	0.96
SW	3.20	1.24
SE	3.23	1.53
M	2.71	1.59
	F= 1.116 n.s., η=0.073	F= 0.747 n.s. η=0.064

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 first day.

Area most often hunted[1]	Mean number of ducks	Mean number of geese
Statewide[2]	2.36	0.76
NW	2.09	0.93
NE	3.65	1.21
EC	2.04	0.60
WC	2.24	0.61
SW	2.41	0.61
SE	2.35	0.98
M	1.95	0.89
	F=1.054 n.s. η=0.072	F=0.970 n.s., η=0.074

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-21: Number of ducks and geese shot on last day.

Area most often hunted[1]	Mean number of ducks	Mean number of geese
Statewide[2]	1.20	0.52
NW	1.66	0.52
NE	1.95	0.89
EC	0.93	0.38
WC	1.17	0.47
SW	0.99	0.41
SE	1.29	0.54
M	0.96	0.72
	F=1.756 n.s. η=0.093	F=1.163 n.s., η=0.080

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-22: Month of best waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking:			
		September	October	November	December
Statewide[2]	1320	42.8%	43.2%	12.2%	1.8%
NW	125	44.0%	51.2%	4.8%	0.0%
NE	106	35.8%	56.6%	7.5%	0.0%
EC	221	48.0%	44.3%	6.8%	0.9%
WC	232	43.1%	46.6%	9.5%	0.9%
SW	321	43.0%	42.1%	13.4%	1.6%
SE	152	30.9%	30.9%	29.6%	8.6%
M	91	44.0%	33.0%	19.8%	3.3%
		χ^2 = 117.909***, Cramer's V = 0.177			

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2-23: Month of first waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking: September	October	November	December
Statewide[2]	1244	67.6%	28.1%	3.5%	0.8%
NW	114	63.2%	36.0%	0.9%	0.0%
NE	96	67.7%	29.2%	3.1%	0.0%
EC	204	67.6%	30.4%	2.0%	0.0%
WC	224	71.0%	26.3%	2.7%	0.0%
SW	298	69.8%	25.8%	4.0%	0.3%
SE	148	62.2%	27.7%	6.8%	3.4%
M	90	67.8%	22.2%	6.7%	3.3%
		χ^2 = 44.061**, Cramer's V = 0.112			

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 last waterfowl hunting day of the season

Area most often hunted	n	% of hunters picking: September	October	November	December
Statewide[2]	1226	9.0%	42.2%	39.5%	9.3%
NW	110	12.7%	56.4%	28.2%	2.7%
NE	100	5.0%	60.0%	33.0%	2.0%
EC	205	12.7%	51.2%	28.8%	7.3%
WC	224	5.8%	48.2%	38.8%	7.1%
SW	293	7.2%	35.8%	46.1%	10.9%
SE	143	7.0%	21.7%	50.3%	21.0%
M	85	8.2%	20.0%	55.3%	16.5%
		χ^2 = 117.698***, Cramer's V = 0.184			

[1] This table does not include those respondents who did not hunt waterfowl in Minnesota in 2011; regional data excludes individuals who hunted the same number of days in multiple regions.
[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 2011 Waterfowl Hunt

Table 2-25: Comparison of 2011 general waterfowl hunting experience to 2010.

Residence of hunter	n	% of hunters indicating that their general waterfowl hunting experience in 2011 was _____ than 2010:							Mean[1]
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide[2]	1302	9.9%	11.9%	17.4%	23.0%	19.1%	12.3%	6.5%	3.92
CENTRAL	318	8.2%	9.7%	17.0%	22.0%	24.2%	12.3%	6.6%	4.08
METRO	331	10.9%	12.4%	18.7%	23.9%	14.2%	13.9%	6.0%	3.84
NORTH	316	10.4%	12.3%	15.2%	22.8%	19.6%	12.0%	7.6%	3.95
SOUTH	344	10.2%	13.4%	18.0%	23.0%	19.5%	9.9%	6.1%	3.82
		χ^2 = 16.426 n.s., Cramer's V = 0.065							

[1] F = 1.594 n.s., η = 0.060. 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

Table 2-26: Comparison of 2011 duck hunting experience to 2010.

Residence of hunter	N	% of hunters[1] indicating that their duck hunting experience in 2011 was _____ than 2010:							Mean[2]
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide[3]	1278	8.5%	9.2%	15.2%	29.7%	17.6%	13.2%	6.6%	4.05
CENTRAL	314	8.3%	6.7%	14.3%	28.7%	21.0%	15.3%	5.7%	4.16
METRO	323	6.2%	11.8%	15.8%	30.7%	16.7%	12.4%	6.5%	4.03
NORTH	310	11.0%	6.8%	16.8%	28.4%	15.8%	13.9%	7.4%	4.03
SOUTH	338	10.1%	10.9%	13.6%	31.1%	16.6%	10.9%	6.8%	3.93
		χ^2 = 20.665 n.s., Cramer's V = 0.073							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011.
[2] F = 1.115 n.s., η = 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

Section 2: Satisfaction With the 2011 Waterfowl Hunt

Table 2-27: Comparison of 2011 duck hunting harvest to 2010.

Residence of hunter	n	% of hunters[1] indicating that their duck hunting harvest in 20110 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1281	15.4%	13.7%	18.1%	20.3%	16.5%	9.6%	6.5%	3.64
CENTRAL	313	14.4%	12.1%	17.9%	19.2%	19.8%	9.3%	7.3%	3.75
METRO	328	15.2%	15.9%	18.3%	21.0%	13.7%	10.4%	5.5%	3.55
NORTH	310	15.8%	13.2%	18.7%	19.4%	17.1%	8.4%	7.4%	3.64
SOUTH	335	16.7%	12.5%	17.3%	21.5%	15.8%	10.1%	6.0%	3.61
		χ^2 = 9.453 n.s., Cramer's V = 0.050							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011.
[2] F = 0.703 n.s., η = 0.041. 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 2011 duck hunting regulations to 2010.

Residence of hunter	N	% of hunters[1] indicating that the duck hunting regulations in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1261	3.8%	6.2%	6.8%	46.1%	16.0%	11.2%	9.8%	4.37
CENTRAL	310	3.9%	4.8%	6.1%	46.1%	16.1%	10.6%	12.3%	4.47
METRO	319	3.1%	7.2%	7.8%	45.5%	15.7%	11.3%	9.4%	4.35
NORTH	304	4.3%	4.9%	4.6%	49.7%	14.8%	11.5%	10.2%	4.41
SOUTH	336	4.2%	8.0%	8.3%	43.5%	17.6%	11.6%	6.8%	4.24
		χ^2 = 16.058 n.s., Cramer's V = 0.065							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011.
[2] F = 1.480 n.s., η = 0.059. 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 2011 Waterfowl Hunt

Table 2-29: Comparison of 2011 ducks seen to 2010.

Residence of hunter	N	% of hunters[1] indicating that the number of ducks seen in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1219	17.4%	15.0%	16.3%	17.1%	17.3%	9.2%	7.6%	3.60
CENTRAL	300	13.7%	14.7%	14.0%	17.0%	20.7%	10.7%	9.3%	3.86
METRO	308	16.2%	16.9%	18.5%	17.2%	16.9%	7.5%	6.8%	3.51
NORTH	292	22.6%	13.7%	15.4%	17.5%	13.0%	10.3%	7.5%	3.46
SOUTH	327	19.0%	13.8%	16.8%	16.8%	18.0%	8.9%	6.7%	3.55
		χ^2 = 19.909 n.s., Cramer's V = 0.074							

[1] This table does not include those respondents who did not hunt ducks in Minnesota in 2011.
[2] F = 2.841*, η = 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

Table 2-30: Comparison of 2011 goose hunting experience to 2010.

Residence of hunter	n	% of hunters[1] indicating that their goose hunting experience in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1119	5.8%	9.0%	12.3%	39.4%	15.3%	11.2%	7.1%	4.11
CENTRAL	278	6.5%	8.3%	12.9%	37.1%	16.2%	12.6%	6.5%	4.12
METRO	277	3.6%	13.0%	11.9%	40.1%	13.7%	9.7%	7.9%	4.08
NORTH	265	8.3%	6.0%	9.4%	38.1%	17.4%	14.0%	6.8%	4.19
SOUTH	310	5.5%	7.1%	14.8%	42.6%	14.5%	8.7%	6.8%	4.07
		χ^2 = 25.672 n.s., Cramer's V = 0.087							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011.
[2] F = 0.385 n.s., η = 0.032. 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 2011 Waterfowl Hunt

Table 2-31: Comparison of 2011 goose hunting harvest to 2010.

Residence of hunter	N	% of hunters[1] indicating that their goose hunting harvest in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1116	12.0%	10.5%	14.2%	34.5%	13.1%	8.5%	7.2%	3.81
CENTRAL	279	12.2%	9.3%	15.8%	31.5%	15.8%	7.2%	8.2%	3.84
METRO	275	12.4%	13.5%	10.9%	37.1%	11.3%	8.0%	6.9%	3.73
NORTH	265	12.1%	9.8%	15.1%	32.1%	13.2%	11.7%	6.0%	3.84
SOUTH	307	11.1%	8.5%	16.0%	36.8%	12.4%	7.8%	7.5%	3.84
		χ^2 = 16.976 n.s. Cramer's V = 0.071							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011.
[2] F = 0.305 n.s., η = 0.029. 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 2011 goose hunting regulations to 2010.

Residence of hunter	N	% of hunters[1] indicating that the goose hunting regulations in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1116	4.2%	4.1%	6.4%	56.7%	11.6%	9.3%	7.7%	4.26
CENTRAL	277	3.6%	5.1%	5.8%	54.9%	10.1%	14.1%	6.5%	4.31
METRO	276	4.3%	4.3%	6.9%	57.6%	11.6%	7.6%	7.6%	4.21
NORTH	266	5.3%	3.0%	5.6%	57.1%	11.7%	9.0%	8.3%	4.27
SOUTH	307	3.6%	3.6%	7.5%	57.3%	13.4%	5.9%	8.8%	4.26
		χ^2 = 18.382 n.s., Cramer's V = 0.074							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011.
[2] F = 0.274 n.s., η = 0.027. 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 2-33: Comparison of 2011 geese seen to 2010.

Residence of hunter	N	% of hunters[1] indicating that the number of geese seen in 2011 was _____ than 2010: Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean[2]
Statewide[3]	1133	8.1%	10.0%	13.3%	29.4%	16.6%	12.6%	10.1%	4.14
CENTRAL	281	8.5%	9.6%	11.0%	27.0%	17.8%	15.7%	10.3%	4.24
METRO	281	7.5%	12.8%	14.9%	29.5%	15.3%	10.3%	9.6%	4.02
NORTH	269	9.3%	9.3%	12.6%	27.1%	14.1%	16.0%	11.5%	4.22
SOUTH	312	7.4%	6.7%	14.4%	34.6%	19.6%	8.3%	9.0%	4.13
		χ^2 = 26.889 n.s., Cramer's V = 0.089							

[1] This table does not include those respondents who did not hunt geese in Minnesota in 2011.
[2] F = 1.020 n.s., η = 0.052. 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 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 4 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, 63.2% of respondents supported the youth hunting day with 38.8% strongly supporting it. In contrast, 25.1% opposed the hunt, with 15.1% strongly opposing it. There was a significant negative correlation between age and support for Youth Waterfowl Hunting Day ($r = -0.218$, $p<0.001$). 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 2011

Respondents were asked to indicate their preference for the date of the 2012 Youth Waterfowl Hunting Day. Respondents were equally split between the options of: September 8, 2012 (25.0%), September 15, 2012 (23.6%), no preference (27.8%), and no youth day (23.6%) (Table 3-2). All study respondents were asked if they took any youths hunting on Youth Waterfowl Hunting Day in Minnesota in 2011 (Table 3-3). Statewide, 11.5% 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. Statewide, mentors took an average 1.94 youths hunting on Youth Waterfowl Hunting Day (Table 3-4). Based on the percentages provided by the survey, it is estimated that 15,881 youths participated in the youth hunt in 2011 (Table 3-5).

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: Strongly oppose	Oppose	Undecided/ neutral	Support	Strongly support	Mean[1]
Statewide[2]	1744	15.1%	10.0%	11.7%	24.4%	38.8%	3.62
CENTRAL	423	17.3%	9.5%	10.4%	25.8%	37.1%	3.56
METRO	459	17.0%	10.5%	12.6%	23.5%	36.4%	3.52
NORTH	425	13.6%	10.6%	12.2%	25.2%	38.4%	3.64
SOUTH	437	10.5%	9.2%	11.4%	22.9%	46.0%	3.85
		χ^2=18.359 n.s., Cramer's V=0.059					

[1]F = 3.846**, η=0.081. 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: Preference for 2012 Youth Waterfowl Hunting Day

Residence of hunter	n	Sept. 8, 2012	Sept. 15, 2012	No preference	No youth day
Statewide[1]	1735	25.0%	23.6%	27.8%	23.6%
CENTRAL	421	26.4%	22.6%	26.8%	24.2%
METRO	459	23.1%	22.9%	27.5%	26.6%
NORTH	425	25.2%	23.8%	28.0%	23.1%
SOUTH	427	26.2%	26.5%	29.5%	17.8%
		χ^2=11.369 n.s., Cramer's V = 0.047			

[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: Last September (2011), did you take youth hunting on Youth Waterfowl Hunting Day

Residence of hunter	n	% yes
Statewide[1]	1734	11.5%
CENTRAL	421	12.1%
METRO	456	8.6%
NORTH	424	12.0%
SOUTH	433	14.1%
		χ^2=6.898 n.s. Cramer's V = 0.063

[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: Number of youth taken hunting on 2011 Youth Waterfowl Hunting Day

Residence of hunter	n	Mean number of youth
Statewide[1]	173	1.94
CENTRAL	47	2.32
METRO	33	1.97
NORTH	46	1.80
SOUTH	53	1.55
		F= 0.651 n.s., η = 0.105

[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 2011 YWHD	Total mentors in the 2011 YWHD	Average # of youth with a mentor	Estimate of total youth participating in YWHD
Statewide[1,2]	71,180	11.5%	8186	1.94	15,881
CENTRAL	19,208.7	12.1%	2324	2.32	5,392
METRO	23,297	8.6%	2004	1.97	3,948
NORTH	15,422	12.0%	1851	1.80	3,332
SOUTH	13,286	14.1%	1873	1.55	2,903

[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.

Section 4: Opinions on Management and Special Regulations

Opinions About Duck Bag Limits

Respondents were asked to indicate their opinion about the 6-duck bag limit, 2-hen mallard bag limit, and 3-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 (66.5%) felt the 6-duck bag limit was about right, with 3.4% indicating that it was too low, 18.2% too high, and 11.9% no opinion (Table 4-1). There was no significant difference among regions in opinion of the 6-duck bag limit. Statewide, 62.2% of respondents felt the 2-hen mallard bag limit was about right, compared to 3.5% too low, 22.6% too high, and 11.6% no opinion (Table 4-2). Larger proportions of respondents from northern Minnesota felt the 2-hen mallard limit was too low. Statewide, 65.4% of respondents felt the 3-wood duck bag limit was about right, compared to 7.7% who felt it was too low, 15.5% who thought it was too high, and 11.4% who had no opinion (Table 4-3). There was no significant difference among regions in opinion of the 3-wood duck bag limit.

