

THE 2014 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



2014 Minnesota Waterfowl Stamp
(Harlequin Duck)

Final Report

A cooperative study conducted by:

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

The 2014 Waterfowl Hunting Season in Minnesota: A Study of Hunters' Opinions and Activities

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Executive Summary

This study of the 2014 Minnesota waterfowl-hunting season was conducted to assess waterfowl hunters’:

- participation and activities,
- satisfaction,
- motivations,
- involvement with the activity, and
- attitudes about waterfowl management, including a potential teal season.

The survey was distributed to 3,600 waterfowl hunters; 1,738 surveys were returned. After adjusting for undeliverable surveys and invalid respondents, the response rate was 49.7%.

Experiences

Just less than 9 of 10 survey respondents (88.9%) hunted waterfowl during the 2014 Minnesota season. Respondents who had hunted in 2014 were asked if they had hunted for ducks, Canada Geese during the early and regular seasons, and other geese. Responses ranged from 91% for ducks to only 4% for other geese (Figure S-1).

Hunters who reported pursuing ducks, Canada geese, or other geese reported bagging an average of 11.5 ducks, 6.6 Canada geese, and 5.3 “other” geese, respectively, over the course of the 2014 Minnesota season. Respondents hunted an average of 6.6 days on weekends and holidays, and 3.4 days during the week. Approximately two-thirds (66.3%) of waterfowl hunters statewide hunted on the opening Saturday. Respondents spent an average of 2.6 nights away from home while waterfowl hunting during the Minnesota season.

Survey recipients were asked to report the number of days they hunted in the different zones in the state. About 4 in 10 (40.7%) hunted only in the central zone, with 23.3% hunting only in the north zone, and 20.2% hunting only in the south duck zone. Nearly half of respondents hunted most frequently in the central zone (47.3%), with 25.9% hunting most frequently in the north zone, and 23.3% hunting most frequently in the south zone (Figure S-2).

Figure S-1: Percentage of Hunters Participating in Activities in 2014

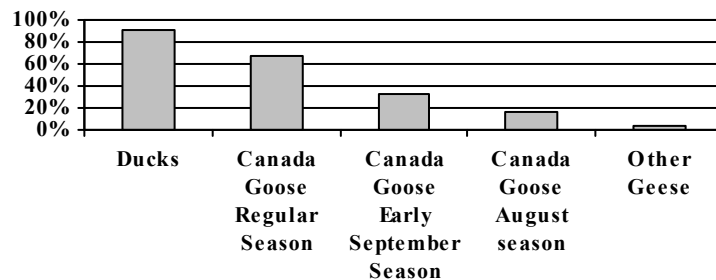
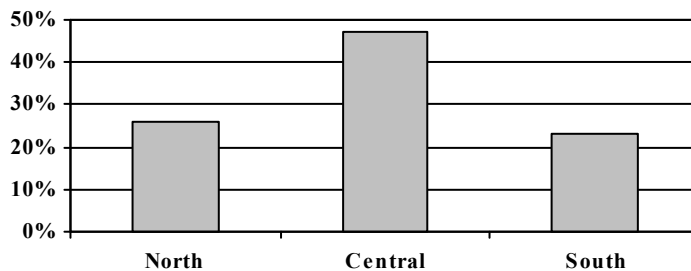


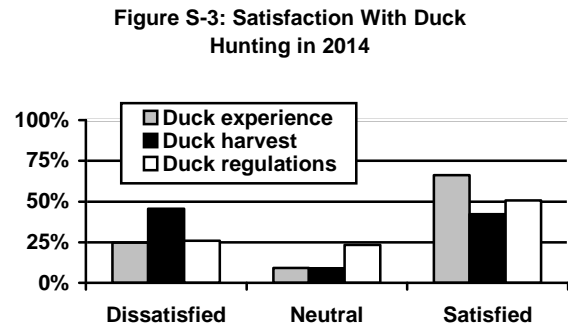
Figure S-2: Most Frequent Hunting Destination in 2014



Satisfaction

Over two-thirds of hunters (65.0%) 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.

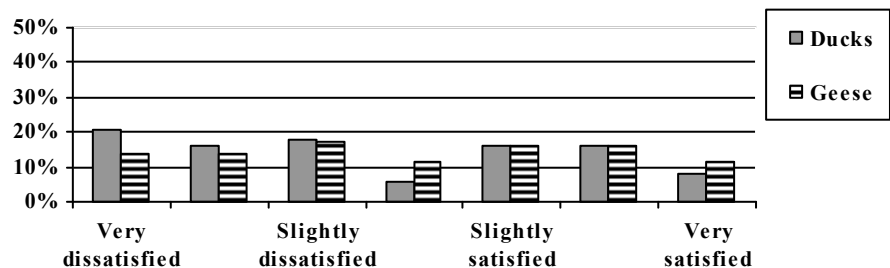
About two-thirds of respondents were satisfied with their 2014 duck-hunting experience (Figure S-3). Nearly half of respondents were satisfied with their duck-hunting harvest, with a larger proportion dissatisfied. Satisfaction with duck-hunting regulations was between satisfaction levels for experience and harvest. About one-fourth of 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.



Over half of goose hunters (57.5%) were satisfied with their general goose-hunting experience. But, less than 4 in 10 (37.9%) respondents were satisfied with their goose harvest. Nearly half of goose hunters (48.1%) 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

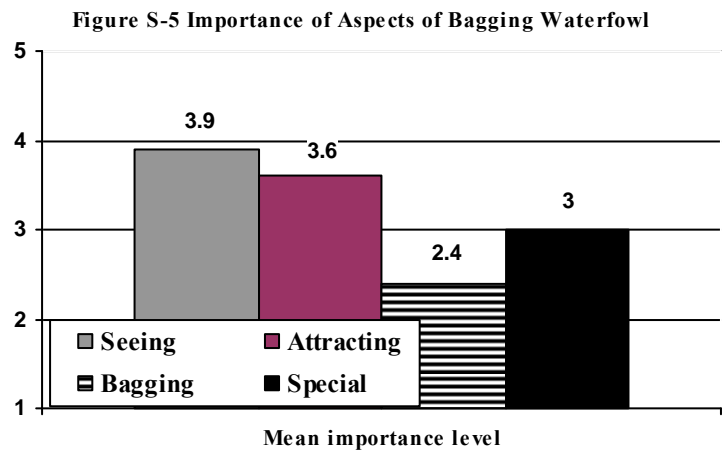


Hunters were asked to compare the 2014 waterfowl season to the 2013 season. More than one-fourth of respondents indicated that their general waterfowl hunting experience was better in 2014 than in 2013, while 42.6% felt it was worse, and 29.2% felt neither year was better than the other. Results were similar for duck hunting experience. Over half (53.5%) of respondents felt that the number of ducks seen in 2014 was worse than in 2013, while about one-fourth (25.4%) felt the number was better.

Motivations for and Importance of Waterfowl Hunting

Respondents rated statements related to bagging waterfowl. A majority of respondents agreed with only one of the items: A waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged. A majority of respondents disagreed that: (a) I must bag waterfowl for the waterfowl hunting trip to be enjoyable, and (b) A full bag limit is the best indicator of a good waterfowl hunting trip. Other items did not have a majority in agreement or disagreement.

Respondents were asked to report how important 15 aspects of bagging waterfowl hunting were to them, then rate how much these 15 experiences happened during the 2014 Minnesota waterfowl season. An exploratory factor analysis of the importance of aspects of bagging waterfowl found four factors: (a) seeing ducks and geese, (b) attracting waterfowl with decoys and calls, (c) bagging a lot of waterfowl, and (d) specialized aspects of bagging waterfowl. The importance of these four factors is shown in Figure S-5.



Respondents were asked how important waterfowl hunting was to them. About one-third indicated that it was “one of my most important recreational activities.” Statewide, 85% indicated that it was likely they would hunt in 2015. However, after respondents were told that the price of a federal duck stamp would increase from \$15 to \$25, the proportion who said it was likely they would hunt in 2015 dropped to 73.5%.

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, 69% of respondents support the youth hunt, with 41% strongly supporting it.

Study respondents were asked if they took any youth hunting on Minnesota’s 2014 Youth Waterfowl Hunting Day, and 10.7% reported participating. Those respondents who participated in Youth Waterfowl Hunting Day reported escorting an average of 2.0 youths. Based on the percentages provided by the survey, it is estimated that 16,580 youths participated in the youth waterfowl hunt in 2014.

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 2.9% indicating that it was too low, 15.9% too high, and 12.8% no opinion. Similarly, about two-thirds of respondents felt the 2-hen mallard bag limit was about right, compared to 4.4% too low, 16.1% too high, and 13.6% no opinion. Nearly two-thirds of respondents felt the 3-wood duck bag limit was about right, compared to 10.9% who felt it was too low, 12.4% who thought it was too high, and 11.9% who had no opinion.

Respondents were asked to rate 13 statements about bag limits. Respondents generally agreed that bag limits should be based on biological impacts, and generally disagreed that they should follow what was socially desirable.

Respondents were asked to indicate their level of support for 10 management strategies. Respondents reported the most support for beginning shooting hours ½ hour before sunrise on opening day and the least support for restricting the use of motorized decoys for the first part of Minnesota’s waterfowl season. Statewide, 81.5% of respondents supported beginning shooting hours one-half hour before sunrise on opening day. Over half of respondents (53.1%) supported using North, Central, and South duck zones during last year’s season. Respondents from the southern region were most supportive of the zones. About one-third of respondents supported using a split season in the Central Duck Zone, and 28% supported using a split season in the South Duck Zone. Respondents from the south and metropolitan regions were more likely to strongly support the splits. Statewide, 41% of respondents opposed and 38% supported ending shooting hours at 4 pm for the first part of the season. About one in four of respondents supported restrictions on open water hunting during the regular waterfowl season, with 27% opposed. About half of respondents supported open water hunting on a few larger lakes or rivers during the regular waterfowl season. Less than one-third of respondents supported restricting the use of motorized decoys for the first part of Minnesota’s waterfowl season, with 43% opposed. About half of respondents supported two strategies related to goose management in the Intensive Harvest Zone: 47% supported having the August Canada Goose Conservation Season in the Intensive Harvest Zone, and 54% supported having the 10 Canada goose bag limit in September in that zone.

Respondents were asked about their support or opposition to eliminating the waterfowl stamp contest and pictorial stamp, and 44% opposed it with only 19% supporting the elimination of the stamp. Respondents from the metropolitan region were more strongly opposed to eliminating the contest and pictorial stamp.

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 (44%) selected the central region, followed by north (25%), south (20%), and southeast (4%). Another 7.5% had no preference.

Study participants were asked to select between a straight season, one of three split seasons, or no preference for a 60-day duck season in 2015. A substantially greater proportion of respondents from the North region preferred a straight season (70.0% compared to 28–38% for other regions). A substantially greater proportion of respondents from the South region preferred the split season with the later season closing dates (about 20% compared to 2-10% for other regions).

The Canada goose season extends for 107 days in each of the 3 waterfowl zones. In 2014, the Canada goose season was closed when the duck season was also closed for 5 days in the Central Zone and 11 days in the South zone. Respondents were asked for their preference for Canada goose season dates, either split to coincide with the duck season or open during splits in the duck season. Statewide, respondents were fairly split between the options: 28% preferred closing the goose season during splits, 37% preferred keeping the goose season open, and 35% had no preference.



Teal Management

Respondents were asked their opinions on a special teal season. Nearly one-third of respondents supported a season, while 41% were opposed. Over one-third (36%) indicated that they would be likely to hunt a season, while 44% were unlikely. Respondents were asked to indicate how adopting a special September teal-only season would affect their waterfowl-hunting in Minnesota. Less than one-fifth of respondents indicated that a season would improve their waterfowl hunting, while nearly 40% indicated that it would damage it. Respondents rated their support for a two blue-winged teal bonus bag limit during the first 16 days of the regular duck season in Minnesota. More respondents supported this bonus bag limit (43%) than opposed it (19%).

Study participants were asked to rate their agreement with 12 beliefs about possible special teal seasons. A majority of respondents *agreed* that: (a) A special September teal season would disturb waterfowl before the regular season; (b) I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled; and (c) I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal. A majority of respondents *disagreed* that: I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day. Because of large proportions of individuals who were neutral, other items did not have a majority in agreement or disagreement.

Comparison with Earlier Study Results

Respondents reported significantly higher satisfaction levels for the 2014 season than for the 2005, 2007 or 2010 seasons, and lower than the 2002 season. Satisfaction was not significantly different from the 2000 and 2011 seasons. Support for Youth Waterfowl Hunting Day in 2014 was significantly higher than 2002, 2005, 2010, and 2011, but not significantly different than in 2000. Reported memberships in Ducks Unlimited, Delta Waterfowl, the Minnesota Waterfowl Association, and local sportsmen's clubs were lower in 2014 than in 2011, but similar to levels seen in previous study years.

Table of Contents

Acknowledgements.....	ii
Suggested Citation.....	ii
Contact Information.....	ii
Executive Summary.....	iii
Experiences.....	iii
Satisfaction.....	iv
Motivations for and Importance of Waterfowl Hunting.....	v
Youth Waterfowl Hunting Day.....	v
Management Strategies.....	v
Season Dates and Splits.....	vi
Teal Management.....	vii
Comparison with Earlier Study Results.....	vii
Table of Contents.....	viii
List of Tables.....	x
Introduction.....	1
Study Purpose and Objectives.....	1
Methods.....	2
Sampling.....	2
Data Collection.....	2
Survey Instrument.....	2
Data Entry and Analysis.....	3
Survey Response Rate.....	3
Population Estimates.....	4
Statewide Estimates.....	4
Regional Estimates.....	4
Section 1: Experiences During the 2014 Waterfowl Hunt.....	5
Waterfowl Seasons Hunted in Minnesota in 2014.....	5
Harvest.....	5
Average Number of Days Hunting Weekends and Weekdays, and Days Away From Home.....	6
Hunting Opening Saturday.....	6
Hunting During the Last 2 Hours of Afternoons.....	6
Zones Hunted.....	6
Hunting During the Second Opening Weekend After the Season Split in the Central and South Zones.....	6
Section 2: Satisfaction With the 2014 Waterfowl Hunt.....	13
Satisfaction With the General Waterfowl Hunting Experience.....	13
Satisfaction With Duck Hunting.....	13
Satisfaction With Goose Hunting.....	14
Comparison of Duck Hunting and Goose Hunting.....	14
Satisfaction With the Number of Ducks and Geese Seen in the Field.....	14
Changes in Satisfaction Levels.....	15
Section 3: Youth Waterfowl Hunting Day/Battery-Operated Spinning-Wing Decoys.....	26
Support/Opposition to Youth Waterfowl Hunting Day.....	26
Participation in Youth Waterfowl Hunting Day in 2014.....	26
Ownership and Use of Battery-Operated, Spinning-Wing Decoys.....	26
Support/Opposition to Regulations on Battery-Operated, Spinning Wing Decoys.....	26
Section 4: Opinions on Management and Special Regulations.....	31
Opinions About Duck Bag Limits.....	31
Likelihood of Hunting With Increased Price of Federal Waterfowl Stamp.....	31
Waterfowl Management Strategies and Special Regulations.....	31
Section 5: Opinions on Season Dates and Zones.....	49
Most Important Area of State for Duck Hunting.....	49

Preference for Season Dates for a 60-day Duck Season	49
Splitting the Canada Goose Season.....	49
Comparison of 3-Zone Structure to No Zones	49
Restricted Shooting Hours for Different Number of Days in Different Regions	50
Section 6: Opinions on Teal Management.....	54
Special September Teal-Only Season	54
Two Blue-Winged Teal Bonus Bag Limit	54
Beliefs About Special Seasons and Bag Limits for Teal.....	54
Section 7: Motivations for and Importance of Waterfowl Hunting	64
Attitudes about Bagging Waterfowl.....	64
Importance and Performance Related to Bagging Waterfowl.....	64
Importance of Waterfowl Hunting	65
Future Waterfowl Hunting	65
Section 8: Trust in Minnesota Department of Natural Resources.....	84
Trust in and Desire for Voice with the Minnesota Department of Natural Resources	84
Section 9: Characteristics of Waterfowl Hunters in Minnesota	93
Hunter Age.....	93
Years of Waterfowl Hunting	93
Membership in Conservation and Hunting Organizations	93
Hunting Outside of Minnesota.....	94
Years Living in Minnesota, and on a Farm or Ranch.....	94
Income and Education.....	94
Late Respondents	94
Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings.....	101
Respondent age, Years Hunting and Days Hunting During the Season.....	101
Waterfowl Harvest	101
Hunting Participation and Satisfaction.....	102
Youth Waterfowl Hunting Day	102
Group Membership	102
Agency Trust.....	102
References Cited	110
Appendix A: Survey Instrument	112

List of Tables

Table I-1: Response rates for each management region	3
Table I-2: Proportion of sample population of state waterfowl stamp purchasers by region of residence in Minnesota.....	4
Table 1-1: Proportion of hunters participating in different waterfowl hunts by region of residence.....	7
Table 1-2: Proportion of hunters participating in different waterfowl hunts in each region.....	7
Table 1-3: Estimate of the number of hunters participating in different waterfowl hunts.....	8
Table 1-4: Average number of birds bagged statewide and by region of residence	8
Table 1-5: Estimates of harvest statewide and by region of residence	9
Table 1-6: Average number of days hunting on weekends and weekdays	9
Table 1-7: Average number of nights spent away from primary residence while waterfowl hunting in Minnesota during 2014 season.....	9
Table 1-8: Participation in hunting on opening Saturday by region of residence.....	10
Table 1-9: Participation in hunting on opening Saturday by region most often hunted	10
Table 1-10: Average number of days hunting ducks during the last 2 hours of the afternoon.....	10
Table 1-11: Hunting North and South Zones during the 2014 Minnesota Season	11
Table 1-12: Regional distribution of hunting across Minnesota.....	11
Table 1-13: Regional distribution of hunting across Minnesota.....	11
Table 1-14: Hunting Central and South zones after the split in the seasons in those zones.....	12
Table 2-1: Satisfaction with the general waterfowl-hunting experience for the 2014 season by zone most often hunted.....	16
Table 2-2: Satisfaction with the general waterfowl-hunting experience for the 2014 season by region of residence.....	16
Table 2-3: Satisfaction with the general waterfowl-hunting experience by hunting involvement level.....	17
Table 2-4: Satisfaction with the duck-hunting experience for the 2014 season.....	17
Table 2-5: Satisfaction with the duck-hunting harvest for the 2014 season	18
Table 2-6: Satisfaction with the duck-hunting regulations for the 2014 season	18
Table 2-7: Satisfaction with the goose-hunting experience for the 2014 season.....	19
Table 2-8: Satisfaction with the goose-hunting harvest for the 2014 season.....	19
Table 2-9: Satisfaction with the goose-hunting regulations for the 2014 season.....	20
Table 2-10: Comparison of duck-hunting and goose-hunting satisfaction	20
Table 2-11: Satisfaction with number of ducks seen in the field during the 2014 Minnesota waterfowl hunting season.....	21
Table 2-12: Satisfaction with number of geese seen in the field during the 2014 Minnesota waterfowl hunting season.....	21
Table 2-13: Comparison of 2014 general waterfowl hunting experience to 2013.....	22
Table 2-14: Comparison of 2014 duck hunting experience to 2013.....	22
Table 2-15: Comparison of 2014 duck hunting harvest to 2013.....	23
Table 2-16: Comparison of 2014 number of ducks seen to 2013.....	23
Table 2-17: Comparison of 2014 goose hunting experience to 2013.....	24
Table 2-18: Comparison of 2014 goose hunting harvest to 2013.....	24
Table 2-19: Comparison of 2014 geese seen to 2013.....	25
Table 3-1: Do you support or oppose the concept of Youth Waterfowl Hunting Day?	27
Table 3-2: Last September (2014), did you take youth hunting on Youth Waterfowl Hunting Day.....	27
Table 3-3: Number of youth taken hunting on 2014 Youth Waterfowl Hunting Day	28
Table 3-4: Estimate of the number of youth participating in Youth Waterfowl Hunting Day	28
Table 3-5: Do you own a battery-operated, spinning-wing decoy?	29
Table 3-6: Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the 2014 waterfowl season?	29

Table 3-7: Do you support or oppose prohibiting the use of motorized decoys or other motorized devices until the Saturday nearest Oct. 8 th . Last year, this was: North Zone=15 days; Central Zone=10 days; South zone=4 days. (Current regulation).	30
Table 3-8: Do you support or oppose prohibiting the use of motorized decoys or other motorized devices on Department of Natural Resources Wildlife Management Areas for the entire duck season. (Current regulation).	30
Table 4-2: Opinion on 2 hen mallard bag limit.....	33
Table 4-3: Opinion on 3 wood duck bag limit.....	33
Table 4-5: The only purpose of bag limits is to protect duck populations.....	34
Table 4-6: Bag limits set standards for the number of ducks it is ethical for a hunter to bag.....	35
Table 4-7: Bag limits should reflect what hunters feel is socially desirable.....	35
Table 4-8: Bag limits should be based solely on what is biologically possible.....	36
Table 4-9: It is acceptable to reduce bag limits if that is what most hunters think is socially desirable.....	36
Table 4-10: Bag limits should be based on biological impacts to the waterfowl resource.....	37
Table 4-11: Bag limits help keep people from harvesting more ducks than they can use.....	37
Table 4-12: Bag limits help make sure everyone has a fair chance to bag some ducks.....	38
Table 4-13: Bag limits establish a goal for how many ducks to harvest to have a successful trip.....	38
Table 4-14: Most hunters think bag limits should be followed.....	39
Table 4-15: I think bag limits should be followed.....	39
Table 4-16: Most hunters think bag limits represent the number of ducks that it is acceptable to bag.....	40
Table 4-17: I think bag limits represent the number of ducks that it is acceptable to bag.....	40
Table 4-18: The price of a Federal Waterfowl Stamp likely will increase from \$15 to \$25 next year. Given this increase in the stamp price how likely is it that you will hunt next year?	41
Table 4-19: Mean statewide results: Special regulations.....	41
Table 4-20: Beginning shooting hours ½ hour before sunrise on opening day.....	42
Table 4-21: Using a North, Central, and South duck zone during last year’s waterfowl season.....	42
Table 4-22: Using a split season in the Central Duck Zone during last year’s waterfowl season.....	43
Table 4-23: Using a split season in the South Duck Zone during last year’s waterfowl season.....	43
Table 4-24: Ending shooting hours at 4 pm for the first part of Minnesota’s waterfowl season.....	44
Table 4-25: Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season.....	44
Table 4-26: Allowing open water hunting on a few (5-10) larger lakes or rivers during the regular waterfowl season.....	45
Table 4-27: Restricting the use of motorized decoys for the first part of Minnesota’s waterfowl season.....	45
Table 4-28: Having the August Canada Goose Conservation Season in the Intensive Harvest Zone.....	46
Table 4-29: Using a 10 Canada goose daily bag limit in September in the Intensive Harvest Zone.....	46
Table 4-30: Currently, waterfowl hunters need to purchase a waterfowl stamp validation, but do not need to purchase the actual stamp which is available for an extra charge. The DNR still holds an annual waterfowl stamp contest and prints a small number of stamps. Would you support or oppose eliminating the waterfowl stamp contest and pictorial stamp?.....	47
Table 4-31: Last fall (2014), waterfowl hunters could hunt open water (not restricted to concealing vegetation) on Lake Pepin, Lake of the Woods, Mille Lacs Lake, and/or Lake Superior. Did you hunt in any of these places during the 2014 waterfowl season?.....	47
Table 4-32: If you hunted on Lake Pepin, Lake of the Woods, Mille Lacs Lake, and/or Lake Superior last fall, did you hunt in open water (that is you were at anchor and not located in concealing vegetation while hunting on these areas)?	48
Table 5-2: Preference for season dates for a 60-day duck season in 2015.....	51
Table 5-3: The Canada goose season extends for 107 days in each of the 3 waterfowl zones. Last year, the Canada goose season was closed when the duck season was also closed for 5 days in the Central Zone and 11 days in the South zone. What is your preference for Canada goose season dates?	52

Table 5-4: Minnesota first used 3 zones for duck hunting in 2012. How would you compare your duck hunting experience in Minnesota under the current 3-zone structure to your experiences when no zones were used?.....	52
Table 5-5: The Minnesota DNR has used restricted shooting hours that end at 4 p.m. in the early portion of duck season since 1973. Last year, the restriction lasted a different number of days in each duck zone (North Zone=14 days; Central Zone=9 days; South zone=3 days) due to differences in season dates. Do you support or oppose this restriction?.....	53
Table 6-1: What is your level of support for a special September teal-only season in Minnesota?	55
Table 6-2: Preference for timing of teal season.....	55
Table 6-3: If a special September teal-only season is made available, how likely are you to hunt in this early teal-only season?	55
Table 6-4: How would Minnesota adopting a special September teal-only season affect your waterfowl-hunting in Minnesota?	56
Table 6-5: What is your level of support for 2 blue-winged teal bonus bag limit during the first 16 days of the regular duck season in Minnesota?.....	56
Table 6-6: Mean statewide results: Perceptions about a possible special teal season.....	57
Table 6-7: A special September teal season would disturb waterfowl before the regular season.	57
Table 6-8: I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled.	58
Table 6-9: I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day....	58
Table 6-10: I am concerned about having a September teal season because teal nest in Minnesota.	59
Table 6-11: Minnesota should have a September teal season because teal seasons are offered in other states.....	59
Table 6-12: Minnesota should have a September teal season because the continental blue-winged teal population can sustain a higher harvest.....	60
Table 6-13: I am concerned about having a September teal season because the number of breeding teal in Minnesota is lower than long-term averages.....	60
Table 6-14: I would prefer 2 bonus blue-winged teal in the regular duck season instead of a September teal season.	61
Table 6-15: I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal.	61
Table 6-16: I am concerned about having a September teal season because I might shoot ducks that are not teal.	62
Table 6-17: An early teal season would allow hunters to harvest more ducks.	62
Table 6-18: The 2 bird bonus blue-winged teal limit would complicate regulations.....	63
Table 7-1: Motivations for waterfowl hunting.....	66
Table 7-2: Motivations for in waterfowl hunting: Agreement/disagreement that... The more ducks I bag the happier I am.....	66
Table 7-3: Motivations for in waterfowl hunting: Agreement/disagreement that... The more geese I bag the happier I am.....	67
Table 7-4: Motivations for in waterfowl hunting: Agreement/disagreement that... When I go waterfowl hunting, I'm just as happy if I don't bag anything.	67
Table 7-5: Motivations for in waterfowl hunting: Agreement/disagreement that... If I thought I wouldn't bag any ducks or geese, I wouldn't go waterfowl hunting.....	67
Table 7-6: Motivations for in waterfowl hunting: Agreement/disagreement that... I'm just as happy if I don't bag the ducks and geese I see.	68
Table 7-7: Motivations for in waterfowl hunting: Agreement/disagreement that... I must bag waterfowl for the waterfowl hunting trip to be enjoyable.	68
Table 7-8: Motivations for in waterfowl hunting: Agreement/disagreement that... A full bag limit is the best indicator of a good waterfowl hunting trip.	68

