WATERFOWL HUNTING IN MINNESOTA

A follow-up study of respondents to the 2001 waterfowl survey

Ruddy Duck

Final Report

A cooperative study conducted by:

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

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Executive Summary

This follow-up study of respondents to the 2001 Minnesota waterfowl survey was conducted to supplement the data gathered by the 2005 survey of Minnesota waterfowl hunters. It is intended to allow the Minnesota Department of Natural Resources better understand issues related to Minnesota waterfowl hunter retention.

The specific objectives of this study were to:

1. Describe hunters' backgrounds.
2. Describe hunter effort in Minnesota in 2005 including: species and seasons hunted; number of days hunted; and effort during weekdays, weekends, and opening weekends; regions hunted.
3. Describe hunting satisfaction with waterfowl (duck and goose) hunting in Minnesota.
4. Describe the waterfowl-hunting involvement/commitment and motivations.
5. Describe changes in problems associated with hunting in Minnesota.
6. Describe changes in the quality of waterfowl-hunting in Minnesota.
7. Describe constraints to waterfowl-hunting.
8. Determine hunters' opinions concerning management strategies.
9. Describe opinions about Youth Waterfowl Hunting Day in Minnesota.
10. Describe ownership and use of battery-operated, spinning-wing decoys.
11. Determine Minnesota waterfowl hunters' opinions on the Minnesota Department of Natural Resources.
12. Describe sources of information on waterfowl hunting.
13. Describe participation in other hunting activities.

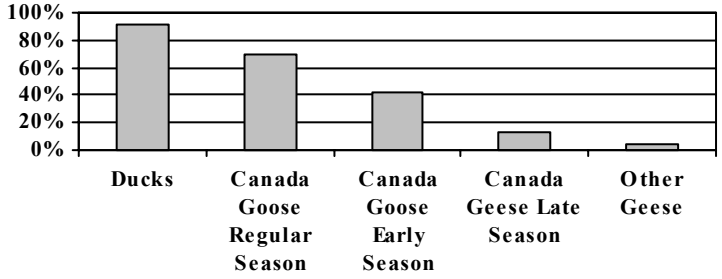
The survey was distributed to 1,320 individuals who had responded to a waterfowl hunter survey conducted in 2001. The sample was stratified by hunter segment (longtime hunters, less-engaged hunters, recreational-casual hunters, social enthusiasts, and individualist/achievement-oriented enthusiasts) as described in Schroeder, Fulton, and Lawrence (2006). After adjusting for undeliverable surveys and invalid respondents, the response rate for the full survey was 68%.

Nearly 9 of 10 respondents still considered themselves to be waterfowl hunters. Over 90% of enthusiast participants still considered themselves to be waterfowl hunters, compared to 84.5% of longtime hunters, 86.0% of less-engaged hunters, and 81.6% of recreational-casual hunters. It was somewhat surprising to see higher drop out among hunters classified as recreational-casual compared to those classified as less-engaged. About two-thirds (67%) had hunted during the 2005 season, ranging from 46% for less-engaged hunters to 75% of social waterfowl-hunting enthusiasts. Nearly 7 in 10 respondents had hunted every year from 2000 through 2004. Consistent waterfowl hunting behavior was higher among the two enthusiast hunter segments. About half of the respondents (51%) indicated that they would be 'very likely' to hunt for ducks and/or geese in Minnesota in the next 5 years. More than half of the respondents (61%) reported being members of a hunting or conservation organization, with 42% reporting a membership in Ducks Unlimited. Membership in DU ranged from 23% among less-engaged waterfowl hunters to 46% of recreational-casual hunters. More than half of the respondents had hunted for waterfowl outside of Minnesota at some point in their lives, ranging from 35% of less-engaged hunters to 62% of social waterfowl-hunting enthusiasts.

2005 Waterfowl Hunting Experiences

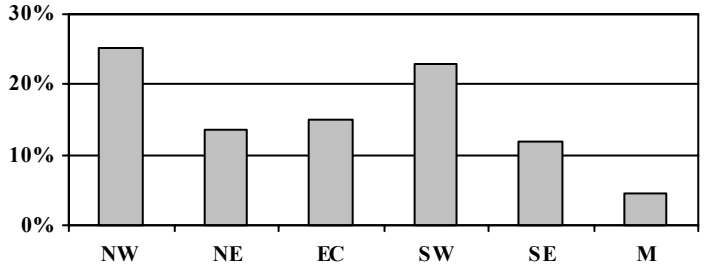
About two-thirds of the respondents had hunted for waterfowl in Minnesota in 2005. Of those who hunted, nearly all had hunted for ducks, with about two-thirds hunting for geese (Figure S-1).