Waterfowl Management Strategies and Special Regulations

Respondents were asked to rate their agreement with four statements related to crowding on public hunting areas using the 5-point scale 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Respondents were evenly split in their agreement (40.0%) and disagreement (39.9%) that the public hunting areas they used were not crowded (Table 4-4). About half of respondents (50.5%) agreed that the public hunting areas they used were too crowded on opening weekend but usually not after that, while only about one-fourth (24.9%) disagreed (Table 4-5). Respondents were fairly evenly split in their agreement (30.3%) and disagreement (39.4%) that the public hunting areas they used were too crowded most of the time (Table 4-6). About two-thirds of respondents (65.8%) disagreed that the DNR should use a drawing or lottery to limit waterfowl hunter numbers in some public hunting areas (Table 4-7). There were significant regional differences for several items in perceptions of crowding on public hunting areas, with greater crowding perceived in the southern and metropolitan regions.

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. About three-fourths (77.3%) of respondents supported beginning shooting hours one-half hour before sunrise on opening day, with only 12.9% opposing (Table 4-8). There was no significant difference in support by region. Nearly two-thirds (63.0%) of respondents supported opening last year's regular waterfowl season one week earlier, with less than 20% opposed (Table 4-9). There was no significant difference in support by region. Nearly half of respondents (44.9%) supported using a North and South duck zone during last year's season, with 11% opposing (Table 4-10). Respondents from the southern region were most supportive of the North and South duck zones, with respondents from the central region least supportive. About one-third (32.7%) of respondents supported using a split season in the South Duck Zone during last year's waterfowl season (Table 4-11). Respondents from the south and metropolitan regions were most supportive of the split season in the South Duck Zone. About half (45.4%) of respondents opposed and 34.1% supported ending shooting hours at 4 pm for the first part of the season (Table 4-12). More than one-third (37.6%) of respondents supported restrictions on open water hunting during the regular waterfowl season, with 26.3% opposed (Table 4-13). There was no significant difference by region. More than four in ten respondents (43.8%) supported open water hunting on a few larger lakes or rivers during the regular waterfowl season, with 15.3% opposed and 40.9% neutral (4-14). Respondents from the central and metropolitan regions were somewhat more supportive of this.

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]	1746	3.4%	66.5%	18.2%	11.9%
CENTRAL	422	3.3%	65.2%	19.7%	11.8%
METRO	461	4.1%	67.2%	17.6%	11.1%
NORTH	424	3.8%	68.2%	17.9%	10.1%
SOUTH	438	1.8%	65.1%	17.8%	15.3%
		χ^2=10.743 n.s. , Cramer'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

Table 4-2: Opinion on 2 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]	1744	3.5%	62.2%	22.6%	11.6%
CENTRAL	422	4.3%	59.2%	23.5%	13.0%
METRO	460	2.6%	63.3%	23.5%	10.7%
NORTH	424	5.2%	67.5%	17.5%	9.9%
SOUTH	438	2.1%	58.4%	26.0%	13.5%
		χ^2=22.293** , Cramer's V=0.065			

[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 3 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]	1749	7.7%	65.4%	15.5%	11.4%
CENTRAL	423	7.8%	64.8%	16.1%	11.3%
METRO	461	7.6%	66.8%	15.6%	10.0%
NORTH	426	7.5%	65.7%	14.1%	12.7%
SOUTH	439	8.2%	63.3%	15.9%	12.5%
		χ^2=3.129 n.s., Cramer's V=0.024			

[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: The public hunting areas I use are NOT crowded most of the time.

Residence of hunter	n	% of hunters indicating that they _____ with this statement: Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[1]
Statewide[2]	1469	13.6%	26.3%	20.2%	32.7%	7.3%	2.94
CENTRAL	350	11.1%	24.9%	22.9%	32.6%	8.6%	3.03
METRO	379	18.5%	28.2%	16.1%	30.6%	6.6%	2.79
NORTH	363	6.3%	19.8%	23.7%	41.6%	8.5%	3.26
SOUTH	384	16.9%	32.3%	19.5%	26.0%	5.2%	2.70
		χ^2=62.756***, Cramer's V=0.119					

[1] F = 17.272***, η =0.184. Mean is based on the following scale: 1 = strongly disagree; 2 = disagree; 3 = neutral, 4 = agree; 5 = strongly agree.
[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: The public hunting areas I use are too crowded opening weekends but usually not after that.

Residence of hunter	n	% of hunters indicating that they _____ with this statement: Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[1]
Statewide[2]	1422	6.2%	18.7%	24.6%	37.7%	12.8%	3.32
CENTRAL	344	5.2%	18.6%	25.6%	40.7%	9.9%	3.31
METRO	359	7.0%	19.2%	22.8%	36.2%	14.8%	3.33
NORTH	349	5.2%	17.2%	27.2%	39.3%	11.2%	3.34
SOUTH	380	7.6%	19.5%	23.2%	34.2%	15.5%	3.31
		χ^2=13.847 n.s., Cramer's V=0.057					

[1] F = 070 n.s., η =0.012. Mean is based on the following scale: 1 = strongly disagree; 2 = disagree; 3 = neutral, 4 = agree; 5 = strongly agree.
[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 4-6: The public hunting areas I use are too crowded most of the time.

Residence of hunter	n	% of hunters indicating that they _____ with this statement: Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[1]
Statewide[2]	1457	6.9%	32.5%	30.5%	20.9%	9.4%	2.93
CENTRAL	352	10.2%	29.8%	31.8%	19.6%	8.5%	2.86
METRO	374	6.7%	31.8%	27.8%	22.2%	11.5%	3.00
NORTH	358	4.7%	41.1%	33.8%	15.4%	5.0%	2.75
SOUTH	379	5.0%	27.4%	29.3%	26.1%	12.1%	3.13
		χ^2=47.859***, Cramer's V=0.104					

[1] F = 8.703***, η =0.133. Mean is based on the following scale: 1 = strongly disagree; 2 = disagree; 3 = neutral, 4 = agree; 5 = strongly agree.
[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: The DNR should use a drawing or lottery to limit the number of waterfowl hunters that use some public hunting areas.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy: Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[1]
Statewide[2]	1484	45.4%	20.4%	17.9%	9.4%	6.9%	2.12
CENTRAL	358	45.8%	19.0%	20.7%	8.7%	5.9%	2.10
METRO	380	40.8%	20.8%	18.4%	10.8%	9.2%	2.27
NORTH	365	49.0%	21.1%	16.2%	8.2%	5.5%	2.00
SOUTH	388	48.5%	20.9%	15.2%	9.3%	6.2%	2.04
		χ^2=14.180 n.s., Cramer's V=0.056					

[1] F = 3.324*, η =0.082. Mean is based on the following scale: 1 = strongly disagree; 2 = disagree; 3 = neutral, 4 = agree; 5 = strongly agree.
[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 4-8: Beginning shooting hours ½ hour before sunrise on opening day.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1723	4.5%	8.4%	9.8%	31.6%	45.7%	4.06
CENTRAL	420	4.0%	6.7%	10.5%	33.6%	45.2%	4.09
METRO	454	4.4%	9.9%	10.4%	28.4%	46.9%	4.04
NORTH	419	4.8%	6.7%	8.8%	35.1%	44.6%	4.08
SOUTH	429	5.1%	10.0%	8.9%	30.3%	45.7%	4.01
		χ^2=11.330 n.s., Cramer's V=0.047					

[1] F = 0.459 n.s., η =0.028 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: Opening last year's regular waterfowl season one week earlier (Sept. 24, 2011).

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1710	8.1%	11.2%	17.7%	32.0%	31.0%	3.67
CENTRAL	416	6.5%	10.6%	16.6%	36.5%	29.8%	3.73
METRO	448	8.3%	10.7%	19.6%	29.0%	32.4%	3.67
NORTH	419	8.4%	11.5%	16.7%	32.0%	31.5%	3.67
SOUTH	427	9.8%	12.9%	16.9%	30.7%	29.7%	3.58
		χ^2=10.613 n.s., Cramer's V=0.045					

[1] F = 1.033 n.s., η =0.043. 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 4-10: Using a North and South duck zone during last year's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1531	3.3%	7.7%	44.1%	30.5%	14.4%	3.45
CENTRAL	372	3.0%	10.5%	47.3%	26.3%	12.9%	3.36
METRO	390	3.8%	7.2%	44.4%	29.7%	14.9%	3.45
NORTH	376	4.3%	7.7%	41.2%	33.8%	13.0%	3.44
SOUTH	401	2.0%	4.5%	42.6%	33.9%	17.0%	3.59
		χ^2=22.599*, Cramer's V=0.070					

[1] F = 4.315**, η =0.091. 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 4-11: Using a split season in the South Duck Zone during last year's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1464	6.5%	13.7%	47.1%	21.4%	11.3%	3.17
CENTRAL	366	7.1%	15.0%	48.6%	19.9%	9.3%	3.09
METRO	385	6.0%	13.0%	45.7%	23.4%	11.9%	3.22
NORTH	313	6.4%	13.4%	56.2%	16.6%	7.3%	3.05
SOUTH	404	6.7%	13.1%	38.6%	24.8%	16.8%	3.32
		χ^2=35.810***, Cramer's V=0.090					

[1] F = 5.315**, η =0.104. 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 4-12: Ending shooting hours at 4 pm for the first part of Minnesota's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1700	18.6%	26.8%	20.5%	24.4%	9.7%	2.80
CENTRAL	414	18.1%	29.7%	19.3%	23.7%	9.2%	2.76
METRO	447	18.1%	25.1%	24.2%	23.3%	9.4%	2.81
NORTH	417	22.3%	28.5%	14.6%	23.7%	10.8%	2.72
SOUTH	420	16.0%	23.6%	22.4%	28.3%	9.8%	2.92
		χ^2=23.316*, Cramer's V=0.068					

[1] F = 1.993 n.s., η = 0.059. 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 4-13: Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1655	8.0%	18.3%	36.1%	25.0%	12.6%	3.16
CENTRAL	409	7.6%	19.3%	37.9%	24.9%	10.3%	3.11
METRO	432	8.1%	16.7%	37.3%	24.1%	13.9%	3.19
NORTH	404	8.2%	20.5%	33.2%	26.0%	12.1%	3.13
SOUTH	409	8.3%	16.9%	35.0%	25.7%	14.2%	3.21
		χ^2=7.772 n.s., Cramer's V=0.040					

[1] F = 0.681 n.s., η = 0.035. 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 4-14: Allowing open water hunting on a few (5-10) larger lakes or rivers during the regular waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____with this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Statewide[2]	1595	5.6%	9.7%	40.9%	31.0%	12.8%	3.36
CENTRAL	389	4.6%	7.7%	39.6%	35.7%	12.3%	3.43
METRO	420	5.2%	11.4%	36.7%	31.4%	15.2%	3.40
NORTH	388	7.2%	7.5%	46.6%	29.9%	8.8%	3.26
SOUTH	396	5.6%	12.1%	43.7%	24.7%	13.9%	3.29
		χ^2=30.753**, Cramer's V=0.080					

[1] F = 2.835*, η = 0.073. 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 Season Dates

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. The largest proportion (41.6%) selected the central region, followed by north (26.4%), south (17.6%), and southeast (8.6%). About 6% had no preference (Table 5-1).

Preference for Season Dates for a 60-day Duck Season

Study participants were asked to select between a straight season, one of two split seasons, or no preference for a 60-day duck season in 2012. Statewide, 38.3% preferred a straight season (Saturday Sept. 22 to Tuesday, Nov. 20), 26.6% preferred a split season (Saturday Sept. 29 to Sunday Sept. 30, close 5 days and reopen Saturday Oct. 6 to Sunday Dec. 2), 20.1% preferred a split season (Saturday Sept. 22 to Sunday Sept. 23, close 5 days and reopen Saturday Sept. 29 to Sunday Nov. 25), and 15.0% had no preference (Table 5-2). A substantially greater proportion of respondents from the North region preferred a straight season (55% compared to 23–38% for other regions). A substantially greater proportion of respondents from the South region preferred the split season with the later season closing date (37% compared to 18–27% for other regions).

Preferred Dates for 30-day Season

Study participants were asked to select between a straight season, one of two split seasons, or no preference for a 30-day duck season in 2012. Statewide, 34.8% preferred a straight season (Saturday Sept. 29 to Sunday, Oct. 28), 31.9% preferred a split season (Saturday Sept. 29 to Sunday Oct. 7, close 10 days and reopen Thursday Oct. 18 to Wednesday, Nov. 7), 16.7% preferred a split season (Saturday Sept. 29 to Sunday Sept. 30, close 5 days and reopen Saturday Oct. 6 to Friday, Nov. 2), and 16.6% had no preference (Table 5-3). A greater proportion of respondents from the North region preferred a straight season (43% compared to 28-36% for other regions). A greater proportion of respondents from the South region preferred the split season with the later season closing date (41% compared to 22-37% for other regions).

Preferred Dates for September Goose Season

Study participants were asked to select between two straight seasons of different lengths, or no preference for a September goose season. Choices for the September goose season were fairly evenly divided. Statewide, 37.2% had no preference, while 35.1% preferred the longer Saturday Sept. 1 to Friday, Sept. 21 season, and 27.7% preferred the shorter Saturday Sept. 1 to Sunday Sept. 16 season (Table 5-4). A greater proportion of respondents from the metropolitan region had no preference (45% compared to 32-37% for other regions).

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: North	Central	South	Southeast	No preference
Statewide[2]	1735	26.4%	41.6%	17.6%	8.6%	5.9%
CENTRAL	420	12.1%	76.7%	4.0%	1.0%	6.2%
METRO	457	19.9%	46.4%	17.9%	8.3%	7.4%
NORTH	424	72.9%	20.5%	3.8%	0.2%	2.6%
SOUTH	433	3.5%	7.6%	52.7%	29.8%	6.5%
		χ^2=1,382.391***, Cramer's V=0.516				

[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 2012.

Residence of hunter	n	% of hunters indicating that they prefer: Saturday Sept. 22 to Tuesday, Nov. 20	Saturday Sept. 22 to Sunday Sept 23, close 5 days and reopen Saturday Sept. 29 to Sunday Nov. 25	Saturday Sept. 29 to Sunday Sept 30, close 5 days and reopen Saturday Oct 6 to Sunday Dec. 2	No preference
Statewide[1]	1722	38.3%	20.1%	26.6%	15.0%
CENTRAL	419	36.0%	22.9%	25.3%	15.8%
METRO	456	37.7%	21.1%	27.0%	14.3%
NORTH	415	55.2%	11.1%	18.3%	15.4%
SOUTH	430	22.8%	24.9%	37.4%	14.9%
		χ^2=112.412***, Cramer's V=0.148			

[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: Preference for season dates for a 30-day duck season in 2012.

Residence of hunter	n	% of hunters indicating that they prefer: Saturday Sept. 29 to Sunday Oct. 28	Saturday Sept. 29 to Sunday Sept 30, close 5 days and reopen Saturday Oct. 6 to Friday Nov. 2	Saturday Sept. 29 to Sunday Oct. 7, close 10 days and reopen Thursday Oct 18 to Wednesday Nov. 7	No preference
Statewide[1]	1715	34.8%	16.7%	31.9%	16.6%
CENTRAL	420	36.0%	18.3%	27.4%	18.3%
METRO	450	32.0%	14.7%	36.7%	16.7%
NORTH	419	43.4%	19.6%	22.4%	14.6%
SOUTH	424	27.8%	14.4%	41.3%	16.5%
		χ^2=52.325***, Cramer's V=0.101			

[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 5-4: Preference for September goose season.