Table 7-9: Motivations for in waterfowl hunting: Agreement/disagreement that... When I go waterfowl hunting, I'm not satisfied unless I bag at least something.....	69
Table 7-10: Motivations for in waterfowl hunting: Agreement/disagreement that... A successful waterfowl hunting trip is one in which many ducks or geese are bagged.....	69
Table 7-11: Motivations for in waterfowl hunting: Agreement/disagreement that... I'm happiest with a waterfowl hunting trip if I bag the limit.....	69
Table 7-12: Motivations for in waterfowl hunting: Agreement/disagreement that... A waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged.....	70
Table 7-13: Motivations for waterfowl hunting: Importance of.....	70
Table 7-14: Motivations for waterfowl hunting: Importance of... Seeing ducks in the field.....	71
Table 7-15: Motivations for waterfowl hunting: Importance of... Seeing geese in the field.....	71
Table 7-16: Motivations for waterfowl hunting: Importance of... Attracting ducks with decoys.....	71
Table 7-17: Motivations for waterfowl hunting: Importance of... Attracting geese with decoys.....	72
Table 7-18: Motivations for waterfowl hunting: Importance of... Calling ducks in.....	72
Table 7-19: Motivations for waterfowl hunting: Importance of... Calling geese in.....	72
Table 7-20: Motivations for waterfowl hunting: Importance of... Bagging my daily limit.....	73
Table 7-21: Motivations for waterfowl hunting: Importance of... Bagging at least one duck during a day in the field.....	73
Table 7-22: Motivations for waterfowl hunting: Importance of... Bagging drakes.....	73
Table 7-23: Motivations for waterfowl hunting: Importance of... Bagging a lot of ducks over the season.....	74
Table 7-24: Motivations for waterfowl hunting: Bagging a lot of geese over the season.....	74
Table 7-25: Motivations for waterfowl hunting: Importance of... Bagging a variety of different duck species.....	74
Table 7-26: Motivations for waterfowl hunting: Importance of... Bagging diving ducks.....	75
Table 7-27: Motivations for waterfowl hunting: Importance of... Bagging mallards.....	75
Table 7-28: Motivations for waterfowl hunting: Importance of... Bagging teal and wood ducks.....	75
Table 7-29: Factor analysis of importance of experiences related to bagging waterfowl.....	76
Table 7-30: Experiences during 2014 Minnesota waterfowl hunting season.....	77
Table 7-31: Experiences during the 2014 season: Seeing ducks in the field.....	77
Table 7-32: Experiences during the 2014 season: Seeing geese in the field.....	78
Table 7-33: Experiences during the 2014 season: Attracting ducks with decoys.....	78
Table 7-34: Experiences during the 2014 season: Attracting geese with decoys.....	78
Table 7-35: Experiences during the 2014 season: Calling ducks in.....	79
Table 7-36: Experiences during the 2014 season: Calling geese in.....	79
Table 7-37: Experiences during the 2014 season: Bagging my daily limit.....	79
Table 7-38: Experiences during the 2014 season: Bagging at least one duck during a day in the field.....	80
Table 7-39: Experiences during the 2014 season: Bagging drakes.....	80
Table 7-40: Experiences during the 2014 season: Bagging a lot of ducks over the season.....	80
Table 7-41: Experiences during the 2014 season: Bagging a lot of geese over the season.....	81
Table 7-42: Experiences during the 2014 season: Bagging a variety of different duck species.....	81
Table 7-43: Experiences during the 2014 season: Bagging diving ducks.....	81
Table 7-44: Experiences during the 2014 season: Bagging mallards.....	82
Table 7-45: Experiences during the 2014 season: Bagging teal and wood ducks.....	82
Table 7-46: How important is waterfowl hunting to you?.....	83
Table 7-47: Likelihood of hunting for ducks or geese during the 2015 Minnesota waterfowl season.....	83
Table 8-1: Mean statewide results: Trust in the Minnesota Department of Natural Resources.....	85
Table 8-2: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR does a good job of managing waterfowl in Minnesota.....	85

Table 8-3: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.	86
Table 8-4: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.	86
Table 8-5: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR will make decisions about waterfowl management in a way that is fair.	87
Table 8-6: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.	87
Table 8-7: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR listens to waterfowl hunters' concerns.	88
Table 8-8: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider an opportunity to voice opinions to MNDNR waterfowl management desirable.	88
Table 8-9: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I intend to respect MNDNR waterfowl management's future management decisions.	89
Table 8-10: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I accept the decisions of MNDNR waterfowl management.	89
Table 8-11: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider an opportunity to voice opinions to MNDNR about waterfowl management important.	90
Table 8-12: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I think Minnesotans should have the right to voice opinions about waterfowl management to the MNDNR. ...	90
Table 8-13: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I am willing to accept the decisions of MNDNR waterfowl management.	91
Table 8-14: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I think MNDNR waterfowl management uses the best available science when making management decisions.	91
Table 8-15: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider MNDNR decision-making about waterfowl management fair.	92
Table 9-1: Residence of waterfowl stamp buyers.	95
Table 9-2: Age of study population and survey respondents.	95
Table 9-3: Proportion of respondents from different age categories who actually hunted waterfowl in Minnesota in the year 2014.	95
Table 9-4: What year the hunter first hunted waterfowl.	96
Table 9-5: Number of years hunting waterfowl in Minnesota.	97
Table 9-6: Hunting in the last five years.	97
Table 9-7: Membership in hunting-related groups.	98
Table 9-8: Did you hunt for waterfowl in a state or province other than Minnesota in 2014?	98
Table 9-9: Number of years living in Minnesota.	99
Table 9-10: Percent of respondents who had lived on a farm or ranch, or in a non-suburban rural area from birth until age 17, and mean number of years and percent of youth for those who did.	99
Table 9-11: Percent of respondents who had lived on a farm or ranch, or in a non-suburban rural area from age 18 on, and mean number of years and percent of adult life for those who did.	99
Table 9-12: Mean income.	100
Table 9-13: Highest Level of Education.	100
Table 10-1: Age of respondents: 2000, 2002, 2005, 2007, 2010, 2011 and 2014 findings.	103
Table 10-2: Number of years hunting ducks/waterfowl: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings.	103
Table 10-3: Frequency distributions of HIP registrants in sample and age of respondents: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings.	104

Table 10-4 Number of days hunting waterfowl: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings	104
Table 10-5: Number of ducks bagged: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings	104
Table 10-6: Waterfowl Hunting Activity: 2000, 2002, 2005, 2007, 2010, 2011 and 2014 findings	105
Table 10-7: Waterfowl Hunting, Opening Saturday: 2000, 2002, 2005, 2010, 2011, and 2014 findings	105
Table 10-8: Waterfowl Hunting, Opening Sunday: 2000, 2002, 2005, 2010, and 2011 findings	105
Table 10-9: Hunt Outside Minnesota: 2000, 2002, 2005, 2010, 2011, and 2014 findings	106
Table 10-10: Overall Satisfaction With Waterfowl Hunting: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings.....	106
Table 10-11 Support for Youth Waterfowl Hunting Day: 2000, 2002, 2005, 2010, 2011, and 2014 findings.....	107
Table 10-12 Group Membership : 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings	107
Table 10-13: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR does a good job of managing waterfowl in Minnesota.	108
Table 10-14: 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.....	108
Table 10-15: 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.	108
Table 10-16: 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.	109
Table 10-17: 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.	109
Table 10-18: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR listens to waterfowl hunters' concerns.	109

Introduction

Minnesota has generally been in the top 3 states for number of waterfowl hunters in the United States; however, waterfowl hunter numbers have declined by one-fourth since we began conducting surveys of Minnesota waterfowl hunters in 2000. 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, 2010, and 2011 waterfowl hunting seasons were completed (Fulton et al. 2002, Schroeder et al. 2004, 2007a, 2008, 2012a, 2012b). In addition, a series of surveys looking at hunter recruitment and retention were completed following the 2005 waterfowl hunting season (Schroeder et al. 2007b,c,d) and a study of former waterfowl hunters was completed following the 2009 season (Schroeder et al. 2011). Results from some of these studies have been published in peer-reviewed journals (Schroeder et al. 2006, 2012c, 2013, 2014). Information from these studies 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 (earlier opening date, shooting hours, bag limit and zone changes) necessitated the need for an additional hunter survey. It has been 3 years since the last survey. In addition to monitoring changes in hunter satisfaction, there was also a need to determine waterfowl hunter opinions on current zones, proposed teal seasons, and other proposed changes to regulations.

Study Purpose and Objectives

This study was conducted to identify hunter preferences/opinion on regulations, seasons, daily bag limits and zones relative to their satisfaction, success, and opinions/preferences on other waterfowl hunting and management issues. Results 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 2014 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 2014, and changes in satisfaction since 2013, and factors that may affect satisfaction with Minnesota waterfowl hunting.
3. Examine the importance of various experiences preferences (related to bagging waterfowl) for Minnesota waterfowl hunters' participation in waterfowl hunting during 2014.
4. Examine the importance of waterfowl hunting to Minnesota waterfowl hunters and intentions to participate in the future.
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' opinions a potential teal season.

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

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

Methods

Sampling

The population of interest in this study included all Minnesota residents 18 years of age and older who hunted waterfowl in the state during 2014. 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 2014 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 3 duck zones (North, Central, South) and the Twin Cities Metropolitan area (Figure 1).

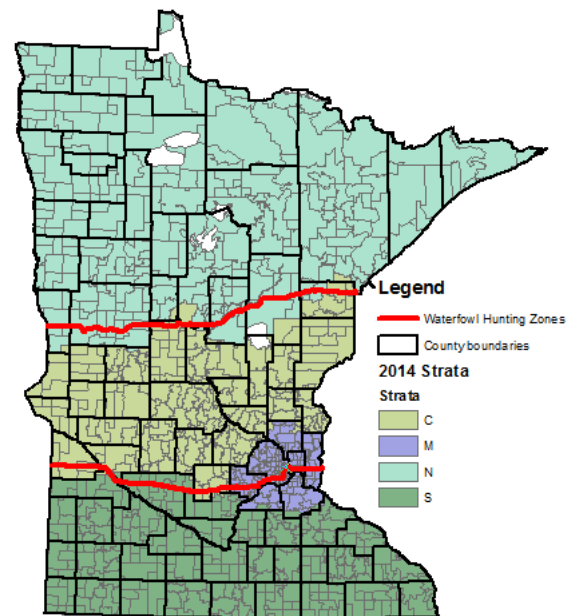


Figure 1. Zones for the 2011 and 2014 Minnesota Waterfowl Hunter Surveys.

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 May 2015. 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 final mailing, including a \$1 incentive to maximize response.

Survey Instrument

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

- Part 1: Background and length of experience as a waterfowl hunter;
- Part 2: Hunting experiences during the 2014 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 2013 and 2014 hunting satisfaction for ducks and geese; and satisfaction with the number of ducks and geese seen in the field;
- Part 4: Motivations for waterfowl hunting;
- Part 5: General waterfowl hunting information including involvement 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: Opinions about an early teal season;
- Part 9: Youth Waterfowl Hunting Day;
- Part 10: Use and regulation of battery-operated, spinning-wing decoys
- Part 11: Minnesota DNR waterfowl management; and
- Part 12: 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 21). 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, 104 were undeliverable or otherwise invalid. Of the remaining 3,496 surveys, a total of 1,738 were returned, resulting in a response rate of 49.7%. Of the surveys returned, 213 were in response to the final mailing (n = 1,986), which included a \$1 incentive. Nearly 11% of outstanding respondents returned their full-length survey in the mailing that included the incentive, which compared to 15.5% of outstanding respondents who returned a one-page, two-sided nonresponse survey in the final mailing of the 2011 waterfowl survey. 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 12 surveys that were returned without identification numbers. These 12 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	Surveys completed and returned	Survey response rate %
Central	900	29	871	424	48.7%
Metro	900	23	877	427	48.7%
North	900	28	872	424	48.6%
South	900	24	876	451	51.5%

The average age of respondents ($\bar{x} = 44.6$) was significantly older than the population of waterfowl hunters ($\bar{x} = 39.6$) ($t = 14.283^{***}$). People over 50 returned the survey at a significantly higher rate than younger people. Weights correcting this age bias were calculated and applied to the data. While there were a few statistically significant differences between the weighted and unweighted data, weighting the data did not change results beyond the margin of error for the survey and the effect size of all differences were minimal. For this reason, data were not weighted for age bias in any of the results reported here (see section 9 for respondent/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	24,211	27.8%
METRO	28,742	33.0%
NORTH	18,783	21.6%
SOUTH	15,417	17.7%
Statewide ²	87,153	100%

¹ Source: DNR license database

² The statewide total is not equal to the total number of waterfowl stamps sold. 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 2014 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 2014 Minnesota waterfowl-hunting seasons. Only individuals who hunted waterfowl in Minnesota in 2014 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 2014

Respondents were first asked to report if they had actually hunted for waterfowl in Minnesota in 2014. Statewide 88.9% of the survey respondents indicated that they had hunted waterfowl in 2014. There were no significant differences in participation rates by region of residence (Table 1-1). Respondents who had hunted in 2014 were next asked if they had hunted for ducks, and Canada Geese during the August, early September, and regular seasons. At the statewide level, 90.8% of actual waterfowl hunters in 2014 indicated they had hunted ducks while 67.2% had hunted Canada Geese during the regular season. Less than 1 in 5 (16.1%) hunted Canada Geese during the August season, and 32.1% hunted Canada Geese during the early September season. Less than 5% of respondents hunted "other" geese (4.4%). Statewide, 25.2% of respondents hunted ducks exclusively and 7.7% hunted geese exclusively.

Looking at differences in participation based on region of residence, smaller proportions of hunters from the north and south regions hunted for ducks compared to hunters from the central and metro regions (Table 1-1). A greater proportion of hunters from the central region hunted for Canada Geese during the August season. A smaller proportion of waterfowl hunters residing in the metropolitan area hunted for Canada Geese during the early September goose season. Smaller proportions of hunters from the metro and north regions hunted during the regular Canada Goose season. Looking at differences based on where respondents hunted, a greater proportion of hunters targeted ducks in the central region compared to the north and south regions (Table 1-2). A greater proportion of hunters targeted Canada Geese during the regular season in the south region. There were no statistically significant differences in where respondents targeted Canada geese during the August or early September 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 11.5 (Table 1-4). Hunters reported an average of 4.1 Canada Geese during the August season, 5.7 Canada Geese during the early September season, and 3.4 during the regular season. For all Canada Goose seasons combined, goose hunters bagged a total of 6.6 Canada Geese for the year. On average, goose hunters targeting other geese harvested 5.3 "other" geese. The high average number of "other" geese harvested reflects a small number of hunters pursuing "other" geese, and several hunters who bagged a high number of geese.

Results of ANOVA indicate that, on average, hunters residing in the metropolitan 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 2014 Waterfowl Hunt

Average Number of Days Hunting Weekends and Weekdays, and Days Away From Home

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 (6.6 days) than during the week (3.4 days) (Table 1-6). Respondents were also asked to report the number of days they spent away from their primary residence while waterfowl hunting during the 2014 season (Table 1-7). Statewide, respondents had spent an average of 2.6 days away from home, and metropolitan residents spent significantly more days (Mean = 4.3 days) away.

Hunting Opening Saturday

Approximately two-thirds of waterfowl hunters statewide hunted opening Saturday (66.3%) during the 2014 duck season (Tables 1-8, 1-9). There was no significant difference by region of residence in participation in hunting on the opening Saturday (Table 1-8). However, a smaller proportion of individuals hunting in the northern region hunted during opening weekend (Table 1-9).



Hunting During the Last 2 Hours of Afternoons

Respondents were asked to report the number of days that they hunted ducks during the last 2 hours of the afternoon (Table 1-10). Statewide, respondents had hunted 2.6 days during the last 2 hours of the afternoon, and there was no significant difference by region of residence.

Zones Hunted

Respondents were asked to indicate which zones they hunted in during the season (see map) (Table 1-11). About 4 in 10 (40.7%) hunted only in the Central Duck Zone, with 23.3% hunting only in the North Duck Zone, and 20.2% hunting only in the South Duck Zone. About 8% of respondents hunted in both the North and Central Duck Zones, and about 6% hunted in both the Central and South Duck Zones. Less than 5% hunted in both the North and South Duck Zones or in all three zones.

Respondents were asked to indicate the number of days they hunted in each of the zones (see map) (Tables 1-12, 1-13). Statewide, hunters hunted the most days in the Central Zone (M = 4.8) with fewer days of hunting in the North Zone (M = 2.6) and the South Zone (M = 2.5).

Hunting During the Second Opening Weekend After the Season Split in the Central and South Zones

Respondents were asked if they had hunted the opening weekends after the season splits in the Central and South zones (Table 1-14). The majority of respondents (55.4%) had not hunted the opening weekends after the season splits, but 28.7% had hunted in the Central Zone during the second opening, and 15.9% had hunted in the South Zone during the second opening. Residents of the zones with the splits were more likely to hunt the second opening (55.7% of Central Zone residents and 58.3% of South Zone residents hunted).

Section 1: Experiences During the 2014 Waterfowl Hunt

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

Region of residence	%Who actually hunted in 2014	% of hunters ¹ indicating they hunted in Minnesota in 2014				
		Ducks	Canada Geese August season	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide ²	88.9%	90.8%	16.1%	32.1%	67.2%	4.4%
CENTRAL	91.0%	93.3%	22.9%	38.7%	69.9%	3.5%
METRO	87.7%	92.7%	12.4%	23.2%	65.9%	4.6%
NORTH	88.5%	86.8%	13.2%	34.4%	62.0%	5.5%
SOUTH	88.5%	88.2%	15.1%	34.8%	71.6%	4.3%
	$\chi^2=2.629$ n.s.	$\chi^2=13.415^{**}$ CV=0.095	$\chi^2=19.292^{***}$ CV=0.114	$\chi^2=22.317^{***}$ CV=0.122	$\chi^2=9.403^*$ CV=0.079	$\chi^2=1.830$ n.s.

¹ % for species reflects only % of respondents that actually hunted waterfowl during 2014.

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	% of hunters ¹ indicating they hunted in Minnesota in 2014				
	Ducks	Canada Geese August	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide ²	90.8%	16.1%	32.1%	67.2%	4.4%
North	87.4%	13.6%	32.1%	63.2%	5.2%
Central	93.7%	17.4%	30.5%	67.6%	4.0%
South	88.9%	14.7%	35.0%	71.4%	3.7%
	$\chi^2=13.212^{**}$ CV=0.095	$\chi^2=.058$ n.s.	$\chi^2=2.415$ n.s.	$\chi^2=6.454^*$ CV=0.067	$\chi^2=1.281$ n.s.

¹ % for species reflects only % of respondents that actually hunted waterfowl during 2014.

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

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

Section 1: Experiences During the 2014 Waterfowl Hunt

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

Region of residence	N	Actually hunted in 2014	Ducks	Canada Geese August	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	87,153 ^{1,2}	77,479	70,351	12,474	24,871	52,066	3,409
CENTRAL	24,211	22,032	22,556	5,045	8,526	15,400	969
METRO	28,742	25,207	23,367	3,126	5,848	16,611	1,160
NORTH	18,783	16,623	14,429	2,194	5,718	10,306	914
SOUTH	15,417	13,644	12,034	2,060	4,748	9,769	587

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 2014 per hunter for that specific season					
	Ducks	Canada Geese August Season	Canada Geese Early September	Canada Geese Regular Season	Total Canada Geese All Seasons ¹	Other Geese
Statewide ²	11.5	4.1	5.7	3.4	6.6	5.3 ³
CENTRAL	11.7	4.9	6.1	3.6	7.8	0.6
METRO	9.9	1.3	4.8	2.4	4.1	2.9
NORTH	12.4	7.1	7.0	4.3	8.5	4.5
SOUTH	13.2	3.3	4.6	4.1	6.5	14.7 ³
	F=2.570 n.s.	F=3.047* η=0.198	F=1.573 n.s.	F=2.665* η=0.092	F=3.452* η=0.099	F=0.994 n.s.

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.

³ The high average number of “other” geese harvested reflects a small number of hunters pursuing “other” geese, and several hunters who bagged a high number of geese.

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

Section 1: Experiences During the 2014 Waterfowl Hunt

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

Region of residence	Ducks	Canada Geese August Season	Canada Geese Early September	Canada Geese Regular Season	Other geese
Statewide	809,037	51,143	141,765	177,024	18,068
CENTRAL	263,905	24,721	52,009	55,440	581
METRO	231,333	4,064	28,070	39,866	3,364
NORTH	178,920	15,577	40,026	44,316	4,113
SOUTH	158,849	6,798	21,841	40,053	8,629

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	Mean number of days hunted during 2014 waterfowl season		
	Weekends/Holidays	Weekdays (Monday-Friday)	Total
Statewide ¹	6.6	3.4	10.0
North	5.9	3.5	9.4
Central	6.9	3.2	10.1
South	7.0	3.8	10.8
	F=5.272** η=0.085	F=1.745 n.s.	F=2.335 n.s.

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: Average number of nights spent away from primary residence while waterfowl hunting in Minnesota during 2014 season.

Region of residence	Mean number of days away from home
Statewide ¹	2.6
CENTRAL	1.5
METRO	4.3
NORTH	2.0
SOUTH	1.7
	F=34.882*** η=0.256

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

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

Section 1: Experiences During the 2014 Waterfowl Hunt

Table 1-8: Participation in hunting on opening Saturday by region of residence

Region of residence	% hunting Opening Saturday (Sept. 27, 2014)
Statewide ¹	66.3%
CENTRAL	71.0%
METRO	61.7%
NORTH	65.5%
SOUTH	67.9%
	$\chi^2=7.759$ n.s.

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 opening Saturday by region most often hunted

Area most often hunted	% hunting opening weekend in Minnesota Opening Saturday (Sept. 27, 2014)
Statewide ¹	66.3%
North	60.9%
Central	69.0%
South	68.1%
	$\chi^2=7.804^*$ CV=0.073

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: Average number of days hunting ducks during the last 2 hours of the afternoon.

Region of residence	Mean number of days hunting last 2 hours of the afternoon
Statewide ¹	2.6
CENTRAL	2.7
METRO	2.6
NORTH	2.4
SOUTH	2.6
	F=0.168 n.s.

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

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

Section 1: Experiences During the 2014 Waterfowl Hunt

Table 1-11: Hunting North and South Zones during the 2014 Minnesota Season

Residence of hunter	n	% of hunters...						
		Hunted only in the North duck zone	Hunted only in the Central duck zone	Hunted only in the South duck zone	Hunted in the North & Central Zones	Hunted in the Central & South Zones	Hunted in the North and South Zones	Hunted in all three zones
Statewide ¹	1466	23.3%	40.7%	20.2%	7.7%	5.6%	1.5%	1.1%
CENTRAL	361	7.5%	76.5%	1.7%	9.7%	3.0%	0.8%	0.8%
METRO	365	14.2%	45.2%	16.4%	10.1%	10.7%	1.4%	1.9%
NORTH	355	74.9%	14.9%	0.8%	7.3%	0.6%	0.8%	0.6%
SOUTH	382	2.9%	6.0%	80.6%	0.3%	6.0%	3.4%	0.8%
$\chi^2=1535.035^{***}$ CV=0.591								

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: Regional distribution of hunting across Minnesota

Residence of hunter	Mean number of days hunting by region		
	North	Central	South
Statewide ¹	2.6	4.8	2.5
CENTRAL	1.0	9.2	0.3
METRO	1.7	5.0	2.3
NORTH	7.8	2.0	0.1
SOUTH	0.5	0.9	9.4
	F=171.487*** $\eta=0.506$	F=124.270*** $\eta=0.447$	F=228.182*** $\eta=0.560$

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	% 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 2014		
	North	Central	South
Statewide ¹	25.9%	47.3%	23.3%
CENTRAL	9.0%	88.5%	2.5%
METRO	19.3%	57.5%	23.2%
NORTH	80.2%	18.4%	1.4%
SOUTH	4.5%	7.6%	87.9%
$\chi^2=1453.789^{***}$ CV=0.709			

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

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

Section 1: Experiences During the 2014 Waterfowl Hunt

Table 1-14: Hunting Central and South zones after the split in the seasons in those zones.

Residence of hunter	n	% of hunters indicating that hunted after 2 nd opening in split zones (Central and South)		
		% Hunted Central Zone 2 nd opening	% Hunted South Zone 2 nd opening	% Did not hunt either zone 2 nd opening
Statewide ¹	1470	28.7%	15.9%	55.4%
CENTRAL	366	55.7%	2.7%	41.5%
METRO	367	28.5%	14.5%	57.0%
NORTH	352	11.1%	0.3%	88.6%
SOUTH	384	6.5%	58.3%	35.2%
$\chi^2=747^{***}$, CV=0.505				

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 2014 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 (65.0%) reported being satisfied with their general waterfowl-hunting experience, with 27.0% expressing dissatisfaction. Statewide the overall mean satisfaction score was 4.8. 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 ($r = -0.200$, $p < 0.001$) between age and satisfaction. This means that older hunters reported less satisfaction than younger hunters. Likewise, there was a significant negative relationship ($r = -0.204$, $p < 0.001$) 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 casual (called "novice" by Humburg) or intermediate hunters (Table 2-3). Age was significantly related to avidity. Avid hunters were significantly younger than intermediate and casual hunters; the mean age for casual hunters was 45 years, intermediate hunters 44 years, and avid hunters 39 years ($F = 10.769$, $p < 0.001$).

Satisfaction With Duck Hunting

Statewide

Statewide about two-thirds (66.2%) of duck hunters were satisfied (slightly, moderately, or very) with their duck-hunting experience in 2014; of these 19.3% were very satisfied. Conversely, 24.7% of respondents were dissatisfied (slightly, moderately, or very), with 6.8% very dissatisfied with their duck-hunting experience. Nearly one-half (42.2%) of respondents were satisfied with their duck-hunting harvest, but a slightly larger proportion (45.6%) of the respondents were dissatisfied with their duck harvest. Nearly one in ten hunters (8.6%) were very satisfied with their duck harvest. Satisfaction with duck-hunting regulations was higher than satisfaction with harvest, with 50.7% of respondents reporting satisfaction with the regulations, including 35.1% of respondents who were moderately or very satisfied. However, about one-fourth of respondents (23.4%) felt neither satisfied nor dissatisfied about the duck-hunting regulations, compared to only 9.2% 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).

Section 2: Satisfaction With the 2014 Waterfowl Hunt

The mean score for duck-harvest satisfaction ($\bar{x} = 3.8$) was significantly lower than the mean scores for experience ($\bar{x} = 4.9$, $t = 25.443$, $p < 0.001$) or regulations ($\bar{x} = 4.5$, $t = 13.660$, $p < 0.001$). The mean satisfaction score for experience was significantly higher than for regulations ($t = 7.914$, $p < 0.001$).

There was a significant positive relationship ($r = 0.269$, $p < 0.001$) 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 (57.5%) with their general goose-hunting experience, with slightly less than half reporting that they were moderately (23.7%) or very (15.1%) satisfied (Table 2-7). Most goose hunters were less satisfied with their harvest, however. A total of 41.5% reported being dissatisfied with their harvest with 10.4% moderately dissatisfied and 17.8% very dissatisfied (Table 2-8). Nearly one-half (48.1%) of the goose hunters indicated they were satisfied with the goose-hunting regulations with 20.6% moderately satisfied and 14.1% very satisfied (Table 2-9).

There was a statistically significant correlation ($r = 0.265$, $p < 0.001$) between the total number of geese bagged in 2014 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 significant, but slight, differences among regions for satisfaction with goose-hunting experience and harvest, with respondents who hunted in the central region reporting less satisfaction.