Figure S-1: Percentage of Hunters Participating in Activities in 2005



Respondents reported bagging an average of 9.0 ducks, 5.6 Canada Geese, and 0.7 "other" geese over the course of the 2005 Minnesota season. Respondents hunted an average of 6.6 days on weekends and holidays, and 4.8 days during the week. Approximately two-thirds of waterfowl hunters statewide hunted opening Saturday (65%) or Sunday (68%).

Figure S-2: Most Frequent Hunting Destination in 2005



Survey recipients were asked how many days they hunted in each of six management regions. Over one-fifth of respondents reported hunting most frequently in either the Northwest or Southwest region (Figure S-2). Less than 10% of the respondents reported that they most often hunted in the metro region.

Satisfaction

About half of the respondents reported being satisfied with their general waterfowl-hunting experience. Less-engaged hunters and individualist/achievement-oriented enthusiasts were somewhat more satisfied with the general experience than other groups were (Figure S-3).

Figure S-3: Satisfaction With General Waterfowl Hunting Experience

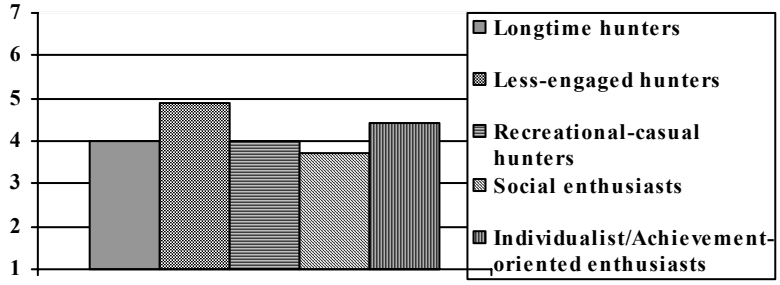
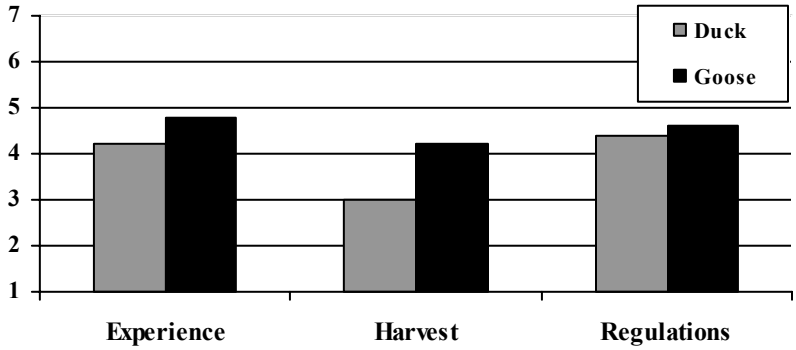


Figure S-4: Satisfaction With Duck Versus Goose Hunting



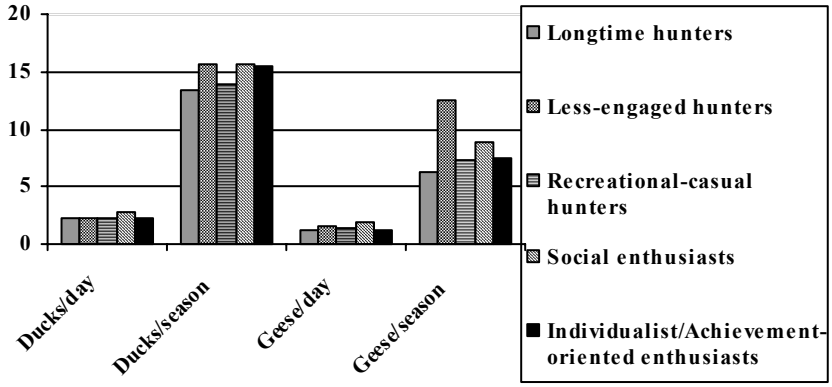
Satisfaction with goose hunting was generally found to be higher than satisfaction with duck hunting. This was true for experiences, harvest, and regulations (Figure S-4).

Hunters were asked if their overall level of satisfaction for duck hunting and goose hunting had decreased or increased in the past three hunting seasons, and since they had begun hunting ducks and geese. Hunters' satisfaction with duck hunting had declined significantly more than goose hunting satisfaction in the past 3 years. This was also true when comparing satisfaction with duck hunting and goose hunting since hunters' beginning of hunting.

Respondents were asked how satisfied or dissatisfied they were with the number of ducks and geese seen in the field. Nearly 8 of 10 respondents were dissatisfied with the number of ducks they had seen in the field during their most recent waterfowl-hunting season in Minnesota. However, nearly 6 out of 10 respondents were satisfied with the number of geese they had seen. Less-engaged hunters were somewhat less dissatisfied with the number of ducks they had seen in the field during their most recent season (Figure S-5).