Residence of hunter	n	% of hunters indicating that they prefer: Option 1: Saturday, Sept. 1 to Friday Sept. 21	Option 2: Saturday, Sept. 1 to Sunday, Sept 16	No preference
Statewide[1]	1726	35.1%	27.7%	37.2%
CENTRAL	420	41.0%	26.7%	32.4%
METRO	455	28.8%	26.6%	44.6%
NORTH	421	38.7%	29.2%	32.1%
SOUTH	429	33.6%	29.4%	37.1%
		χ^2=24.479***, Cramer's V=0.084		

[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). Six items were rated very to extremely important: (a) enjoying nature and the outdoors ($\bar{x}$ = 4.44), (b) good behavior among other waterfowl hunters ($\bar{x}$ = 4.30), (c) the excitement of hunting ($\bar{x}$ = 4.30), (d) getting away from crowds of people ($\bar{x}$ = 4.12), (e) the challenge of making a successful shot ($\bar{x}$ = 4.08), and (f) being with friends ($\bar{x}$ = 4.01). 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 north and non-metro central regions rated the importance of "getting food for my family" (Table 6-4) and "getting my own food" (Table 6-25) higher than respondents from the metro and south regions did. Respondents from the metro and south regions rated "hunting areas open to the public" (Table 6-18) slightly higher than other respondents did. Respondents from the metropolitan region rated "being on my own" (Table 6-9) lower than respondents from other regions did, and "being with friends" (Table 6-10) more important than other respondents did.

An exploratory factor analysis of the 26 experience items produced six motivational factors: (a) achievement ($\bar{x}$ = 2.74), (b) affiliation ($\bar{x}$ = 3.74), (c) access ($\bar{x}$ = 3.37), (d) appreciation ($\bar{x}$ = 4.28), (e) food ($\bar{x}$ = 2.28), and (f) being on your own ($\bar{x}$ = 3.05).

Importance of and Identification with Waterfowl Hunting

Respondents were asked how important waterfowl hunting was to them. The majority of respondents (54.0%) indicated that it was "one of my most important recreational activities." Over one-fourth (26.6%) indicated that it was "no more important than my other recreational activities," while 9.6% indicated that it was "my most important recreational activity," 8.4% indicated that it was "less important than my other recreational activities," and 1.4% indicated that it was "one of my least important recreational activities" (Table 6-28).

Respondents were asked to indicate how much they identified as waterfowl hunters. Over two-thirds (66.8%) responded "I am a waterfowl hunter." Fifteen percent indicated that "I go waterfowl hunting, but I do not really consider myself a waterfowl hunter. About 10% indicated that they used to be, but no longer consider themselves waterfowl hunters, and 7.5% indicated that they were in the process of becoming waterfowl hunters (Table 6-29).

Section 6: Motivations for and Involvement in Waterfowl Hunting

Involvement 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 ($\bar{x}$ = 4.34), (b) the decision to go waterfowl hunting is primarily my own ($\bar{x}$ = 4.15), (c) waterfowl hunting is important to me ($\bar{x}$ = 4.14), (d) I have acquired equipment that I can only use for waterfowl hunting ($\bar{x}$ = 4.14), (e) I am knowledgeable about waterfowl hunting ($\bar{x}$ = 4.10), (f) I enjoy discussing waterfowl hunting with friends ($\bar{x}$ = 4.05) and (g) waterfowl hunting is one of the most enjoyable things I do ($\bar{x}$ = 4.02). One item was rated substantially lower than other items: I do not really know much about waterfowl hunting ($\bar{x}$ = 1.79). Means and frequencies for all 26 involvement items are presented in Tables 6-31 through 6-51. Agreement with involvement items did not differ substantively by region of residence.

Importance of Individuals and Groups for Waterfowl Hunting Participation

Respondents were asked to rate the importance of 14 individuals and groups to their participation in waterfowl hunting using the scale: 1 = not at all to 5 = extremely (Table 6-52). On average, friends were rated moderately to very important ($\bar{x}$ = 3.65) to participation and parents were rated moderately important ($\bar{x}$ = 2.99). Means and frequencies for all 14 individuals and groups are presented in Tables 6-53 through 6-66. The importance of individuals and groups to waterfowl hunting participation did not differ substantively among regions.

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	4.30
Good behavior among other waterfowl hunters	4.30
Getting away from crowds of people	4.12
The challenge of making a successful shot	4.08
Being with friends	4.01
Being with family	3.92
Seeing a lot of ducks and geese	3.88
Hunting areas open to the public	3.76
Reducing tension and stress	3.74
Sharing my hunting skills and knowledge	3.55
Thinking about personal values	3.50
Having a long duck season	3.45
Using my hunting equipment (decoys, boats, etc.)	3.41
Developing my skills and abilities	3.37
Hunting with a dog	3.33
Access to a lot of different hunting areas	3.33
Bagging ducks and geese	3.02
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	3.01
Shooting a gun	2.83
Being on my own	2.78
Getting my own food	2.40
Killing waterfowl	2.39
A large daily duck bag limit	2.24
Getting food for my family	2.16
Getting my limit	2.05

[1] This table does not include those respondents who did not hunt in Minnesota in 201`.
[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]	1516	0.2%	1.0%	5.9%	40.2%	52.6%	4.44
CENTRAL	376	0.3%	0.8%	6.1%	42.8%	50.0%	4.41
METRO	400	0.0%	1.5%	6.3%	37.5%	54.8%	4.46
NORTH	372	0.5%	1.1%	5.1%	40.6%	52.7%	4.44
SOUTH	387	0.3%	0.3%	5.9%	42.4%	51.2%	4.44
	χ^2=8.768 n.s., Cramer's V=0.044						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.234 n.s., η=0.021. Mean is based on the scale: 1 = not at all important, 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 6-3: 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]	1515	2.5%	3.4%	15.1%	37.2%	41.8%	4.12
CENTRAL	375	3.5%	2.4%	14.4%	38.1%	41.6%	4.12
METRO	401	1.7%	4.2%	17.0%	35.7%	41.4%	4.11
NORTH	372	2.7%	3.2%	15.3%	37.1%	41.7%	4.12
SOUTH	385	2.1%	3.1%	13.5%	38.7%	42.6%	4.17
	χ^2=7.058 n.s., Cramer's V=0.039						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.292 n.s., η=0.024. Mean is based on the scale: 1 = not at all important, 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]	1508	39.5%	24.9%	21.0%	9.6%	5.1%	2.16
CENTRAL	372	37.9%	22.6%	20.7%	13.7%	5.1%	2.26
METRO	399	45.6%	24.8%	18.3%	6.8%	4.5%	2.00
NORTH	369	32.8%	27.1%	22.2%	10.3%	7.6%	2.33
SOUTH	387	40.3%	24.8%	24.0%	8.0%	2.8%	2.08
	χ^2=32.934**, Cramer's V=0.085						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=6.347***, η=0.111. Mean is based on the scale: 1 = not at all important, 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]	1510	16.9%	20.9%	34.4%	17.6%	10.2%	2.83
CENTRAL	372	15.1%	20.4%	34.4%	18.5%	11.6%	2.91
METRO	400	16.5%	21.8%	36.3%	16.8%	8.8%	2.80
NORTH	372	16.4%	20.4%	32.8%	18.8%	11.6%	2.89
SOUTH	384	21.4%	20.1%	33.3%	15.9%	9.4%	2.72
	χ^2=9.860 n.s., Cramer's V=0.046						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=2.039 n.s., η=0.063. Mean is based on the scale: 1 = not at all important, 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 6-6: 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]	1509	29.6%	31.0%	28.1%	8.4%	2.9%	2.24
CENTRAL	373	28.4%	33.8%	26.0%	8.6%	3.2%	2.24
METRO	398	27.4%	30.9%	29.4%	9.5%	2.8%	2.29
NORTH	371	32.1%	28.3%	28.8%	7.0%	3.8%	2.22
SOUTH	386	31.6%	31.6%	27.7%	7.0%	2.1%	2.16
	χ^2=9.093 n.s., Cramer's V=0.045						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.034 n.s., η=0.045. Mean is based on the scale: 1 = not at all important, 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]	1504	10.3%	13.9%	26.5%	30.7%	18.6%	3.33
CENTRAL	368	11.1%	15.8%	28.0%	28.0%	17.1%	3.24
METRO	399	10.0%	13.0%	23.6%	32.1%	21.3%	3.42
NORTH	372	11.3%	11.6%	29.8%	31.7%	15.6%	3.29
SOUTH	384	8.3%	15.9%	25.3%	30.5%	20.1%	3.38
	χ^2=14.597 n.s., Cramer's V=0.057						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.668 n.s., η=0.057. Mean is based on the scale: 1 = not at all important, 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]	1504	7.1%	20.7%	41.9%	23.6%	6.6%	3.02
CENTRAL	373	7.2%	19.6%	40.2%	25.7%	7.2%	3.06
METRO	396	7.8%	19.7%	40.9%	23.7%	7.8%	3.04
NORTH	368	4.9%	21.5%	45.7%	20.4%	7.6%	3.04
SOUTH	387	8.0%	23.0%	43.4%	22.7%	2.8%	2.89
	χ^2=18.999 n.s., Cramer's V=0.064						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=2.387 n.s., η=0.068. Mean is based on the scale: 1 = not at all important, 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 6-9: Motivations for waterfowl hunting: Importance of… Being on my own.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Statewide[3]	1510	24.3%	17.6%	25.9%	20.5%	11.7%	2.78
CENTRAL	374	21.9%	19.3%	25.7%	20.1%	13.1%	2.83
METRO	398	28.6%	17.6%	24.1%	19.3%	10.3%	2.65
NORTH	372	20.4%	16.7%	28.0%	20.4%	14.5%	2.92
SOUTH	385	24.2%	16.9%	27.3%	22.3%	9.4%	2.76
	χ^2=14.944 n.s., Cramer's V=0.057						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=2.839*, η=0.075. Mean is based on the scale: 1 = not at all important, 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]	1511	2.8%	5.1%	17.4%	37.8%	36.9%	4.01
CENTRAL	375	2.4%	6.7%	17.1%	36.8%	37.1%	3.99
METRO	399	2.5%	2.5%	17.0%	36.1%	41.9%	4.12
NORTH	370	4.6%	6.8%	15.9%	40.0%	32.7%	3.89
SOUTH	385	2.1%	5.5%	19.7%	40.3%	32.5%	3.96
	χ^2=23.282*, Cramer's V=0.071						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=3.605*, η=0.084. Mean is based on the scale: 1 = not at all important, 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]	1506	8.2%	12.8%	30.2%	31.1%	17.7%	3.37
CENTRAL	372	8.3%	14.8%	28.2%	29.8%	18.8%	3.36
METRO	397	7.3%	11.6%	30.0%	32.2%	18.9%	3.44
NORTH	370	8.6%	13.0%	28.4%	31.1%	18.9%	3.39
SOUTH	385	9.1%	11.4%	35.6%	30.9%	13.0%	3.27
	χ^2=13.552 n.s., Cramer's V=0.054						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.398 n.s., η=0.052. Mean is based on the scale: 1 = not at all important, 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 6-12: Motivations for waterfowl hunting: Being with family.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Statewide[3]	1500	6.3%	6.5%	16.1%	31.2%	39.9%	3.92
CENTRAL	367	6.0%	6.0%	13.9%	32.7%	41.4%	3.98
METRO	397	6.3%	5.3%	16.4%	30.0%	42.1%	3.96
NORTH	372	6.5%	8.3%	18.0%	30.9%	36.3%	3.82
SOUTH	384	7.8%	7.0%	17.7%	30.5%	37.0%	3.82
	χ^2=9.581 n.s., Cramer's V=0.046						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.992 n.s., η=0.063. Mean is based on the scale: 1 = not at all important, 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]	1505	26.7%	27.5%	30.4%	11.0%	4.4%	2.39
CENTRAL	370	25.4%	26.2%	32.7%	10.3%	5.4%	2.44
METRO	399	27.6%	29.1%	28.1%	12.3%	3.0%	2.34
NORTH	369	26.6%	26.0%	29.5%	10.8%	7.0%	2.46
SOUTH	386	27.7%	28.8%	31.9%	9.1%	2.6%	2.30
	χ^2=16.437 n.s., Cramer's V=0.060						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.766 n.s., η=0.059. Mean is based on the scale: 1 = not at all important, 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]	1511	13.7%	18.8%	32.6%	22.7%	12.2%	3.01
CENTRAL	372	14.8%	16.7%	33.6%	21.2%	13.7%	3.02
METRO	400	12.8%	18.0%	33.3%	23.5%	12.5%	3.05
NORTH	371	13.7%	23.7%	31.5%	20.8%	10.2%	2.90
SOUTH	387	14.7%	16.8%	31.3%	25.6%	11.6%	3.03
	χ^2=12.382 n.s., Cramer's V=0.052						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=1.182 n.s., η=0.048. Mean is based on the scale: 1 = not at all important, 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 6-15: Motivations for waterfowl hunting: Importance of… Getting my limit.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Statewide[3]	1512	37.5%	30.9%	23.1%	5.9%	2.5%	2.05
CENTRAL	372	37.4%	28.5%	25.3%	6.5%	2.4%	2.08
METRO	400	36.5%	29.3%	25.0%	7.3%	2.0%	2.09
NORTH	372	40.3%	32.0%	19.1%	5.6%	3.0%	1.99
SOUTH	387	37.0%	35.4%	21.4%	2.8%	3.4%	2.00
	χ^2=18.223 n.s., Cramer's V=0.063						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.972 n.s., η=0.044. Mean is based on the scale: 1 = not at all important, 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]	1511	1.3%	3.0%	10.9%	34.3%	50.4%	4.30
CENTRAL	373	1.1%	2.7%	10.5%	35.7%	50.1%	4.31
METRO	400	1.5%	2.8%	10.3%	33.0%	52.5%	4.32
NORTH	373	1.3%	4.0%	12.3%	35.4%	46.9%	4.23
SOUTH	384	1.6%	3.4%	11.2%	33.1%	50.8%	4.28
	χ^2=4.647 n.s., Cramer's V=0.032						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.917 n.s., η=0.042. Mean is based on the scale: 1 = not at all important, 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]	1514	8.9%	10.9%	29.8%	27.1%	23.3%	3.45
CENTRAL	373	9.4%	12.9%	27.9%	24.7%	25.2%	3.43
METRO	401	9.0%	8.7%	32.2%	26.9%	23.2%	3.47
NORTH	373	5.9%	13.9%	29.8%	27.3%	23.1%	3.48
SOUTH	385	11.7%	8.1%	29.4%	30.1%	20.8%	3.40
	χ^2=21.227*, Cramer's V=0.068						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.296 n.s., η=0.024. Mean is based on the scale: 1 = not at all important, 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 6-18: 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]	1508	6.9%	8.5%	19.1%	32.1%	33.3%	3.76
CENTRAL	373	8.3%	11.8%	19.8%	30.8%	29.2%	3.61
METRO	400	6.3%	6.8%	18.5%	29.0%	39.5%	3.89
NORTH	371	5.7%	11.3%	18.9%	35.8%	28.3%	3.70
SOUTH	381	8.4%	3.9%	19.2%	34.6%	33.9%	3.82
	χ^2=35.545***, Cramer's V=0.088						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=4.112**, η=0.090. Mean is based on the scale: 1 = not at all important, 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]	1511	17.1%	12.6%	18.9%	23.2%	28.1%	3.33
CENTRAL	373	15.0%	12.9%	20.4%	21.7%	30.0%	3.39
METRO	400	16.0%	13.0%	18.8%	25.3%	27.0%	3.34
NORTH	372	20.7%	12.9%	17.2%	22.3%	26.9%	3.22
SOUTH	385	17.7%	10.4%	20.0%	23.1%	28.8%	3.35
	χ^2=8.882 n.s., Cramer's V=0.044						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.994 n.s., η=0.044. Mean is based on the scale: 1 = not at all important, 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]	1507	6.1%	8.6%	21.6%	32.7%	31.0%	3.74
CENTRAL	372	5.1%	9.1%	23.7%	28.2%	33.9%	3.77
METRO	399	6.5%	8.3%	19.0%	36.6%	29.6%	3.74
NORTH	370	5.1%	9.5%	23.0%	31.9%	30.5%	3.73
SOUTH	383	8.1%	7.3%	21.7%	32.1%	30.8%	3.70
	χ^2=12.570 n.s., Cramer's V=0.052						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.196 n.s., η=0.020. Mean is based on the scale: 1 = not at all important, 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 6-21: 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]	1512	1.4%	4.4%	26.6%	39.8%	27.8%	3.88
CENTRAL	372	1.3%	4.0%	26.1%	43.0%	25.5%	3.87
METRO	401	1.5%	3.7%	26.9%	40.4%	27.4%	3.89
NORTH	372	1.1%	5.9%	25.5%	38.4%	29.0%	3.88
SOUTH	386	1.6%	4.7%	28.0%	36.3%	29.5%	3.88
	χ^2=6.865 n.s., Cramer's V=0.039						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.016 n.s., η=0.006. Mean is based on the scale: 1 = not at all important, 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]	1514	4.1%	10.5%	31.5%	34.1%	19.9%	3.55
CENTRAL	374	2.9%	9.1%	35.6%	31.8%	20.6%	3.58
METRO	401	4.7%	12.7%	29.9%	34.4%	18.2%	3.49
NORTH	371	3.8%	9.4%	30.7%	35.8%	20.2%	3.59
SOUTH	386	5.4%	10.1%	31.1%	32.6%	20.7%	3.53
	χ^2=10.495 n.s., Cramer's V=0.048						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.833 n.s., η=0.040. Mean is based on the scale: 1 = not at all important, 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]	1509	6.2%	11.0%	29.8%	32.5%	20.6%	3.50
CENTRAL	369	4.1%	10.0%	31.7%	34.4%	19.8%	3.56
METRO	400	7.5%	11.5%	28.3%	30.5%	22.3%	3.48
NORTH	372	6.2%	11.0%	27.2%	35.5%	20.2%	3.52
SOUTH	387	7.0%	11.1%	33.6%	28.7%	19.6%	3.43
	χ^2=12.487 n.s., Cramer's V=0.052						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.934 n.s., η=0.043. Mean is based on the scale: 1 = not at all important, 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 6-24: 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]	1513	5.3%	14.6%	31.6%	31.0%	17.5%	3.41
CENTRAL	374	5.3%	12.8%	32.4%	31.8%	17.6%	3.44
METRO	400	5.0%	17.5%	29.8%	29.5%	18.3%	3.39
NORTH	372	4.8%	15.6%	33.1%	29.0%	17.5%	3.39
SOUTH	386	6.5%	11.1%	32.6%	33.9%	15.8%	3.41
	χ^2=11.192 n.s., Cramer's V=0.049						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.186 n.s., η=0.019. Mean is based on the scale: 1 = not at all important, 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]	1512	31.3%	26.4%	21.8%	12.5%	8.0%	2.40
CENTRAL	373	26.5%	26.0%	23.9%	15.0%	8.6%	2.53
METRO	399	37.8%	24.8%	19.0%	9.5%	8.8%	2.27
NORTH	372	28.2%	26.6%	22.0%	14.8%	8.3%	2.48
SOUTH	387	31.5%	28.7%	23.0%	11.4%	5.4%	2.30
	χ^2=23.135*, Cramer's V=0.071						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=4.164**, η=0.090. Mean is based on the scale: 1 = not at all important, 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]	1509	0.8%	2.5%	10.1%	38.7%	47.9%	4.30
CENTRAL	375	0.8%	1.9%	9.9%	40.3%	47.2%	4.31
METRO	397	0.8%	2.0%	9.8%	38.0%	49.4%	4.33
NORTH	371	0.5%	4.3%	11.3%	36.7%	47.2%	4.26
SOUTH	385	1.0%	1.8%	9.9%	41.0%	46.2%	4.30
	χ^2=9.420 n.s., Cramer's V=0.045						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.605 n.s., η=0.034. Mean is based on the scale: 1 = not at all important, 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 6-27: 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]	1513	1.7%	4.1%	16.2%	40.5%	37.4%	4.08
CENTRAL	374	1.9%	5.6%	15.5%	40.6%	36.4%	4.04
METRO	400	2.0%	2.8%	14.3%	42.8%	38.3%	4.13
NORTH	371	0.8%	4.6%	18.6%	37.2%	38.8%	4.09
SOUTH	387	2.1%	3.6%	18.3%	40.6%	35.4%	4.04
	χ^2=12.085 n.s., Cramer's V=0.051						