Comparison of Duck Hunting and Goose Hunting

We compared mean satisfaction levels for duck and goose hunting (Table 2-10). Levels of satisfaction were similar when comparing duck and goose hunting.

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 2014 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 40.5% of respondents were satisfied with the number of ducks that they saw in the field, and 8.3% 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. Less than half of respondents (43.8%) were satisfied with the number of geese that they saw in the field, with 11.4% who were very satisfied (Table 2-12).

Section 2: Satisfaction With the 2014 Waterfowl Hunt

Respondents who hunted primarily in the central region reported significantly lower average satisfaction with the number of geese seen in the field.

Changes in Satisfaction Levels

Hunters were asked to compare the 2014 waterfowl season to the 2013 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 = 2014 much worse, 2 = 2014 somewhat worse, 3 = 2014 slightly worse, 4 = neither, and 5 = 2014 slightly better, 6 = 2014 somewhat better, 7 = 2014 much better, or 9 = did not hunt in 2013.

Over one-fourth of respondents (28.3%) indicated that their general waterfowl hunting experience was better (slightly, somewhat, or much) in 2014 than in 2013, while 42.6% felt it was worse, and 29.2% felt neither year was better than the other (Table 2-13). Results were similar for duck hunting experience, with 28.4% of respondents indicating that 2014 was better, 36.8% worse, and 34.9% neither (Table 2-14). A slightly smaller proportion of respondents indicated that duck hunting harvest was better in 2014 (23.8%), compared to 52.9% who felt that 2014 was worse, and 23.3% who indicated that neither year was better than the other (Table 2-15). Many respondents (53.5%) felt that the number of ducks seen in 2014 was worse than in 2013, compared to 25.4% who felt the number was better and 21.2% who felt neither year was better (Table 2-16).

About one-fourth of respondents (24.2%) indicated that their goose hunting experience was better in 2014 than in 2013, while 35.5% felt it was worse, and 40.3% felt neither year was better than the other (Table 2-17). Results for goose hunting harvest had 19.8% of respondents indicating that 2014 was better, 49.3% worse, and 31.0% neither (Table 2-18). Less than one-fourth (21.3%) of respondents felt that the number of geese seen in 2014 was better than in 2013, while about one-half (48.5%) felt the number was worse (Table 2-19). Total years of hunting experience in Minnesota was significantly negatively correlated with all measures of satisfaction with the 2014 season relative to the 2013 season.

Section 2: Satisfaction With the 2014 Waterfowl Hunt

Table 2-1: Satisfaction with the general waterfowl-hunting experience for the 2014 season by zone most often hunted.

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1394	7.9%	8.7%	10.4%	8.0%	20.3%	30.6%	14.1%	4.8
North	375	5.9%	7.2%	9.3%	9.3%	19.2%	31.7%	17.3%	4.9
Central	572	7.7%	8.7%	11.7%	8.6%	20.1%	30.2%	12.9%	4.7
South	404	7.9%	9.9%	10.4%	5.9%	22.0%	29.2%	14.6%	4.7
$\chi^2 = 11.701$ n.s.									

¹ This table does not include those respondents who did not hunt waterfowl in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² F = 2.603 n.s. 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 2014 season by region of residence.

Region of residence	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1394	7.9%	8.7%	10.4%	8.0%	20.3%	30.6%	14.1%	4.8
CENTRAL	351	7.4%	10.8%	8.3%	9.4%	19.9%	32.5%	11.7%	4.7
METRO	343	9.6%	7.9%	11.7%	6.7%	21.3%	29.4%	13.4%	4.6
NORTH	333	6.6%	6.9%	9.3%	8.7%	19.6%	31.3%	17.5%	4.9
SOUTH	363	6.9%	8.8%	12.9%	7.2%	19.8%	28.9%	15.4%	4.7
$\chi^2 = 18.153$ n.s.									

¹ This table does not include those respondents who did not hunt waterfowl in Minnesota in 2014.

² F = 1.513 n.s. for one-way ANOVA comparing means among regions. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

³ A stratified sample based on region of residence was drawn. 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 2014 Waterfowl Hunt

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

2014 Waterfowl-hunting involvement ²	n	% of hunters ¹ indicating that level of satisfaction:			Mean ³
		Slightly, moderately, or very dissatisfied	Neither satisfied nor dissatisfied	Slightly, moderately, or very satisfied	
Casual (0-5 days afield) ⁴	530	27.2%	10.6%	62.3%	4.7
Intermediate (6-19 days afield)	678	27.1%	7.1%	65.8%	4.7
Avid (20+ days afield)	184	25.5%	3.8%	70.7%	4.9
$\chi^2 = 10.886^*$, Cramer's V = 0.063					

¹ This table does not include those respondents who did not hunt waterfowl in Minnesota in 2014.

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 = 1.019 n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ³
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1411	6.8%	9.0%	8.9%	9.2%	18.9%	28.0%	19.3%	4.9
North	374	5.9%	7.5%	7.5%	8.6%	19.0%	29.7%	21.9%	5.0
Central	587	6.6%	9.2%	10.2%	9.2%	19.1%	26.6%	19.1%	4.8
South	403	7.7%	9.7%	7.4%	8.7%	19.1%	29.8%	17.6%	4.8
$\chi^2 = 8.291$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² F = 2.105 n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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

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

Section 2: Satisfaction With the 2014 Waterfowl Hunt

Table 2-5: Satisfaction with the duck-hunting harvest for the 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1412	15.9%	13.9%	15.8%	12.3%	19.2%	14.4%	8.6%	3.8
North	377	12.7%	13.8%	16.4%	14.1%	17.0%	14.9%	11.1%	4.0
Central	588	16.2%	15.1%	14.1%	12.4%	19.4%	14.6%	8.2%	3.8
South	401	17.7%	13.0%	17.5%	11.2%	19.5%	14.5%	6.7%	3.7
$\chi^2 = 12.663$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 1.861$ n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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

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

Table 2-6: Satisfaction with the duck-hunting regulations for the 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1399	7.9%	7.5%	10.5%	23.4%	15.6%	21.3%	13.8%	4.5
North	370	8.6%	7.8%	8.1%	21.6%	14.9%	24.6%	14.3%	4.6
Central	582	7.2%	6.2%	10.8%	23.7%	16.5%	21.1%	14.4%	4.6
South	403	8.4%	8.9%	14.9%	24.3%	12.7%	19.4%	11.4%	4.3
$\chi^2 = 18.723$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 4.018^*$, $\eta = 0.077$ 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 2014 Waterfowl Hunt

Table 2-7: Satisfaction with the goose-hunting experience for the 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1148	7.8%	7.2%	9.5%	18.1%	18.7%	23.7%	15.1%	4.6
North	294	7.8%	5.1%	8.5%	16.3%	19.7%	23.1%	19.4%	4.8
Central	475	7.8%	7.6%	10.7%	20.0%	18.1%	22.1%	13.7%	4.5
South	346	5.5%	7.2%	9.8%	14.5%	20.8%	26.9%	15.3%	4.8
$\chi^2 = 14.851$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 3.164^*$, $\eta = 0.075$ for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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

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

Table 2-8: Satisfaction with the goose-hunting harvest for the 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1146	17.8%	10.4%	13.3%	20.7%	16.8%	12.2%	8.8%	3.8
North	295	15.9%	8.1%	12.9%	22.7%	14.2%	13.2%	12.9%	4.0
Central	473	19.5%	12.3%	13.5%	19.5%	17.1%	10.8%	7.4%	3.6
South	346	15.3%	8.7%	14.2%	19.4%	20.8%	13.0%	8.7%	4.0
$\chi^2 = 19.063$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 4.589^*$, $\eta = 0.091$ 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 2014 Waterfowl Hunt

Table 2-9: Satisfaction with the goose-hunting regulations for the 2014 season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1148	7.9%	5.7%	10.0%	28.2%	13.4%	20.6%	14.1%	4.5
North	295	8.8%	5.8%	7.5%	27.5%	12.2%	22.7%	15.6%	4.6
Central	474	9.1%	6.1%	10.3%	27.8%	13.5%	19.4%	13.7%	4.4
South	346	4.9%	4.9%	11.8%	29.2%	14.5%	20.8%	13.9%	4.6
$\chi^2 = 11.026$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² F = 1.264 n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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

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

Table 2-10: Comparison of duck-hunting and goose-hunting satisfaction

Satisfaction with... ^{1,2}	Mean ³
Duck-hunting experience	4.7
Goose-hunting experience	4.6
t=3.262**	
Duck-hunting harvest	3.7
Goose-hunting harvest	3.8
t=0.582 n.s.	
Duck-hunting regulations	4.4
Goose-hunting regulations	4.5
t=1.929 n.s.	

¹ This table does not include those respondents who did not hunt ducks and geese in Minnesota in 2014.

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 2014 Waterfowl Hunt

Table 2-11: Satisfaction with number of ducks seen in the field during the 2014 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1410	20.5%	15.9%	17.6%	5.5%	16.1%	16.1%	8.3%	3.6
North	361	20.2%	13.9%	16.6%	5.8%	15.2%	16.6%	11.6%	3.8
Central	586	20.5%	17.7%	17.6%	5.5%	15.9%	15.7%	7.2%	3.5
South	408	20.8%	14.7%	19.1%	4.9%	16.9%	16.4%	7.1%	3.6
$\chi^2 = 10.524$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 1.638$ n.s. for one-way ANOVA comparing means. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied; 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.

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

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

Table 2-12: Satisfaction with number of geese seen in the field during the 2014 Minnesota waterfowl hunting season

Area most often hunted	n	% of hunters ¹ indicating that level of satisfaction:							Mean ²
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Statewide ³	1272	14.0%	13.8%	17.2%	11.3%	16.3%	16.1%	11.4%	4.0
North	323	12.1%	12.7%	15.2%	8.7%	17.6%	18.3%	15.5%	4.2
Central	525	15.4%	15.0%	18.5%	12.4%	15.8%	13.1%	9.7%	3.8
South	379	12.7%	12.4%	17.2%	11.1%	16.9%	19.5%	10.3%	4.1
$\chi^2 = 20.418$ n.s.									

¹ This table does not include those respondents who did not hunt ducks in Minnesota in 2014; regional data excludes individuals who hunted the same number of days in multiple regions.

² $F = 6.509^{**}$, $\eta = 0.0103$ 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 2014 Waterfowl Hunt

Table 2-13: Comparison of 2014 general waterfowl hunting experience to 2013.

Residence of hunter	n	% of hunters ¹ indicating that their general waterfowl hunting experience in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1327	10.1%	12.4%	20.1%	29.2%	16.7%	7.0%	4.6%	3.7
CENTRAL	342	9.1%	12.3%	21.1%	29.8%	15.5%	7.3%	5.0%	3.7
METRO	324	10.2%	11.4%	20.7%	26.2%	19.1%	7.1%	5.2%	3.8
NORTH	299	9.4%	12.4%	20.7%	30.4%	15.7%	7.0%	4.3%	3.7
SOUTH	347	11.8%	14.7%	17.0%	32.0%	15.9%	5.2%	3.5%	3.6
$\chi^2 = 11.679$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 1.178 n.s. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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 2-14: Comparison of 2014 duck hunting experience to 2013.

Residence of hunter	N	% of hunters ¹ indicating that their duck hunting experience in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1294	8.6%	11.5%	16.7%	34.9%	14.9%	8.4%	5.1%	3.8
CENTRAL	332	8.4%	12.0%	17.8%	33.4%	13.9%	8.1%	6.3%	3.8
METRO	316	7.9%	10.8%	15.8%	37.0%	14.6%	8.9%	5.1%	3.9
NORTH	293	8.5%	9.9%	18.1%	35.2%	15.7%	7.8%	4.8%	3.8
SOUTH	339	10.6%	12.7%	15.3%	33.3%	16.8%	7.7%	3.5%	3.7
$\chi^2 = 8.936$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 0.695 n.s. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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 2014 Waterfowl Hunt

Table 2-15: Comparison of 2014 duck hunting harvest to 2013.

Residence of hunter	n	% of hunters ¹ indicating that their duck hunting harvest in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1284	16.5%	15.5%	20.9%	23.3%	12.5%	6.8%	4.5%	3.4
CENTRAL	333	13.8%	17.1%	23.7%	21.0%	13.5%	5.4%	5.4%	3.4
METRO	312	15.4%	16.7%	18.9%	24.4%	12.2%	7.4%	5.1%	3.4
NORTH	287	18.1%	12.5%	21.6%	24.4%	12.9%	6.6%	3.8%	3.4
SOUTH	338	21.0%	13.6%	19.8%	24.0%	11.5%	7.7%	2.4%	3.2
$\chi^2 = 18.893$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 0.949. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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 2-16: Comparison of 2014 number of ducks seen to 2013.

Residence of hunter	N	% of hunters ¹ indicating that the duck hunting regulations in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1278	18.7%	14.5%	20.3%	21.2%	13.0%	7.4%	5.0%	3.4
CENTRAL	331	16.9%	15.7%	19.3%	22.1%	12.1%	6.9%	6.9%	3.5
METRO	312	18.9%	13.5%	19.6%	20.8%	15.1%	7.4%	4.8%	3.4
NORTH	286	17.8%	15.4%	23.8%	19.9%	11.2%	7.3%	4.5%	3.3
SOUTH	335	22.1%	13.1%	20.0%	21.8%	12.2%	8.4%	2.4%	3.2
$\chi^2 = 16.055$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 1.068. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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 2014 Waterfowl Hunt

Table 2-17: Comparison of 2014 goose hunting experience to 2013.

Residence of hunter	n	% of hunters ¹ indicating that their goose hunting experience in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1100	9.6%	8.5%	17.4%	40.3%	13.4%	7.0%	3.8%	3.8
CENTRAL	297	9.1%	9.8%	18.9%	38.4%	12.1%	8.8%	3.0%	3.7
METRO	261	10.7%	8.0%	15.3%	43.7%	12.6%	6.5%	3.1%	3.7
NORTH	239	9.2%	7.1%	17.2%	37.2%	16.3%	5.9%	7.1%	3.9
SOUTH	291	8.6%	8.9%	18.6%	40.9%	13.7%	6.2%	3.1%	3.7
$\chi^2 = 16.579$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 0.410. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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: Comparison of 2014 goose hunting harvest to 2013.

Residence of hunter	N	% of hunters ¹ indicating that their goose hunting harvest in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1096	17.5%	13.2%	18.6%	31.0%	10.8%	5.5%	3.5%	3.3
CENTRAL	296	16.6%	14.2%	18.9%	29.7%	12.5%	5.1%	3.0%	3.3
METRO	259	18.1%	13.5%	17.0%	33.6%	9.7%	5.0%	3.1%	3.3
NORTH	237	17.7%	10.1%	18.6%	29.5%	11.8%	6.3%	5.9%	3.5
SOUTH	293	17.7%	14.7%	21.2%	29.4%	9.2%	5.5%	2.4%	3.2
$\chi^2 = 12.775$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 0.273. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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 2014 Waterfowl Hunt

Table 2-19: Comparison of 2014 geese seen to 2013.

Residence of hunter	N	% of hunters ¹ indicating that the number of geese seen in 2014 was _____ than 2013:							Mean ²
		Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	
Statewide ³	1104	16.8%	13.1%	18.6%	30.1%	10.5%	5.9%	4.9%	3.4
CENTRAL	297	17.5%	14.5%	19.9%	26.3%	10.8%	6.1%	5.1%	3.4
METRO	263	19.0%	12.5%	16.3%	31.6%	11.0%	5.3%	4.2%	3.4
NORTH	239	15.1%	10.5%	19.2%	31.0%	9.2%	7.9%	7.1%	3.6
SOUTH	294	14.3%	15.0%	19.4%	32.7%	10.5%	4.8%	3.4%	3.4
$\chi^2 = 15.282$ n.s.									

¹ This table does not include those respondents who did not hunt geese in Minnesota in 2014.

² F = 0.245. Mean is based on the following scale: 1 = much worse; 2 = somewhat worse; 3 = slightly worse, 4 = neither; 5 = slightly better, 6 = somewhat better, 7 = much better.

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: Youth Waterfowl Hunting Day/Battery-Operated Spinning-Wing Decoys

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 9 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, 69.1% of respondents supported the youth hunting day with 41.4% strongly supporting it. In contrast, 19.4% opposed the hunt, with 10.7% strongly opposing it. There was a significant negative correlation between age and support for Youth Waterfowl Hunting Day ($r = -0.211$, $p < 0.001$). 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 2014

All study respondents were asked if they took any youths hunting on Youth Waterfowl Hunting Day in Minnesota in 2014 (Table 3-2). Statewide, 10.7% 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 2.0 youths hunting on Youth Waterfowl Hunting Day (Table 3-3). Based on the percentages provided by the survey, it is estimated that 16,580 youths participated in the youth hunt in 2014 (Table 3-4).

Ownership and Use of Battery-Operated, Spinning-Wing Decoys

Respondents were asked if they owned battery-operated, spinning-wing decoys and if they used them during the 2014 season. Statewide, 42.3% of respondents reported owning a battery-operated, spinning-wing decoy (Table 3-5), and 33.9% of respondents reported using one during the 2014 season (Table 3-6). A significantly smaller proportion of respondents from the north region reported owning a battery-operated, spinning-wing decoy.

Support/Opposition to Regulations on Battery-Operated, Spinning-Wing Decoys

Respondents were asked if they support or oppose two current regulations related to battery-operated, spinning-wing decoys using the following scale: “strongly support,” “support,” “undecided or neutral,” “oppose,” and “strongly oppose.” On average, respondents were slightly opposed to (a) prohibiting the use of motorized decoys or other motorized devices until the Saturday nearest Oct. 8th (Table 3-7), and (b) prohibiting the use of motorized decoys or other motorized devices on Department of Natural Resources Wildlife Management Areas for the entire duck season (Table 3-8). There were no significant differences by region in support for these regulations.

Section 3: Youth Waterfowl Hunting Day and Battery-Operated Spinning Wing Decoys

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

Residence of hunter	n	% of hunters indicating that they _____ the concept of Youth Waterfowl Hunting Day:					Mean ¹
		Strongly oppose	Oppose	Undecided/neutral	Support	Strongly support	
Statewide ²	1638	10.7%	8.7%	11.5%	27.7%	41.4%	3.8
CENTRAL	404	11.1%	8.7%	12.4%	27.0%	40.8%	3.8
METRO	407	9.6%	11.8%	11.3%	24.8%	42.5%	3.8
NORTH	392	10.7%	4.8%	9.9%	34.4%	40.1%	3.9
SOUTH	433	12.2%	7.4%	12.2%	26.1%	42.0%	3.8
$\chi^2=23.303^*$, Cramer's V=0.069							

¹F = 0.552 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided; 4 = support; 5 = strongly support.

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

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

Table 3-2: Last September (2014), did you take youth hunting on Youth Waterfowl Hunting Day

Residence of hunter	n	% yes
Statewide ¹	1640	10.7%
CENTRAL	404	11.9%
METRO	407	7.4%
NORTH	393	13.5%
SOUTH	435	11.5%
		$\chi^2=8.353^*$, Cramer's V=0.071

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

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

Section 3: Youth Waterfowl Hunting Day and Battery-Operated Spinning Wing Decoys

Table 3-3: Number of youth taken hunting on 2014 Youth Waterfowl Hunting Day

Residence of hunter	n	Mean number of youth
Statewide ¹	173	2.0
CENTRAL	48	1.8
METRO	29	1.8
NORTH	55	2.2
SOUTH	51	1.9
		F= 0.519 n.s.

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

Table 3-4: 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 2014 YWHD	Total mentors in the 2014 YWHD	Average # of youth with a mentor	Estimate of total youth participating in YWHD
Statewide ^{1,2}	77,479	10.7%	8,290	2.0	16,580
CENTRAL	22,032	11.9%	2,622	1.8	4,720
METRO	25,207	7.4%	1,865	1.8	3,357
NORTH	16,623	13.5%	2,244	2.2	4,937
SOUTH	13,644	11.5%	1,569	1.9	2,981

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 3: Youth Waterfowl Hunting Day and Battery-Operated Spinning Wing Decoys

Table 3-5: Do you own a battery-operated, spinning-wing decoy?

Residence of hunter	n	% yes
Statewide ¹	1642	42.3%
CENTRAL	405	46.2%
METRO	406	42.1%
NORTH	399	34.8%
SOUTH	430	45.3%
		$\chi^2=13.238^{**}$, Cramer's V=0.090

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 3-6: Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the 2014 waterfowl season?

Residence of hunter	n	% yes
Statewide ¹	1641	33.9%
CENTRAL	406	36.5%
METRO	405	32.3%
NORTH	398	30.7%
SOUTH	430	36.5%
		$\chi^2=4.774$ n.s.

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

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

Section 3: Youth Waterfowl Hunting Day and Battery-Operated Spinning Wing Decoys

Table 3-7: Do you support or oppose prohibiting the use of motorized decoys or other motorized devices until the Saturday nearest Oct. 8th. Last year, this was: North Zone=15 days; Central Zone=10 days; South zone=4 days. (Current regulation).

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Strongly oppose	Oppose	Undecided/neutral	Support	Strongly support	
Statewide ²	1628	19.8%	22.9%	33.3%	15.3%	8.7%	2.7
CENTRAL	405	18.5%	25.4%	33.3%	14.8%	7.9%	2.7
METRO	401	21.7%	20.4%	30.9%	16.5%	10.5%	2.7
NORTH	394	19.0%	25.9%	33.8%	13.2%	8.1%	2.7
SOUTH	425	19.3%	19.8%	36.9%	16.5%	7.5%	2.7
$\chi^2=13.517$ n.s.							

¹F = 0.441 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided; 4 = support; 5 = strongly support.

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

Table 3-8: Do you support or oppose prohibiting the use of motorized decoys or other motorized devices on Department of Natural Resources Wildlife Management Areas for the entire duck season. (Current regulation).

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Strongly oppose	Oppose	Undecided/neutral	Support	Strongly support	
Statewide ²	1618	23.4%	23.0%	31.6%	11.6%	10.4%	2.6
CENTRAL	400	26.8%	24.0%	29.3%	9.8%	10.3%	2.5
METRO	400	21.3%	22.0%	32.3%	12.0%	12.5%	2.7
NORTH	392	20.4%	24.0%	33.2%	12.5%	9.9%	2.7
SOUTH	423	25.5%	22.0%	32.2%	12.8%	7.6%	2.5
$\chi^2=13.735$ n.s., Cramer's V=0.053							

¹F = 2.428 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided; 4 = support; 5 = strongly support.

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

Section 4: Opinions on Management and Special Regulations

Opinions About Duck Bag Limits

Respondents were asked to indicate their opinions 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 (68.4%) felt the 6-duck bag limit was about right, with 2.9% indicating that it was too low, 15.9% too high, and 12.8% no opinion (Table 4-1). There was no significant difference among regions in opinion of the 6-duck bag limit. Statewide, 65.9% of respondents felt the 2-hen mallard bag limit was about right, compared to 4.4% too low, 16.1% too high, and 13.6% no opinion (Table 4-2). Larger proportions of respondents from northern Minnesota felt the 2-hen mallard limit was too low or had no opinion about the limit. Statewide, 64.8% of respondents felt the 3-wood duck bag limit was about right, compared to 10.9% who felt it was too low, 12.4% who thought it was too high, and 11.9% who had no opinion (Table 4-3). A greater proportion of respondents from the north region had no opinion on this limit.

Respondents were asked to rate 13 statements about bag limits on the scale 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. Respondents disagreed most strongly that “bag limits establish a goal for how many ducks to harvest to have a successful day, and agreed most strongly that “I think bag limits should be followed” (Tables 4-4 to 4-17). Respondents generally agreed that bag limits should be based on biological impacts, and generally disagreed that they should follow what was socially desirable. A greater proportion of respondents from the metropolitan region strongly agreed that “I think bag limits should be followed” (Table 4-15), “most hunters think bag limits represent the number of ducks that it is acceptable to bag” (Table 4-16), and “I think bag limits represent the number of ducks that it is acceptable to bag” (Table 4-17).

Likelihood of Hunting With Increased Price of Federal Waterfowl Stamp

Respondents were asked to indicate how likely they would be to hunt next year given the increase of the federal waterfowl stamp price from \$15 to \$25 (Table 4-18). Statewide, 73.5% said it was likely that they would hunt, with 52.1% saying very likely. On average, respondents from the central and north regions reported a slightly lower likelihood of hunting.

Waterfowl Management Strategies and Special Regulations

Respondents were asked to indicate their level of support for 10 management strategies on the scale 1 = strongly oppose, 2 = oppose, 3 = undecided, 4 = support, and 5 = strongly support (Tables 4-19 to 4-29). Respondents reported the most support for beginning shooting hours ½ hour before sunrise on opening day and the least support for restricting the use of motorized decoys for the first part of Minnesota’s waterfowl season (Table 4-19). Statewide, 81.5% of respondents supported beginning shooting hours one-half hour before sunrise on opening day, with only 9.3% opposing (Table 4-20). Respondents from the north region were slightly more supportive. Over half of respondents (53.1%) supported using a North, Central, and South duck zone during last year’s season, with 11% opposing (Table 4-21). Respondents from the southern region were most supportive of the zones. About one-third (31.0%) of respondents supported using a split season in the Central Duck Zone during last year’s waterfowl season (Table 4-22), and 28.2% supported using a split season in the South Duck Zone (Table 4-23). Statewide, 41.4% of respondents opposed and 38.2% supported ending shooting hours at 4 pm for the first part of the season (Table 4-24). About four in ten (40.3%) of respondents supported restrictions on open water hunting during the regular waterfowl season, with 26.7% opposed (Table 4-25). Respondents from the north

Section 4: Opinions on Management and Special Regulations

region reported less support. About half of respondents (50.6%) supported open water hunting on a few larger lakes or rivers during the regular waterfowl season, with 12.6% opposed and 36.8% neutral (4-26). There was no significant difference by region for this question. Less than one-third of respondents supported restricting the use of motorized decoys for the first part of Minnesota's waterfowl season, with 43.4% opposed (Table 4-27). There was no significant difference by region. About half of respondents supported two strategies related to goose management in the Intensive Harvest Zone; 47.2% supported having the August Canada Goose Conservation Season in the Intensive Harvest Zone (Table 4-28) and 53.7% supported having the 10 Canada goose bag limit in September in that zone (Table 4-29).

Respondents were asked about their support or opposition to eliminating the waterfowl stamp contest and pictorial stamp, and 43.5% opposed it with only 19.4% supporting the elimination of the stamp (Table 4-30). Respondents from the metropolitan region were more strongly opposed to eliminating the contest and pictorial stamp.

Respondents were asked whether they had hunted the four lakes that allowed hunters to hunt open water without concealing vegetation (Lake Pepin, Lake of the Woods, Mille Lacs Lake, and Lake Superior). Only 1.8% of respondents statewide had hunted in these areas (Table 4-31), and about one-third hunted without concealing vegetation (Table 4-32). These results suggest that 1,395 hunters hunted on the four lakes that allowed hunters to hunt open water without concealing vegetation, and 502 actually hunted without concealing vegetation.

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	1669	2.9%	68.4%	15.9%	12.8%
CENTRAL	412	1.7%	71.1%	14.8%	12.4%
METRO	415	3.4%	67.0%	17.1%	12.5%
NORTH	404	4.2%	66.6%	14.6%	14.6%
SOUTH	434	2.5%	68.7%	16.8%	12.0%
$\chi^2= 8.312$ n.s.					