Figure S-5: Satisfaction With Number of Ducks Seen in the Field

Figure S-6: Number of Birds Bagged to Feel Satisfied



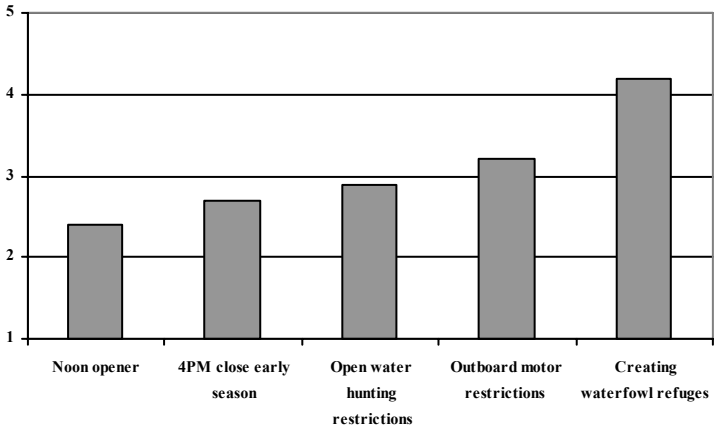
Respondents were asked to indicate the number of ducks and geese they needed to harvest in a day and in a season to feel satisfied with their harvest. Respondents indicated that they needed to harvest 2.3 ducks per day and 14.3 ducks per season on average to feel satisfied. They indicated that they needed to harvest 1.4 geese per day and 7.3 geese per season to feel satisfied. In general, social enthusiasts and less-engaged hunters indicated that they needed to harvest slightly more birds to feel satisfied (Figure S-6).

Youth Waterfowl Hunting Day

Overall, 64% of respondents supported the youth hunt, with 40% strongly supporting it. Study respondents were asked if they took any youths hunting on Minnesota's Youth Waterfowl Hunting Day during their most recent waterfowl-hunting season, and 17% reported participating.

Management Strategies

S-7: Support for Management Strategies



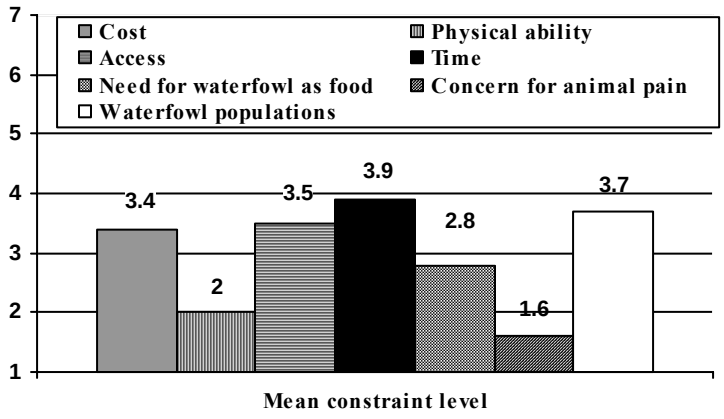
Survey recipients reported their support for different waterfowl management strategies. Results show strong support for creating waterfowl refuges and some support for outboard motor restrictions, with less support for other strategies (Figure S-7).

Opinions on the Minnesota Department of Natural Resources

Respondents were asked to respond to four statements about the Minnesota Department of Natural Resources (DNR). Overall, survey respondents had neutral to mildly positive opinions about the Minnesota Department of Natural Resources. On average, respondents agreed slightly that: "The Minnesota DNR has waterfowl management staff who are well trained for their jobs" and "The Minnesota DNR answers questions honestly." Respondents were neutral on the statement: "The Minnesota DNR listens to waterfowl hunters' concerns." They were in slight disagreement with the statement: "The Minnesota DNR responds to waterfowl hunters' concerns."

Constraints

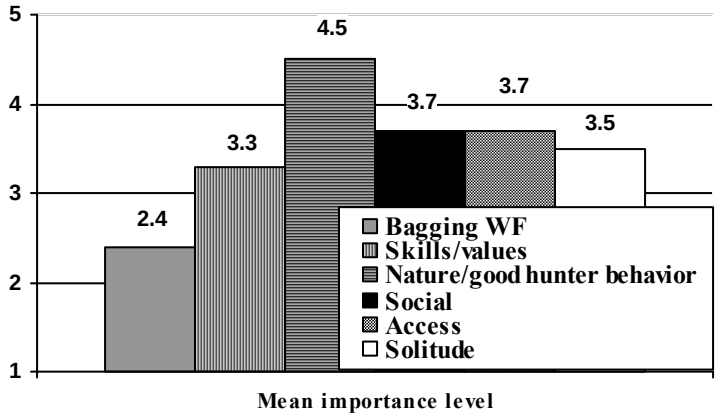
Figure S-8 Means on Constraint Factors



Respondents rated 28 items to indicate how much they limited the amount and type of waterfowl hunting they participated in. We identified seven factors that constrained waterfowl hunters' participation: (a) cost, (b) physical ability, (c) access, (d) time, (e) need/desire for waterfowl as food, (f) concern for animal pain, and (g) waterfowl populations. Time constraints were the most limiting, followed by waterfowl populations, cost, and access issues (Figure S-8). Less-engaged waterfowl hunters were more constrained in their participation. The constraints that were relatively more limiting for this group related to concern for animal pain, physical ability, and no need/desire for waterfowl for food. Access issues were seen as less of a constraint for this group.