[1] This table does not include those respondents who did not hunt in Minnesota in 2011.
[2] F=0.813 n.s., η=0.040. Mean is based on the scale: 1 = not at all important, 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 6-28: 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]	1745	9.6%	54.0%	26.6%	8.4%	1.4%	2.38
CENTRAL	421	7.8%	53.4%	30.4%	6.9%	1.4%	2.41
METRO	458	9.4%	56.6%	25.3%	7.2%	1.5%	2.35
NORTH	429	11.7%	51.0%	25.4%	10.5%	1.4%	2.39
SOUTH	438	10.0%	53.7%	24.7%	10.3%	1.4%	2.39
		χ^2=13.590 n.s., Cramer's V=0.051					

[1] F=0.386, η=0.026. 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]	1733	15.0%	7.5%	10.7%	66.8%
CENTRAL	415	15.4%	8.4%	11.3%	64.8%
METRO	456	16.0%	6.4%	8.6%	69.1%
NORTH	426	12.2%	6.3%	12.9%	68.5%
SOUTH	438	15.8%	9.6%	11.2%	63.5%
		χ^2=12.641 n.s., Cramer's V= 0.049			

[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 6-30: Involvement in waterfowl hunting: Level of agreement/disagreement that…

	Mean[1]
Waterfowl hunting is interesting to me.	4.34
The decision to go waterfowl hunting is primarily my own.	4.15
Waterfowl hunting is important to me.	4.14
I have acquired equipment that I can only use for waterfowl hunting.	4.14
I am knowledgeable about waterfowl hunting.	4.10
I enjoy discussing waterfowl hunting with my friends.	4.05
Waterfowl hunting is one of the most enjoyable things I do.	4.02
I consider myself an educated consumer regarding waterfowl hunting.	3.94
When I am waterfowl hunting I am really myself.	3.80
I have close friendships based on a common interest in waterfowl hunting.	3.69
When I waterfowl hunt, others see me the way I want them to see me.	3.60
You can tell a lot about a person when you see them waterfowl hunting.	3.48
I have a preference for waterfowl hunting over other leisure activities.	3.48
Even if close friends recommend other recreational activities, I prefer waterfowl hunting.	3.18
Most of my friends are in some way connected with waterfowl hunting.	3.15
Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.	3.15
A lot of my life is organized around waterfowl hunting.	2.84
Waterfowl hunting has a central role in my life.	2.81
I find a lot of my life organized around waterfowl-hunting activities.	2.80
The decision to go waterfowl hunting is not entirely my own.	2.43
I do not really know much about waterfowl hunting.	1.79

[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]	1745	1.4%	4.2%	20.5%	39.4%	34.6%	4.02
CENTRAL	423	2.6%	3.8%	23.9%	40.0%	29.8%	3.91
METRO	460	0.7%	4.1%	17.8%	40.4%	37.0%	4.09
NORTH	425	1.2%	4.5%	19.8%	38.8%	35.8%	4.04
SOUTH	436	1.1%	4.8%	21.1%	37.2%	35.8%	4.02
	χ^2=15.992 n.s., Cramer's V= 0.055						

[1] F=3.066*, η=0.073. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-32: 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]	1742	0.9%	3.1%	13.0%	51.0%	32.1%	4.10
CENTRAL	424	0.9%	2.4%	13.4%	52.6%	30.7%	4.10
METRO	460	0.9%	3.0%	11.7%	48.5%	35.9%	4.15
NORTH	422	0.5%	2.8%	14.0%	52.1%	30.6%	4.09
SOUTH	435	1.1%	4.6%	13.3%	51.7%	29.2%	4.03
	χ^2=10.545 n.s., Cramer's V= 0.045						

[1] F=1.727 n.s., η=0.055. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1736	1.0%	4.5%	11.0%	45.3%	38.3%	4.15
CENTRAL	420	1.9%	5.2%	11.7%	45.2%	36.0%	4.08
METRO	457	0.7%	3.5%	11.2%	43.8%	40.9%	4.21
NORTH	421	0.5%	5.0%	11.6%	45.4%	37.5%	4.14
SOUTH	438	0.7%	4.6%	8.9%	48.2%	37.7%	4.18
	χ^2=12.232 n.s., Cramer's V= 0.048						

[1] F=1.710 n.s., η=0.055. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-34: 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]	1737	11.8%	28.7%	32.3%	18.5%	8.7%	2.84
CENTRAL	421	11.6%	29.5%	33.7%	17.3%	7.8%	2.80
METRO	456	12.3%	28.5%	32.2%	16.9%	10.1%	2.84
NORTH	424	9.7%	31.1%	30.9%	20.5%	7.8%	2.86
SOUTH	437	13.7%	24.9%	31.8%	20.8%	8.7%	2.86
	χ^2=11.500 n.s., Cramer's V= 0.047						

[1] F=0.219 n.s., η=0.019. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1743	13.1%	28.6%	30.7%	18.9%	8.7%	2.81
CENTRAL	424	15.6%	26.9%	31.4%	17.9%	8.3%	2.76
METRO	459	14.2%	27.5%	29.0%	20.5%	8.9%	2.83
NORTH	422	8.1%	33.9%	32.7%	16.6%	8.8%	2.84
SOUTH	437	13.7%	27.0%	30.7%	19.9%	8.7%	2.83
	χ^2=19.316 n.s. Cramer's V= 0.061						

[1] F=0.387 n.s., η=0.026. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-36: 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]	1740	7.4%	23.6%	25.7%	32.8%	10.5%	3.15
CENTRAL	422	7.1%	22.7%	26.8%	32.2%	11.1%	3.18
METRO	460	9.3%	24.1%	26.3%	29.8%	10.4%	3.08
NORTH	421	4.8%	26.1%	23.0%	36.8%	9.3%	3.20
SOUTH	436	7.6%	21.1%	25.9%	34.2%	11.2%	3.20
	χ^2=14.917 n.s., Cramer's V= 0.053						

[1] F=1.224 n.s., η=0.046. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1738	4.5%	6.2%	32.3%	38.8%	18.1%	3.60
CENTRAL	423	5.0%	5.2%	32.9%	39.7%	17.3%	3.59
METRO	458	3.9%	6.8%	35.2%	36.0%	18.1%	3.58
NORTH	422	3.3%	6.4%	31.5%	37.4%	21.3%	3.67
SOUTH	434	6.5%	6.2%	27.4%	44.2%	15.7%	3.56
	χ^2=18.922 n.s., Cramer's V= 0.060						

[1] F=0.975 n.s., η=0.041. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-38: 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]	1742	45.0%	38.5%	11.0%	3.7%	1.8%	1.79
CENTRAL	423	44.7%	38.3%	12.3%	3.3%	1.4%	1.78
METRO	460	46.3%	38.7%	10.4%	2.4%	2.2%	1.75
NORTH	424	43.9%	39.6%	10.8%	4.2%	1.4%	1.80
SOUTH	434	44.7%	36.9%	10.4%	5.8%	2.3%	1.84
	χ^2=10.343 n.s., Cramer's V= 0.045						

[1] F=0.684 n.s., η=0.034. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1745	1.8%	4.1%	16.2%	54.2%	23.7%	3.94
CENTRAL	424	1.2%	5.0%	16.7%	53.3%	23.8%	3.94
METRO	460	1.7%	2.8%	14.3%	56.3%	24.8%	4.00
NORTH	424	2.1%	4.5%	16.7%	54.2%	22.4%	3.90
SOUTH	436	2.3%	4.8%	18.1%	51.8%	22.9%	3.88
	χ^2=8.290 n.s., Cramer's V= 0.040						

[1] F=1.491 n.s., η=0.051. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-40: 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]	1746	0.6%	0.5%	6.0%	50.3%	42.5%	4.34
CENTRAL	423	0.5%	0.5%	6.4%	52.0%	40.7%	4.32
METRO	460	0.4%	0.4%	6.3%	47.8%	45.0%	4.37
NORTH	425	1.2%	0.2%	4.7%	50.8%	43.1%	4.34
SOUTH	438	0.5%	0.9%	6.6%	51.8%	40.2%	4.30
	χ^2=8.954 n.s., Cramer's V= 0.041						

[1] F=0.729 n.s., η=0.035. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1742	0.9%	2.5%	16.5%	42.5%	37.7%	4.14
CENTRAL	422	0.7%	2.6%	17.8%	43.1%	35.8%	4.11
METRO	458	1.1%	2.0%	16.6%	40.4%	40.0%	4.16
NORTH	425	0.7%	1.9%	14.8%	44.2%	38.4%	4.18
SOUTH	437	0.9%	4.1%	16.2%	43.2%	35.5%	4.08
	χ^2=9.497 n.s., Cramer's V= 0.043						

[1] F=1.226 n.s., η=0.046. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-42: 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]	1745	2.6%	10.3%	38.4%	34.1%	14.6%	3.48
CENTRAL	424	4.5%	10.6%	42.9%	28.1%	13.9%	3.36
METRO	460	1.3%	10.0%	37.0%	35.7%	16.1%	3.55
NORTH	424	2.1%	10.1%	37.0%	36.1%	14.6%	3.51
SOUTH	436	3.0%	10.3%	36.2%	37.4%	13.1%	3.47
	χ^2=20.469 n.s., Cramer's V= 0.063						

[1] F=3.155*, η=0.074. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1745	1.5%	3.5%	29.7%	44.1%	21.2%	3.80
CENTRAL	423	1.9%	2.8%	29.1%	47.5%	18.7%	3.78
METRO	460	1.7%	3.5%	30.2%	40.2%	24.3%	3.82
NORTH	424	0.5%	3.3%	31.6%	45.0%	19.6%	3.80
SOUTH	437	1.8%	4.6%	27.7%	45.1%	20.8%	3.78
	χ^2=13.921 n.s., Cramer's V= 0.052						

[1] F=0.175 n.s., η=0.017. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-44: 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]	1746	1.4%	2.6%	14.1%	53.7%	28.2%	4.05
CENTRAL	424	1.4%	2.1%	12.5%	57.8%	26.2%	4.05
METRO	460	0.9%	3.0%	14.1%	51.5%	30.4%	4.08
NORTH	425	1.4%	2.6%	14.4%	53.4%	28.2%	4.04
SOUTH	436	2.1%	2.8%	16.3%	52.1%	26.8%	3.99
	χ^2=8.785 n.s., Cramer's V= 0.041						

[1] F=0.926 n.s., η=0.040. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1746	27.7%	29.9%	18.7%	18.6%	5.1%	2.43
CENTRAL	423	28.1%	29.8%	18.4%	17.3%	6.4%	2.44
METRO	460	28.7%	30.0%	17.6%	19.6%	4.1%	2.40
NORTH	425	25.9%	31.5%	18.8%	19.1%	4.7%	2.45
SOUTH	437	27.2%	28.1%	21.1%	18.3%	5.3%	2.46
	χ^2=6.137 n.s., Cramer's V= 0.034						