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

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

Table 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	1673	4.4%	65.9%	16.1%	13.6%
CENTRAL	411	3.2%	71.8%	12.4%	12.7%
METRO	417	5.0%	62.8%	18.7%	13.4%
NORTH	407	6.1%	63.1%	15.0%	15.7%
SOUTH	433	3.2%	65.8%	18.2%	12.7%
$\chi^2= 17.871^*$, Cramer's V=0.060					

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

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

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	1671	10.9%	64.8%	12.4%	11.9%
CENTRAL	413	11.9%	67.3%	11.4%	9.4%
METRO	415	9.6%	67.0%	11.3%	12.0%
NORTH	406	11.8%	59.1%	12.8%	16.3%
SOUTH	432	10.4%	63.4%	15.7%	10.4%
$\chi^2= 17.700^*$, Cramer's V=0.060					

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-4: Mean statewide results: Perceptions of bag limits.

Item	N	Mean ^{1,2}
I think bag limits should be followed.	1618	4.6
Most hunters think bag limits should be followed.	1655	4.2
Bag limits should be based on biological impacts to the waterfowl resource.	1656	4.1
The only purpose of bag limits is to protect duck populations.	1661	3.9
Most hunters think bag limits represent the number of ducks that it is acceptable to bag	1659	3.7
I think bag limits represent the number of ducks that it is acceptable to bag	1645	3.7
Bag limits set standards for the number of ducks it is ethical for a hunter to bag.	1652	3.6
Bag limits help keep people from harvesting more ducks than they can use.	1659	3.5
Bag limits should be based solely on what is biologically possible.	1656	3.4
Bag limits help make sure everyone has a fair chance to bag some ducks.	1659	3.4
It is acceptable to reduce bag limits if that is what most hunters think is socially desirable.	1652	2.9
Bag limits should reflect what hunters feel is socially desirable.	1658	2.6
Bag limits establish a goal for how many ducks to harvest to have a successful trip.	1661	2.5

¹Grand mean=3.5, F=780.551***, $\eta^2=0.336$. 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 4-5: The only purpose of bag limits is to protect duck populations.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1661	1.4%	10.3%	14.4%	49.0%	24.9%	3.9
CENTRAL	409	0.5%	7.8%	14.2%	51.1%	26.4%	4.0
METRO	414	1.2%	12.1%	13.5%	48.3%	24.9%	3.8
NORTH	402	2.5%	10.4%	14.7%	47.5%	24.9%	3.8
SOUTH	431	1.9%	10.7%	16.0%	48.7%	22.7%	3.8
$\chi^2= 12.465$ n.s.							

¹ F = 2.120 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-6: Bag limits set standards for the number of ducks it is ethical for a hunter to bag.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1652	3.2%	11.0%	21.4%	51.0%	13.4%	3.6
CENTRAL	406	3.0%	10.6%	23.2%	53.2%	10.1%	3.6
METRO	410	4.1%	11.5%	19.5%	48.0%	16.8%	3.6
NORTH	402	3.0%	10.9%	22.4%	51.7%	11.9%	3.6
SOUTH	431	2.1%	10.9%	20.9%	52.2%	13.9%	3.6
$\chi^2 = 13.502$ n.s.							

¹ F = 0.587 n.s. 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: Bag limits should reflect what hunters feel is socially desirable.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1658	14.4%	34.2%	31.7%	16.3%	3.4%	2.6
CENTRAL	409	13.2%	32.3%	34.7%	17.6%	2.2%	2.6
METRO	414	17.4%	35.3%	29.5%	14.3%	3.6%	2.5
NORTH	401	13.5%	33.4%	32.4%	16.2%	4.5%	2.6
SOUTH	428	11.9%	36.4%	29.9%	18.2%	3.5%	2.6
$\chi^2 = 14.080$ n.s.							

¹ F = 1.659 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-8: Bag limits should be based solely on what is biologically possible.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1656	2.3%	18.8%	30.2%	35.6%	13.1%	3.4
CENTRAL	407	2.2%	17.2%	31.4%	39.3%	9.8%	3.4
METRO	412	2.7%	21.4%	26.7%	33.7%	15.5%	3.4
NORTH	401	2.0%	19.5%	28.7%	35.9%	14.0%	3.4
SOUTH	432	2.1%	15.7%	36.8%	32.6%	12.7%	3.4
$\chi^2 = 21.092^*$, Cramer's V=0.065							

¹ F = 0.070 n.s. 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 4-9: It is acceptable to reduce bag limits if that is what most hunters think is socially desirable.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1652	9.4%	27.4%	33.8%	24.5%	4.9%	2.9
CENTRAL	407	8.1%	24.8%	38.6%	23.8%	4.7%	2.9
METRO	409	12.0%	27.9%	30.3%	25.2%	4.6%	2.8
NORTH	401	9.5%	29.9%	32.2%	23.4%	5.0%	2.8
SOUTH	432	6.7%	27.5%	34.7%	25.5%	5.6%	3.0
$\chi^2 = 14.481$ n.s.							

¹ F = 1.477 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-10: Bag limits should be based on biological impacts to the waterfowl resource.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1656	0.3%	2.4%	14.2%	56.3%	26.6%	4.1
CENTRAL	405	0.5%	2.5%	17.3%	56.3%	23.5%	4.0
METRO	413	0.5%	2.2%	10.9%	54.2%	32.2%	4.2
NORTH	401	0.0%	3.5%	14.2%	57.9%	24.4%	4.0
SOUTH	434	0.2%	1.6%	15.7%	58.5%	24.0%	4.0
$\chi^2=20.675$ n.s.							

¹ F = 3.636*, $\eta=0.081$. 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 4-11: Bag limits help keep people from harvesting more ducks than they can use.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1659	4.6%	17.2%	19.8%	40.7%	17.7%	3.5
CENTRAL	406	5.4%	18.5%	19.5%	41.9%	14.8%	3.4
METRO	415	5.3%	16.4%	20.2%	37.3%	20.7%	3.5
NORTH	402	3.2%	16.9%	20.9%	41.3%	17.7%	3.5
SOUTH	432	3.5%	17.1%	18.1%	44.4%	16.9%	3.5
$\chi^2=12.272$ n.s.							

¹ F = 1.051 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-12: Bag limits help make sure everyone has a fair chance to bag some ducks.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1659	3.5%	17.1%	23.7%	43.9%	11.9%	3.4
CENTRAL	407	3.4%	17.0%	23.1%	46.9%	9.6%	3.4
METRO	413	3.6%	17.7%	22.5%	42.4%	13.8%	3.5
NORTH	403	3.7%	15.6%	26.3%	42.2%	12.2%	3.4
SOUTH	433	3.0%	17.8%	23.8%	43.9%	11.5%	3.4
$\chi^2 = 7.014$ n.s.							

¹ F = 0.053 n.s. 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 4-13: Bag limits establish a goal for how many ducks to harvest to have a successful trip.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1661	15.9%	38.9%	27.1%	15.6%	2.6%	2.5
CENTRAL	408	14.0%	38.2%	28.2%	17.4%	2.2%	2.6
METRO	415	17.8%	39.5%	25.5%	14.7%	2.4%	2.4
NORTH	402	15.4%	38.3%	28.1%	15.4%	2.7%	2.5
SOUTH	431	15.8%	39.4%	27.1%	14.4%	3.2%	2.5
$\chi^2 = 5.288$ n.s.							

¹ F = 0.879 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-14: Most hunters think bag limits should be followed.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1655	0.2%	1.8%	9.1%	57.0%	31.9%	4.2
CENTRAL	408	0.2%	2.0%	10.5%	56.4%	30.9%	4.2
METRO	412	0.5%	1.7%	6.8%	54.6%	36.4%	4.2
NORTH	400	0.0%	1.5%	11.5%	61.0%	26.0%	4.1
SOUTH	431	0.0%	2.3%	8.1%	57.5%	32.0%	4.2
$\chi^2 = 19.391$ n.s.							

¹ F = 2.769*, $\eta = 0.071$. 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 4-15: I think bag limits should be followed.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1618	0.2%	0.5%	4.9%	27.1%	67.3%	4.6
CENTRAL	397	0.3%	0.5%	5.0%	33.0%	61.2%	4.5
METRO	405	0.2%	0.2%	4.2%	19.8%	75.6%	4.7
NORTH	387	0.3%	0.5%	5.7%	32.0%	61.5%	4.5
SOUTH	425	0.2%	0.9%	5.2%	25.4%	68.2%	4.6
$\chi^2 = 27.848^{**}$, Cramer's V=0.076							

¹ F = 5.648**, $\eta = 0.102$. 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

Section 4: Opinions on Management and Special Regulations

Table 4-16: Most hunters think bag limits represent the number of ducks that it is acceptable to bag.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1659	1.2%	5.3%	26.2%	52.5%	14.7%	3.7
CENTRAL	408	0.5%	5.1%	26.0%	56.6%	11.8%	3.7
METRO	414	2.2%	5.1%	23.9%	49.5%	19.3%	3.8
NORTH	402	1.2%	6.0%	27.6%	52.2%	12.9%	3.7
SOUTH	430	0.5%	5.1%	29.3%	52.1%	13.0%	3.7
$\chi^2= 22.575^*$, Cramer's V=0.067							

¹ F = 0.934 n.s. 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 4-17: I think bag limits represent the number of ducks that it is acceptable to bag.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1645	1.8%	7.5%	24.1%	47.5%	19.1%	3.7
CENTRAL	406	1.2%	5.7%	27.6%	52.0%	13.5%	3.7
METRO	409	2.4%	8.6%	21.3%	42.8%	24.9%	3.8
NORTH	400	2.0%	8.5%	25.3%	47.3%	17.0%	3.7
SOUTH	426	1.4%	7.3%	22.3%	49.5%	19.5%	3.8
$\chi^2= 28.239^{**}$, Cramer's V=0.076							

¹ F = 1.378 n.s. 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

Section 4: Opinions on Management and Special Regulations

Table 4-18: The price of a Federal Waterfowl Stamp likely will increase from \$15 to \$25 next year. Given this increase in the stamp price how likely is it that you will hunt next year?

Regions	N	Very unlikely	Somewhat unlikely	Slightly unlikely	Undecided	Slightly likely	Somewhat likely	Very likely	Mean ¹
Statewide ²	1639	5.9%	5.3%	4.7%	10.6%	6.9%	14.5%	52.1%	5.6
CENTRAL	404	7.9%	5.7%	4.7%	11.4%	5.9%	16.1%	48.3%	5.4
METRO	408	4.7%	4.4%	3.9%	9.1%	6.9%	12.7%	58.3%	5.8
NORTH	397	5.8%	7.3%	6.0%	11.6%	7.3%	14.9%	47.1%	5.4
SOUTH	426	5.2%	4.0%	4.5%	11.0%	8.2%	14.6%	52.6%	5.7
$\chi^2 = 22.199$ n.s.									

¹ F=4.285**, $\eta^2=0.088$. Mean is based on the scale: 1 = very unlikely, 2 = somewhat unlikely, 3 = slightly unlikely, 4= undecided, 5 = slightly likely, 6 = somewhat likely, 7= very likely.

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 4-19: Mean statewide results: Special regulations.

Regulation	N	Mean ^{1,2}
Beginning shooting hours ½ hour before sunrise on opening day	1658	4.2
Using a North, Central, and South duck zone during last year's waterfowl season	1546	3.5
Allowing open water hunting on a few (5-10) larger lakes or rivers during the regular waterfowl season	1568	3.5
Using a 10 Canada goose daily bag limit in September in the Intensive Harvest Zone	1560	3.5
Having the August Canada Goose Conservation Season in the Intensive Harvest Zone	1514	3.4
Restrictions on open water hunting (must be in concealing vegetation) during the regular waterfowl season	1600	3.2
Using a split season in the Central Duck Zone during last year's waterfowl season	1492	3.1
Using a split season in the South Duck Zone during last year's waterfowl season	1421	3.0
Ending shooting hours at 4 pm for the first part of Minnesota's waterfowl season	1637	2.9
Restricting the use of motorized decoys for the first part of Minnesota's waterfowl season	1631	2.8

¹ Grand mean=3.3, F=192.601***, $\eta^2=0.135$. Mean based on scale: 1=strongly oppose, 2=oppose, 3=neither, 4=support, 5=strongly support.

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

Section 4: Opinions on Management and Special Regulations

Table 4-20: Beginning shooting hours ½ hour before sunrise on opening day.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1658	2.9%	6.4%	9.2%	33.0%	48.5%	4.2
CENTRAL	410	2.0%	4.6%	9.0%	35.1%	49.3%	4.3
METRO	412	3.9%	8.0%	9.2%	32.8%	46.1%	4.1
NORTH	401	1.7%	6.5%	9.2%	29.7%	52.9%	4.3
SOUTH	431	3.9%	6.0%	9.5%	33.9%	46.6%	4.1
$\chi^2= 14.366$ n.s.							

¹ F = 2.666*, $\eta = 0.069$ 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 4-21: Using a North, Central, and South duck zone during last year's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1546	4.0%	7.0%	35.8%	38.3%	14.8%	3.5
CENTRAL	382	2.6%	9.4%	34.3%	40.8%	12.8%	3.5
METRO	386	5.2%	6.2%	34.5%	39.4%	14.8%	3.5
NORTH	365	3.8%	6.6%	44.4%	31.8%	13.4%	3.4
SOUTH	410	4.4%	5.4%	30.7%	39.8%	19.8%	3.7
$\chi^2= 32.302^{**}$, Cramer's V=0.084							

¹ F = 3.127*, $\eta = 0.078$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-22: Using a split season in the Central Duck Zone during last year's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1492	8.2%	17.5%	43.2%	22.5%	8.5%	3.1
CENTRAL	385	7.5%	21.8%	35.1%	27.5%	8.1%	3.1
METRO	376	9.0%	17.6%	40.4%	22.9%	10.1%	3.1
NORTH	341	7.0%	13.2%	56.6%	17.0%	6.2%	3.0
SOUTH	376	9.3%	14.9%	47.1%	19.7%	9.0%	3.0
$\chi^2= 45.651^{***}$, Cramer's V=0.101							

¹ F = 0.207 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Table 4-23: 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:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1421	9.2%	14.5%	48.1%	19.7%	8.5%	3.0
CENTRAL	332	6.0%	15.7%	54.8%	17.8%	5.7%	3.0
METRO	364	10.2%	14.0%	45.1%	20.3%	10.4%	3.1
NORTH	322	5.9%	11.2%	64.6%	13.7%	4.7%	3.0
SOUTH	409	15.2%	17.1%	27.1%	27.6%	13.0%	3.1
$\chi^2= 125.334^{***}$, Cramer's V=0.171							

¹ F = 0.368 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-24: 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:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1637	15.7%	25.7%	20.4%	28.1%	10.1%	2.9
CENTRAL	406	12.6%	30.0%	20.7%	26.8%	9.9%	2.9
METRO	407	15.5%	24.6%	20.4%	30.7%	8.8%	2.9
NORTH	395	20.5%	24.6%	17.7%	25.8%	11.4%	2.8
SOUTH	424	15.3%	22.2%	23.3%	27.8%	11.3%	3.0
$\chi^2 = 20.536$ n.s.							

¹ F = 0.952 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Table 4-25: 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:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1600	8.9%	17.8%	32.9%	28.7%	11.6%	3.2
CENTRAL	396	7.8%	17.7%	37.1%	27.0%	10.4%	3.1
METRO	398	9.0%	16.6%	28.6%	31.9%	13.8%	3.2
NORTH	385	10.6%	21.0%	34.8%	25.7%	7.8%	3.0
SOUTH	416	8.2%	16.6%	32.0%	29.1%	14.2%	3.2
$\chi^2 = 22.277^*$, Cramer's V=0.068							

¹ F = 4.645**, $\eta = 0.093$. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-26: 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:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1568	3.6%	9.0%	36.8%	36.4%	14.2%	3.5
CENTRAL	392	2.3%	9.9%	36.7%	37.2%	13.8%	3.5
METRO	390	4.9%	7.9%	34.4%	37.7%	15.1%	3.5
NORTH	376	3.2%	8.0%	37.8%	37.2%	13.8%	3.5
SOUTH	404	3.7%	10.6%	40.6%	31.4%	13.6%	3.4
$\chi^2 = 11.801$ n.s.							

¹ F = 1.026 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Table 4-27: Restricting the use of motorized decoys for the first part of Minnesota's waterfowl season.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1631	17.6%	25.8%	28.1%	18.9%	9.7%	2.8
CENTRAL	404	17.3%	27.0%	28.7%	18.6%	8.4%	2.7
METRO	407	18.4%	23.3%	27.8%	20.4%	10.1%	2.8
NORTH	392	16.6%	27.8%	27.6%	17.1%	11.0%	2.8
SOUTH	422	17.5%	25.8%	28.4%	18.7%	9.5%	2.8
$\chi^2 = 4.862$ n.s.							

¹ F = 0.206 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-28: Having the August Canada Goose Conservation Season in the Intensive Harvest Zone.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1514	8.5%	6.5%	37.8%	30.7%	16.5%	3.4
CENTRAL	381	13.1%	6.8%	34.9%	27.8%	17.3%	3.3
METRO	370	6.2%	3.5%	38.9%	33.8%	17.6%	3.5
NORTH	359	6.4%	8.6%	37.0%	32.0%	15.9%	3.4
SOUTH	404	7.9%	8.7%	41.3%	28.0%	14.1%	3.3
$\chi^2=30.891^{**}$, Cramer's V=0.082							

¹ F = 3.689*, $\eta = 0.085$. 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 4-29: Using a 10 Canada goose daily bag limit in September in the Intensive Harvest Zone.

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1560	6.2%	7.6%	32.5%	33.5%	20.2%	3.5
CENTRAL	393	9.4%	7.9%	30.8%	29.8%	22.1%	3.5
METRO	380	4.5%	5.8%	33.4%	36.3%	20.0%	3.6
NORTH	373	4.6%	9.4%	31.1%	33.8%	21.2%	3.6
SOUTH	414	6.3%	8.5%	35.0%	33.8%	16.4%	3.5
$\chi^2=21.169^*$, Cramer's V=0.067							

¹ F = 2.011 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-30: Currently, waterfowl hunters need to purchase a waterfowl stamp validation, but do not need to purchase the actual stamp which is available for an extra charge. The DNR still holds an annual waterfowl stamp contest and prints a small number of stamps. Would you support or oppose eliminating the waterfowl stamp contest and pictorial stamp?

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1670	20.1%	23.4%	37.1%	12.6%	6.8%	2.6
CENTRAL	411	15.3%	23.1%	40.6%	14.4%	6.6%	2.7
METRO	416	24.3%	27.2%	31.7%	11.3%	5.5%	2.5
NORTH	406	18.7%	21.2%	41.4%	10.3%	8.4%	2.7
SOUTH	432	21.5%	19.7%	36.1%	14.8%	7.9%	2.7
$\chi^2 = 29.292^{**}$, Cramer's V=0.077							

¹ F = 4.574**, $\eta = 0.091$. 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 4-31: Last fall (2014), waterfowl hunters could hunt open water (not restricted to concealing vegetation) on Lake Pepin, Lake of the Woods, Mille Lacs Lake, and/or Lake Superior. Did you hunt in any of these places during the 2014 waterfowl season?

Residence of hunter	n	% yes
Statewide ¹	1670	1.8%
CENTRAL	410	0.7%
METRO	417	1.9%
NORTH	405	3.2%
SOUTH	434	1.4%
		$\chi^2 = 7.660$ n.s.

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

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

Section 4: Opinions on Management and Special Regulations

Table 4-32: If you hunted on Lake Pepin, Lake of the Woods, Mille Lacs Lake, and/or Lake Superior last fall, did you hunt in open water (that is you were at anchor and not located in concealing vegetation while hunting on these areas)?

Residence of hunter	n	% yes
Statewide ¹	27	36.0%
CENTRAL	2	0.0%
METRO	7	57.1%
NORTH	13	15.4%
SOUTH	6	66.7%
		$\chi^2= 7.355$ n.s.

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

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

Section 5: Opinions on Season Dates and Zones

Most Important Area of State for Duck Hunting

Respondents were asked to select the area of the state where season dates were most important to them using the map shown. The largest proportion (44.2%) selected the central region, followed by north (24.9%), south (19.8%), and southeast (3.7%). Another 7.5% 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 three split seasons, or no preference for a 60-day duck season in 2015. Statewide, 42.3% preferred a straight season (Saturday Sept. 26 to Tuesday, Nov. 24), 23.2% preferred a split season (Saturday Sept. 26 to Sunday Oct. 4, close 5 days and reopen Saturday Oct. 10 to Sunday Nov. 29), 7.4% preferred a split season (Saturday Sept. 26 to Monday Sept 28, close 11 days and reopen Saturday Oct. 10 to Saturday Dec. 5), 8.0% preferred a split season (Saturday Sept. 26 to Sunday Oct. 4, close 12 days and reopen Saturday Oct. 17 to Saturday Dec. 6), and 19.1% had no preference (Table 5-2). A substantially greater proportion of respondents from the North region preferred a straight season (70.0% compared to 28–38% for other regions). A substantially greater proportion of respondents from the South region preferred the split season with the later season closing dates (about 20% compared to 2-10% for other regions).



Splitting the Canada Goose Season

The Canada goose season extends for 107 days in each of the 3 waterfowl zones. In 2014, the Canada goose season was closed when the duck season was also closed for 5 days in the Central Zone and 11 days in the South zone. Respondents were asked for their preference for Canada goose season dates, either split to coincide with the duck season or open during splits in the duck season. Statewide, respondents were fairly split between the options: 28.3% preferred closing the goose season during splits, 36.6% preferred keeping the goose season open, and 35.2% had no preference (Table 5-3). A greater proportions of respondents from the south region preferred keeping the goose season open and a greater proportion of respondents from the north region had no preference.

Comparison of 3-Zone Structure to No Zones

Study participants were asked to compare their waterfowl hunting experience in Minnesota under the current 3-zone structure to their experiences when no zones were used. About two-thirds of respondents said the 3-zone experience was neither better or worse (66.6%), while 14.7% said it was better and 18.6% said it was worse (Table 5-4).

Section 5: Opinions on Season Dates and Zones

Restricted Shooting Hours for Different Number of Days in Different Regions

The Minnesota DNR has used restricted shooting hours that end at 4 p.m. in the early portion of duck season since 1973. In 2014, the restriction lasted a different number of days in each duck zone (North Zone=14 days; Central Zone=9 days; South zone=3 days) due to differences in season dates. Study participants were asked if they supported or opposed this restriction. Statewide, 41.8% of respondents were neutral, with 21.5% supporting and 36.8% opposing (Table 5-5). Respondents from the north region were more opposed.

Section 5: Opinions on Season Dates and 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 ¹	1668	24.9%	44.2%	19.8%	3.7%	7.5%
CENTRAL	408	8.3%	80.1%	3.2%	0.0%	8.3%
METRO	415	15.9%	51.6%	19.3%	3.1%	10.1%
NORTH	407	78.4%	16.5%	0.7%	0.2%	4.2%
SOUTH	435	2.3%	6.9%	70.6%	14.9%	5.3%
$\chi^2= 1667.472^{***}$, Cramer's V=0.578						

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 2015

Residence of hunter	n	% of hunters indicating that they prefer:				
		Saturday Sept. 26 to Tuesday Nov. 24 (<i>same season as used last year in <u>North Duck Zone</u></i>)	Saturday Sept. 26 to Sunday Oct. 4, close 5 days, reopen Saturday Oct. 10 to Sunday Nov. 29 (<i>same season as used last year in <u>Central Duck Zone</u></i>)	Saturday Sept. 26 to Monday Sept. 28, close 11 days, reopen Saturday Oct. 10 to Saturday, Dec. 5 (<i>same season as used last year in <u>South Duck Zone</u></i>)	Saturday Sept. 26 to Sunday Oct. 4, close 12 days, reopen Saturday Oct. 17 to Sunday, Dec. 6 (<i>later split; same season as used in 2013 in <u>South Duck Zone</u></i>)	No preference
Statewide ¹	1649	42.3%	23.2%	7.4%	8.0%	19.1%
CENTRAL	403	34.2%	37.5%	4.0%	3.0%	21.3%
METRO	409	38.6%	24.4%	6.1%	9.8%	21.0%
NORTH	400	70.0%	12.3%	2.5%	1.8%	13.5%
SOUTH	437	28.4%	11.7%	20.8%	20.1%	19.0%
$\chi^2= 401.150^{***}$, Cramer's V=0.285						

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 Season Dates and Zones

Table 5-3: The Canada goose season extends for 107 days in each of the 3 waterfowl zones. Last year, the Canada goose season was closed when the duck season was also closed for 5 days in the Central Zone and 11 days in the South zone. What is your preference for Canada goose season dates?

Residence of hunter	n	% of hunters indicating:		
		Keep <u>goose season closed</u> during any splits (closed periods) in duck season	Keep <u>goose season open</u> during any splits (closed periods) in duck season	No preference
Statewide ¹	1658	28.3%	36.6%	35.2%
CENTRAL	405	33.1%	36.0%	30.9%
METRO	414	30.4%	35.5%	34.1%
NORTH	402	17.4%	32.6%	50.0%
SOUTH	434	29.7%	44.2%	26.0%
$\chi^2 = 67.710^{***}$, Cramer's V=0.143				

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: Minnesota first used 3 zones for duck hunting in 2012. How would you compare your duck hunting experience in Minnesota under the current 3-zone structure to your experiences when no zones were used? Would you say that your duck hunting experience under the 3-zone structure has been...

Regions	N	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Mean ¹
Statewide ²	1471	4.1%	6.4%	8.1%	66.6%	8.1%	4.7%	1.9%	3.9
CENTRAL	364	3.3%	6.9%	8.5%	69.2%	5.8%	4.7%	1.6%	3.9
METRO	366	4.9%	6.8%	9.3%	61.5%	10.4%	5.5%	1.6%	3.9
NORTH	348	3.4%	3.7%	4.9%	77.9%	5.2%	3.2%	1.7%	3.9
SOUTH	391	4.9%	7.9%	9.0%	58.8%	11.3%	5.4%	2.8%	3.9
$\chi^2 = 42.665^{**}$, Cramer's V= 0.098									

¹ F= 0.235 n.s. Mean is based on the scale: 1 = much worse, 2 = somewhat worse, 3 = slightly worse, 4= neither, 5 = slightly better, 6 = somewhat better, 7= much better.

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 5: Opinions on Season Dates and Zones

Table 5-5: The Minnesota DNR has used restricted shooting hours that end at 4 p.m. in the early portion of duck season since 1973. Last year, the restriction lasted a different number of days in each duck zone (North Zone=14 days; Central Zone=9 days; South zone=3 days) due to differences in season dates. Do you support or oppose this restriction?