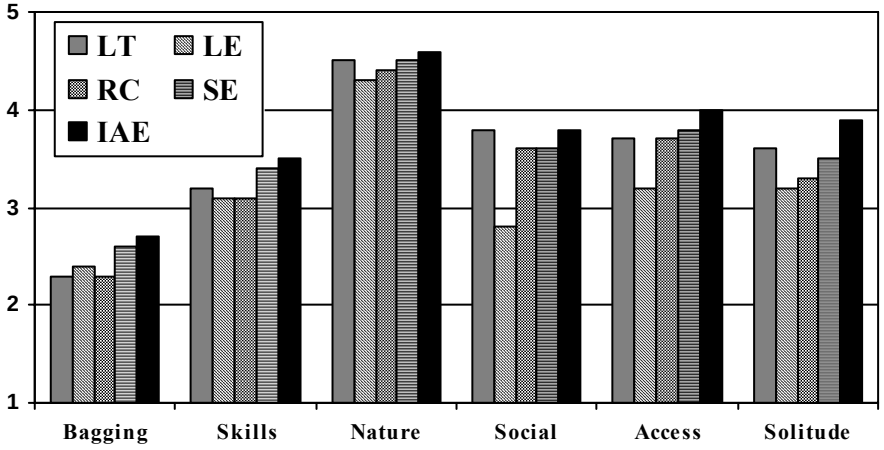
Motivations

Figure S-9 Means on Motivation Factors



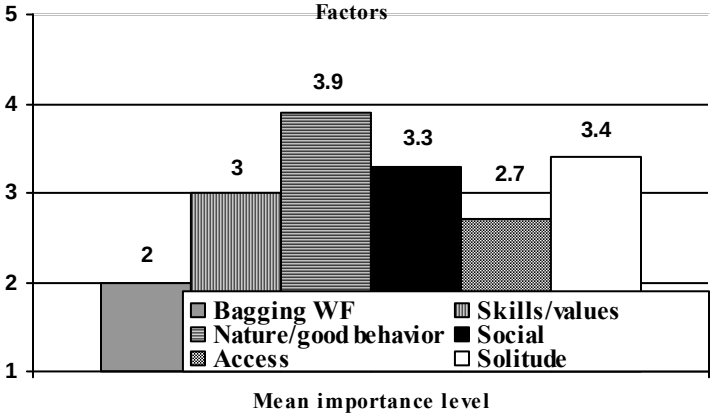
Respondents rated the importance of 21 experience items related to participation in waterfowl hunting. Six motivational factors were identified: (a) bagging waterfowl, (b) skills/values, (c) nature/good hunter behavior, (d) social, (e) access, and (f) solitude (Figure S-9). Nature/good hunter behavior was the most important factor, and bagging waterfowl was the least important factor. In general, motivations were less important to less-engaged hunters and more important to individualist/achievement-oriented enthusiasts and longtime hunters (Figure S-10).

Figure S-10: Experience factors by strata



Respondents rated their achievement of each of the 21 experience items. Respondents achieved experiences related to nature/good hunter behavior, social interaction, and solitude (Figure S-11). Importance-performance analysis suggested that emphasis on access, a long duck season, hunter information, and waterfowl populations might help hunters achieve desired experiences.

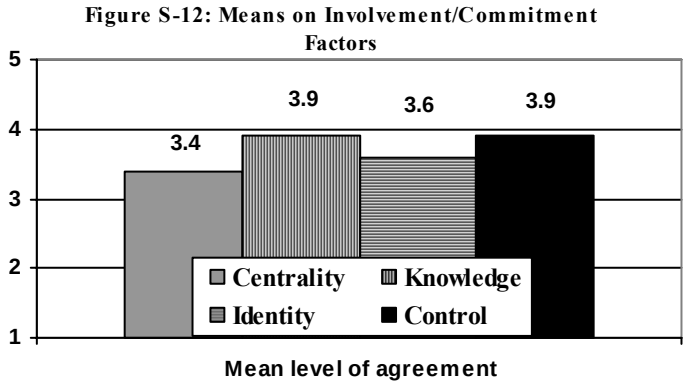
Figure S-11 Means on Achievement of Experience Factors



Respondents rated 21 items addressing their involvement with and commitment to waterfowl hunting. Four involvement/commitment factors were identified: (a) centrality, (b) knowledge, (c) identity, and (d) control (Figure S-12). Less-engaged hunters were lower on all involvement/commitment factors.