[1] F=0.194 n.s., η=0.018. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-46: 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]	1745	4.2%	12.0%	30.4%	38.0%	15.3%	3.48
CENTRAL	424	3.1%	13.4%	32.1%	38.9%	12.5%	3.44
METRO	460	5.2%	10.2%	29.6%	40.4%	14.6%	3.49
NORTH	424	3.3%	12.0%	28.8%	38.0%	17.9%	3.55
SOUTH	436	5.3%	13.3%	31.4%	32.3%	17.7%	3.44
	χ^2=17.838 n.s., Cramer's V= 0.058						

[1] F=1.119 n.s., η=0.044. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1740	11.5%	30.3%	32.6%	17.5%	8.1%	2.80
CENTRAL	423	13.0%	31.0%	32.9%	16.8%	6.4%	2.73
METRO	459	12.4%	29.6%	32.9%	16.6%	8.5%	2.79
NORTH	421	8.6%	31.6%	34.0%	17.8%	8.1%	2.85
SOUTH	436	11.2%	29.1%	30.0%	19.7%	9.9%	2.88
	χ^2=10.853 n.s., Cramer's V= 0.046						

[1] F=1.624 n.s., η=0.053. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-48: 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]	1746	5.5%	21.5%	34.6%	26.2%	12.2%	3.18
CENTRAL	423	5.4%	25.8%	33.6%	22.9%	12.3%	3.11
METRO	460	5.7%	20.0%	35.2%	27.0%	12.2%	3.20
NORTH	425	4.2%	19.8%	35.8%	28.5%	11.8%	3.24
SOUTH	437	6.6%	20.1%	33.4%	27.0%	12.8%	3.19
	χ^2=10.794 n.s., Cramer's V= 0.045						

[1] F=1.087 n.s., η=0.043. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1746	2.2%	5.5%	7.7%	45.4%	39.2%	4.14
CENTRAL	424	1.9%	5.0%	10.1%	45.3%	37.7%	4.12
METRO	460	2.6%	6.1%	5.2%	42.8%	43.3%	4.18
NORTH	423	1.9%	4.0%	7.1%	50.4%	36.6%	4.16
SOUTH	438	2.1%	7.1%	9.6%	44.5%	36.8%	4.07
	χ^2=20.062 n.s., Cramer's V= 0.062						

[1] F=1.236 n.s., η=0.046. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-50: 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]	1742	3.2%	10.3%	24.1%	39.0%	23.4%	3.69
CENTRAL	424	3.8%	10.4%	26.4%	38.0%	21.5%	3.63
METRO	458	2.6%	8.7%	21.0%	40.2%	27.5%	3.81
NORTH	424	3.1%	12.7%	24.1%	38.9%	21.2%	3.63
SOUTH	436	3.7%	10.1%	26.6%	38.5%	21.1%	3.63
	χ^2=14.528 n.s., Cramer's V= 0.053						

[1] F=3.498*, η=0.077. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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]	1746	7.3%	24.6%	30.2%	21.8%	16.1%	3.15
CENTRAL	424	6.8%	24.3%	33.7%	20.5%	14.6%	3.12
METRO	459	6.8%	25.1%	28.3%	21.8%	18.1%	3.19
NORTH	425	6.6%	25.4%	32.7%	22.6%	12.7%	3.09
SOUTH	438	9.8%	23.1%	25.8%	22.6%	18.7%	3.17
	χ^2=17.935 n.s., Cramer's V= 0.059						

[1] F=0.688 n.s., η=0.034. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 6-52: Importance of individuals and groups in participation in waterfowl hunting…

	Mean[1]
Friend(s)	3.65
Parent	2.99
Other relative	2.43
Sibling	2.28
Hunting magazines	2.18
Hunting-related TV shows	2.04
Sportsmen's groups	2.02
Coworker(s)	1.95
State wildlife agency	1.92
Hunting equipment manufacturers	1.90
Hunting equipment retailers	1.89
Grandparent	1.82
Neighbor(s)	1.74
Spouse or significant other	1.47

[1] Mean is based on the scale: 1 = not at all, 2 = slightly, 3 = moderately, 4= very, 5 = extremely.

Table 6-53: Role of individuals and groups in participation in waterfowl hunting: Importance of… parent.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1700	30.3%	12.8%	13.4%	14.7%	28.7%	2.99
CENTRAL	411	28.2%	13.1%	13.9%	16.5%	28.2%	3.03
METRO	441	31.1%	12.7%	13.6%	12.7%	29.9%	2.98
NORTH	417	27.8%	13.2%	12.5%	17.3%	29.3%	3.07
SOUTH	435	34.7%	12.2%	13.6%	12.9%	26.7%	2.85
	χ^2=10.728 n.s., Cramer's V=0.046						

[1] F=1.563 n.s., η=0.052. Mean is based on the scale: 1 = not at all important, 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 6-54: Role of individuals and groups in participation in waterfowl hunting: Importance of… sibling.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1694	51.6%	8.8%	12.6%	14.2%	12.8%	2.28
CENTRAL	408	51.2%	9.8%	13.2%	14.5%	11.3%	2.25
METRO	442	52.3%	7.7%	12.7%	14.0%	13.3%	2.29
NORTH	414	50.7%	9.4%	12.3%	13.8%	13.8%	2.30
SOUTH	433	52.0%	8.5%	12.0%	14.5%	12.9%	2.28
	χ^2=2.953 n.s., Cramer's V=0.024						

[1] F=0.100 n.s., η=0.013. Mean is based on the scale: 1 = not at all important, 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 6-55: Role of individuals and groups in participation in waterfowl hunting: Importance of… grandparent.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1690	67.4%	7.7%	9.0%	7.8%	8.1%	1.82
CENTRAL	406	65.3%	6.7%	9.6%	10.3%	8.1%	1.89
METRO	439	69.7%	8.0%	8.4%	6.2%	7.7%	1.74
NORTH	415	68.0%	8.2%	8.0%	7.5%	8.4%	1.80
SOUTH	435	65.5%	8.0%	10.6%	7.6%	8.3%	1.85
	χ^2=8.719 n.s., Cramer's V=0.041						

[1] F=1.010 n.s., η=0.042. Mean is based on the scale: 1 = not at all important, 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 6-56: Role of individuals and groups in participation in waterfowl hunting: Importance of… spouse or significant other.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1695	78.0%	7.9%	6.6%	3.8%	3.7%	1.47
CENTRAL	410	73.4%	8.3%	9.5%	3.9%	4.9%	1.59
METRO	441	80.5%	7.7%	4.5%	4.1%	3.2%	1.42
NORTH	414	76.1%	8.0%	7.5%	4.3%	4.1%	1.52
SOUTH	434	82.5%	7.4%	5.3%	2.3%	2.5%	1.35
	χ^2=19.331 n.s., Cramer's V=0.062						

[1] F=4.552**, η=0.089. Mean is based on the scale: 1 = not at all important, 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 6-57: Role of individuals and groups in participation in waterfowl hunting: Importance of… other relative.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1677	45.3%	9.3%	15.3%	17.6%	12.5%	2.43
CENTRAL	406	41.1%	10.6%	16.5%	16.7%	15.0%	2.54
METRO	437	46.9%	8.5%	14.9%	17.4%	12.4%	2.40
NORTH	407	43.2%	10.1%	12.3%	21.6%	12.8%	2.51
SOUTH	430	50.5%	8.1%	17.9%	14.7%	8.8%	2.23
	χ^2=24.142*, Cramer's V=0.069						

[1] F=3.606*, η=0.080. Mean is based on the scale: 1 = not at all important, 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 6-58: Role of individuals and groups in participation in waterfowl hunting: Importance of… friend(s).

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1701	8.3%	8.0%	21.2%	35.7%	26.8%	3.65
CENTRAL	413	9.0%	6.1%	22.5%	36.3%	26.2%	3.65
METRO	443	7.7%	7.7%	19.0%	35.9%	29.8%	3.72
NORTH	415	8.4%	9.4%	22.7%	36.9%	22.7%	3.56
SOUTH	433	8.1%	9.5%	21.7%	33.3%	27.5%	3.63
	χ^2=11.537 n.s., Cramer's V=0.048						

[1] F=1.406 n.s., η=0.050. Mean is based on the scale: 1 = not at all important, 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 6-59: Role of individuals and groups in participation in waterfowl hunting: Importance of… neighbor(s).

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1690	66.4%	9.5%	12.5%	7.4%	4.2%	1.74
CENTRAL	408	60.8%	11.5%	15.2%	8.1%	4.4%	1.84
METRO	440	71.8%	6.4%	9.5%	7.5%	4.8%	1.67
NORTH	411	65.5%	11.4%	12.7%	6.8%	3.6%	1.72
SOUTH	435	65.7%	9.7%	13.8%	7.1%	3.7%	1.73
	χ^2=18.989 n.s., Cramer's V=0.061						

[1] F=1.511 n.s., η=0.052. Mean is based on the scale: 1 = not at all important, 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 6-60: Role of individuals and groups in participation in waterfowl hunting: Importance of… coworker(s).

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1704	57.0%	11.6%	15.7%	10.6%	5.1%	1.95
CENTRAL	413	53.8%	14.5%	16.0%	11.4%	4.4%	1.98
METRO	442	61.3%	9.5%	13.8%	10.6%	4.8%	1.88
NORTH	416	54.3%	11.5%	18.3%	9.9%	6.0%	2.02
SOUTH	437	57.0%	11.4%	15.8%	10.3%	5.5%	1.96
	χ^2=11.907 n.s., Cramer's V=0.048						

[1] F=0.897 n.s., η=0.040. Mean is based on the scale: 1 = not at all important, 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 6-61: Role of individuals and groups in participation in waterfowl hunting: Importance of… hunting equipment manufacturers.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1692	50.4%	21.2%	18.6%	7.8%	2.0%	1.90
CENTRAL	409	45.5%	23.0%	20.0%	9.8%	1.7%	1.99
METRO	442	50.7%	20.1%	18.1%	8.6%	2.5%	1.92
NORTH	411	50.4%	22.1%	20.9%	4.6%	1.9%	1.86
SOUTH	433	57.0%	19.4%	15.0%	7.2%	1.4%	1.76
	χ^2=21.591*, Cramer's V=0.065						

[1] F=3.462*, η=0.078. Mean is based on the scale: 1 = not at all important, 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 6-62: Role of individuals and groups in participation in waterfowl hunting: Importance of… hunting equipment retailers.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1703	49.7%	22.8%	18.5%	7.0%	1.9%	1.89
CENTRAL	411	46.2%	23.6%	20.0%	9.0%	1.2%	1.95
METRO	443	48.5%	22.8%	18.1%	7.9%	2.7%	1.93
NORTH	417	50.6%	23.0%	20.6%	3.8%	1.9%	1.83
SOUTH	436	55.7%	21.6%	14.9%	6.2%	1.6%	1.76
	χ^2=21.384*, Cramer's V=0.065						

[1] F=3.069*, η=0.073. Mean is based on the scale: 1 = not at all important, 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 6-63: Role of individuals and groups in participation in waterfowl hunting: Importance of… state wildlife agency.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1700	50.0%	21.8%	17.4%	7.4%	3.4%	1.92
CENTRAL	411	47.7%	24.8%	15.3%	8.8%	3.4%	1.95
METRO	441	48.8%	20.4%	17.9%	8.2%	4.8%	2.00
NORTH	416	53.1%	20.9%	19.2%	4.8%	1.9%	1.81
SOUTH	436	51.8%	21.1%	17.2%	7.3%	2.5%	1.88
	χ^2=17.296 n.s., Cramer's V=0.058						

[1] F=2.261 n.s., η=0.063. Mean is based on the scale: 1 = not at all important, 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 6-64: Role of individuals and groups in participation in waterfowl hunting: Importance of… sportsmen's groups.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1701	46.4%	20.9%	19.9%	10.1%	2.8%	2.02
CENTRAL	410	44.6%	22.4%	20.5%	8.8%	3.7%	2.04
METRO	442	48.4%	19.2%	16.7%	12.9%	2.7%	2.02
NORTH	417	46.5%	22.1%	21.3%	8.2%	1.9%	1.97
SOUTH	437	45.3%	20.1%	22.9%	9.2%	2.5%	2.03
	χ^2=15.127 n.s., Cramer's V=0.054						

[1] F=0.361 n.s., η=0.025. Mean is based on the scale: 1 = not at all important, 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 6-65: Role of individuals and groups in participation in waterfowl hunting: Importance of… hunting-related TV shows.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1704	45.2%	21.1%	21.3%	9.9%	2.5%	2.04
CENTRAL	412	43.9%	19.4%	23.1%	10.7%	2.9%	2.09
METRO	443	47.4%	20.5%	19.9%	9.7%	2.5%	1.99
NORTH	417	45.6%	21.8%	22.3%	9.1%	1.2%	1.99
SOUTH	436	42.7%	23.4%	20.2%	10.3%	3.4%	2.08
	χ^2=9.678 n.s., Cramer's V=0.043						

[1] F=1.089 n.s., η=0.044. Mean is based on the scale: 1 = not at all important, 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 6-66: Role of individuals and groups in participation in waterfowl hunting: Importance of… hunting magazines.

Regions	N	Not at all	Slightly	Moderately	Very	Extremely	Mean[2]
Statewide[3]	1704	37.8%	23.6%	24.4%	11.5%	2.7%	2.18
CENTRAL	411	37.0%	21.9%	22.6%	14.8%	3.6%	2.26
METRO	443	37.2%	24.4%	25.3%	10.6%	2.5%	2.17
NORTH	417	36.9%	25.7%	25.9%	10.1%	1.4%	2.13
SOUTH	437	41.0%	22.4%	23.3%	9.8%	3.4%	2.12
	χ^2=14.985 n.s., Cramer's V=0.054						

[1] F=1.291 n.s., η=0.048. Mean is based on the scale: 1 = not at all important, 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: 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 7-1). Trust in the DNR did not differ substantively by region of residence. Means and frequencies for the 6 trust statements strategies are presented in Tables 7-2 through 7-7.