Residence of hunter	n	% of hunters indicating that they _____ with this management strategy:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1664	13.7%	23.1%	41.8%	18.1%	3.4%	2.7
CENTRAL	407	13.5%	25.1%	42.3%	16.2%	2.9%	2.7
METRO	417	13.7%	20.9%	39.8%	22.1%	3.6%	2.8
NORTH	399	16.5%	26.1%	41.6%	12.8%	3.0%	2.6
SOUTH	437	10.8%	20.4%	44.9%	19.9%	4.1%	2.9
$\chi^2=23.675^*$, Cramer's V=0.069							

¹ F = 5.733**, $\eta = 0.101$. 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 6: Opinions on Teal Management

Special September Teal-Only Season

Respondents responded to four questions about a special September Teal-Only Season. First, respondents rated their support for a special September teal season. Nearly one-third of respondents (31.8%) supported a season (Table 6-1), while 41.2% opposed. Respondents from the central and north regions reported lower levels of support. Next, respondents indicated their preference for the timing of a teal season. Half of respondents preferred no teal season, with 35.5% preferring a 7-day season starting September 5 and 14.6% preferring a 7-day season starting September 1 (Table 6-2). A greater proportion of respondents from the central and north regions preferred no teal season. Respondents were then asked to indicate how likely they would be to hunt in an early teal-only season. Over one-third (35.8%) indicated that they would be likely to hunt a season (Table 6-3), while 43.9% were unlikely. Respondents from the central and north regions reported a lower likelihood of hunting. Finally, respondents were asked to indicate how adopting a special September teal-only season would affect their waterfowl hunting in Minnesota. Less than one-fifth of respondents (19.4%) indicated that a season would improve their waterfowl hunting, while 37.7% indicated that it would damage it (Table 6-4).

Two Blue-Winged Teal Bonus Bag Limit

Respondents rated their support for a two blue-winged teal bonus bag limit during the first 16 days of the regular duck season in Minnesota. More than 4 in 10 respondents (42.5%) supported this bonus bag limit, while 18.7% opposed it (Table 6-5).

Beliefs About Special Seasons and Bag Limits for Teal

Study participants were asked to rate their agreement with 12 beliefs about possible special teal seasons (Tables 6-6 to 6-18). Respondents most strongly agreed that: (a) I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal ($M = 3.9$) and (b) A special September teal season would disturb waterfowl before the regular season ($M = 3.8$) (Table 6-6). A majority of respondents *agreed* that: (a) A special September teal season would disturb waterfowl before the regular season (65.8%, Table 6-7); (b) I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled (52.9%, Table 6-8); and (c) I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal (69.8%, Table 6-15). The majority of respondents *disagreed* that: I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day (58.0%, Table 6-9). Because of large proportions of individuals who were neutral, other items did not have a majority in agreement or disagreement. Differences in beliefs by region were slight.

Section 6: Opinions on Teal Management

Table 6-1: What is your level of support for a special September teal-only season in Minnesota?

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1666	26.7%	14.5%	26.9%	18.4%	13.4%	2.8
CENTRAL	405	29.9%	17.0%	25.4%	17.5%	10.1%	2.6
METRO	417	26.6%	12.5%	24.7%	19.2%	17.0%	2.9
NORTH	401	24.9%	15.7%	31.9%	15.0%	12.5%	2.7
SOUTH	441	23.8%	13.2%	27.4%	22.4%	13.2%	2.9
$\chi^2 = 26.278^*$, Cramer's V=0.073							

¹ F = 3.675*, $\eta = 0.081$. 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 6-2: Preference for timing of teal season.

Residence of hunter	n	% of hunters indicating that they prefer:		
		Tuesday Sept. 1 to Monday, Sept. 7, 2015 (7 days)	Saturday Sept. 5-Friday, Sept. 11 (7 days)	No teal season
Statewide ¹	1596	14.6%	35.5%	50.0%
CENTRAL	391	14.3%	30.4%	55.2%
METRO	400	14.5%	37.8%	47.8%
NORTH	375	15.2%	32.5%	52.3%
SOUTH	428	14.3%	42.5%	43.2%
$\chi^2 = 17.007^{**}$, Cramer's V=0.073				

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 6-3: If a special September teal-only season is made available, how likely are you to hunt in this early teal-only season?

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Extremely unlikely	Somewhat unlikely	Undecided	Somewhat likely	Extremely likely	
Statewide ²	1657	29.3%	14.6%	20.3%	20.3%	15.5%	2.8
CENTRAL	403	30.5%	14.6%	20.3%	20.1%	14.4%	2.7
METRO	415	28.9%	14.5%	20.7%	19.5%	16.4%	2.8
NORTH	398	33.4%	15.8%	19.6%	19.1%	12.1%	2.6
SOUTH	439	23.5%	13.4%	20.0%	23.2%	19.8%	3.0
$\chi^2 = 19.440$ n.s.							

¹ F = 6.272***, $\eta = 0.106$. 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 6: Opinions on Teal Management

Table 6-4: How would Minnesota adopting a special September teal-only season affect your waterfowl-hunting in Minnesota?

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Greatly damage	Somewhat damage	No change	Somewhat improve	Greatly improve	
Statewide ²	1651	16.4%	21.3%	42.9%	13.9%	5.5%	2.7
CENTRAL	402	19.9%	23.1%	39.6%	12.9%	4.5%	2.6
METRO	413	14.8%	22.0%	40.0%	16.5%	6.8%	2.8
NORTH	396	15.9%	19.7%	49.5%	10.9%	4.0%	2.7
SOUTH	439	14.8%	18.9%	45.6%	14.1%	6.6%	2.8
$\chi^2 = 22.433^*$, Cramer's V=0.067							

¹ F = 3.333*, $\eta = 0.078$. 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 6-5: What is your level of support for 2 blue-winged teal bonus bag limit during the first 16 days of the regular duck season in Minnesota?

Residence of hunter	n	% of hunters indicating:					Mean ¹
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Statewide ²	1654	9.5%	9.2%	38.8%	28.8%	13.7%	3.3
CENTRAL	403	10.7%	10.4%	36.7%	29.3%	12.9%	3.2
METRO	411	9.7%	8.0%	39.9%	28.0%	14.4%	3.3
NORTH	400	8.3%	9.0%	41.8%	27.8%	13.3%	3.3
SOUTH	440	8.6%	9.8%	36.6%	30.9%	14.1%	3.3
$\chi^2 = 6.355$ n.s.							

¹ F = 0.451 n.s. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.

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

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

Section 6: Opinions on Teal Management

Table 6-6: Mean statewide results: Perceptions about a possible special teal season.

Item	N	Mean ^{1,2}
I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal.	1561	3.9
A special September teal season would disturb waterfowl before the regular season.	1552	3.8
I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled.	1540	3.5
I would prefer 2 bonus blue-winged teal in the regular duck season instead of a September teal season.	1548	3.4
An early teal season would allow hunters to harvest more ducks.	1524	3.4
I am concerned about having a September teal season because the number of breeding teal in Minnesota is lower than long-term averages.	1436	3.2
I am concerned about having a September teal season because teal nest in Minnesota.	1508	3.1
The 2 bird bonus blue-winged teal limit would complicate regulations.	1542	3.0
Minnesota should have a September teal season because the continental blue-winged teal population can sustain a higher harvest.	1474	2.8
I am concerned about having a September teal season because I might shoot ducks that are not teal.	1559	2.7
Minnesota should have a September teal season because teal seasons are offered in other states.	1544	2.6
I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day.	1550	2.4

¹Grand mean=3.1, F=246.713***, $\eta^2=0.159$. 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 6-7: A special September teal season would disturb waterfowl before the regular season.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1552	3.8%	9.9%	20.5%	34.7%	31.1%	3.8
CENTRAL	390	3.6%	8.2%	17.2%	36.2%	34.9%	3.9
METRO	384	4.2%	11.2%	21.1%	33.9%	29.7%	3.7
NORTH	361	2.5%	7.8%	23.3%	34.9%	31.6%	3.9
SOUTH	414	5.1%	12.6%	21.7%	33.6%	27.1%	3.6
$\chi^2= 18.211$ n.s.							

¹ F = 4.341**, $\eta = 0.091$. 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

Section 6: Opinions on Teal Management

Table 6-8: I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1540	7.1%	10.4%	29.6%	26.2%	26.7%	3.5
CENTRAL	388	7.0%	10.6%	29.6%	25.0%	27.8%	3.6
METRO	378	7.9%	12.7%	28.6%	25.9%	24.9%	3.5
NORTH	360	5.0%	7.8%	30.8%	27.8%	28.6%	3.7
SOUTH	414	8.2%	9.2%	30.0%	26.6%	26.1%	3.5
$\chi^2 = 10.352$ n.s.							

¹ F = 1.862 n.s. 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 6-9: I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1550	30.4%	27.6%	23.1%	10.3%	8.7%	2.4
CENTRAL	389	31.4%	28.0%	22.4%	11.8%	6.4%	2.3
METRO	381	29.1%	26.8%	20.7%	11.3%	12.1%	2.5
NORTH	367	31.6%	27.2%	27.5%	8.2%	5.4%	2.3
SOUTH	412	29.6%	28.6%	23.3%	8.5%	10.0%	2.4
$\chi^2 = 21.661^*$, Cramer's V=0.068							

¹ F = 2.139 n.s. 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

Section 6: Opinions on Teal Management

Table 6-10: I am concerned about having a September teal season because teal nest in Minnesota.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1508	6.5%	17.8%	47.3%	18.9%	9.5%	3.1
CENTRAL	384	7.6%	18.5%	45.1%	19.0%	9.9%	3.1
METRO	366	7.7%	18.3%	44.5%	19.9%	9.6%	3.1
NORTH	350	4.0%	16.0%	53.4%	17.7%	8.9%	3.1
SOUTH	409	5.6%	18.1%	48.9%	18.1%	9.3%	3.1
$\chi^2 = 10.755$ n.s.							

¹ F = 0.300 n.s. 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 6-11: Minnesota should have a September teal season because teal seasons are offered in other states.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1544	19.4%	24.1%	37.8%	14.4%	4.3%	2.6
CENTRAL	392	19.4%	25.8%	39.0%	11.2%	4.6%	2.6
METRO	377	19.6%	22.5%	37.1%	17.0%	3.7%	2.6
NORTH	362	21.0%	27.3%	34.0%	13.8%	3.9%	2.5
SOUTH	412	17.0%	20.4%	41.5%	15.8%	5.3%	2.7
$\chi^2 = 16.120$ n.s.							

¹ F = 2.557 n.s. 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

Section 6: Opinions on Teal Management

Table 6-12: Minnesota should have a September teal season because the continental blue-winged teal population can sustain a higher harvest.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1474	13.6%	17.4%	47.4%	18.1%	3.6%	2.8
CENTRAL	377	15.6%	18.8%	46.7%	17.0%	1.9%	2.7
METRO	354	13.0%	15.5%	47.2%	19.5%	4.8%	2.9
NORTH	349	13.5%	20.1%	46.4%	16.3%	3.7%	2.8
SOUTH	396	11.4%	15.2%	50.0%	19.4%	4.0%	2.9
$\chi^2 = 13.575$ n.s.							

¹ F = 3.092*, $\eta = 0.079$. 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 6-13: I am concerned about having a September teal season because the number of breeding teal in Minnesota is lower than long-term averages.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1436	3.0%	9.9%	58.9%	20.2%	8.0%	3.2
CENTRAL	370	2.7%	8.4%	60.5%	20.5%	7.8%	3.2
METRO	343	4.4%	11.1%	56.6%	20.1%	7.9%	3.2
NORTH	338	2.1%	9.2%	61.2%	20.1%	7.4%	3.2
SOUTH	387	2.3%	11.1%	57.4%	19.9%	9.3%	3.2
$\chi^2 = 7.943$ n.s.							

¹ F = 0.498 n.s. 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

Section 6: Opinions on Teal Management

Table 6-14: I would prefer 2 bonus blue-winged teal in the regular duck season instead of a September teal season.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1548	6.7%	11.0%	32.7%	30.3%	19.4%	3.4
CENTRAL	388	6.4%	13.4%	30.4%	29.1%	20.6%	3.4
METRO	381	6.8%	11.3%	33.1%	29.7%	19.2%	3.4
NORTH	363	6.6%	8.3%	33.3%	34.2%	17.6%	3.5
SOUTH	415	6.7%	9.6%	34.9%	28.7%	20.0%	3.5
$\chi^2 = 9.902$ n.s.							

¹ F = 0.134 n.s. 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 6-15: I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1561	2.3%	6.3%	21.6%	36.4%	33.4%	3.9
CENTRAL	392	2.3%	4.6%	20.7%	37.2%	35.2%	4.0
METRO	383	3.4%	7.0%	21.9%	36.0%	31.6%	3.9
NORTH	366	1.1%	6.0%	23.8%	35.2%	33.9%	3.9
SOUTH	420	1.7%	8.1%	19.8%	37.1%	33.3%	3.9
$\chi^2 = 12.096$ n.s.							

¹ F = 1.182 n.s. 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

Section 6: Opinions on Teal Management

Table 6-16: I am concerned about having a September teal season because I might shoot ducks that are not teal.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1559	19.3%	24.4%	28.5%	19.4%	8.3%	2.7
CENTRAL	392	20.4%	24.7%	29.3%	18.9%	6.6%	2.7
METRO	383	19.3%	24.0%	25.6%	20.9%	10.2%	2.8
NORTH	365	17.3%	23.3%	32.3%	18.9%	8.2%	2.8
SOUTH	418	19.9%	25.8%	28.2%	18.2%	7.9%	2.7
$\chi^2 = 8.592$ n.s.							

¹ F = 1.006 n.s. 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 6-17: An early teal season would allow hunters to harvest more ducks.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1524	3.7%	9.9%	39.0%	39.3%	8.1%	3.4
CENTRAL	386	4.1%	13.2%	37.8%	37.6%	7.3%	3.3
METRO	368	2.7%	7.3%	37.8%	43.2%	9.0%	3.5
NORTH	360	4.4%	9.7%	40.3%	36.9%	8.6%	3.4
SOUTH	413	3.9%	9.4%	41.4%	37.8%	7.5%	3.4
$\chi^2 = 12.819$ n.s.							

¹ F = 2.636*, $\eta = 0.072$. 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

Section 6: Opinions on Teal Management

Table 6-18: The 2 bird bonus blue-winged teal limit would complicate regulations.

Residence of hunter	n	% of hunters indicating that they _____ with this statement:					Mean ¹
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Statewide ²	1542	10.8%	22.4%	34.8%	22.3%	9.6%	3.0
CENTRAL	387	10.1%	21.2%	35.7%	20.2%	12.9%	3.0
METRO	377	12.2%	22.8%	32.9%	25.2%	6.9%	2.9
NORTH	364	9.6%	25.3%	35.7%	19.5%	9.9%	2.9
SOUTH	414	10.6%	20.5%	36.0%	23.9%	8.9%	3.0
$\chi^2 = 15.767$ n.s.							

¹ F = 0.984 n.s. 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

Section 7: Motivations for and Importance of Waterfowl Hunting

Attitudes about Bagging Waterfowl

Respondents were asked to rate 11 items related to bagging waterfowl on the scale 1 (strongly disagree) to 5 (strongly agree) (Tables 7-1 to 7-12). Respondents agreed most strongly that: a waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged ($M = 3.7$) and disagreed most strongly that: A full bag limit is the best indicator of a good waterfowl hunting trip ($M = 2.5$) (Table 7-1). A majority of respondents agreed with only one of the 11 items: a waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged (68.3%, Table 7-12). A majority of respondents disagreed that: (a) I must bag waterfowl for the waterfowl hunting trip to be enjoyable (56.8%, Table 7-7), and (b) A full bag limit is the best indicator of a good waterfowl hunting trip (57.3%, Table 7-8). Other items did not have a majority in agreement or disagreement.

Importance and Performance Related to Bagging Waterfowl

Respondents were asked to report how important 15 aspects of bagging waterfowl hunting were to them using the scale: 1 = not at all important to 5 = extremely important, then rate how much these 15 experiences happened during the 2014 Minnesota waterfowl season.

Results for importance of experiences are presented in Tables 7-13 to 7-28. The most important experiences were: seeing ducks in the field, seeing geese in the field, attracting ducks with decoys (Table 7-13). The least important experiences were: bagging a lot of geese over the season, bagging my daily limit, and bagging diving ducks (Table 7-13). Over two-thirds of respondents felt that: (a) seeing ducks in the field (79.9%, Table 7-14), (b) seeing geese in the field (67.3%, Table 7-14), and (c) attracting ducks with decoys (68.0%, Table 7-16) were very or extremely important. Around half of respondents felt that: (a) attracting geese with decoys (56.6%, Table 7-17), (b) calling ducks in (57.3%, Table 7-18), (c) calling geese in (51.5%, Table 7-19), and (d) bagging at least one duck during a day in the field (48.9%, Table 7-21) were very or extremely important. About four in ten respondents felt that: (a) bagging drakes (40.4%, Table 7-22) and (b) bagging mallards (43.3%, Table 7-27) were very or extremely important. About one-third of respondents rated: (a) bagging a variety of different duck species (32.1%, Table 7-25) or (b) bagging teal and wood ducks (35.9%, Table 7-28) very or extremely important. Less than one-fourth of respondents rated: (a) bagging my daily limit (12.3%, Table 7-20), (b) bagging a lot of ducks over the season (17.9%, Table 7-23), (c) bagging a lot of geese over the season (15.9%, Table 7-24), or (d) bagging diving ducks (21.4%, Table 7-26).

An exploratory factor analysis of the importance of aspects of bagging waterfowl found four factors: (a) seeing ducks and geese ($M = 3.9$), (b) attracting waterfowl with decoys and calls ($M = 3.6$), (c) bagging a lot of waterfowl ($M = 2.4$), and (d) specialized aspects of bagging waterfowl ($M = 3.0$) (Table 7-29).

Results for performance on experiences during the 2014 season are presented in Tables 7-30 to 7-45. None of the experiences were rated as happening largely or very much. The most frequently occurring experiences were: (a) Bagging at least one duck during a day in the field ($M = 2.9$, Table 7-38); (b) Seeing ducks in the field ($M = 2.8$, Table 7-31); (c) Attracting ducks with decoys ($M = 2.8$, Table 7-33); (d) Seeing geese in the field ($M = 2.7$, Table 7-32), and (e) Calling ducks in ($M = 2.6$, Table 7-35). The least frequently occurring experiences were: (a) Bagging a lot of geese over the season ($M = 1.7$, Table 7-

Section 7: Motivations for and Importance of Waterfowl Hunting

41); (b) Bagging diving ducks (M = 1.9, Table 7-43), (c) Bagging a lot of ducks over the season (M = 1.9, Table 7-40), and (d) Bagging my daily limit (M = 1.9, Table 7-37).

Importance of Waterfowl Hunting

Respondents were asked how important waterfowl hunting was to them. The majority of respondents (33.0%) indicated that it was “one of my most important recreational activities.” Over one-fourth (27.7%) indicated that it was “no more important than my other recreational activities,” while 8.4% indicated that it was “my most important recreational activity,” 23.9% indicated that it was “less important than my other recreational activities,” and 7.0% indicated that it was “one of my least important recreational activities” (Table 7-46). Waterfowl hunting was less important to respondents from the metropolitan and north regions compared to the central and south regions.

Future Waterfowl Hunting

Respondents were asked how likely or unlikely it was that they would hunt for waterfowl during the 2015 season. Statewide, 85.0% said it was likely they would hunt with 66.0% indicating that it was very likely they would hunt (Table 7-47). Only 7.6% indicated that it was unlikely that they would hunt waterfowl in 2015. There were no significant differences by region.

Section 7: Motivations for and Importance of Waterfowl Hunting

Table 7-1: Motivations for waterfowl hunting.

	Mean ²
A waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged.	3.7
The more ducks I bag the happier I am.	3.2
The more geese I bag the happier I am.	3.2
If I thought I wouldn't bag any ducks or geese, I wouldn't go waterfowl hunting.	3.1
When I go waterfowl hunting, I'm not satisfied unless I bag at least something.	3.0
When I go waterfowl hunting, I'm just as happy if I don't bag anything.	2.9
I'm just as happy if I don't bag the ducks and geese I see.	2.9
A successful waterfowl hunting trip is one in which many ducks or geese are bagged.	2.9
I'm happiest with a waterfowl hunting trip if I bag the limit.	2.9
I must bag waterfowl for the waterfowl hunting trip to be enjoyable.	2.5
A full bag limit is the best indicator of a good waterfowl hunting trip.	2.5

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

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

Table 7-2: Motivations for in waterfowl hunting: Agreement/disagreement that... The more ducks I bag the happier I am.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1490	6.3%	19.5%	30.7%	35.3%	8.2%	3.2
CENTRAL	367	6.8%	22.1%	31.3%	33.2%	6.5%	3.1
METRO	367	6.5%	16.9%	25.3%	41.1%	10.1%	3.3
NORTH	346	4.3%	19.9%	33.5%	32.9%	9.2%	3.2
SOUTH	388	6.4%	19.8%	35.3%	31.7%	6.7%	3.1
$\chi^2= 21.782^*$, Cramer's V=0.122							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=3.229*, $\eta=0.081$. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-3: Motivations for in waterfowl hunting: Agreement/disagreement that... The more geese I bag the happier I am.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1457	6.9%	18.6%	34.4%	32.0%	8.1%	3.2
CENTRAL	355	8.2%	19.7%	34.4%	30.1%	7.6%	3.1
METRO	362	7.2%	17.1%	30.9%	36.2%	8.6%	3.2
NORTH	340	4.1%	20.6%	35.9%	29.4%	10.0%	3.2
SOUTH	380	7.1%	17.4%	38.4%	30.8%	6.3%	3.1
$\chi^2= 16.004$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.307 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-4: Motivations for in waterfowl hunting: Agreement/disagreement that... When I go waterfowl hunting, I'm just as happy if I don't bag anything.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1485	7.3%	36.8%	24.7%	24.0%	7.2%	2.9
CENTRAL	366	7.1%	37.7%	26.5%	20.8%	7.9%	2.8
METRO	367	7.9%	39.0%	23.2%	22.9%	7.1%	2.8
NORTH	344	6.7%	35.2%	23.8%	28.5%	5.8%	2.9
SOUTH	385	7.5%	32.7%	25.7%	26.2%	7.8%	2.9
$\chi^2= 10.424$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.974 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-5: Motivations for in waterfowl hunting: Agreement/disagreement that... If I thought I wouldn't bag any ducks or geese, I wouldn't go waterfowl hunting.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1498	13.8%	26.0%	16.6%	28.6%	15.1%	3.1
CENTRAL	369	14.4%	22.2%	19.5%	28.7%	15.2%	3.1
METRO	369	13.6%	28.5%	15.4%	27.4%	15.2%	3.0
NORTH	348	12.9%	25.6%	16.4%	30.7%	14.4%	3.1
SOUTH	390	13.8%	29.0%	13.6%	28.2%	15.4%	3.0
$\chi^2= 9.575$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.247 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-6: Motivations for in waterfowl hunting: Agreement/disagreement that... I'm just as happy if I don't bag the ducks and geese I see.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1483	5.7%	32.2%	31.6%	26.6%	4.0%	2.9
CENTRAL	365	4.7%	32.9%	29.3%	28.8%	4.4%	3.0
METRO	363	6.3%	35.0%	31.7%	24.0%	3.0%	2.8
NORTH	346	6.1%	30.1%	31.8%	28.9%	3.2%	2.9
SOUTH	388	5.9%	29.1%	33.8%	25.0%	6.2%	3.0
$\chi^2= 13.039$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.557 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-7: Motivations for in waterfowl hunting: Agreement/disagreement that... I must bag waterfowl for the waterfowl hunting trip to be enjoyable.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1492	16.8%	40.0%	23.7%	16.6%	3.0%	2.5
CENTRAL	367	16.6%	39.2%	24.8%	17.2%	2.2%	2.5
METRO	367	18.0%	41.1%	21.0%	16.1%	3.8%	2.5
NORTH	348	14.9%	38.8%	26.1%	16.7%	3.4%	2.5
SOUTH	389	16.2%	40.1%	24.4%	17.0%	2.3%	2.5
$\chi^2= 6.164$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.402 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-8: Motivations for in waterfowl hunting: Agreement/disagreement that... A full bag limit is the best indicator of a good waterfowl hunting trip.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1497	15.8%	41.5%	22.0%	15.9%	4.8%	2.5
CENTRAL	367	17.7%	39.2%	20.7%	17.4%	4.9%	2.5
METRO	369	16.3%	40.7%	23.6%	15.7%	3.8%	2.5
NORTH	349	13.2%	45.8%	19.8%	14.9%	6.3%	2.6
SOUTH	390	15.6%	39.5%	24.1%	15.6%	5.1%	2.6
$\chi^2= 10.209$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.185 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-9: Motivations for in waterfowl hunting: Agreement/disagreement that... When I go waterfowl hunting, I'm not satisfied unless I bag at least something.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1494	7.9%	27.8%	25.6%	31.7%	7.0%	3.0
CENTRAL	368	8.7%	29.3%	25.8%	30.2%	6.0%	3.0
METRO	366	7.1%	26.2%	24.9%	33.1%	8.7%	3.1
NORTH	350	6.9%	26.9%	26.9%	32.9%	6.6%	3.1
SOUTH	389	9.5%	28.3%	25.4%	30.8%	5.9%	3.0
$\chi^2= 6.919$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.710 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-10: Motivations for in waterfowl hunting: Agreement/disagreement that... A successful waterfowl hunting trip is one in which many ducks or geese are bagged.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1495	9.4%	32.1%	27.0%	26.9%	4.6%	2.9
CENTRAL	367	10.4%	32.7%	26.4%	26.2%	4.4%	2.8
METRO	369	9.5%	30.6%	24.4%	29.8%	5.7%	2.9
NORTH	348	6.9%	34.8%	31.0%	22.1%	5.2%	2.8
SOUTH	389	10.5%	29.8%	28.8%	28.0%	2.8%	2.8
$\chi^2= 16.485$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.685 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-11: Motivations for in waterfowl hunting: Agreement/disagreement that... I'm happiest with a waterfowl hunting trip if I bag the limit.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1489	11.0%	28.8%	28.3%	24.8%	7.1%	2.9
CENTRAL	367	11.4%	27.5%	31.9%	23.2%	6.0%	2.8
METRO	366	11.7%	27.3%	23.0%	29.0%	9.0%	3.0
NORTH	347	9.2%	32.0%	30.0%	22.2%	6.6%	2.9
SOUTH	387	10.1%	29.5%	30.0%	24.0%	6.5%	2.9
$\chi^2= 15.951$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.852 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-12: Motivations for in waterfowl hunting: Agreement/disagreement that... A waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ²
Statewide ³	1499	3.1%	11.0%	17.6%	49.2%	19.1%	3.7
CENTRAL	369	3.3%	14.4%	18.7%	45.8%	17.9%	3.6
METRO	368	3.3%	9.5%	15.8%	49.5%	22.0%	3.8
NORTH	351	2.8%	9.7%	17.1%	52.4%	17.9%	3.7
SOUTH	389	3.3%	10.0%	19.5%	50.4%	16.7%	3.7
$\chi^2= 12.324$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.954 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.

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 7-13: Motivations for waterfowl hunting: Importance of...