Spinning-Wing Decoys

Twenty-eight percent of respondents reported that they owned a battery-operated, spinning-wing decoy, and 26% reported using these decoys during the 2005 waterfowl season. A smaller proportion of less-engaged hunters owned and used these decoys, compared to respondents from other hunter segments.

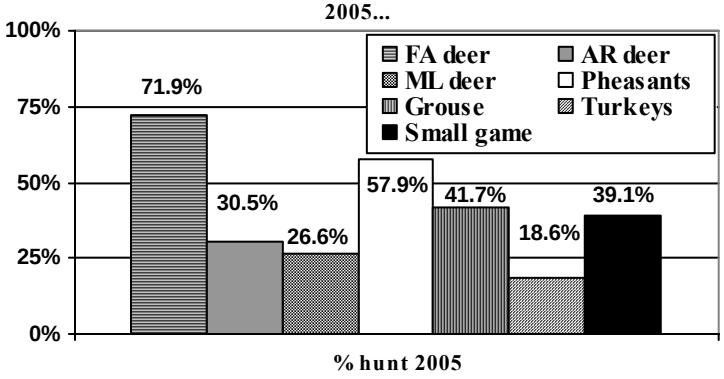


Changes/Problems With Minnesota Waterfowl Hunting

Respondents were asked to rate nine changes and eight problems associated with Minnesota waterfowl hunting from much worse to much better. Respondents felt that all problems and changes had become worse with the exception of changes in regulations that were perceived as neither better nor worse. Where there were differences in perceptions of changes and problems, less-engaged waterfowl hunters perceived that the changes or problems had not declined as much as other groups thought they had.

Participation in Other Types of Hunting

Respondents were asked if they had ever participated in other types of hunting, including: (a) deer with firearms, (b) deer with archery, (c) deer with muzzleloaders, (d) pheasants, (e) grouse/woodcock, (f) turkeys, and (g) small game. If respondents had hunted for a type of game, they were asked how many years, of the previous 5 years, that they had hunted. They were also asked if they hunted for each type of game during the 2005 season, and, if so, how many days they hunted during the season. Nearly 9 of 10 respondents (87%) had hunted for deer with firearms in the past, compared to 77% for pheasants, 59% for grouse, 51% for small game, 45% for deer with archery, 33% for deer with muzzleloaders, and 32% for turkeys. Participation patterns were similar for hunting during the 2005 season (Figure S-13).



Comparison with 2000 Study Results

Compared to results for the 2000 season, respondents reported hunting fewer days during the 2005 season. On average, they bagged fewer ducks but more geese during the 2005 season than they did in 2000. In general, they reported lower levels of satisfaction with waterfowl hunting in Minnesota, and this was particularly true for duck hunting (as compared to goose hunting). In general, they also reported lower levels of importance with experiences associated with waterfowl hunting, and lower achievement of those experiences during the 2005 hunt. Finally, they generally reported lower levels of support for management strategies and for Youth Waterfowl Hunting Day.

Conclusions and Implications

The results suggest that participation, duck-hunting success (in terms of bagging ducks), hunter satisfaction, and support for various management activities have declined in this group of hunters from 2000 to 2005. Declining participation, satisfaction, and support for management may relate to declining duck populations that have received significant coverage in the media. Results suggest that a smaller proportion of the enthusiast participants have dropped out of Minnesota waterfowl hunting. Results also suggest that longtime and individualist/achievement-oriented enthusiasts find most of the experiences related to waterfowl hunting to be more important than other groups do. Less-engaged hunters find all experiences, except bagging ducks and geese, to be less important than other groups do. Less-engaged hunters report needing more ducks and geese bagged to be satisfied than respondents from the other groups do.

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Introduction

Minnesota usually has the largest number of waterfowl hunters in the United States, although State duck stamp sales have declined in recent years. The Department is concerned about recruitment and retention of hunters and has recently established a program to address these issues (http://www.dnr.state.mn.us/harr/index.html). In order to better understand this important clientele, the Minnesota Cooperative Fish and Wildlife Research Unit, in cooperation with Minnesota DNR, completed waterfowl hunter surveys following the 2000 (Fulton et al. 2002) and 2002 (Schroeder et al. 2003) hunting seasons. An additional survey was conducted following the 2005 season.

This follow-up study of respondents to the 2001 Minnesota waterfowl survey was conducted to supplement the data gathered by the 2005 survey of Minnesota waterfowl hunters. It is intended to allow the Minnesota Department of Natural Resources to better understand issues related to Minnesota waterfowl hunter retention.