Section 7: Trust in the Minnesota Department of Natural Resources

Table 7-1: 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.	1664	3.42
The Minnesota DNR will make decisions about waterfowl management in a way that is fair.	1666	3.24
The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.	1668	3.15
When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.	1667	3.15
The Minnesota DNR listens to waterfowl hunters' concerns.	1664	3.03
The Minnesota DNR does a good job of managing waterfowl in Minnesota.	1665	3.02

[1]Grand mean=3.16, F=122.657***, η^2=0.069. 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 7-2: 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]	1665	9.0%	19.9%	34.7%	33.0%	3.4%	3.02
CENTRAL	402	11.9%	20.9%	31.1%	33.3%	2.7%	2.94
METRO	436	7.3%	18.6%	36.7%	33.0%	4.4%	3.08
NORTH	408	7.4%	21.3%	35.0%	32.6%	3.7%	3.04
SOUTH	421	10.0%	19.2%	35.6%	33.0%	2.1%	2.98
	χ^2=13.817 n.s., Cramer's V= 0.053						

[1] F=1.657 n.s., η=0.055. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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: Trust in the Minnesota Department of Natural Resources

Table 7-3: 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]	1667	6.6%	14.7%	40.5%	33.8%	4.4%	3.15
CENTRAL	403	9.4%	16.1%	37.0%	33.5%	4.0%	3.06
METRO	437	4.6%	12.8%	41.4%	35.9%	5.3%	3.24
NORTH	408	6.1%	14.7%	42.6%	32.1%	4.4%	3.14
SOUTH	420	6.7%	16.2%	41.2%	32.6%	3.3%	3.10
	χ^2 =14.741 n.s., Cramer's V= 0.054						

[1] F=2.909*, η=0.072. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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: 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]	1668	8.0%	16.6%	33.2%	37.6%	4.7%	3.15
CENTRAL	403	9.7%	18.1%	32.0%	36.2%	4.0%	3.07
METRO	437	5.7%	15.3%	34.6%	38.4%	5.9%	3.24
NORTH	408	8.8%	16.9%	32.6%	36.5%	5.1%	3.12
SOUTH	421	8.6%	16.2%	33.0%	39.2%	3.1%	3.12
	χ^2 =11.307 n.s., Cramer's V= 0.048						

[1] F=2.078 n.s., η=0.061. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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: 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]	1666	6.1%	12.4%	37.9%	38.8%	4.8%	3.24
CENTRAL	402	7.5%	12.4%	39.6%	36.6%	4.0%	3.17
METRO	437	5.7%	10.8%	35.5%	42.1%	5.9%	3.32
NORTH	407	4.9%	15.0%	37.1%	37.8%	5.2%	3.23
SOUTH	421	6.2%	12.4%	40.6%	37.3%	3.6%	3.20
	χ^2=12.471 n.s., Cramer's V= 0.050						

[1] F=1.962 n.s., η=0.059. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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 7-6: 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]	1664	3.5%	5.5%	44.0%	39.2%	7.8%	3.42
CENTRAL	404	4.0%	5.4%	42.6%	40.8%	7.2%	3.42
METRO	435	3.7%	3.7%	45.5%	38.4%	8.7%	3.45
NORTH	406	2.5%	7.4%	40.6%	41.6%	7.9%	3.45
SOUTH	420	3.6%	6.7%	47.4%	35.2%	7.1%	3.36
	χ^2=13.450 n.s., Cramer's V= 0.052						

[1] F=1.107 n.s., η=0.045. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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: 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]	1664	9.1%	17.3%	39.1%	30.0%	4.5%	3.03
CENTRAL	404	10.6%	18.8%	35.9%	30.2%	4.5%	2.99
METRO	435	7.8%	16.1%	38.9%	31.7%	5.5%	3.11
NORTH	408	9.8%	16.9%	41.2%	28.4%	3.7%	2.99
SOUTH	418	8.4%	17.9%	41.6%	28.5%	3.6%	3.01
	χ^2=8.900 n.s., Cramer's V= 0.042						

[1] F=1.381 n.s., η=0.050. Mean is based on the scale: Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
[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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Section 8: Characteristics of Waterfowl Hunters in Minnesota

Information from the Electronic Licensing System database indicates that over one-third (33.2%) 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 8-1.

Hunter Age

The median age of the study population of Minnesota duck stamp purchasers was 39 years. The median age of 46 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 Table 8-2.) 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 2006 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 8-4, 8-5, and 8-6 are weighted to correct for the age bias for these results.

Statewide nearly 25% of respondents began hunting waterfowl in 2000 or more recently (Table 8-4). On average, waterfowl hunters in Minnesota have been hunting in the state for 21.3 years. The median of 19.0 indicates that half of the hunters have hunted 19 or more years in the state (Table 8-5). Across the regions, hunters in the North region ($\bar{x}$ = 22.5; median = 20.0) tended to have slightly more years of hunting experience in Minnesota, while hunters from the South region had fewer years of experience ($\bar{x}$ = 20.8; median = 18.0). Over one-fourth (26.6%) of respondents began waterfowl hunting (anywhere) in 1995 or later; the majority of these hunters have been hunting in Minnesota and have only hunted during a period when liberal duck seasons (50 or 60 days long and 6 or 4 ducks/day) have been offered.

Statewide a majority (67.8%) of the waterfowl hunters hunted for waterfowl in Minnesota every year during the past 5 years (Table 8-6). Of the 9.3% of respondents who did not hunt waterfowl during any of the years between 2006 and 2010, approximately three-fourths (76.3%) hunted waterfowl during 2011. This would be expected because we drew a sample of those who purchased duck stamps in 2011.

Membership in Conservation and Hunting Organizations

More than half (64.5%) of the waterfowl hunters reported that they belonged to a conservation/hunting organization. Nearly half (46.4%) of respondents reported membership in Ducks Unlimited and 8.7% reported membership in Minnesota Waterfowl Association. About one-fourth (26.7%) of respondents indicated that they had a membership in a local sportsmen's club. Respondents from the south region reported a significantly higher rate of membership in local sportsmen's clubs (Table 8-8).

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Hunting Outside of Minnesota

Approximately one in five (20.5%) Minnesota waterfowl hunters hunted outside the state in 2011, with hunters residing in the non-metro region (25.1%) most likely to hunt elsewhere (Table 8-9). Respondents from the north region were the least likely to have hunted outside of Minnesota during 2011 (16.4%).

Years Living in Minnesota, and on a Farm or Ranch

Respondents had lived in Minnesota an average of 42 years (94.3%) of their lives (Table 8-10). There was no difference by region in length of time residing in Minnesota. On average, respondents had lived 7.4 years from birth through age 17 on a farm, ranch, or in a non-suburban rural area (Table 8-11). After age 18, respondents had lived an average of 10.9 years on a farm, ranch, or in a non-suburban rural area. (Table 8-11). These values varied by region of residence.

Marital Status and Education

Statewide, about one in five respondents (18.3%) was single, with the large majority (70.1%) being married (Table 8-12). There was no significant difference in marital status by region. About four in ten respondents had completed a 4-year degree or higher level of education. Less than 2% had not completed a high school degree (Table 8-13).

Late Respondents

A comparison of late respondents to other respondents found that late respondents had been waterfowl hunting in Minnesota for somewhat fewer years ($\bar{x}$ = 17.8 years) than early respondents had ($\bar{x}$ = 22.2 years) (t = 12.622***). Late respondents had hunted an average of 3.7 of the previous 5 years compared to 4.1 years for early respondents (t = 9.828***). Although, the mean number of weekend days hunted did not differ significantly between late respondents ($\bar{x}$ = 6.50 days) and early respondents ($\bar{x}$ = 6.73), early respondents hunted significantly more weekdays ($\bar{x}$ = 4.3 days) than late respondents ($\bar{x}$ = 3.11 days) did. On average, early respondents also rated waterfowl as being significantly more important to them ($\bar{x}$ = 2.6), compared to late respondents ($\bar{x}$ = 2.4) (t = 13.085***). Similarly, early respondents more strongly identified as waterfowl hunters, compared to late respondents (χ^2 = 108.608***). A greater proportion of early respondents (66%) than late respondents (60%) reported hunting in both north and south duck zones (χ^2 = 23.790***).

Section 8: Characteristics of Waterfowl Hunters in Minnesota

Table 8-1: 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	21,343	26.51%
METRO	26,747	33.22%
NORTH	17,485	21.72%
SOUTH	14,945	18.56%
Statewide[2]	80,520	100%

[1] Source: DNR license database
[2] The statewide total is not equal to the total number of waterfowl stamps sold. The number reflects the sample population for the study, which excluded nonresident stamp buyers and individuals less than 18 years of age. This number reflects the customer count rather than the stamp count. Customers can purchase more than one stamp.

Table 8-2: Age of study population and survey respondents

Residence of hunter	n	20 – 29	30 – 39	40 – 49	50 - 59	60 - 64	65 +	Median age
Population[1]	76,280	25.7%	20.4%	22.5%	20.9%	6.9%	3.6%	39.00
Statewide	1,722	16.5%	18.0%	23.4%	27.1%	10.3%	4.7%	46.00
CENTRAL	411	16.3%	20.0%	25.5%	24.8%	8.8%	4.6%	44.00
METRO	458	15.5%	16.2%	25.3%	29.7%	10.3%	3.1%	48.00
NORTH	423	17.3%	16.1%	19.9%	26.2%	13.0%	7.6%	47.00
SOUTH	429	17.9%	21.0%	21.0%	26.6%	9.3%	4.2%	45.00
	χ^2=26.673*, V= 0.072							

[1] Source: DNR license database
[2] The population total is not equal to the total number of waterfowl stamps sold. The number reflects the sample population for the study, which excluded nonresident stamp buyers, individuals less than 18 years of age, and individuals with invalid ZIP codes. This number reflects the customer count rather than the stamp count. Customers can purchase more than one stamp.

Table 8-3: Proportion of respondents from different age categories who actually hunted waterfowl in Minnesota in the year 2011

Age category	N	% No	% Yes
20-29	282	7.4%	92.6%
30-39	306	7.8%	92.2%
40-49	398	12.6%	87.4%
50-59	462	13.0%	87.0%
60-64	175	16.6%	83.4%
65+	80	18.8%	81.3%
		χ^2=18.259**, V= 0.104	

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

Table 8-4: 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]	CENTRAL	METRO	NORTH	SOUTH
N	1641	412	441	424	428
2011	3.9%	2.7%	3.6%	2.4%	1.9%
2010	1.2%	1.0%	1.1%	0.7%	0.9%
2000-2009	19.8%	13.3%	14.5%	9.0%	13.6%
1990's	23.5%	19.4%	16.1%	20.8%	23.4%
1980's	15.5%	17.5%	14.1%	16.0%	17.1%
1970's	21.3%	23.8%	30.2%	22.9%	25.2%
1960's	11.8%	17.5%	17.5%	19.6%	14.0%
1950's	2.6%	4.6%	2.7%	7.1%	3.3%
1940's	0.3%	0.2%	0.2%	1.4%	0.5%
Before 1940	0.1%	0.0%	0.0%	0.2%	0.2%

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

Table 8-5: Number of years hunting waterfowl in Minnesota

# of years	% of hunters from that area who indicated that they have been hunting in Minnesota for _____ years:[1]				
	Statewide[2]	CENTRAL	METRO	NORTH	SOUTH
N	1664	420	417	407	427
1	4.2%	4.0%	5.3%	4.4%	2.3%
2	2.5%	1.9%	3.8%	2.0%	1.6%
3	2.3%	1.9%	3.1%	1.5%	2.6%
4	2.6%	2.9%	2.9%	1.7%	2.6%
5	2.9%	2.1%	3.1%	1.7%	4.7%
6	1.9%	2.4%	1.7%	0.7%	2.3%
7	2.6%	4.3%	1.7%	2.7%	1.9%
8	4.0%	5.0%	3.6%	4.2%	2.8%
9	1.7%	2.4%	1.0%	1.5%	2.1%
10 – 19	25.6%	22.9%	23.7%	28.3%	29.3%
20 – 29	18.4%	21.2%	16.3%	17.7%	18.5%
30 – 39	16.7%	13.6%	20.1%	16.2%	15.9%
40 – 49	10.7%	11.4%	10.3%	10.8%	10.5%
50 – 59	3.5%	3.3%	2.9%	5.4%	2.6%
60 – 69	0.4%	0.5%	0.2%	0.7%	0.2%
70 +	0.2%	0.2%	0.2%	0.5%	0.0%
Mean	21.25	20.98	20.89	22.49	20.77
Median	19.00	20.00	19.00	20.00	18.00

[1]Actual 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 and age proportions in the population.

Table 8-6: Hunting in the last five years

Residence of hunter	% of hunters who hunted that particular year:						
	2010	**2009**	**2008**	**2007**	**2006**	**Hunted every year**	**Did not hunt during any of these years**
Statewide[1]	82.4%	81.9%	80.2%	79.4%	77.8%	67.8%	9.3%
CENTRAL	83.2%	82.0%	83.4%	81.5%	79.9%	69.9%	7.7%
METRO	78.6%	79.1%	74.6%	75.5%	72.9%	61.7%	11.8%
NORTH	81.7%	81.5%	81.0%	79.5%	79.5%	70.0%	10.5%
SOUTH	89.0%	86.6%	83.7%	82.8%	81.2%	72.6%	5.9%
	χ^2 =17.190**, V= 0.101	χ^2 = 8.743* V= 0.072	χ^2 = 14.711** V= 0.093	χ^2 = 8.016* V= 0.069	χ^2 = 10.278* V= 0.073	χ^2 = 13.158** V= 0.088	χ^2 = 11.197* V= 0.081

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

Table 8-7: 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]	35.5%	46.4%	6.9%	8.7%	26.7%	18.4%
CENTRAL	33.9%	46.3%	6.2%	9.1%	28.9%	19.2%
METRO	37.9%	48.5%	8.1%	11.9%	17.7%	21.1%
NORTH	37.8%	41.9%	7.3%	5.1%	24.3%	14.4%
SOUTH	30.7%	48.0%	5.2%	7.2%	41.6%	17.5%
	χ^2 = 6.355 n.s. V= 0.063	χ^2 = 4.275 n.s. V= 0.053	χ^2 = 2.590 n.s. V= 0.043	χ^2 = 11.608** V= 0.091	χ^2 = 54.565*** V= 0.195	χ^2 = 5.959 n.s. V= 0.065

[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 8-8: Did you hunt for waterfowl in a state or province other than Minnesota in 2011?

Residence of hunter	n	Yes
Statewide[1]	1745	20.5%
CENTRAL	423	18.4%
METRO	459	25.1%
NORTH	428	16.4%
SOUTH	434	20.3%
		χ^2 = 11.476**, Cramer's V= 0.081

[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 8-9: Number of years living in Minnesota

Residence of hunter	n	Mean number of years	% of life
Statewide[1]	1744	41.96	94.3%
CENTRAL	422	41.97	97.2%
METRO	461	41.23	90.7%
NORTH	428	43.76	95.9%
SOUTH	431	41.13	94.8%
		F= 1.727 n.s., η = 0.054	

[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 8-10: Number of years living on a farm or ranch, or in a non-suburban rural area from birth until age 17

Residence of hunter	n	Mean number of years	% of years
Statewide[1]	1694	7.41	43.6%
CENTRAL	407	9.81	57.7%
METRO	454	3.82	22.5%
NORTH	414	8.86	52.1%
SOUTH	415	8.89	52.3%
		F= 57.221***, η = 0.304	

[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 8-11: Number of years living on a farm or ranch, or in a non-suburban rural area from age 18 until now

Residence of hunter	n	Mean number of years	% of years
Statewide[1]	1725	10.88	34.9%
CENTRAL	417	14.81	49.1%
METRO	456	3.24	10.6%
NORTH	423	16.59	51.1%
SOUTH	428	12.31	40.9%
		F= 80.727***, η = 0.351	

[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 8-12: Marital status

Residence of hunter	% of hunters who indicated:			
	Single	Divorced or widowed	Living with a partner	Married
Statewide[1]	18.3%	5.8%	5.8%	70.1%
CENTRAL	20.0%	4.0%	4.5%	71.4%
METRO	17.5%	5.2%	4.8%	72.5%
NORTH	18.8%	6.6%	8.0%	66.6%
SOUTH	16.5%	8.4%	7.0%	68.2%
	χ^2=16.403 n.s., Cramer's V=0.056			

[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 8-13: Highest Level of Education.