	Mean ²
Seeing ducks in the field	4.0
Seeing geese in the field	3.8
Attracting ducks with decoys	3.8
Calling ducks in	3.6
Attracting geese with decoys	3.5
Calling geese in	3.4
Bagging at least one duck during a day in the field	3.4
Bagging mallards	3.2
Bagging drakes	3.1
Bagging teal and wood ducks	3.1
Bagging a variety of different duck species	3.0
Bagging a lot of ducks over the season	2.5
Bagging diving ducks	2.5
Bagging my daily limit	2.4
Bagging a lot of geese over the season	2.4

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

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

Section 7: Motivations for and Importance of Waterfowl Hunting

Table 7-14: Motivations for waterfowl hunting: Importance of... Seeing ducks in the field.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1473	1.7%	2.9%	15.5%	50.3%	29.6%	4.0
CENTRAL	363	2.2%	5.0%	17.9%	47.9%	27.0%	3.9
METRO	364	1.1%	0.5%	13.2%	53.0%	32.1%	4.1
NORTH	343	2.3%	3.2%	14.6%	49.3%	30.6%	4.0
SOUTH	383	0.8%	3.1%	16.7%	51.2%	28.2%	4.0
$\chi^2= 22.533^*$, Cramer's V=0.125							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=4.162**, $\eta=0.092$. 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 7-15: Motivations for waterfowl hunting: Importance of... Seeing geese in the field.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1445	4.6%	5.1%	23.0%	43.4%	23.9%	3.8
CENTRAL	356	4.5%	6.2%	22.8%	43.8%	22.8%	3.7
METRO	360	4.2%	4.7%	23.6%	44.4%	23.1%	3.8
NORTH	330	5.2%	4.2%	20.6%	44.5%	25.5%	3.8
SOUTH	378	3.7%	4.5%	25.7%	40.5%	25.7%	3.8
$\chi^2= 6.509$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.311 n.s. 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 7-16: Motivations for waterfowl hunting: Importance of... Attracting ducks with decoys.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1443	3.5%	5.5%	23.0%	43.8%	24.2%	3.8
CENTRAL	356	3.9%	4.8%	25.8%	41.0%	24.4%	3.8
METRO	355	1.7%	6.8%	20.3%	45.9%	25.4%	3.9
NORTH	336	3.3%	5.4%	23.2%	42.9%	25.3%	3.8
SOUTH	377	5.6%	5.0%	23.3%	44.6%	21.5%	3.7
$\chi^2= 14.282$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.543 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-17: Motivations for waterfowl hunting: Importance of... Attracting geese with decoys.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1426	9.2%	9.3%	24.8%	36.9%	19.7%	3.5
CENTRAL	355	10.4%	7.3%	24.2%	36.9%	21.1%	3.5
METRO	353	7.4%	12.2%	25.5%	38.0%	17.0%	3.5
NORTH	322	9.3%	9.0%	26.7%	32.0%	23.0%	3.5
SOUTH	376	10.1%	7.4%	22.9%	39.4%	20.2%	3.5
$\chi^2= 15.416$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.252 n.s. 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 7-18: Motivations for waterfowl hunting: Importance of... Calling ducks in.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1455	5.7%	9.5%	27.4%	37.6%	19.7%	3.6
CENTRAL	357	5.6%	8.4%	29.4%	38.7%	17.9%	3.5
METRO	359	2.8%	11.1%	25.9%	39.0%	21.2%	3.6
NORTH	339	7.7%	10.0%	26.5%	34.5%	21.2%	3.5
SOUTH	381	7.9%	7.9%	28.6%	36.7%	18.9%	3.5
$\chi^2= 16.483$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.209 n.s. 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 7-19: Motivations for waterfowl hunting: Importance of... Calling geese in.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1432	11.6%	9.4%	27.4%	34.3%	17.2%	3.4
CENTRAL	355	10.1%	8.7%	27.6%	38.3%	15.2%	3.4
METRO	356	10.7%	12.4%	28.4%	32.0%	16.6%	3.3
NORTH	324	13.6%	7.7%	25.3%	34.0%	19.4%	3.4
SOUTH	375	12.5%	7.7%	28.0%	31.7%	20.0%	3.4
$\chi^2= 14.648$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.344 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-20: Motivations for waterfowl hunting: Importance of... Bagging my daily limit.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1451	23.3%	27.8%	36.5%	8.7%	3.6%	2.4
CENTRAL	352	23.3%	31.0%	36.4%	6.0%	3.4%	2.4
METRO	362	22.7%	23.5%	38.4%	11.6%	3.9%	2.5
NORTH	341	20.2%	31.4%	35.5%	8.5%	4.4%	2.5
SOUTH	377	27.9%	25.5%	35.5%	8.2%	2.9%	2.3
$\chi^2= 19.140$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.310 n.s. 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 7-21: Motivations for waterfowl hunting: Importance of... Bagging at least one duck during a day in the field.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1453	7.1%	12.1%	31.9%	33.2%	15.7%	3.4
CENTRAL	355	6.5%	11.8%	34.6%	34.4%	12.7%	3.3
METRO	360	5.0%	9.2%	31.4%	35.0%	19.4%	3.5
NORTH	340	8.8%	15.6%	30.3%	29.7%	15.6%	3.3
SOUTH	378	9.0%	13.0%	32.0%	32.0%	14.0%	3.3
$\chi^2= 20.497$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=4.587**, $\eta=0.098$. 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 7-22: Motivations for waterfowl hunting: Importance of... Bagging drakes.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1446	14.8%	13.6%	31.2%	29.1%	11.3%	3.1
CENTRAL	354	15.0%	12.1%	33.6%	27.4%	11.9%	3.1
METRO	358	13.1%	11.7%	30.4%	34.4%	10.3%	3.2
NORTH	340	16.2%	16.5%	30.6%	25.6%	11.2%	3.0
SOUTH	373	15.3%	15.5%	29.8%	27.3%	12.1%	3.1
$\chi^2= 12.663$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.336 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-23: Motivations for waterfowl hunting: Importance of... Bagging a lot of ducks over the season.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1456	23.3%	23.1%	35.6%	14.3%	3.6%	2.5
CENTRAL	354	23.2%	24.6%	34.7%	15.3%	2.3%	2.5
METRO	361	21.3%	20.5%	38.5%	15.8%	3.9%	2.6
NORTH	344	24.7%	24.4%	33.7%	11.9%	5.2%	2.5
SOUTH	377	24.7%	23.6%	34.7%	13.3%	3.7%	2.5
$\chi^2= 10.718$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.067 n.s. 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 7-24: Motivations for waterfowl hunting: Bagging a lot of geese over the season.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1427	29.6%	24.1%	30.3%	12.9%	3.0%	2.4
CENTRAL	356	29.5%	23.0%	28.4%	16.0%	3.1%	2.4
METRO	354	29.7%	24.9%	31.4%	12.4%	1.7%	2.3
NORTH	327	29.7%	25.1%	29.1%	11.0%	5.2%	2.4
SOUTH	367	28.6%	22.6%	34.1%	11.7%	3.0%	2.4
$\chi^2= 13.788$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.364 n.s. 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 7-25: Motivations for waterfowl hunting: Importance of... Bagging a variety of different duck species.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1457	12.5%	17.9%	37.6%	24.0%	8.1%	3.0
CENTRAL	355	12.7%	17.2%	38.6%	23.7%	7.9%	3.0
METRO	363	9.6%	18.5%	37.2%	27.5%	7.2%	3.0
NORTH	342	15.2%	16.7%	39.5%	20.8%	7.9%	2.9
SOUTH	378	13.5%	19.6%	34.1%	22.2%	10.6%	3.0
$\chi^2= 14.075$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.000 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-26: Motivations for waterfowl hunting: Importance of... Bagging diving ducks.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1448	28.4%	22.3%	27.8%	15.1%	6.3%	2.5
CENTRAL	352	25.3%	24.4%	27.0%	15.6%	7.7%	2.6
METRO	359	28.1%	21.2%	29.2%	15.0%	6.4%	2.5
NORTH	342	28.1%	20.2%	29.2%	17.0%	5.6%	2.5
SOUTH	377	34.0%	23.6%	25.2%	11.9%	5.3%	2.3
$\chi^2= 13.776$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=3.044*, $\eta=0.080$. Mean is based on the scale: 1 = not at all important, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.

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 7-27: Motivations for waterfowl hunting: Importance of... Bagging mallards.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1461	10.4%	13.5%	32.9%	31.3%	12.0%	3.2
CENTRAL	356	9.3%	15.7%	32.6%	31.5%	11.0%	3.2
METRO	362	7.5%	13.3%	31.5%	34.3%	13.5%	3.3
NORTH	344	12.5%	13.7%	34.9%	27.6%	11.3%	3.1
SOUTH	379	13.5%	10.8%	33.2%	30.9%	11.6%	3.2
$\chi^2= 15.710$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.353 n.s. 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 7-28: Motivations for waterfowl hunting: Importance of... Bagging teal and wood ducks.

Regions	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean ²
Statewide ³	1458	10.5%	16.0%	37.7%	26.6%	9.3%	3.1
CENTRAL	355	10.7%	14.6%	38.3%	27.9%	8.5%	3.1
METRO	361	7.5%	16.1%	39.3%	28.3%	8.9%	3.1
NORTH	343	12.5%	18.4%	37.0%	22.2%	9.9%	3.0
SOUTH	380	12.6%	14.7%	34.5%	27.6%	10.5%	3.1
$\chi^2= 13.458$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.314 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-29: Factor analysis of importance of experiences related to bagging waterfowl.

	Mean ²
Seeing ducks and geese ($r = 0.510$)	3.9
- Seeing ducks in the field	4.0
- Seeing geese in the field	3.8
Attracting waterfowl ($\alpha = 0.833$)	3.6
- Attracting ducks with decoys	3.8
- Calling ducks in	3.6
- Attracting geese with decoys	3.5
- Calling geese in	3.4
Bagging a lot of waterfowl ($\alpha = 0.825$)	2.4
- Bagging a lot of ducks over the season	2.5
- Bagging my daily limit	2.4
- Bagging a lot of geese over the season	2.4
Specialized aspects of bagging waterfowl ($\alpha = 0.836$)	3.0
- Bagging at least one duck during a day in the field	3.4
- Bagging mallards	3.2
- Bagging drakes	3.1
- Bagging teal and wood ducks	3.1
- Bagging a variety of different duck species	3.0
- Bagging diving ducks	2.5

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

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

Section 7: Motivations for and Importance of Waterfowl Hunting

Table 7-30: Experiences during 2014 Minnesota waterfowl hunting season.

	Mean ²
Bagging at least one duck during a day in the field	2.9
Seeing ducks in the field	2.8
Attracting ducks with decoys	2.8
Seeing geese in the field	2.7
Calling ducks in	2.7
Bagging teal and wood ducks	2.6
Bagging drakes	2.5
Attracting geese with decoys	2.4
Calling geese in	2.4
Bagging mallards	2.3
Bagging a variety of different duck species	2.2
Bagging my daily limit	1.9
Bagging a lot of ducks over the season	1.9
Bagging diving ducks	1.9
Bagging a lot of geese over the season	1.7

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² Mean is based on the scale for “did it happen:” 1 = not at all, 2 = slightly, 3 = somewhat, 4= largely, 5 = very much.

Table 7-31: Experiences during the 2014 season: Seeing ducks in the field.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1420	7.9%	28.8%	42.5%	16.5%	4.3%	2.8
CENTRAL	345	7.0%	33.0%	42.9%	14.2%	2.9%	2.7
METRO	352	9.1%	26.1%	40.9%	19.0%	4.8%	2.8
NORTH	333	8.4%	27.9%	40.8%	16.8%	6.0%	2.8
SOUTH	373	6.2%	29.2%	45.8%	15.0%	3.8%	2.8
$\chi^2= 14.220$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.073 n.s. Mean is based on the scale for “did it happen:” 1 = not at all, 2 = slightly, 3 = somewhat, 4= largely, 5 = very much.

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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-32: Experiences during the 2014 season: Seeing geese in the field.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1393	11.4%	31.8%	35.4%	16.0%	5.3%	2.7
CENTRAL	338	10.1%	34.9%	37.0%	13.9%	4.1%	2.7
METRO	348	13.5%	32.8%	33.9%	15.2%	4.6%	2.6
NORTH	320	9.7%	28.8%	32.8%	20.3%	8.4%	2.9
SOUTH	369	10.3%	30.1%	37.9%	16.3%	5.4%	2.8
$\chi^2= 18.179$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² $F=3.776^*$, $\eta=0.091$. 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 7-33: Experiences during the 2014 season: Attracting ducks with decoys.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1384	13.4%	21.5%	40.0%	18.9%	5.6%	2.8
CENTRAL	336	11.3%	22.9%	42.6%	17.9%	5.4%	2.8
METRO	344	15.4%	18.0%	41.6%	20.1%	4.9%	2.8
NORTH	323	10.8%	24.1%	37.8%	19.2%	8.0%	2.9
SOUTH	362	13.8%	22.9%	40.1%	18.5%	4.7%	2.8
$\chi^2= 12.776$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² $F=0.773$ n.s. 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 7-34: Experiences during the 2014 season: Attracting geese with decoys.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1381	31.3%	24.4%	26.2%	12.9%	5.2%	2.4
CENTRAL	338	31.4%	21.0%	28.7%	13.6%	5.3%	2.4
METRO	344	34.6%	26.7%	22.1%	11.3%	5.2%	2.3
NORTH	314	28.7%	22.3%	27.7%	14.3%	7.0%	2.5
SOUTH	365	27.1%	27.1%	29.0%	13.7%	3.0%	2.4
$\chi^2= 18.548$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² $F=2.101$ n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-35: Experiences during the 2014 season: Calling ducks in.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1407	16.5%	25.6%	37.0%	15.0%	5.9%	2.7
CENTRAL	341	12.3%	26.7%	38.1%	17.6%	5.3%	2.8
METRO	349	19.2%	23.8%	35.8%	14.3%	6.9%	2.7
NORTH	329	15.2%	27.7%	36.5%	14.9%	5.8%	2.7
SOUTH	369	17.1%	26.0%	37.9%	13.3%	5.7%	2.6
$\chi^2= 10.140$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.891 n.s. 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 7-36: Experiences during the 2014 season: Calling geese in.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1381	32.7%	21.8%	26.9%	12.7%	5.9%	2.4
CENTRAL	339	30.4%	21.2%	28.9%	15.0%	4.4%	2.4
METRO	343	36.7%	23.3%	23.0%	10.8%	6.1%	2.3
NORTH	314	29.6%	21.3%	27.1%	14.3%	7.6%	2.5
SOUTH	366	31.1%	20.8%	30.6%	11.5%	6.0%	2.4
$\chi^2= 14.269$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.031 n.s. 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 7-37: Experiences during the 2014 season: Bagging my daily limit.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1394	49.8%	20.4%	21.8%	5.4%	2.6%	1.9
CENTRAL	334	45.8%	22.2%	24.9%	5.4%	1.8%	2.0
METRO	349	55.3%	16.6%	19.2%	5.4%	3.4%	1.9
NORTH	328	43.6%	24.4%	24.4%	5.2%	2.4%	2.0
SOUTH	365	53.7%	19.2%	18.9%	5.8%	2.5%	1.8
$\chi^2= 19.482$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=1.543 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-38: Experiences during the 2014 season: Bagging at least one duck during a day in the field.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1409	18.0%	21.0%	28.5%	20.1%	12.4%	2.9
CENTRAL	343	13.4%	20.1%	31.2%	23.3%	12.0%	3.0
METRO	350	20.0%	20.0%	25.4%	18.6%	16.0%	2.9
NORTH	329	19.1%	22.5%	29.8%	17.6%	10.9%	2.8
SOUTH	367	18.0%	23.4%	29.2%	20.4%	9.0%	2.8
$\chi^2= 19.654$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.342 n.s. 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 7-39: Experiences during the 2014 season: Bagging drakes.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1396	22.4%	25.7%	31.7%	15.6%	4.7%	2.5
CENTRAL	337	17.8%	28.8%	34.7%	15.7%	3.0%	2.6
METRO	349	24.9%	22.1%	28.9%	18.6%	5.4%	2.6
NORTH	325	23.1%	27.4%	32.0%	12.3%	5.2%	2.5
SOUTH	365	22.5%	25.8%	32.3%	14.5%	4.9%	2.5
$\chi^2= 16.812$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.396 n.s. 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 7-40: Experiences during the 2014 season: Bagging a lot of ducks over the season.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1411	46.6%	26.7%	20.6%	4.6%	1.5%	1.9
CENTRAL	341	39.3%	31.1%	23.2%	5.9%	0.6%	2.0
METRO	354	50.0%	24.6%	20.3%	3.1%	2.0%	1.8
NORTH	330	46.1%	26.4%	20.0%	6.1%	1.5%	1.9
SOUTH	365	51.2%	25.5%	17.8%	3.8%	1.6%	1.8
$\chi^2= 19.566$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.423 n.s. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-41: Experiences during the 2014 season: Bagging a lot of geese over the season.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1391	59.3%	22.3%	12.5%	3.8%	2.1%	1.7
CENTRAL	342	53.5%	28.9%	12.6%	3.5%	1.5%	1.7
METRO	350	66.9%	16.3%	12.0%	2.9%	2.0%	1.6
NORTH	315	55.2%	21.9%	12.7%	6.0%	4.1%	1.8
SOUTH	361	57.9%	24.1%	13.6%	3.9%	0.6%	1.7
$\chi^2= 35.275^{***}$, Cramer's V=0.093							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=3.864**, $\eta=0.092$. 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 7-42: Experiences during the 2014 season: Bagging a variety of different duck species.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1410	32.3%	27.6%	26.4%	10.3%	3.5%	2.2
CENTRAL	341	25.8%	32.8%	28.4%	10.6%	2.3%	2.3
METRO	351	35.0%	23.6%	24.8%	11.7%	4.8%	2.3
NORTH	331	32.0%	27.2%	26.6%	10.9%	3.3%	2.3
SOUTH	369	37.1%	28.2%	25.5%	6.2%	3.0%	2.1
$\chi^2= 24.304^*$, Cramer's V=0.076							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=2.620*, $\eta=0.075$. 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 7-43: Experiences during the 2014 season: Bagging diving ducks.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1406	48.1%	24.1%	18.0%	7.3%	2.5%	1.9
CENTRAL	340	47.6%	26.2%	16.5%	7.9%	1.8%	1.9
METRO	351	49.6%	22.5%	17.1%	7.7%	3.1%	1.9
NORTH	330	41.5%	23.9%	23.6%	7.9%	3.0%	2.1
SOUTH	366	53.3%	24.0%	15.8%	4.6%	2.2%	1.8
$\chi^2= 19.171$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=4.112**, $\eta=0.094$. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-44: Experiences during the 2014 season: Bagging mallards.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1418	27.2%	31.8%	27.4%	10.3%	3.2%	2.3
CENTRAL	343	23.0%	33.5%	30.3%	10.8%	2.3%	2.4
METRO	354	29.1%	29.7%	26.8%	10.5%	4.0%	2.3
NORTH	332	26.8%	32.8%	26.2%	10.8%	3.3%	2.3
SOUTH	369	29.0%	33.1%	25.7%	9.2%	3.0%	2.2
$\chi^2= 7.912$ n.s.							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=0.723 n.s. 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 7-45: Experiences during the 2014 season: Bagging teal and wood ducks.

Regions	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean ²
Statewide ³	1418	22.3%	26.3%	27.6%	17.2%	6.5%	2.6
CENTRAL	343	16.0%	29.2%	31.5%	16.9%	6.4%	2.7
METRO	354	24.0%	22.9%	26.3%	18.9%	7.9%	2.6
NORTH	332	29.2%	28.3%	23.5%	15.1%	3.9%	2.4
SOUTH	368	20.1%	25.8%	29.6%	17.1%	7.3%	2.7
$\chi^2= 28.651^{**}$, Cramer's V=0.083							

¹ This table does not include those respondents who did not hunt in Minnesota in 2014.

² F=5.458**, $\eta=0.108$. 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 7: Motivations for and Importance of Waterfowl Hunting

Table 7-46: 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	1671	8.4%	33.0%	27.7%	23.9%	7.0%	2.9
CENTRAL	408	10.3%	40.9%	29.2%	15.7%	3.9%	2.6
METRO	416	5.3%	27.9%	25.7%	31.0%	10.1%	3.1
NORTH	404	6.2%	29.0%	31.7%	26.2%	6.9%	3.0
SOUTH	441	13.6%	35.1%	24.0%	20.9%	6.3%	2.7
$\chi^2= 75.106^{***}$, Cramer's V=0.122							

¹ F=20.337***, $\eta=0.188$. 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 7-47: Likelihood of hunting for ducks or geese during the 2015 Minnesota waterfowl season.

Regions	N	Very unlikely	Somewhat unlikely	Slightly unlikely	Undecided	Slightly likely	Somewhat likely	Very likely	Mean ¹
Statewide ²	1676	3.5%	2.8%	1.3%	7.5%	5.4%	13.6%	66.0%	6.1
CENTRAL	408	3.9%	0.7%	1.7%	7.1%	4.4%	14.2%	67.9%	6.2
METRO	419	4.1%	3.3%	1.4%	7.2%	5.5%	12.6%	65.9%	6.1
NORTH	405	3.0%	4.0%	0.5%	8.9%	5.4%	16.5%	61.7%	6.1
SOUTH	441	2.5%	3.4%	1.6%	6.8%	6.6%	10.9%	68.3%	6.2
$\chi^2= 24.286$ n.s.									

¹ F=0.440 n.s. Mean is based on the scale: 1 = very unlikely, 2 = somewhat unlikely, 3 = slightly unlikely, 4= undecided, 5 = slightly likely, 6 = somewhat likely, 7= very likely.

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

Section 8: Trust in Minnesota Department of Natural Resources

Trust in and Desire for Voice with the Minnesota Department of Natural Resources

Respondents were asked to rate their agreement with 14 items addressing their trust in and desire for voice with the Minnesota Department of Natural Resources (MNDNR) using the scale 1 (strongly disagree) to 5 (strongly agree). Respondents agreed most strongly with items related to having opportunity to voice opinions to the MNDNR about management, and about willingness to accept decisions made by the DNR about waterfowl management (Table 8-1). Means and frequencies for the 14 trust statements strategies are presented in Tables 8-2 through 8-15. Where differences existed among regions, respondents from the metropolitan region were more likely to agree that they desired voice in management and that they were willing to accept and respect decisions made by the MNDNR.

Section 8: Trust in the Minnesota Department of Natural Resources

Table 8-1: Mean statewide results: Trust in the Minnesota Department of Natural Resources.

Trust item	N	Mean ^{1,2}
I think Minnesotans should have the right to voice opinions about waterfowl management to the MNDNR.	1645	4.2
I consider an opportunity to voice opinions to MNDNR about waterfowl management important.	1641	3.9
I intend to respect MNDNR waterfowl management's future management decisions.	1638	3.8
I am willing to accept the decisions of MNDNR waterfowl management.	1637	3.8
I accept the decisions of MNDNR waterfowl management.	1636	3.8
I consider an opportunity to voice opinions to MNDNR waterfowl management desirable.	1637	3.7
The MNDNR has waterfowl managers and biologists who are well-trained for their jobs.	1641	3.4
I think MNDNR waterfowl management uses the best available science when making management decisions.	1640	3.3
I consider MNDNR decision-making about waterfowl management fair	1640	3.3
The MNDNR can be trusted to make decisions about waterfowl management that are good for the resource.	1643	3.2
The MNDNR will make decisions about waterfowl management in a way that is fair.	1641	3.2
The MNDNR does a good job of managing waterfowl.	1642	3.1
When deciding about waterfowl management in Minnesota, the MNDNR will be open and honest in the things they do and say.	1638	3.1
The MNDNR listens to waterfowl hunters' concerns.	1636	3.1

¹Grand mean=3.5, F=507.457***, $\eta^2=0.241$. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neither, 4=agree, 5=strongly agree.

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

Table 8-2: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR does a good job of managing waterfowl in Minnesota.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1642	7.9%	17.7%	37.0%	33.8%	3.7%	3.1
CENTRAL	407	8.4%	18.2%	38.3%	32.2%	2.9%	3.0
METRO	407	9.6%	16.5%	33.9%	35.9%	4.2%	3.1
NORTH	396	5.6%	18.9%	38.4%	34.1%	3.0%	3.1
SOUTH	429	6.8%	17.7%	38.7%	32.2%	4.7%	3.1
$\chi^2= 11.022$ n.s.							

¹ F=0.468 n.s. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-3: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... When deciding about waterfowl management in Minnesota, the Minnesota DNR will be open and honest in the things they do and say.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1638	6.2%	17.7%	41.0%	30.6%	4.4%	3.1
CENTRAL	403	7.9%	18.6%	42.9%	28.3%	2.2%	3.0
METRO	406	4.9%	19.0%	36.7%	34.2%	5.2%	3.2
NORTH	398	6.5%	17.6%	41.0%	30.7%	4.3%	3.1
SOUTH	429	5.6%	14.2%	45.9%	27.5%	6.8%	3.2
$\chi^2= 24.508^*$, Cramer's V=0.071							

¹ F=3.091*, $\eta=0.075$. 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 8-4: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR can be trusted to make decisions about waterfowl management that are good for the resource.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1643	6.3%	17.2%	34.8%	37.5%	4.2%	3.2
CENTRAL	405	6.9%	17.0%	36.8%	36.8%	2.5%	3.1
METRO	407	6.1%	17.4%	32.4%	39.3%	4.7%	3.2
NORTH	399	6.8%	18.5%	35.1%	35.3%	4.3%	3.1
SOUTH	429	5.1%	15.6%	35.4%	38.0%	5.8%	3.2
$\chi^2= 10.064$ n.s.							

¹ F=1.662 n.s. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-5: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR will make decisions about waterfowl management in a way that is fair.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1641	4.9%	13.8%	39.7%	38.0%	3.6%	3.2
CENTRAL	404	5.2%	13.6%	43.3%	35.9%	2.0%	3.2
METRO	406	5.2%	13.3%	36.5%	40.4%	4.7%	3.3
NORTH	399	5.0%	15.5%	38.8%	37.8%	2.8%	3.2
SOUTH	430	3.7%	13.0%	40.9%	37.2%	5.1%	3.3
$\chi^2= 13.891$ n.s.							

¹ F=1.647 n.s. 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 8-6: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR has waterfowl managers and biologists who are well-trained for their jobs.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1641	2.8%	5.3%	45.0%	40.6%	6.4%	3.4
CENTRAL	405	3.2%	6.2%	46.9%	38.8%	4.9%	3.4
METRO	406	2.0%	3.4%	45.3%	41.9%	7.4%	3.5
NORTH	398	2.8%	6.3%	46.0%	38.7%	6.3%	3.4
SOUTH	429	3.5%	6.1%	39.9%	43.4%	7.2%	3.4
$\chi^2= 12.953$ n.s.							

¹ F=2.102 n.s. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-7: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... The Minnesota DNR listens to waterfowl hunters' concerns.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1636	6.8%	17.3%	43.2%	29.1%	3.5%	3.1
CENTRAL	402	7.7%	19.2%	45.0%	26.4%	1.7%	3.0
METRO	406	5.9%	14.5%	43.1%	31.3%	5.2%	3.2
NORTH	398	6.5%	19.1%	43.0%	28.6%	2.8%	3.0
SOUTH	427	7.5%	17.6%	41.0%	29.7%	4.2%	3.1
$\chi^2= 15.116$ n.s.							