Study Purpose and Objectives

This study was conducted to provide follow-up and retention information on Minnesota waterfowl hunters who had hunted during the 2000 season and were surveyed during 2001.

The specific objectives of this study were to:

1. Describe hunters' backgrounds.
2. Describe hunter effort in Minnesota in 2005 including: species and seasons hunted; number of days hunted; and effort during weekdays, weekends, and opening weekends; regions hunted.
3. Describe hunting satisfaction with waterfowl (duck and goose) hunting in Minnesota in 2005.
4. Describe waterfowl-hunting involvement/commitment and motivations.
5. Describe changes in problems associated with hunting in Minnesota.
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11. Determine Minnesota waterfowl hunters' opinions on the Minnesota Department of Natural Resources.
12. Describe sources of information on waterfowl hunting.
13. Describe participation in other hunting activities.

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

Methods

Sampling

The population of interest in this study included respondents to the 2001 Minnesota waterfowl-hunting survey. The sampling frame used to draw the study sample was response records for the 2001 waterfowl survey with current addresses obtained from the Minnesota Department of Natural Resource's (DNR) Electronic Licensing System (ELS). A stratified random sample 1,321 individuals was drawn based on hunter type as described in Schroeder et al. (2006). Schroeder et al. (2006) used cluster analysis to group

hunters from the 2001 mail survey into 5 types—two types of enthusiasts and three of participants. Enthusiasts hunted more days and placed greater importance on almost all experience items than other respondents (Schroeder et al., 2006). Participant hunters were characterized as longtime waterfowl-hunting participants, less-engaged waterfowl-hunting participants, and recreational–casual waterfowl-hunting participants (Schroeder et al., 2006).

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 June and September 2006. 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. Finally, in order to assess nonresponse bias, a 1-page survey was sent to individuals who had not responded to the earlier mailings.

Survey Instrument

The data collection instrument was a 12-page self-administered survey with 10 pages of questions (Appendix A). The questionnaire addressed the following topics:

Part 1: Waterfowl-hunting background
Part 2: 2005 Minnesota waterfowl-hunting season
Part 3: Hunting satisfaction
Part 4: Future waterfowl-hunting in Minnesota
Part 5: Involvement in waterfowl hunting
Part 6: Motivations for waterfowl hunting
Part 7: Constraints to waterfowl hunting
Part 8: Waterfowl management and special regulations
Part 9: Youth Waterfowl Hunting Day
Part 10: Battery-operated, spinning-wing decoys
Part 11: The Minnesota Department of Natural Resources
Part 12: Information sources for waterfowl hunting, group membership, hunting outside Minnesota
Part 13: Other hunting activities

Data Entry and Analysis

Data were professionally keypunched and analyzed on a PC using the Statistical Program for the Social Sciences (SPSS for Windows 12.0). We computed basic descriptive statistics and frequencies for the statewide results. Regional results were compared using one-way analysis of variance and cross-tabulations.

Several statistics presented in the report are used to show the association between variables. Pearson product moment correlations are used to show the linear relationship between two measured (interval-level) variables. Pearson correlations range from -1.0 (perfect negative association) to 1.0 (perfect

positive association), with 0 indicating no linear association (Norusis, 2002). The chi-square statistic is used to test whether two categorical variables are independent. The chi-square statistic is not a good measure of association (Norusis, 2002), so the Cramer's V statistic is provided to show the strength of the relationship for significant chi-square analyses. Values for Cramer's V range from 0.0 (no association) to 1.0 (perfect association) (Norusis, 2002). Analysis of variance (ANOVA) is used to test hypotheses about differences in two or more population means (Norusis, 2002). In this report it is used to compare: (a) the means of measured (interval-level) variables based on one multiple-category (polytomous) variable, or (b) the means of multiple interval-level variables. ANOVA produces the F ratio. Large values for the F ratio indicate that the sample means vary more than you would expect (Norusis, 2002). The correlation ratio (eta) is calculated for significant one-way ANOVA calculations in this report, to indicate the strength of the relationship. Like the Cramer's V statistic, eta (η) ranges from 0.0 (no association) to 1.0 (perfect association) (Norusis, 2002).

It is important to report the reliability of measurement scales. The reliability of items (i.e. questions) that make up a scale indicates the extent to which the scale yields consistent results over repeated observations (Eagly and Chaiken, 1993). Other ways of thinking about the reliability of a measure are: (a) "the extent to which it is free from random error" (Eagly and Chaiken, 1993, p. 64), or (b) "how well scores on the measuring instrument correlate with themselves" (Eagly and Chaiken, 1993, p. 64). We use Cronbach's alpha to report the reliability of the scales in this report.