Regions	Percent of respondents whose highest level of education was…								
	Grade school	Some high school	High school diploma (or GED)	Some vocational or technical school	Associate's degree	Some college	4-year college degree	Some graduate school	Graduate degree
Statewide[1]	0.3%	1.0%	16.4%	8.5%	18.7%	17.3%	24.3%	4.6%	8.9%
CENTRAL	0.5%	0.7%	16.2%	12.1%	21.2%	16.9%	20.2%	4.8%	7.4%
METRO	0.0%	0.9%	12.5%	5.7%	16.2%	19.0%	30.4%	4.6%	10.7%
NORTH	0.0%	1.2%	18.0%	8.5%	18.2%	16.6%	24.2%	4.5%	8.8%
SOUTH	0.9%	1.2%	21.9%	8.1%	20.3%	15.5%	19.4%	4.6%	8.1%
	χ^2=53.651***, Cramer's V=0.102								

[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 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

In this section, we compare results from this 2011 waterfowl hunter survey to previous studies of Minnesota waterfowl hunters. In 2000, 2002, 2005, 2007 and 2010 similar studies of Minnesota waterfowl hunters were completed (Fulton et al. 2002; Schroeder et al., 2004, Schroeder et al., 2006, Schroeder et al., 2008, Schroeder et al., 2012). Some of the questions asked in these previous surveys are either identical or similar to questions asked in the 2011 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 2011 survey (45.1 years) was significantly higher than the average age of respondents in 2000 (41.4 years), 2005 (43.2 years), and 2007 (42.3 years) surveys, but it was not significantly different than the average age of respondents to the 2002 survey (45.3 years) or the 2010 survey (45.2 years) (Table 10-1). There were also significant differences between the 2011 data and the earlier sets of data concerning the average number years hunting waterfowl (Table 9-2). Respondents for the 2011 season report hunting waterfowl an average of 29.7 years compared to 22.5 in 2000, 26.9 in 2002, 23.1 in 2005, 25.1 in 2007, and 27.7 in 2010. 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 sample from the 2005 season did not include HIP registrants, and the samples for the 2010 and 2011 seasons excluded both HIP registrants and license buyers less than 18 years of age (Table 9-2).

The average number of days spent hunting waterfowl also differed significantly when comparing 2011 results to some earlier surveys. Respondents reported hunting an average of 10.3 days in 2011, compared to an average of 10.7 in 2010, 10.2 in 2007, 10.2 in 2005, 9.7 in 2002, 11.5 in 2000 (Table 9-4).

Waterfowl Harvest

Reported number of ducks bagged per hunter in 2011 varied significantly from 2007, 2005, 2002, and 2000 (Table 9-5). Looking at the proportions of hunters who: bagged zero ducks, 1-10 ducks, or 11 or more ducks, results largely parallel those from the 2010 season.

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 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 9-6).

A greater proportion of 2011 season waterfowl hunters hunted on the opening Saturday compared to 2010, but the proportion was not significantly different to those hunting the opening Saturday during the 2000, 2002 and 2005 seasons (Table 9-7). The proportion of respondents who hunted opening Sunday was significantly lower than the proportion of hunters who hunted opening Sunday during the 2000, 2002, and 2005 season (Table 9-8).

A smaller proportion of respondents reported hunting outside of Minnesota during the 2011 season (20.5%) compared to the 2000 season (24.7%), but the proportion of respondents who hunted for waterfowl outside the state was greater than in 2005 and 2010 (Table 9-9). It must be noted that question phrasing may have caused higher reporting of out-of-state hunting for the 2000 survey. The 2002, 2005, 2010 and 2011 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 higher satisfaction levels for the 2011 season than for the 2005, 2007 or 2010 seasons. Satisfaction was not significantly different from the 2000 and 2002 seasons (Table 9-10).

Youth Waterfowl Hunting Day

Based on a scale of 1 (strongly oppose) to 5 (strongly support), support for Youth Waterfowl Hunting Day in 2011 ($\bar{x}$ = 3.62) was significantly lower than in 2000 ($\bar{x}$ = 3.77), but significantly higher than 2002 ($\bar{x}$ = 3.53). Support was not significantly different than 2005 ($\bar{x}$ = 3.56) or 2010 ($\bar{x}$ = 3.57) (Table 9-11). In 2000, 44.1% of respondents indicated that they strongly supported Youth Waterfowl Hunting Day, compared to 35.8% of respondents in 2002, 37.9% in both 2005 and 2010, and 38.8% in 2011.

Group Membership

Reported memberships in Ducks Unlimited, Delta Waterfowl, the Minnesota Waterfowl Association, and local sportsmen's clubs were higher in 2011 than in previous study years. See Table 9-12.

Agency Trust

Six identical measures of trust in the Minnesota Department of Natural Resources were asked in both 2010 and 2011, and two identical measures were asked in 2002. Average trust was significantly higher in 2011 than 2010 for several measures, and average trust in 2011 was significantly lower than 2002 for the two measures that were consistent between those years (Tables 9-13 to 9-18).

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-1: Age of respondents: 2000, 2002, 2005, 2007, 2010 and 2011 findings

Study year	N[1]	Average age (years)	Range (years)	t-test, average compared to 2011
2000 hunters	2,454	41.4	16 - 88	t = 11.686***
2002 hunters	3,109	45.3	14 - 88	t = 0.528 n.s.
2005 hunters	2,568	43.2	16 – 90	t = 6.049***
2007 hunters	469	42.3	17 - 76	t = 8.867***
2010 hunters	1,932	45.2	20 - 87	t = 0.214 n.s.
2011 hunters	1,780	45.1	19 - 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 hunter information program (HIP). The 2005 and 2007 samples did not include individuals from the HIP. The 2010 and 2011 samples includes duck stamp buyers 18 years of age and older.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-2: Number of years hunting ducks/waterfowl: 2000, 2002, 2005, 2007, 2010 and 2011 findings

Study year	N[1]	Average number of years hunting ducks/waterfowl[1]	t-test, average compared to 2011
2000 hunters	2,376	22.5	t = 19.419***
2002 hunters	3,034	26.9	t = 7.609***
2005 hunters	2,295	23.1	t = 17.808***
2007 hunters	461	25.1	t = 12.440***
2010 hunters	1,845	27.7	t = 5.462***
2011 hunters	1,702	29.7	

[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 hunter information program (HIP). The 2005 and 2007 samples did not include individuals from the HIP. The 2010 and 2011 samples includes duck stamp buyers 18 years of age and older.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-3: Frequency distributions of HIP registrants in sample and age of respondents: 2000, 2002, 2005, 2007, 2010 and 2011 findings

	Sample				Respondents							
Study year	HIP registrants		Stamp buyers		<18 years		>64 years		18-64 years		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
2000 hunters	199	14.2%	1,207	85.8%	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%
2011 hunters	0	0%	3,600	100%	0	0.0%	99	5.6%	1,681	94.4%	1,780	100%

n.a. = not available

Table 9-4 Number of days hunting waterfowl: 2000, 2002, 2005, 2007, 2010 and 2011 findings

Study year	n	Average number of days hunting waterfowl	t-test, average compared to 2011
2000 hunters	2,120	11.5	t= 5.247***
2002 hunters	3,113	9.7	t= 2.507*
2005 hunters	2,137	10.2	t= 0.353 n.s.
2007 hunters	419	10.2	t= 0.353 n.s.
2010 hunters	1,678	10.7	t= 1.801 n.s.
2011 hunters	1,537	10.3	

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

Table 9-5: Number of ducks bagged: 2000, 2002, 2005, 2007, 2010 and 2011 findings

Number bagged	2000 hunters (%)	2002 hunters (%)	2005 hunters (%)	2007 hunters (%)	2010 hunters (%)	2011 hunters (%)
N	1,959	2,027	1,960	370	1,514	1,407
Bagged none	14.7%	16.2%	17.1%	6.8%	13.5%	12.1%
Bagged 1 – 10	53.4%	50.9%	59.8%	51.2%	56.1%	55.4%
Bagged more than 10	31.9%	32.9%	23.1%	42.1%	30.4%	32.5%
Chi-square analysis[1]	χ^2=8.813*	χ^2=20.999***	χ^2=86.668***	χ^2=85.660***	χ^2=5.984 n.s.	

[1]Compares year in column to 2011 results.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-6: Waterfowl Hunting Activity: 2000, 2002, 2005, 2007, 2010 and 2011 findings

Study year	Hunt ducks	Hunt Canada geese regular season	Hunt Canada geese—early season	Hunt Canada geese—late season	Hunt geese--other
2000 hunters	92.6% [a]	72.3% [a]	38.5% [a]	9.0%	6.9% [a]
2002 hunters	93.5% [b]	73.1% [b]	41.9% [b]	13.9%	7.8% [b]
2005 hunters	92.5% [c]	72.9% [c]	43.6% [c]	13.4%	4.3% [c]
2007 hunters	90.4% [d]	69.2% [d]	38.0% [d]	10.1%	2.6% [d]
2010 hunters	91.8% [e]	71.1% [e]	40.9% [e]		6.4% [e]
2011 hunters	93.4%	73.3%	43.0%		6.5%
Chi-square analysis[1]	[a] χ^2=1.948 n.s. [b] χ^2=0.003 n.s. [c] χ^2=2.358 n.s. [d] χ^2=17.323*** [e] χ^2=6.113*	[a] χ^2=1.564 n.s. [b] χ^2=0.325 n.s. [c] χ^2=0.550 n.s. [d] χ^2=14.347*** [e] χ^2=5.063*	[a] χ^2=16.208*** [b] χ^2=1.915 n.s. [c] χ^2=0.008 n.s. [d] χ^2=19.560*** [e] χ^2=4.632*		[a] χ^2=0.011 n.s. [b] χ^2=1.664 n.s. [c] χ^2=19.528*** [d] χ^2=88.833*** [e] χ^2=0.381 n.s.

[1]Chi-square test [a] compares 2000 to 2011 and [b] compares 2002 to 2011 and [c] compares 2005 to 2011, [d] compares 2007 to 2011 and [e]compares 2010 to 2011.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-7: Waterfowl Hunting, Opening Saturday: 2000, 2002, 2005, 2010 and 2011 findings

Study year	N	Hunt opening Saturday	Chi-square analysis, proportion compared to 2011
2000 hunters	2,191	63.2%	χ^2=1.982 n.s.
2002 hunters	2,745	64.4%	χ^2=0.190 n.s.
2005 hunters	2,118	63.0%	χ^2=2.460 n.s.
2010 hunters	1,690	60.1%	χ^2=14.963***
2011 hunters	1,534	64.7%	

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

Table 9-8: Waterfowl Hunting, Opening Sunday: 2000, 2002, 2005, 2010 and 2011 findings

Study year	N	Hunt opening Sunday	Chi-square analysis, proportion compared to 2011
2000 hunters	2,191	69.7%	χ^2=63.124***
2002 hunters	2,745	67.4%	χ^2=34.339***
2005 hunters	2,120	64.9%	χ^2=13.658***
2010 hunters	1,689	62.3%	χ^2=2.341 n.s.
2011 hunters	1,543	60.4%	

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

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-9: Hunt Outside Minnesota: 2000, 2002, 2005, 2010 and 2011 findings

Study year	N	Hunt Outside Minnesota	Chi-square analysis, proportion compared to 2011
2000 hunters	2,399	24.7%	χ^2=19.616***
2002 hunters	3,035	18.6%	χ^2=2.683 n.s.
2005 hunters	2,378	17.3%	χ^2=9.736**
2010 hunters	1,662	18.0%	χ^2=5.341*
2011 hunters	1,745	20.5%	

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

Table 9-10: Overall Satisfaction With Waterfowl Hunting: 2000, 2002, 2005, 2007, 2010 and 2011 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%	χ^2=31.444***	4.77[1]
2002 hunters	2,604	7.0%	8.9%	10.4%	5.5%	16.0%	35.0%	17.1%	χ^2=13.542*	4.88[2]
2005 hunters	1,997	14.1%	14.2%	12.5%	6.1%	16.8%	24.6%	11.7%	χ^2=143.567***	4.18[3]
2007 hunters	417	9.4%	8.6%	12.5%	6.0%	18.5%	34.5%	10.6%	χ^2=66.742***	4.61[4]
2010 hunters	1,535	11.4%	12.0%	11.9%	6.5%	17.7%	28.3%	12.2%	χ^2=67.281	4.41[5]
2011 hunters	1,401	8.5%	8.8%	9.2%	5.4%	18.4%	32.7%	17.0%		4.82

[1] 2000 compared to 2011, t=1.090 n.s.
[2] 2002 compared to 2011, t=1.093 n.s.
[3] 2005 compared to 2011, t=12.796***
[4] 2007 compared to 2011, t=4.264***
[5] 2010 compared to 2011, t=8.233***
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-11 Support for Youth Waterfowl Hunting Day: 2000, 2002, 2005, 2010 and 2011 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%	χ^2=29.505***	3.77[1]
2002 hunters	3,027	17.0%	9.3%	12.7%	25.2%	35.8%	χ^2=14.939**	3.53[2]
2005 hunters	2,357	17.3%	9.5%	10.5%	24.7%	37.9%	χ^2=11.135*	3.56[3]
2010 hunters	1,655	16.6%	9.7%	11.9%	23.9%	37.9%	χ^2=5.488 n.s.	3.57[4]
2011 hunters	1,744	15.1%	10.0%	11.7%	24.4%	38.8%		3.62

[1] 2000 compared to 2011, t=4.393***
[2] 2002 compared to 2011, t=2.490*
[3] 2005 compared to 2011, t=1.629 n.s.
[4] 2010 compared to 2011, t=1.343 n.s.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-12 Group Membership : 2000, 2002, 2005, 2007, 2010 and 2011 findings

Study year	Ducks Unlimited	Delta Waterfowl	Minnesota Waterfowl Association	Local sportsman's club	No memberships[1]
2000 hunters	35.6%[a]	Not asked	11.0%[a]	16.0%[a]	46.4%[a]
2002 hunters	36.8%[b]	2.9%[b]	10.5%[b]	22.3%[b]	43.9%[b]
2005 hunters	37.1%[c]	3.5%[c]	7.8%[c]	20.3%[c]	42.9%[c]
2007 hunters	37.5%[d]	3.2%[d]	6.1%[d]	25.8%[d]	41.8%[d]
2010 hunters	40.1%[e]	5.4%[e]	6.1%[e]	21.2%[e]	46.6%[e]
2011 hunters	46.4%	6.9%	8.7%	26.7%	41.0%
Chi-square analysis[2]	[a]χ^2=75.240*** [b]χ^2=58.318*** [c]χ^2=54.469*** [d]χ^2=49.567*** [e]χ^2=23.762***	[b]χ^2=71.708*** [c]χ^2=42.477*** [d]χ^2=55.349*** [e]χ^2=4.718*	[a]χ^2=10.322** [b]χ^2=7.128** [c]χ^2=0.504 n.s. [d]χ^2=11.898** [e]χ^2=11.898**	[a]χ^2=158.715*** [b]χ^2=28.710*** [c]χ^2=55.203*** [d]χ^2=4.265* [e]χ^2=41.953***	[a]χ^2=22.752*** [b]χ^2=7.786** [c]χ^2=3.978* [d]χ^2=1.242 n.s. [e]χ^2=24.285***

[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]Chi-square test [a] compares 2000 to 2011, [b] compares 2002 to 2011. [c] compares 2005 to 2011, [d] compares 2007 to 2011, [e] compares 2010 to 2011.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-13: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that… The Minnesota DNR does a good job of managing waterfowl in Minnesota.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2010 hunters	1873	11.4%	22.9%	33.4%	28.7%	3.5%	χ^2=25.649***	2.90
2011 hunters	1665	9.0%	19.9%	34.7%	33.0%	3.4%		3.02

[1] 2010 compared to 2011, t=4.729***
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-14: 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.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2010 hunters	1869	5.9%	16.4%	40.9%	32.5%	4.5%	χ^2=4.667 n.s.	3.13
2011 hunters	1667	6.6%	14.7%	40.5%	33.8%	4.4%		3.15

[1] 2010 compared to 2011, t=0.724 n.s.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-15: 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.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2010 hunters	1865	6.6%	19.7%	33.9%	34.9%	4.9%	χ^2=18.525**	3.12
2011 hunters	1668	8.0%	16.6%	33.2%	37.6%	4.7%		3.15

[1] 2010 compared to 2011, t=1.010 n.s.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Section 9: Comparison of 2000, 2002, 2005, 2007, 2010 and 2011 Minnesota Waterfowl Hunter Survey Findings

Table 9-16: 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.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2010 hunters	1860	5.1%	16.9%	38.0%	35.5%	4.4%	χ^2=25.803***	3.17
2011 hunters	1666	6.1%	12.4%	37.9%	38.8%	4.8%		3.24

[1] 2010 compared to 2011, t=2.957**
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-17: 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.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2002 hunters	2556	3.6%	7.6%	32.3%	46.4%	10.0%	χ^2=107.195***	3.51
2010 hunters	1865	2.5%	5.3%	45.4%	38.8%	8.0%	χ^2=7.142 n.s.	3.44
2011 hunters	1664	3.5%	5.5%	44.0%	39.2%	7.8%		3.42

[1] 2002 compared to 2011, t=4.141***
[2] 2010 compared to 2011, t=0.776 n.s.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

Table 9-18: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that… The Minnesota DNR listens to waterfowl hunters' concerns.