¹ F=3.203*, $\eta=0.077$. 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 8-8: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider an opportunity to voice opinions to MNDNR waterfowl management desirable.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1637	0.9%	3.0%	33.7%	49.0%	13.4%	3.7
CENTRAL	402	0.7%	4.5%	38.3%	45.8%	10.7%	3.6
METRO	407	0.7%	2.2%	30.0%	49.1%	17.9%	3.8
NORTH	396	1.3%	2.5%	33.3%	52.0%	10.9%	3.7
SOUTH	429	0.9%	2.8%	33.8%	50.1%	12.4%	3.7
$\chi^2= 21.608^*$, Cramer's V=0.066							

¹ F=4.825**, $\eta=0.094$. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-9: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I intend to respect MNDNR waterfowl management's future management decisions.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1638	0.9%	2.1%	25.0%	55.4%	16.5%	3.8
CENTRAL	403	1.2%	2.2%	28.0%	56.6%	11.9%	3.8
METRO	406	0.7%	2.2%	23.6%	51.5%	21.9%	3.9
NORTH	397	1.3%	1.8%	23.9%	57.7%	15.4%	3.8
SOUTH	430	0.2%	2.1%	24.2%	58.1%	15.3%	3.9
$\chi^2= 21.080^*$, Cramer's V=0.066							

¹ F=3.264*, $\eta=0.077$. 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 8-10: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I accept the decisions of MNDNR waterfowl management.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1636	1.5%	3.7%	26.8%	53.7%	14.2%	3.8
CENTRAL	404	2.0%	4.0%	29.5%	53.2%	11.4%	3.7
METRO	405	1.2%	3.0%	24.9%	52.6%	18.3%	3.8
NORTH	397	2.3%	3.8%	26.4%	55.7%	11.8%	3.7
SOUTH	427	0.5%	4.4%	26.5%	54.3%	14.3%	3.8
$\chi^2= 17.399$ n.s.							

¹ F=3.132*, $\eta=0.076$. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-11: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider an opportunity to voice opinions to MNDNR about waterfowl management important.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1641	0.2%	1.5%	27.0%	52.0%	19.3%	3.9
CENTRAL	406	0.0%	1.5%	31.3%	50.0%	17.2%	3.8
METRO	406	0.0%	1.5%	23.9%	51.2%	23.4%	4.0
NORTH	398	0.5%	1.5%	25.6%	56.5%	15.8%	3.9
SOUTH	428	0.5%	1.4%	27.6%	51.2%	19.4%	3.9
$\chi^2= 17.382$ n.s.							

¹ F=2.657*, $\eta=0.070$. 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 8-12: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I think Minnesotans should have the right to voice opinions about waterfowl management to the MNDNR.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1645	0.1%	0.5%	11.6%	57.8%	30.0%	4.2
CENTRAL	406	0.2%	0.5%	12.1%	61.3%	25.9%	4.1
METRO	408	0.0%	0.2%	10.3%	55.4%	34.1%	4.2
NORTH	399	0.0%	1.0%	11.0%	58.1%	29.8%	4.2
SOUTH	428	0.0%	0.5%	14.3%	56.3%	29.0%	4.1
$\chi^2= 14.601$ n.s.							

¹ F=2.400 n.s. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-13: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I am willing to accept the decisions of MNDNR waterfowl management.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1637	0.9%	2.3%	26.5%	56.1%	14.2%	3.8
CENTRAL	405	1.0%	3.7%	28.6%	55.8%	10.9%	3.7
METRO	405	1.2%	1.0%	23.7%	55.1%	19.0%	3.9
NORTH	396	0.8%	2.0%	28.3%	57.6%	11.4%	3.8
SOUTH	428	0.5%	2.8%	26.2%	56.5%	14.0%	3.8
$\chi^2= 23.149^*$, Cramer's V=0.069							

¹ F=4.296**, $\eta=0.089$. 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 8-14: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I think MNDNR waterfowl management uses the best available science when making management decisions.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1640	4.1%	12.5%	41.4%	35.4%	6.6%	3.3
CENTRAL	405	3.7%	14.6%	42.0%	34.1%	5.7%	3.2
METRO	407	4.7%	10.6%	42.8%	34.6%	7.4%	3.3
NORTH	398	3.8%	12.6%	42.2%	35.9%	5.5%	3.3
SOUTH	426	4.0%	12.7%	37.1%	38.3%	8.0%	3.3
$\chi^2= 9.294$ n.s.							

¹ F=0.909 n.s. 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 8: Trust in the Minnesota Department of Natural Resources

Table 8-15: Trust in Minnesota Department of Natural Resources: Agreement/disagreement that... I consider MNDNR decision-making about waterfowl management fair.

Regions	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean ¹
Statewide ²	1640	3.6%	9.8%	42.6%	38.5%	5.5%	3.3
CENTRAL	406	3.9%	10.1%	42.9%	38.2%	4.9%	3.3
METRO	406	3.7%	8.9%	43.1%	38.2%	6.2%	3.3
NORTH	398	3.5%	10.8%	44.2%	37.2%	4.3%	3.3
SOUTH	426	2.8%	10.1%	39.4%	41.1%	6.6%	3.4
$\chi^2= 6.351$ n.s.							

¹ F=1.233 n.s. 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 9: Characteristics of Waterfowl Hunters in Minnesota

Information from the Electronic Licensing System database indicates that one-third (33.0%) of the Minnesota residents who purchased a state duck stamp live in the Twin Cities Metropolitan area. See Table 9-1.

Hunter Age

The mean age of the study population of Minnesota duck stamp purchasers was 39.6 years. The mean age of 44.4 years for study respondents was higher than the age of the population (Table 9-2.)

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 2009 that they hunted for waterfowl in the state. Please note that because responses to these questions are strongly correlated to age, the data presented in Tables 9-4, 9-5, and 9-6 are weighted to correct for the age bias for these results.

Statewide, over 30% of respondents began hunting waterfowl in 2000 or more recently (Table 9-4). On average, waterfowl hunters in Minnesota have been hunting in the state for 20.4 years (Table 9-5). The median of 18.0 indicates that half of the hunters have hunted 18 or more years in the state (Table 9-5). Across the regions, hunters in the North region (\bar{x} = 21.6; 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} = 20.0; median = 16.0).

Statewide 65.2% of the waterfowl hunters hunted for waterfowl in Minnesota every year during the past 5 years (Table 9-6). Of the 9.7% of respondents who did not hunt waterfowl during any of the years between 2009 and 2013, approximately two-thirds (66.93%) hunted waterfowl during 2014. This would be expected because we drew a sample of those who purchased duck stamps in 2014.

Membership in Conservation and Hunting Organizations

More than half (57.6%) of the respondents reported that they belonged to a conservation/hunting organization. Nearly four of ten (39.4%) of respondents reported membership in Ducks Unlimited and 6.2% reported membership in Minnesota Waterfowl Association. About one-fifth (21.2%) 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 9-7).

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Hunting Outside of Minnesota

Approximately one in five (20.5%) Minnesota waterfowl hunters hunted outside the state in 2014 (Table 9-8). There was no significant difference by region of residence in the proportion of respondents who had hunted outside the state.

Years Living in Minnesota, and on a Farm or Ranch

Respondents had lived in Minnesota an average of 41 years (93.1%) of their lives (Table 9-9). There was no difference by region in length of time residing in Minnesota. Slightly more than half of respondents (51.7%) had lived on a farm, ranch, or in a non-suburban rural area from birth through age 17. On average, these respondents had lived 15.7 years from birth through age 17 on a farm, ranch, or in a non-suburban rural area (Table 9-10). More than half (55.9%) of respondents had lived on a farm, ranch, or in a non-suburban rural area after age 18. These respondents had lived an average of 18.9 years on a farm, ranch, or in a non-suburban rural area. (Table 9-11). These values varied by region of residence.

Income and Education

Statewide, respondents had a mean annual household income of approximately \$100,000 (Table 9-12). Respondents from the metropolitan region had a significantly higher mean income than respondents from the other three regions. About four in ten respondents (38.1%) had completed a 4-year degree or higher level of education. Less than 2% had not completed a high school degree (Table 9-13). Respondents from the metropolitan region had significantly higher levels of education.

Late Respondents

We compared respondents who responded to the fourth and final survey mailing, which included a \$1 incentive (n=215) to other respondents. We found that late respondents had been waterfowl hunting in Minnesota for somewhat fewer years ($M = 18.6$ years) than early respondents had ($M = 24.4$ years) ($t = 5.269^{***}$). Late respondents had hunted an average of 3.7 of the previous 5 years compared to 4.0 years for early respondents ($t = 2.530^*$). However, the mean numbers of weekend, weekday, or total days hunted during the 2014 season did not differ significantly between early and late respondents. On average, early respondents also rated waterfowl as being significantly more important to them ($M = 2.9$), compared to late respondents ($M = 2.5$) ($t = 5.019^{***}$). Despite these noted differences, early and late respondents did not differ significantly in attitudinal measures related to satisfaction, importance of experiences, perceptions about bag limits, regulations, or agency trust. Because of the strong similarity between early and late respondents in all attitudinal measures, responses to the last survey mailing are included in analyses.

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Table 9-1: Residence of waterfowl stamp buyers

Region of residence	Proportion of state waterfowl stamp purchasers in each region age 18-64	
	# of licensed MN waterfowl hunters ¹	% of all MN waterfowl hunters
CENTRAL	24,211	27.8%
METRO	28,742	33.0%
NORTH	18,783	21.6%
SOUTH	15,417	17.7%
Statewide ²	87,153	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 9-2: Age of study population and survey respondents

Residence of hunter	n	18-19	20 – 29	30 – 39	40 – 49	50 - 59	60 - 64	65 +	Mean age
Population ¹	87,153	5.0%	26.9%	20.3%	17.7%	18.9%	6.7%	4.4%	39.6
Statewide	1,665	1.2%	18.3%	19.7%	17.5%	27.6%	8.6%	7.2%	44.6
CENTRAL	409	2.2%	18.1%	19.3%	21.3%	24.4%	8.8%	5.9%	43.7
METRO	418	0.2%	18.4%	20.3%	16.7%	32.3%	5.7%	6.2%	44.4
NORTH	403	1.2%	17.4%	19.6%	14.6%	24.6%	12.9%	9.7%	45.7
SOUTH	439	1.6%	19.4%	19.4%	16.2%	27.3%	8.2%	8.0%	44.1
$\chi^2=36.262^{***}$, $V=0.085$									

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 9-3: Proportion of respondents from different age categories who actually hunted waterfowl in Minnesota in the year 2014

Age category	N	% No	% Yes
18-19	21	0.0%	100.0%
20-29	301	6.0%	94.0%
30-39	327	6.4%	93.6%
40-49	288	9.0%	91.0%
50-59	459	13.7%	86.3%
60-64	139	11.5%	88.5%
65+	117	27.4%	72.6%
$\chi^2=55.287^{***}$, $V=0.183$			

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

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Table 9-4: 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	1621	418	395	374	431
2014	3.9%	2.2%	6.1%	4.0%	3.0%
2010-2013	8.7%	10.8%	7.6%	8.6%	7.4%
2000-2009	22.1%	23.2%	20.5%	18.2%	27.8%
1990's	20.3%	21.1%	21.0%	18.4%	20.0%
1980's	15.4%	16.3%	15.2%	15.2%	14.4%
1970's	18.8%	17.7%	21.0%	18.2%	17.2%
1960's	8.8%	7.4%	6.1%	14.2%	9.3%
1950's	1.7%	1.2%	2.3%	2.4%	0.5%
1940's	0.2%	0.2%	0.0%	0.5%	0.2%
Before 1940	0.2%	0.0%	0.3%	0.3%	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.

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Table 9-5: 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	1623	416	391	383	432
1	3.5%	1.9%	4.9%	3.4%	3.7%
2	4.0%	2.6%	4.9%	6.0%	2.5%
3	2.3%	2.4%	2.3%	1.8%	2.8%
4	4.0%	6.3%	2.8%	2.6%	4.2%
5	3.2%	3.1%	2.3%	4.7%	3.0%
6	2.2%	3.1%	1.8%	1.8%	1.9%
7	3.2%	3.6%	3.3%	1.8%	3.9%
8	2.2%	1.0%	3.1%	3.1%	1.9%
9	1.8%	1.2%	1.5%	2.1%	2.8%
10 – 19	25.7%	28.6%	25.3%	19.6%	28.9%
20 – 29	18.6%	18.0%	19.2%	19.8%	16.9%
30 – 39	14.5%	14.4%	15.3%	15.4%	12.3%
40 – 49	11.2%	10.6%	11.3%	11.7%	11.6%
50 – 59	2.9%	2.4%	1.5%	5.5%	3.0%
60+	0.7%	0.7%	0.5%	0.5%	0.7%
Mean	20.4	20.4	19.9	21.6	20.0
Median	18.0	17.0	17.0	20.0	16.0

¹Actual number years were collected for each hunter and used in computation of the means and medians. Data are presented in categorical form in the table for 10+ years to simplify the table.

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

Table 9-6: Hunting in the last five years

Residence of hunter	% of hunters who hunted that particular year:						
	2013	2012	2011	2010	2009	Hunted every year	Did not hunt during any of these years
Statewide ¹	85.0%	80.8%	77.9%	75.8%	73.4%	65.2%	9.7%
CENTRAL	88.7%	84.7%	80.9%	77.8%	74.8%	66.3%	7.5%
METRO	82.5%	78.3%	76.8%	73.5%	72.3%	64.7%	10.5%
NORTH	83.3%	77.6%	74.3%	74.8%	72.0%	62.6%	10.8%
SOUTH	84.9%	82.6%	79.6%	78.0%	74.6%	67.3%	10.8%
	$\chi^2=7.335$ n.s.	$\chi^2=9.253^*$, V= 0.075	$\chi^2=6.202$ n.s.	$\chi^2=3.441$ n.s.	$\chi^2=1.434$ n.s.	$\chi^2=2.224$ n.s.	$\chi^2=3.496$ n.s.

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

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Table 9-7: 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	42.4%	39.4%	6.2%	6.2%	21.2%	14.6%
CENTRAL	43.4%	37.4%	4.9%	5.4%	21.5%	14.4%
METRO	44.1%	43.2%	7.3%	8.0%	13.9%	14.6%
NORTH	43.6%	35.4%	7.7%	4.7%	23.8%	12.9%
SOUTH	36.3%	40.6%	4.6%	5.7%	30.9%	17.1%
	$\chi^2=7.351$ n.s.	$\chi^2=6.132$ n.s.	$\chi^2=5.734$ n.s.	$\chi^2=4.547$ n.s.	$\chi^2=35.815^{***}$, V= 0.147	$\chi^2=2.999$ n.s.

¹“Not a member of any conservation/hunting organization” was not a direct question. It was determined by counting those respondents who did not indicate they were members of any of the group categories.

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

Table 9-8: Did you hunt for waterfowl in a state or province other than Minnesota in 2014?

Residence of hunter	n	Yes
Statewide ¹	1677	20.5%
CENTRAL	409	18.8%
METRO	419	21.7%
NORTH	404	22.3%
SOUTH	443	19.0%
		$\chi^2=2.511$ n.s.

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

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

Section 9: Characteristics of Waterfowl Hunters in Minnesota

Table 9-9: Number of years living in Minnesota

Residence of hunter	n	Mean number of years	% of life
Statewide ¹	1670	41.2	93.1%
CENTRAL	409	41.6	95.6%
METRO	418	40.7	91.7%
NORTH	401	42.0	92.3%
SOUTH	439	40.7	93.0%
F= 0.780 n.s.			

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

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

Table 9-10: Percent of respondents who had lived on a farm or ranch, or in a non-suburban rural area from birth until age 17, and mean number of years and percent of youth for those who did.

Residence of hunter	N	% who lived	Mean number of years	% of years
Statewide ¹	1650	51.7%	15.7	92.0%
CENTRAL	404	65.8%	16.6	97.4%
METRO	414	29.3%	13.5	79.2%
NORTH	397	64.0%	15.6	91.6%
SOUTH	430	56.9%	16.1	94.8%
$\chi^2=141.534^{***}$, V=0.294			F= 4.784**, $\eta = 0.127$	

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

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

Table 9-11: Percent of respondents who had lived on a farm or ranch, or in a non-suburban rural area from age 18 on, and mean number of years and percent of adult life for those who did.

Residence of hunter	n	% who lived	Mean number of years	% of years
Statewide ¹	1646	55.9%	18.9	60.3%
CENTRAL	403	73.7%	20.0	83.5%
METRO	413	25.4%	10.9	45.9%
NORTH	395	74.7%	21.0	74.5%
SOUTH	431	62.8%	18.6	66.3%
$\chi^2=271.034^{***}$, V=0.406			F= 13.777***, $\eta = 0.203$	

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: Characteristics of Waterfowl Hunters in Minnesota

Table 9-12: Mean income

Residence of hunter	n	Mean income
Statewide ¹	1254	\$100,147.91
CENTRAL	301	\$92,737.43
METRO	317	\$122,229.52
NORTH	304	\$88,958.01
SOUTH	330	\$83,422.35
		F=10.671***, $\eta^2 = 0.158$

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

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

Table 9-13: 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	0.4%	1.2%	16.8%	9.3%	19.4%	14.8%	26.8%	2.9%	8.4%
CENTRAL	1.0%	2.2%	20.6%	11.9%	20.6%	13.4%	20.6%	4.5%	5.0%
METRO	0.0%	0.7%	10.8%	6.8%	16.4%	14.7%	36.7%	2.4%	11.5%
NORTH	0.0%	1.0%	19.2%	7.8%	19.9%	17.7%	23.0%	1.5%	9.8%
SOUTH	0.5%	0.7%	19.2%	11.4%	22.1%	13.9%	23.1%	2.7%	6.4%
$\chi^2=87.966^{***}$, Cramer's V=0.134									

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

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

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

In this section, we compare results from this 2014 waterfowl hunter survey to previous studies of Minnesota waterfowl hunters. In 2000, 2002, 2005, 2007, 2010 and 2011 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., 2012a, Schroeder et al., 2012b). Some of the questions asked in these previous surveys are either identical or similar to questions asked in the 2014 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 2014 survey (44.6 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, and significantly lower than the average age of respondents to the 2002 survey (45.3 years). The average age of 2014 respondents was not significantly different from respondents to the 2010 survey (45.2 years) or the 2011 survey (45.1 years) (Table 10-1). There were also significant differences between the 2014 data and the earlier sets of data concerning the average number years hunting waterfowl (Table 10-2). Respondents for the 2014 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, 27.7 in 2010, and 29.7 in 2011. 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, 2011, and 2014 seasons excluded both HIP registrants and license buyers less than 18 years of age (Table 10-3).

The average number of days spent hunting waterfowl also differed significantly when comparing 2014 results to some earlier surveys. Respondents reported hunting an average of 10.0 days in 2014, compared to an average of 10.3 in 2011, 10.7 in 2010, 10.2 in 2007, 10.2 in 2005, 9.7 in 2002, 11.5 in 2000 (Table 10-4).

Waterfowl Harvest

Reported number of ducks bagged per hunter in 2014 varied significantly from 2010, 2007, 2005, 2002, and 2000 (Table 10-5). Looking at the proportions of hunters who: bagged zero ducks, 1-10 ducks, or 11 or more ducks, results largely parallel those from the 2011 season.

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Hunting Participation and Satisfaction

There were some statistically significant differences in participation in the different waterfowl hunts, but differences do not appear substantive (Table 10-6).

A greater proportion of 2014 season waterfowl hunters hunted on the opening Saturday compared to 2010, 2005, and 2000, but the proportion was not significantly different to those hunting the opening Saturday during the 2002 and 2011 seasons (Table 10-7).

A smaller proportion of respondents reported hunting outside of Minnesota during the 2014 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 10-9). 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, 2011, and 2014 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 2014 season than for the 2005, 2007 or 2010 seasons, and lower than the 2002 season. Satisfaction was not significantly different from the 2000 and 2011 seasons (Table 10-10).

Youth Waterfowl Hunting Day

Based on a scale of 1 (strongly oppose) to 5 (strongly support), support for Youth Waterfowl Hunting Day in 2014 ($\bar{x} = 3.8$) was not significantly different than in 2000 ($\bar{x} = 3.8$), but significantly higher than 2002, 2005, 2010, and 2011 (Table 10-11).

Group Membership

Reported memberships in Ducks Unlimited, Delta Waterfowl, the Minnesota Waterfowl Association, and local sportsmen’s clubs were lower in 2014 than in 2011, but similar to levels seen in previous study years. See Table 10-12.

Agency Trust

Six identical measures of trust in the Minnesota Department of Natural Resources were asked in 2010, 2011, and 2014, and two identical measures were also asked in 2002. Although there were some significant differences in average trust ratings, differences were not substantive (Tables 10-13 to 10-18).

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-1: Age of respondents: 2000, 2002, 2005, 2007, 2010, 2011 and 2014 findings

Study year	N ¹	Average age (years)	Range (years)	t-test, average compared to 2014
2000 hunters	2,454	41.4	16 - 88	t = 9.098***
2002 hunters	3,109	45.3	14 - 88	t = 2.137*
2005 hunters	2,568	43.2	16 - 90	t = 3.913***
2007 hunters	469	42.3	17 - 76	t = 6.505***
2010 hunters	1,932	45.2	20 - 87	t = 1.849 n.s.
2011 hunters	1,780	45.1	19 - 87	t = 1.561 n.s.
2014 hunters	1,665	44.6	18 - 83	

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, 2011 and 2014 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 10-2: Number of years hunting ducks/waterfowl: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings

Study year	N ¹	Average number of years hunting ducks/waterfowl ¹	t-test, average compared to 2014
2000 hunters	2,376	22.5	t = 16.740***
2002 hunters	3,034	26.9	t = 5.458***
2005 hunters	2,295	23.1	t = 15.201***
2007 hunters	461	25.1	t = 10.073***
2010 hunters	1,845	27.7	t = 3.407**
2011 hunters	1,702	29.7	t = 1.721 n.s.
2014 hunters	1,652	29.0	

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, 2011 and 2014 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 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-3: Frequency distributions of HIP registrants in sample and age of respondents: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings

Study year	Sample				Respondents							
	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%
2014 hunters	0	0%	3,600	100%	0	0.0%	120	7.2%	1,552	92.8%	1,672	100%

n.a. = not available

Table 10-4 Number of days hunting waterfowl: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings

Study year	n	Average number of days hunting waterfowl	t-test, average compared to 2014
2000 hunters	2,120	11.5	t = 6.350***
2002 hunters	3,113	9.7	t = 1.277 n.s.
2005 hunters	2,137	10.2	t = 0.841 n.s.
2007 hunters	419	10.2	t = 0.841 n.s.
2010 hunters	1,678	10.7	t = 2.960**
2011 hunters	1,537	10.3	t = 1.265 n.s.
2014 hunters	1,504	10.0	

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

Table 10-5: Number of ducks bagged: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings

Number bagged	2000 hunters (%)	2002 hunters (%)	2005 hunters (%)	2007 hunters (%)	2010 hunters (%)	2011 hunters (%)	2014 hunters (%)
N	1,959	2,027	1,960	370	1,514	1,407	1,311
Bagged none	14.7%	16.2%	17.1%	6.8%	13.5%	12.1%	11.2%
Bagged 1 – 10	53.4%	50.9%	59.8%	51.2%	56.1%	55.4%	54.3%
Bagged > 10	31.9%	32.9%	23.1%	42.1%	30.4%	32.5%	34.5%
Chi-square analysis ¹	$\chi^2=17.273$ ***	$\chi^2=26.154$ ***	$\chi^2=122.504$ ***	$\chi^2=48.824$ ***	$\chi^2=18.390$ ***	$\chi^2=5.551$ n.s.	

¹Compares year in column to 2014 results.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-6: Waterfowl Hunting Activity: 2000, 2002, 2005, 2007, 2010, 2011 and 2014 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% ^f	73.3% ^f	43.0% ^f		6.5% ^f
2014 hunters	90.8%	67.2%	32.1%		4.4%
Chi-square analysis ¹	^a $\chi^2=13.985^{***}$ ^b $\chi^2=29.001^{***}$ ^c $\chi^2=12.741^{***}$ ^d $\chi^2=0.185$ n.s. ^e $\chi^2=5.945^*$ ^f $\chi^2=26.948^{***}$	^a $\chi^2=18.673^{***}$ ^b $\chi^2=25.605^{***}$ ^c $\chi^2=23.755^{***}$ ^d $\chi^2=2.517$ n.s. ^e $\chi^2=10.498^{***}$ ^f $\chi^2=27.534^{***}$	^a $\chi^2=20.927^{***}$ ^b $\chi^2=51.585^{***}$ ^c $\chi^2=71.822^{***}$ ^d $\chi^2=17.529^{***}$ ^e $\chi^2=41.210^{***}$ ^f $\chi^2=64.304^{***}$		^a $\chi^2=13.912^{***}$ ^b $\chi^2=23.289^{***}$ ^c $\chi^2=0.094$ n.s. ^d $\chi^2=20.535^{***}$ ^e $\chi^2=9.430^{**}$ ^f $\chi^2=10.278^{**}$

¹Chi-square test ^a compares 2000 to 2014 and ^b compares 2002 to 2014 and ^c compares 2005 to 2014, ^d compares 2007 to 2014, ^e compares 2010 to 2014 and ^f compares 2011 to 2014.
n.s. = not significant, *p < 0.05, **p < 0.01, ***p < 0.001

Table 10-7: Waterfowl Hunting, Opening Saturday: 2000, 2002, 2005, 2010, 2011, and 2014 findings

Study year	N	Hunt opening Saturday	Chi-square analysis, proportion compared to 2014
2000 hunters	2,191	63.2%	$\chi^2=7.236^{**}$
2002 hunters	2,745	64.4%	$\chi^2=3.029$ n.s.
2005 hunters	2,118	63.0%	$\chi^2=8.106^{**}$
2010 hunters	1,690	60.1%	$\chi^2=25.978^{***}$
2011 hunters	1,534	64.7%	$\chi^2=2.253$ n.s.
2014 hunters	1,499	66.3%	

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

Table 10-8: 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%	$\chi^2=63.124^{***}$
2002 hunters	2,745	67.4%	$\chi^2=34.339^{***}$
2005 hunters	2,120	64.9%	$\chi^2=13.658^{***}$
2010 hunters	1,689	62.3%	$\chi^2=2.341$ n.s.
2011 hunters	1,543	60.4%	
2014 hunters		Question not asked	

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

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-9: Hunt Outside Minnesota: 2000, 2002, 2005, 2010, 2011, and 2014 findings

Study year	N	Hunt Outside Minnesota	Chi-square analysis, proportion compared to 2014
2000 hunters	2,399	24.7%	$\chi^2=16.513^{***}$
2002 hunters	3,035	18.6%	$\chi^2=3.656$ n.s.
2005 hunters	2,378	17.3%	$\chi^2=11.381^{**}$
2010 hunters	1,662	18.0%	$\chi^2=6.635^*$
2011 hunters	1,745	20.5%	$\chi^2=0.007$ n.s.
2014 hunters	1,677	20.5%	

2000 study asked “Did you waterfowl hunt in a state or province other than MN?”