Survey Response Rate

Of the 1,320 questionnaires mailed, 51 were undeliverable, nine were sent to a deceased person, and two were sent to people who had moved out of state, for a total of 62 invalid surveys. Of the remaining 1,258 surveys, a total of 863 full-length surveys were returned, resulting in a response rate of 68%. An additional 88 one-page follow-up surveys were returned for a total response rate of 75%. Response rates for each strata are summarized in Table I-1. We report unweighted results for each of the five hunter strata, and we report overall results weighted to reflect the proportion of hunters in the original study.

Table I-1: Response rates for each strata

	Initial sample size	Number invalid	Valid sample size	Full length surveys returned	Short surveys returned	Total completed and returned	Response rate %
Longtime hunters	355	17	338	241	22	263	77.8%
Less-engaged hunters	62	2	60	45	6	51	85.0%
Recreational-casual hunters	357	16	341	221	22	243	71.3%
Social enthusiasts	178	9	170	114	8	122	71.8%
Individualist/Achievement-oriented enthusiasts	368	17	351	242	29	271	77.2%

Reluctant Respondents

A greater proportion of reluctant responders reported that they no longer considered themselves to be waterfowl hunters (24%) compared to the other respondents (13%) ($t=9.214$, $p<0.001$). Similarly, reluctant respondents, on average, reported being significantly less likely to (a) hunt ducks in Minnesota in the next 5 years ($\bar{x}=4.6$ reluctant responders vs. $\bar{x}=5.5$ others, $t=11.421$, $p<0.001$) or (b) hunt geese in Minnesota in the next 5 years ($\bar{x}=4.8$ reluctant responders vs. $\bar{x}=5.5$ others, $t=9.881$, $p<0.001$). The reluctant respondents rated the importance of waterfowl hunting lower than others did ($\bar{x}=3.0$ reluctant responders vs. $\bar{x}=2.6$ others, $t=11.797$, $p<0.001$) (importance scale 1=most important to 5= one of least important). However, reluctant respondents rated satisfaction with their most recent Minnesota waterfowl

hunting season higher than other respondents did ($\bar{x}$ =4.6 reluctant responders vs. $\bar{x}$ =4.1 others, t=6.690, p<0.001). Weights were calculated to correct for differences in waterfowl hunting participation and applied to the data. However, there were no statistically significant differences observed between the weighted and unweighted data. For this reason, data were not weighted for differences in hunting participation.

Section 1: Experiences During the 2005 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 2005 Minnesota waterfowl-hunting seasons. Only individuals who hunted waterfowl in Minnesota in 2005 completed this section of the survey. Overall estimates and estimates based on hunter segment are presented for participation in various seasons.

Waterfowl Seasons Hunted in Minnesota in 2005

Respondents were first asked to report if they had actually hunted waterfowl in Minnesota in 2005. Overall, 67.2% of the survey respondents indicated that they had hunted waterfowl in Minnesota in 2005. A significantly larger proportion of social waterfowl-hunting enthusiasts (74.5%) hunted during the 2005 Minnesota season. A significantly smaller proportion of less-engaged waterfowl hunters (45.5%) hunted during the season (χ^2=18.851, p<0.01) (Table 1-1).

Respondents who had hunted in 2005 were next asked if they had hunted for (a) ducks, (b) Canada Geese during the early September, regular, and late December seasons, and (c) other geese. Overall, 91.8% of actual waterfowl hunters in 2005 indicated they had hunted ducks while 69.0% had hunted Canada Geese during the regular season. Approximately, 4 out of 10 respondents (41.4%) hunted Canada Geese during the early season, while approximately 1 in 10 hunted Canada Geese during the late season (13.5%). Less than 5% of respondents hunted "other" geese (4.8%). There were no significant differences among hunter groups in participation in the different hunts (Table 1-2).

Harvest

For each season in which they hunted, respondents were asked to report the number of ducks or geese they personally bagged. The overall estimate of the average number of ducks each hunter harvested during the season was 9.0 (Table 1-3). Hunters reported an average of 3.9 geese during the early season, 3.1 during the regular season, and 2.2 during the late season. For all Canada Goose seasons combined, hunters reported an average of 5.6 Canada Geese for the year. On average, hunters harvested 0.7 "other" geese.

Results of ANOVA indicate that on average, social enthusiasts hunting during the early Canada Goose season bagged significantly more geese ($\bar{x}$ =6.4), while less-engaged hunters bagged significantly fewer geese ($\bar{x}$ =2.2), compared to the other segments of hunters. There were no significant differences among hunter groups in the number of birds bagged during other seasons (Table 1-3).

Average Number of Days Hunting Weekends and Weekdays

Next, respondents were asked to report the number of days they hunted on weekends or holidays and weekdays. On average, hunters spent more days hunting on weekends and holidays (6.6 days) than during the week (4.8 days). This trend was the same in each hunter strata (Table 1-4).