Study year	n	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Chi-square analysis[1]	Means
2002 hunters	2665	7.4%	19.1%	30.2%	36.8%	6.6%	χ^2=91.625***	3.16
2010 hunters	1867	9.1%	22.3%	38.5%	26.5%	3.6%	χ^2=27.131***	2.93
2011 hunters	1664	9.1%	17.3%	39.1%	30.0%	4.5%		3.03

[1] 2002 compared to 2011, t=5.100***
[2] 2010 compared to 2011, t=4.208***
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

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Appendix A: Survey Instrument

THE 2011 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!

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
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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 5 years prior to last year's waterfowl season, indicate which years you hunted waterfowl in Minnesota? (*Check all that apply.*)

- q 2010
- q 2009
- q 2008
- q 2007
- q 2006
- q I did not hunt during any of these years.

Q4. Did you hunt waterfowl in Minnesota during the 2011 season? (*Please check one.)*

- q No → (*Skip to Part V, question Q20.)*
- q Yes (*Please continue with Part II, Q5.*)

Part II. Your 2011 Minnesota Waterfowl Hunting Season

Next we have a few questions about your hunting experiences during the 2011 Minnesota waterfowl-hunting season. (*If you did not hunt waterfowl in Minnesota in 2011 please skip to question Q20.)*

Q5. Please indicate whether you hunted for the following kinds of waterfowl in Minnesota in 2011. If you did hunt, estimate the total number of that kind of waterfowl you bagged (shot and retrieved).

During the 2011 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

Q6. During the 2011 Minnesota waterfowl season, about how many days did you hunt on…

Weekend days or holidays: _____days

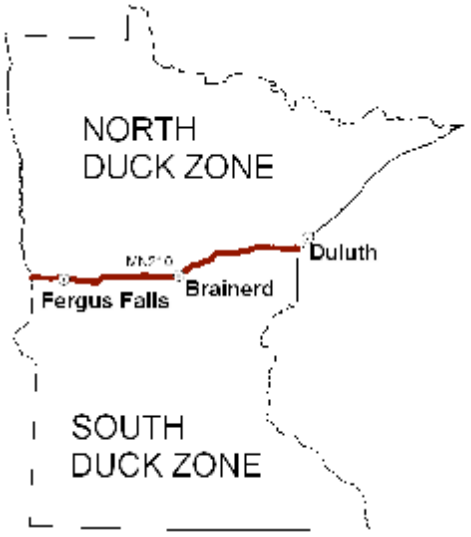
Weekdays (Monday-Friday): _____days

Q7. Did you hunt the opening Saturday (September 24) of the 2011 Minnesota Season? (*Please check one.*)

- q No
- q Yes

Q8. Did you hunt the <u>first Sunday</u> (September 25) of the 2011 Minnesota Season? (*Please check <u>one</u>.*)

- q No
- q Yes



Q9. If you hunted in the <u>North Zone</u>, did you hunt any days from Monday, September 26 through Friday, September 30 during the 2011 Minnesota Season? (*Please check <u>one</u>.*)

- q No
- q Yes
- q Did not hunt in the North Zone

Q10. Did you hunt the second <u>Saturday</u> or <u>Sunday</u> (October 1 - 2) of the 2011 Minnesota Season? (*Please check <u>one</u>.*)

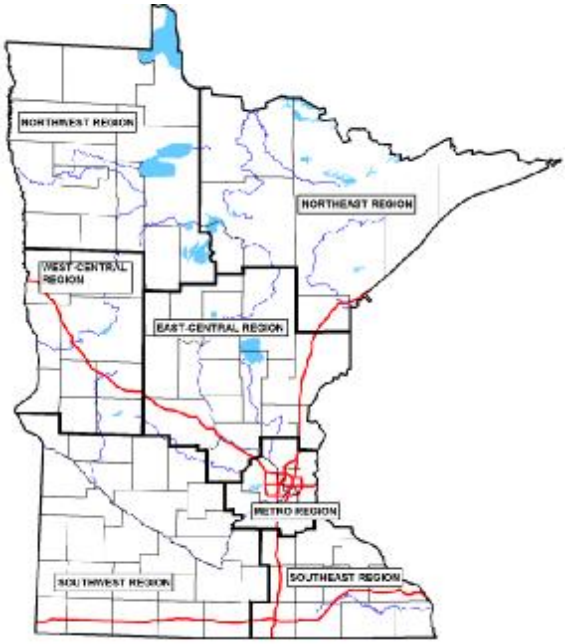
- q No
- q Yes

Q11. During the 2011 Minnesota waterfowl season, did you hunt ducks and geese (*see map above*)…

- q Only in the **<u>North</u>** duck zone
- q Only in the **<u>South</u>** duck zone
- q I hunted in both the **<u>North</u>** and **<u>South</u>** duck zones

Q12. During the 2011 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



Q13. During the 2011 Minnesota waterfowl-hunting season, how many days did you shoot and retrieve:

At least 1 wood duck _____ days
Of those days, how many days did you shoot 3 wood ducks? _____days

At least 1 mallard <u>hen</u> _____<u>days</u>
Of those days, how many days did you shoot 2 mallard <u>hens</u> _____days

Part III. Your Hunting Satisfaction

Q14. During the 2011 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 2011 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 seen**	1	2	3	4	5	6	7	9
Number of **geese seen**	1	2	3	4	5	6	7	9

Q16. During the 2011 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 2011 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 best waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	□ Sept. □ Oct. □ Nov. □ Dec.
Your first waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	□ Sept. □ Oct. □ Nov. □ Dec.
Your last waterfowl hunting day of the season	1	2	3	4	5	_____ ducks _____ geese	□ Sept. □ Oct. □ Nov. □ Dec.

Q18. How did your 2011 waterfowl season compare with the 2010 waterfowl season? (*Circle one response for each.*)

Compared to 2010, rate your 2011 waterfowl season:	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Did not hunt in 2010
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

Q19. Please tell us how important each of the following experiences was to your waterfowl hunting satisfaction during the 2011 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. 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 2011.*

Q20. How important is waterfowl hunting to you? (*Please check one.*)

- q It is my most important recreational activity.
- q It is one of my most important recreational activities.
- q It is no more important than my other recreational activities.
- q It is less important than my other recreational activities.
- q It is one of my least important recreational activities.

Q21. How would you describe your identification with the activity of waterfowl hunting. (*Please check one.*)

- q I go waterfowl hunting, but I do not really consider myself a waterfowl hunter.
- q I am in the process of becoming a waterfowl hunter.
- q I used to be a waterfowl hunter, but I no longer consider myself one.
- q I am a waterfowl hunter.

Q22. Please indicate how much you agree or disagree with the following statements about waterfowl hunting. (*Please 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

Q23. How much do or did each of the following individuals or groups play a role in helping you participate in waterfowl hunting: (*Please circle <u>one</u> response <u>for each</u>.*)

	Not at all	Slightly	Moderately	Very	Extremely
Parent	1	2	3	4	5
Sibling	1	2	3	4	5
Grandparent	1	2	3	4	5
Spouse or significant other	1	2	3	4	5
Other relative	1	2	3	4	5
Friend(s)	1	2	3	4	5
Neighbor(s)	1	2	3	4	5
Coworker(s)	1	2	3	4	5
Hunting equipment manufacturers	1	2	3	4	5
Hunting equipment retailers	1	2	3	4	5
State wildlife agency	1	2	3	4	5
Sportsmen's groups	1	2	3	4	5
Hunting-related TV shows	1	2	3	4	5
Hunting magazines	1	2	3	4	5

Q24. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2011. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (6 ducks)? (*Please check <u>one</u>.)*

- q The daily limit was too low.
- q The daily limit was about right.
- q The daily limit was too high.
- q No opinion.

Q25. The U.S. Fish and Wildlife Service allowed states to have a 2 hen mallard daily bag limit in 2011. Which one statement best describes how you feel about the hen mallard daily bag limit in Minnesota (2 hen mallards)? (*Please check <u>one</u>.)*

- q The daily limit was too low.
- q The daily limit was about right.
- q The daily limit was too high.
- q No opinion.

Q26. The U.S. Fish and Wildlife Service allowed states to have a 3 wood duck daily bag limit in 2011. Which one statement best describes how you feel about the wood duck daily bag limit in Minnesota (3 wood ducks)? (*Please check <u>one</u>.)*

- q The daily limit was too low.
- q The daily limit was about right.
- q The daily limit was too high.
- q No opinion.

Q27. Please indicate how you feel about the following statements on public land use by waterfowl hunters.

Circle one response for each:	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Don't Know
The public hunting areas I use are NOT crowded most of the time.	1	2	3	4	5	9
The public hunting areas I use are too crowded opening weekends but usually not after that.	1	2	3	4	5	9
The public hunting areas I use are too crowded most of the time.	1	2	3	4	5	9
The DNR should use a drawing or lottery to limit the number of waterfowl hunters that use some public hunting areas.	1	2	3	4	5	9

Part VI. Waterfowl Management and Special Regulations

Q28. 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
Beginning shooting hours ½ hour before sunrise on opening day	1	2	3	4	5	9
Opening last year's regular waterfowl season one week earlier (Sept. 24, 2011)	1	2	3	4	5	9
Using a North and South duck zone during last year's waterfowl season	1	2	3	4	5	9
Using a split season in the South Duck Zone during last year's waterfowl season	1	2	3	4	5	9
Ending shooting hours at 4 pm for the first part of Minnesota's waterfowl season	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
Allowing open water hunting on a few (5-10) larger lakes or rivers during the regular waterfowl season	1	2	3	4	5	9

Part VII. Waterfowl Hunting Season Dates

Last year (2011), two duck zones (North and South) were used in Minnesota. The DNR is tentatively considering establishing a third zone in southern Minnesota or in southeast Minnesota along the Mississippi river. Duck zones allow states to set different season dates in different regions of the state to match duck migration patterns, freeze-up dates, and hunter preferences.

Q29. In which area of the state is the timing of open duck hunting and season dates most important to you? (*See Map. Please select only one area.*)

- **q** North
- **q** Central
- **q** South
- **q** Southeast
- **q** No preference

Q30. If duck season length is <u>60 days</u> in 2012, what is your preference for season dates for the area <u>you selected above</u>?

- **q** Saturday Sept. 22 to Tuesday Nov. 20 (*same season as used last year in <u>North Duck Zone</u>*)
- **q** Saturday Sept. 22 to Sunday Sept. 23, close 5 days, reopen Saturday Sept. 29 to Sunday Nov. 25 (*same season as used last year in <u>South Duck Zone</u>)*
- **q** Saturday Sept. 29 to Sunday Sept. 30, close 5 days, reopen Saturday Oct. 6 to Sunday Dec. 2
- **q** No preference

Q31. If duck season length is <u>30 days</u> in 2012, what is your preference for season dates for the area <u>you selected above</u>?

- **q** Saturday Sept. 29 to Sunday Oct. 28
- **q** Saturday Sept. 29 to Sunday Sept. 30, close 5 days, reopen Saturday Oct. 6 to Friday Nov. 2
- **q** Saturday Sept. 29 to Sunday Oct. 7, close 10 days, reopen Thursday Oct. 18 to Wednesday Nov. 7
- **q** No preference

Q32. In 2012, the regular waterfowl season may open on Saturday, September 22. Please indicate which option <u>for the September goose season</u> you would favor. Option 1 would maximize days during the September goose season. Option 2 would allow a one week delay between the September goose season and the Regular waterfowl season (*Please check <u>one</u>*).

- **q** Option 1: Saturday, September 1 to Friday, September 21.
- **q** Option 2: Saturday, September 1 to Sunday, September 16.
- **q** No preference

Part VIII. Youth Waterfowl Hunting Day

Since 1996, the U.S. Fish and Wildlife Service has allowed states to select 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.)*

- q Strongly oppose
- q Oppose
- q Undecided or neutral
- q Support
- q Strongly support

Q34. Next year (2012), when do you prefer Youth Waterfowl Hunting Day? (*Please check one.)*

- q September 8, 2012 (2 weeks before waterfowl opener)
- q September 15, 2012 (1 week before waterfowl opener)
- q No preference
- q No youth day

Q35. Last September (2011), did you take any youth hunting on Youth Waterfowl Hunting Day? (*Please check one.)*

- q No → **(***Skip to Q37).*
- q Yes (*Please answer question Q36.*)

Q36. If yes, how many youths did you take? _____ youths

Part IX. Minnesota DNR Waterfowl Management

Q37. 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 X. About You

Q38. Are you currently a member of: (*Check <u>all</u> that apply*.)

- q Ducks Unlimited
- q Delta Waterfowl
- q Minnesota Waterfowl Association
- q Local sportsman's club
- q Other national/statewide conservation/hunting organization(s) *Please specify*: _____

Q39. Did you hunt for waterfowl in a state or province other than Minnesota in 2011? (*Please check <u>one</u>*.)

- q No.
- q Yes. ***If yes, how many <u>days</u> did you hunt for waterfowl outside Minnesota?*** _____

Q40. What is your age?

_____ years

Q41. How many years have you lived in Minnesota?

_____ years

Q42. How many years did you live on a farm or ranch, or in a non-suburban rural area from birth until age 17?

_____ years

Q43. How many years have you lived on a farm or ranch, or in a non-suburban rural area from age 18 until now?

_____ years

Q44. Which of the following <u>best describes</u> your <u>current</u> marital status? *(Check one.)*

- q Single
- q Divorced or widowed
- q Living with a partner
- q Married

Q45. What is the highest level of education you have completed? *(Check one.)*

- ☐ Grade school
- ☐ Some high school
- ☐ High school diploma or GED
- ☐ Some vocational or technical school
- ☐ Vocational or technical school (associate's) degree
- ☐ Some college
- ☐ Four-year college (bachelor's) degree
- ☐ Some graduate school
- ☐ Graduate (master's or doctoral) degree

Please write additional comments below or on additional sheets. Survey results will be available in the summer of 2012 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.

THANK YOU FOR YOUR HELP!

Please return the completed questionnaire in the enclosed self-addressed, stamped envelope.

Appendix B: Sampling Issues

After data collection for this study was initiated, we observed some discrepancies between the desired sampling protocol and the actual sample. These discrepancies are shown in Figure A2-1. Specifically, individuals from McLeod County were included in the North stratum instead of the Central. Parts of Martin County were included in the Central stratum rather than the South. Marshall County was included in the South stratum instead of the North. Cleveland, in Le Sueur County, was coded to the Metro stratum, although the rest of the county was appropriately in the south. These discrepancies affected only 19 survey respondents. Therefore, results are presented based on the assigned sample stratum rather than corrected to represent the desired sampling protocol.

Figure A2-1.