Other 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 10-10: Overall Satisfaction With Waterfowl Hunting: 2000, 2002, 2005, 2007, 2010, 2011, and 2014 findings

Study year	N	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Moderately satisfied	Very satisfied	Chi-square analysis ¹	Means
2000 hunters	1,788	8.8%	10.3%	11.4%	4.0%	15.3%	30.8%	19.5%	$\chi^2=102.155^{***}$	4.8 ¹
2002 hunters	2,604	7.0%	8.9%	10.4%	5.5%	16.0%	35.0%	17.1%	$\chi^2=45.129^{***}$	4.9 ²
2005 hunters	1,997	14.1%	14.2%	12.5%	6.1%	16.8%	24.6%	11.7%	$\chi^2=122.275^{***}$	4.2 ³
2007 hunters	417	9.4%	8.6%	12.5%	6.0%	18.5%	34.5%	10.6%	$\chi^2=46.142^{***}$	4.6 ⁴
2010 hunters	1,535	11.4%	12.0%	11.9%	6.5%	17.7%	28.3%	12.2%	$\chi^2=50.444^{***}$	4.4 ⁵
2011 hunters	1,401	8.5%	8.8%	9.2%	5.4%	18.4%	32.7%	17.0%	$\chi^2=31.176^{***}$	4.8 ⁶
2014 hunters	1,394	7.9%	8.7%	10.4%	8.0%	20.3%	30.6%	14.1%		4.8

¹ 2000 compared to 2014, $t=0.922$ n.s.

² 2002 compared to 2014, $t=3.171^{**}$

³ 2005 compared to 2014, $t=11.141^{***}$

⁴ 2007 compared to 2014, $t=2.350^*$

⁵ 2010 compared to 2014, $t=6.439^{***}$

⁶ 2011 compared to 2014, $t=1.944$ n.s.

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

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-11 Support for Youth Waterfowl Hunting Day: 2000, 2002, 2005, 2010, 2011, and 2014 findings

Study year	n	Strongly oppose	Oppose	Neutral	Support	Strongly support	Chi-square analysis ¹	Means
2000 hunters	2,432	11.7%	9.4%	13.0%	21.7%	44.1%	$\chi^2=38.792^{***}$	3.8 ¹
2002 hunters	3,027	17.0%	9.3%	12.7%	25.2%	35.8%	$\chi^2=58.680^{***}$	3.5 ²
2005 hunters	2,357	17.3%	9.5%	10.5%	24.7%	37.9%	$\chi^2=55.086^{***}$	3.6 ³
2010 hunters	1,655	16.6%	9.7%	11.9%	23.9%	37.9%	$\chi^2=52.340^{***}$	3.6 ⁴
2011 hunters	1,744	15.1%	10.0%	11.7%	24.4%	38.8%	$\chi^2=35.630^{***}$	3.6 ⁵
2014 hunters	1,638	10.7%	8.7%	11.5%	27.7%	41.4%		3.8

¹ 2000 compared to 2014, $t=1.033$ n.s.

² 2002 compared to 2014, $t=8.265^{***}$

³ 2005 compared to 2014, $t=7.361^{***}$

⁴ 2010 compared to 2014, $t=7.059^{***}$

⁵ 2011 compared to 2014, $t=5.553^{***}$

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

Table 10-12 Group Membership : 2000, 2002, 2005, 2007, 2010, 2011, and 2014 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% ^f	6.9% ^f	8.7% ^f	26.7% ^f	41.0% ^f
2014 hunters	39.4%	6.2%	6.2%	21.2%	42.4%
Chi-square analysis ²	^a $\chi^2=9.395^{**}$ ^b $\chi^2=4.111^*$ ^c $\chi^2=3.135$ n.s. ^d $\chi^2=2.044$ n.s. ^e $\chi^2=0.567$ n.s. ^f $\chi^2=34.768^{***}$	^b $\chi^2=59.472^{***}$ ^c $\chi^2=32.606^{***}$ ^d $\chi^2=44.325^{***}$ ^e $\chi^2=1.476$ n.s. ^f $\chi^2=1.769$ n.s.	^a $\chi^2=43.180^{***}$ ^b $\chi^2=36.506^{***}$ ^c $\chi^2=7.852^{**}$ ^d $\chi^2=0.060$ n.s. ^e $\chi^2=0.060$ n.s. ^f $\chi^2=15.747^{***}$	^a $\chi^2=55.046^{***}$ ^b $\chi^2=0.131$ n.s. ^c $\chi^2=5.773^*$ ^d $\chi^2=8.511^{**}$ ^e $\chi^2=2.151$ n.s. ^f $\chi^2=13.801^{***}$	^a $\chi^2=14.648^{***}$ ^b $\chi^2=3.199$ n.s. ^c $\chi^2=0.938$ n.s. ^d $\chi^2=0.004$ n.s. ^e $\chi^2=15.520^{***}$ ^f $\chi^2=0.364$ n.s.

¹“Not a member of any conservation/hunting organization” was not a direct question. It was determined by counting those respondents who did not indicate they were members of any of the group categories.

²Chi-square test ^a compares 2000 to 2014, ^b compares 2002 to 2014, ^c compares 2005 to 2014, ^d compares 2007 to 2014, ^e compares 2010 to 2014, ^f compares 2011 to 2014.

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

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-13: 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%	$\chi^2=60.897^{***}$	2.9 ¹
2011 hunters	1665	9.0%	19.9%	34.7%	33.0%	3.4%	$\chi^2=11.270^*$	3.0 ²
2014 hunters	1642	7.9%	17.7%	37.0%	33.8%	3.7%		3.1

¹ 2010 compared to 2014, $t=7.269^{***}$

² 2010 compared to 2014, $t=2.335^*$

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

Table 10-14: 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%	$\chi^2=4.259$ n.s.	3.1 ¹
2011 hunters	1667	6.6%	14.7%	40.5%	33.8%	4.4%	$\chi^2=15.141^{**}$	3.2 ²
2014 hunters	1638	6.2%	17.7%	41.0%	30.6%	4.4%		3.2

¹ 2010 compared to 2014, $t=1.590$ n.s.

² 2010 compared to 2014, $t=2.442^*$

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

Table 10-15: 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%	$\chi^2=1.659$ n.s.	3.1 ¹
2011 hunters	1668	8.0%	16.6%	33.2%	37.6%	4.7%	$\chi^2=0.406$ n.s.	3.2 ²
2014 hunters	1643	6.3%	17.2%	34.8%	37.5%	4.2%		3.2

¹ 2010 compared to 2014, $t=1.164$ n.s.

² 2010 compared to 2014, $t=2.442^*$

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

Section 10: Comparison of 2000, 2002, 2005, 2007, 2010, 2011, and 2014 Minnesota Waterfowl Hunter Survey Findings

Table 10-16: 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%	$\chi^2=15.477^{**}$	3.2 ¹
2011 hunters	1666	6.1%	12.4%	37.9%	38.8%	4.8%	$\chi^2=14.175^{**}$	3.2 ²
2014 hunters	1641	4.9%	13.8%	39.7%	38.0%	3.6%		3.2

¹ 2010 compared to 2014, $t=2.063^*$

² 2010 compared to 2014, $t=1.085$ n.s.

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

Table 10-17: 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%	$\chi^2=118.441^{***}$	3.5 ¹
2010 hunters	1865	2.5%	5.3%	45.4%	38.8%	8.0%	$\chi^2=7.682$ n.s.	3.4 ²
2011 hunters	1664	3.5%	5.5%	44.0%	39.2%	7.8%	$\chi^2=6.608$ n.s.	3.4 ³
2014 hunters	1641	2.8%	5.3%	45.0%	40.6%	6.4%		3.4

¹ 2002 compared to 2014, $t=4.218^{***}$

² 2010 compared to 2014, $t=0.687$ n.s.

³ 2011 compared to 2014, $t=0.322$ n.s.

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

Table 10-18: 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%	$\chi^2=141.808^{***}$	3.2 ¹
2010 hunters	1867	9.1%	22.3%	38.5%	26.5%	3.6%	$\chi^2=37.411^{***}$	2.9 ²
2011 hunters	1664	9.1%	17.3%	39.1%	30.0%	4.5%	$\chi^2=19.130^{**}$	3.0 ³
2014 hunters	1636	6.8%	17.3%	43.2%	29.1%	3.5%		3.1

¹ 2002 compared to 2014, $t=4.706^{***}$

² 2010 compared to 2014, $t=5.233^{***}$

³ 2011 compared to 2014, $t=0.912$ n.s.

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

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Appendix A: Survey Instrument

THE 2014 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



2015 Minnesota Waterfowl Stamp
(Harlequin Duck)

**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
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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.)*

- 2013
- 2012
- 2011
- 2010
- 2009
- I did not hunt during any of these years.

Q4. Did you hunt waterfowl in Minnesota during the 2014 season? *(Please check one.)*

- No —→ *(Skip to Part V, question Q18.)*
- Yes *(Please continue with Part II, Q5.)*

Part II. Your 2014 Minnesota Waterfowl Hunting Season

Next we have a few questions about your hunting experiences during the 2014 Minnesota waterfowl-hunting season. *(If you did not hunt waterfowl in Minnesota in 2014 please skip to question Q18.)*

Q5. Please indicate whether you hunted for the following kinds of waterfowl in Minnesota in 2014. If you did hunt, estimate the total number of that kind of waterfowl you bagged (shot and retrieved).

During the 2014 waterfowl season, did you hunt in Minnesota for:	Please circle no or yes.		If yes, how many did you personally bag in Minnesota? <i>(Write in number bagged.)</i>
Ducks	no	yes	_____ ducks
Canada Geese during:			
August Canada Goose Management Action	no	yes	_____ geese
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 2014 Minnesota waterfowl season, about how many days did you hunt on...

Weekend days or holidays: _____ days

Weekdays (Monday-Friday): _____ days

Q7. During the 2014 Minnesota waterfowl season, how many nights did you spend away from your primary residence (e.g. motel, camp, cabin, with family/friends, etc.) while waterfowl hunting in Minnesota?

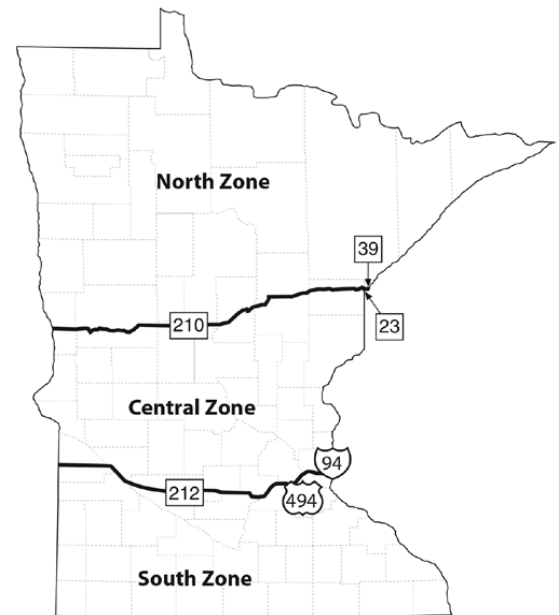
_____ nights

Q8. Did you hunt the opening Saturday (September 27) of the 2014 Minnesota Season? (Please check one.)

- No
- Yes

Q9. During the 2014 Minnesota waterfowl-hunting season, how many days did you hunt in each zone? (See map.) Do not include days hunted during the special August or September goose seasons.

Region	Number of Days
North Zone	_____ days
Central Zone	_____ days
South Zone	_____ days



Q10. How many of those days did you hunt ducks during the last 2 hours of the afternoon?

_____ days

Q11. During the 2014 Minnesota waterfowl season, the season was split (closed for several days) in the Central and South zones. Did you hunt the 2nd opening weekend (Saturday, October 11-Sunday, October 12) in either of these zones?

- Yes, I hunted in the Central Zone the 2nd opening (Oct. 11-12)
- Yes, I hunted in the South Zone the 2nd opening (Oct. 11-12)
- No, I did not hunt these days in these regions

Q12. What was the last day that you hunted ducks during the 2014 Minnesota waterfowl season?

_____ (month) _____ (day)

Part III. Your Hunting Satisfaction

Q13. During the 2014 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the following? (Circle one response for each. If you did not hunt ducks or geese please circle "9" in the far right column.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Did not hunt ducks/geese
General waterfowl hunting experience	1	2	3	4	5	6	7	9
DUCKS:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
GEESE:								
hunting experience	1	2	3	4	5	6	7	9
hunting harvest	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9

Q14. During the 2014 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

Q15. How did your 2014 waterfowl season compare with the 2013 waterfowl season? (Circle one response for each.)

Compared to 2013, rate your 2014 waterfowl season:	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Did not hunt in 2013
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
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
number of geese seen	1	2	3	4	5	6	7	9

Part IV. Motivations for Waterfowl Hunting


Q16. We would like to know some of your general attitudes about bagging waterfowl. For each of the following statements, please indicate how much you agree or disagree with that statement. (Please circle one response for each of the following statements.)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The more ducks I bag the happier I am.	1	2	3	4	5
The more geese I bag the happier I am.	1	2	3	4	5
When I go waterfowl hunting, I'm just as happy if I don't bag anything.	1	2	3	4	5
If I thought I wouldn't bag any ducks or geese, I wouldn't go waterfowl hunting.	1	2	3	4	5
I'm just as happy if I don't bag the ducks and geese I see.	1	2	3	4	5
I must bag waterfowl for the waterfowl hunting trip to be enjoyable.	1	2	3	4	5
A full bag limit is the best indicator of a good waterfowl hunting trip.	1	2	3	4	5
When I go waterfowl hunting, I'm not satisfied unless I bag at least something.	1	2	3	4	5
A successful waterfowl hunting trip is one in which many ducks or geese are bagged.	1	2	3	4	5
I'm happiest with a waterfowl hunting trip if I bag the limit.	1	2	3	4	5
A waterfowl hunting trip can be enjoyable even if no ducks or geese are bagged.	1	2	3	4	5

Q17. How important are the following experiences to your Minnesota waterfowl hunting satisfaction?

For each:

- First, tell us **how important** it is to your waterfowl hunting satisfaction.
- Next, tell us to what extent it happened **during your 2014 Minnesota waterfowl hunting season.**



	HOW IMPORTANT TO YOU?					DID IT HAPPEN?				
	Not at all	Slightly	Somewhat	Very	Extremely	Not at all	Slightly	Somewhat	Largely	Very much
Seeing ducks in the field	1	2	3	4	5	1	2	3	4	5
Seeing geese in the field	1	2	3	4	5	1	2	3	4	5
Attracting ducks with decoys	1	2	3	4	5	1	2	3	4	5
Attracting geese with decoys	1	2	3	4	5	1	2	3	4	5
Calling ducks in	1	2	3	4	5	1	2	3	4	5
Calling geese in	1	2	3	4	5	1	2	3	4	5
Bagging my daily limit	1	2	3	4	5	1	2	3	4	5
Bagging at least one duck during a day in the field	1	2	3	4	5	1	2	3	4	5
Bagging drakes	1	2	3	4	5	1	2	3	4	5
Bagging a lot of ducks over the season	1	2	3	4	5	1	2	3	4	5
Bagging a lot of geese over the season	1	2	3	4	5	1	2	3	4	5
Bagging a variety of different duck species	1	2	3	4	5	1	2	3	4	5
Bagging diving ducks	1	2	3	4	5	1	2	3	4	5
Bagging mallards	1	2	3	4	5	1	2	3	4	5
Bagging teal and wood ducks	1	2	3	4	5	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 2014.*

Q18. How important is waterfowl hunting to you? (Please check one.)

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

Q19. Please indicate how likely it is you will hunt ducks or geese during the 2015 Minnesota waterfowl season. (Circle one response.)

Very Unlikely	Somewhat Unlikely	Slightly Unlikely	Undecided	Slightly Likely	Somewhat Likely	Very Likely
1	2	3	4	5	6	7

Q20. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2014. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (6 ducks)? (Check one.)

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

Q21. The U.S. Fish and Wildlife Service allowed states to have a 2 hen mallard daily bag limit in 2014. Which one statement best describes how you feel about the hen mallard daily bag limit in Minnesota (2 hen mallards)? (Please check one.)

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

Q22. The U.S. Fish and Wildlife Service allowed states to have a 3 wood duck daily bag limit in 2014. Which one statement best describes how you feel about the wood duck daily bag limit in Minnesota (3 wood ducks)? (Please check one.)

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

Q23. We would like to know some of your general perceptions about duck bag limits. For each of the following statements, please indicate how much you agree or disagree with that statement. (Please circle one response for each of the following statements.)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The only purpose of bag limits is to protect duck populations.	1	2	3	4	5
Bag limits set standards for the number of ducks it is ethical for a hunter to bag.	1	2	3	4	5
Bag limits should reflect what hunters feel is socially desirable.	1	2	3	4	5
Bag limits should be based solely on what is biologically possible.	1	2	3	4	5
It is acceptable to reduce bag limits if that is what most hunters think is socially desirable.	1	2	3	4	5
Bag limits should be based on biological impacts to the waterfowl resource.	1	2	3	4	5
Bag limits help keep people from harvesting more ducks than they can use.	1	2	3	4	5
Bag limits help make sure everyone has a fair chance to bag some ducks.	1	2	3	4	5
Bag limits establish a goal for how many ducks to harvest to have a successful trip.	1	2	3	4	5
Most hunters think bag limits should be followed.	1	2	3	4	5
I think bag limits should be followed.	1	2	3	4	5
Most hunters think bag limits represent the number of ducks that it is acceptable to bag	1	2	3	4	5
I think bag limits represent the number of ducks that it is acceptable to bag	1	2	3	4	5

Q24. The price of a Federal Waterfowl Stamp likely will increase from \$15 to \$25 next year. Given this increase in the stamp price how likely is it that you will hunt next year? (Circle one response.)

Very Unlikely	Somewhat Unlikely	Slightly Unlikely	Undecided	Slightly Likely	Somewhat Likely	Very Likely
1	2	3	4	5	6	7

Part VI. Waterfowl Management and Special Regulations

Q25. We would like to know if you oppose or support each of these different strategies: (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
Using a North, Central, and South duck zone during last year's waterfowl season	1	2	3	4	5	9
Using a split season in the Central 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
Restricting the use of motorized decoys for the first part of Minnesota's waterfowl season	1	2	3	4	5	9
Having the August Canada Goose Conservation Season in the Intensive Harvest Zone	1	2	3	4	5	9
Using a 10 Canada goose daily bag limit in September in the Intensive Harvest Zone	1	2	3	4	5	9

Q26. Currently, waterfowl hunters need to purchase a waterfowl stamp validation, but do not need to purchase the actual stamp which is available for an extra charge. The DNR still holds an annual waterfowl stamp contest and prints a small number of stamps. Would you support or oppose eliminating the waterfowl stamp contest and pictorial stamp? (Circle one.)

1 Strongly oppose 2 Oppose 3 Neutral 4 Support 5 Strongly support

Q27. Last fall (2014), waterfowl hunters could hunt open water (not restricted to concealing vegetation) on Lake Pepin, Lake of the Woods, Mille Lacs Lake, and/or Lake Superior. Did you hunt in any of these places during the 2014 waterfowl season? (Check one.)

- No → (Skip to Q29).
- Yes (Please answer question Q28.)

→ **Q28. Did you hunt in open water (that is you were at anchor and not located in concealing vegetation while hunting on these areas)? (Check one.)**

- No
- Yes

Part VII. Waterfowl Hunting Season Dates

Last fall (2014), three waterfowl zones (North, Central and South) were used in Minnesota. Waterfowl zones allow states to set different season dates in different regions of the state to match waterfowl migration patterns, freeze-up dates, and hunter preferences.



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

- North
- Central
- South
- Mississippi River area
- No preference

Q30. For the area you selected above, what is your preference for season dates if duck season length is 60 days in 2015? (Please check one.)

- Saturday Sept. 26 to Tuesday Nov. 24 (*same season as used last year in North Duck Zone*)
- Saturday Sept. 26 to Sunday Oct. 4, close 5 days, reopen Saturday Oct. 10 to Sunday Nov. 29 (*same season as used last year in Central Duck Zone*)
- Saturday Sept. 26 to Monday Sept. 28, close 11 days, reopen Saturday Oct. 10 to Saturday, Dec. 5 (*same season as used last year in South Duck Zone*)
- Saturday Sept. 26 to Sunday Oct. 4, close 12 days, reopen Saturday Oct. 17 to Sunday, Dec. 6 (*later split; same season as used in 2013 in South Duck Zone*)
- No preference

Q31. The Canada goose season extends for 107 days in each of the 3 waterfowl zones. Last year, the Canada goose season was closed when the duck season was also closed for 5 days in the Central Zone and 11 days in the South zone. What is your preference for Canada goose season dates?

- Keep goose season closed during any splits (closed periods) in duck season
- Keep goose season open during splits (closed periods) in duck season
- No preference

Q32. Minnesota first used 3 zones for duck hunting in 2012. How would you compare your duck hunting experience in Minnesota under the current 3-zone structure to your experiences when no zones were used? Would you say that your duck hunting experience under the 3-zone structure has been... (Circle one.)

Compared to when no zones were used, rate your experience hunting waterfowl with zones:	Much worse	Somewhat worse	Slightly worse	Neither	Slightly better	Somewhat better	Much better	Did not hunt when zones were not used
	1	2	3	4	5	6	7	9

Q33. The Minnesota DNR has used restricted shooting hours that end at 4 p.m. in the early portion of duck season since 1973. Last year, the restriction lasted a different number of days in each duck zone (North Zone=14 days; Central Zone=9 days; South zone=3 days) due to differences in season dates. Do you support or oppose this restriction?

1	2	3	4	5
Strongly oppose	Oppose	Neutral	Support	Strongly support

Part VIII. Early Teal Season

All states in the Mississippi Flyway, including Minnesota, are allowed a special teal-only season in September for up to 16 days OR a bag limit that includes 2 bonus blue-winged teal in addition to the regular bag limit during the first 16 days of the regular duck season. A potential September teal season in Minnesota would occur about 3 weeks before the regular waterfowl season opens, would last 7 days, and would have a bag limit of 6 teal per day. Blue-winged and green-winged teal would be the only legal species.

Q34. What is your level of support for a special September teal-only season in Minnesota? (Circle one number.)

1	2	3	4	5
Strongly oppose	Moderately oppose	Neutral	Moderately support	Strongly support

Q35. What is your preference for timing of teal season? (The regular waterfowl season could open no earlier than Saturday, Sept. 26, 2015.)

- Tuesday Sept. 1 to Monday, Sept. 7, 2015 (7 days)
- Saturday Sept. 5-Friday, Sept. 11 (7 days)
- No teal season

Q36. If a special September teal-only season is made available, how likely are you to hunt in this early teal-only season? (Circle one number.)

1	2	3	4	5
Extremely unlikely	Somewhat unlikely	Undecided	Somewhat likely	Extremely likely

Q37. How would Minnesota adopting a special September teal-only season affect your waterfowl-hunting in Minnesota? (Circle one number.)

1	2	3	4	5
Greatly damage	Somewhat damage	No change	Somewhat improve	Greatly improve

Q38. What is your level of support for 2 blue-winged teal bonus bag limit during the first 16 days of the regular duck season in Minnesota? (Circle one number.)

1	2	3	4	5
Strongly oppose	Moderately oppose	Neutral	Moderately support	Strongly support

Q39. We would like to know some of your perceptions about a possible special teal season or bonus blue-winged teal bag limit during the regular duck season in Minnesota. For each of the following statements, please indicate how much you agree or disagree with that statement. (Circle one response for each of the following statements.)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't know
A special September teal season would disturb waterfowl before the regular season.	1	2	3	4	5	9
I would not want a September teal season if it meant that Youth Waterfowl Hunting Day would have to be cancelled.	1	2	3	4	5	9
I would prefer to have a September teal season rather than Youth Waterfowl Hunting Day.	1	2	3	4	5	9
I am concerned about having a September teal season because teal nest in Minnesota.	1	2	3	4	5	9
Minnesota should have a September teal season because teal seasons are offered in other states.	1	2	3	4	5	9
Minnesota should have a September teal season because the continental blue-winged teal population can sustain a higher harvest.	1	2	3	4	5	9
I am concerned about having a September teal season because the number of breeding teal in Minnesota is lower than long-term averages.	1	2	3	4	5	9
I would prefer 2 bonus blue-winged teal in the regular duck season instead of a September teal season.	1	2	3	4	5	9
I am concerned about having a September teal season because I think other hunters would shoot ducks that are not teal.	1	2	3	4	5	9
I am concerned about having a September teal season because I might shoot ducks that are not teal.	1	2	3	4	5	9
An early teal season would allow hunters to harvest more ducks.	1	2	3	4	5	9
The 2 bird bonus blue-winged teal limit would complicate regulations.	1	2	3	4	5	9

Part IX. 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.

Q40. Do you support or oppose the concept of Youth Waterfowl Hunting Day? (Please check one.)

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

Q41. Last September (2014), did you take any youth hunting on Youth Waterfowl Hunting Day? (Please check one.)

- No → (Skip to Q43).
- Yes (Please answer question Q42.)

→ **Q42. If yes, how many youths did you take? _____ youths**

Part X. Battery-Operated Spinning-Wing Decoys

Q43. Do you own a battery-operated, spinning-wing decoy? (Please check one.)

- No
- Yes

Q44. Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during the 2014 waterfowl season? (Please check one.)

- No
- Yes

Q45. Do you support or oppose the following... (Circle one for each.)

	Strongly oppose	Oppose	Neutral	Support	Strongly support
Prohibit the use of motorized decoys or other motorized devices until the Saturday nearest Oct. 8 th . Last year, this was: North Zone=15 days; Central Zone=10 days; South zone=4 days. (Current regulation)	1	2	3	4	5
Prohibit use of motorized decoys or other motorized devices on Department of Natural Resources Wildlife Management Areas for the entire duck season. (Current regulation)	1	2	3	4	5

Part XI. Minnesota DNR Waterfowl Management

Q46. How do you feel about the Minnesota Department of Natural Resources (MNDNR)? Please circle one response for each of the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The MNDNR does a good job of managing waterfowl.	1	2	3	4	5
When deciding about waterfowl management in Minnesota, the MNDNR will be open and honest in the things they do and say.	1	2	3	4	5
The MNDNR can be trusted to make decisions about waterfowl management that are good for the resource.	1	2	3	4	5
The MNDNR will make decisions about waterfowl management in a way that is fair.	1	2	3	4	5
The MNDNR has waterfowl managers and biologists who are well-trained for their jobs.	1	2	3	4	5
The MNDNR listens to waterfowl hunters' concerns.	1	2	3	4	5
I consider an opportunity to voice opinions to MNDNR waterfowl management desirable.	1	2	3	4	5
I intend to respect MNDNR waterfowl management's future management decisions.	1	2	3	4	5
I accept the decisions of MNDNR waterfowl management.	1	2	3	4	5
I consider an opportunity to voice opinions to MNDNR about waterfowl management important.	1	2	3	4	5
I think Minnesotans should have the right to voice opinions about waterfowl management to the MNDNR.	1	2	3	4	5
I am willing to accept the decisions of MNDNR waterfowl management.	1	2	3	4	5
I think MNDNR waterfowl management uses the best available science when making management decisions.	1	2	3	4	5
I consider MNDNR decision-making about waterfowl management fair	1	2	3	4	5

Part XII. About You

Q47. Are you currently a member of: (Check all that apply.)

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

Q48. Did you hunt for waterfowl in a state or province other than Minnesota in 2014? (Please check one.)

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

Q49. What is your age?

_____ years

Q50. How many years have you lived in Minnesota?

_____ years

Q51. How many years did you live on a farm or ranch, or in a non-suburban rural area from birth until age 17?

_____ years

Q52. How many years have you lived on a farm or ranch, or in a non-suburban rural area from age 18 until now?

_____ years

Q53. What was your annual household income from all sources, before taxes, in 2014?

\$ _____

Q54. What is the highest level of education you have completed? (Check one.)

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

Please write any comments on additional sheets or send them to sas@umn.edu. Survey results will be available in the summer of 2015 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.