Section 1: Experiences During the 2005 Waterfowl Hunt

Hunting Opening Weekend

Approximately two-thirds of waterfowl hunters statewide hunted opening Saturday (65.0%) or Sunday (67.6%) during the 2005 duck season (Table 1-5). There were no significant differences among hunter segments in the proportion of respondents hunting on the opening weekend.

Regions Hunted

The northwest region (25.2%) and southwest region (23.0%) were hunted by the largest proportions of waterfowl hunters. Less than one in five respondents reported hunting in the east-central (15.1%), northeast (13.7%) or southeast (11.8%) regions. Less than 5% of the state waterfowl hunters reported that they hunted in the metropolitan region (4.6%).

Hunting on Public and Private Land

About 4 in 10 respondents reported hunting "mostly on privately owned areas" (40.4%) and a slightly smaller proportion (38.7%) reported hunting "mostly on public access areas (Wildlife Management Areas, Waterfowl Production Areas, public access waters)" (Table 1-7). About one-fifth of the respondents (20.9%) reported hunting "on public and private land about the same." There were no significant differences among hunter segments in the proportion of respondents hunting on public versus private land.

Section 1: Experiences During the 2005 Waterfowl Hunt

Table 1-1: Proportion, by cluster, who actually hunted waterfowl in Minnesota in the year 2005

	N	% Yes
Overall[1]	847	67.2%
Longtime participants	238	67.2%
Less-engaged participants	44	45.5%
Recreational-casual participants	216	62.5%
Social enthusiasts	110	74.5%
Individualist/achievement-oriented enthusiasts	216	62.5%
		χ^2=18.851**, Cramer's V=0.149

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect 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

	n	% of hunters[1] indicating they hunted in Minnesota in 2005				
		Ducks	Canada Geese Early September	Canada Geese Regular Season	Canada Geese Late Season	Other geese
Overall[2]	586	91.8%	41.4%	69.0%	13.5%	4.8%
Longtime participants	164	92.1%	35.2%	66.1%	12.7%	4.2%
Less-engaged participants	21	85.7%	23.8%	71.4%	4.8%	14.3%
Recreational-casual participants	139	88.5%	44.6%	69.1%	10.1%	3.6%
Social enthusiasts	84	92.9%	47.6%	69.0%	17.9%	2.4%
Individualist/ achievement-oriented enthusiasts	181	95.0%	47.0%	73.5%	17.7%	7.2%
		χ^2=5.808 n.s.	χ^2=9.278 n.s.	χ^2=2.331 n.s.	χ^2=6.536 n.s.	χ^2=7.486 n.s.

[1] % for species reflects only % of respondents that actually hunted waterfowl during 2005
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 1-3: Average number of birds bagged

	Average number of birds bagged in Minnesota in 2005 per hunter for that specific season					
	Ducks	Canada Geese Early September	Canada Geese Regular Season	Canada Geese Late Season	Total Canada Geese All Seasons	Other Geese
Overall[1]	9.0	3.9	3.1	2.2	5.6	0.7
Longtime participants	8.2	3.6	3.1	2.2	5.2	0.1
Less-engaged participants	8.4	2.2	1.7	1.0	2.4	1.0
Recreational-casual participants	8.3	3.5	2.8	1.7	4.8	1.7
Social enthusiasts	10.8	6.4	3.1	2.7	7.8	2.0
Individualist/ achievement-oriented enthusiasts	10.4	3.7	3.6	2.5	6.3	0.4
	F=1.348 n.s.	F=2.769*	F=0.841 n.s.	F=0.275 n.s.	F=0.465 n.s.	F=1.473 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 1-4: Average number of days hunting on weekends and weekdays

	Mean number of days hunted during 2005 waterfowl season		
	Weekends/ Holidays	Weekdays (Monday-Friday)	Total days
Overall[1]	6.6	4.8	10.6
Longtime participants	6.2	5.3	10.6
Less-engaged participants	6.1	4.0	9.0
Recreational-casual participants	6.6	3.9	9.8
Social enthusiasts	6.6	4.8	10.6
Individualist/ achievement-oriented enthusiasts	7.4	5.2	11.8
	F=1.500 n.s.	F=1.170 n.s.	F=1.427 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 1-5: Participation in hunting on opening Saturday and Sunday

	N	% hunting opening weekend in Minnesota	
		Opening Saturday (October 1, 2005)	First Sunday (October 2, 2005)
Overall[1]	584	65.0%	67.6%
Longtime participants	165	68.5%	64.8%
Less-engaged participants	21	47.6%	65.0%
Recreational-casual participants	136	64.0%	68.1%
Social enthusiasts	83	61.4%	71.4%
Individualist/ achievement-oriented enthusiasts	180	63.9%	70.2%
		χ^2=4.117 n.s.	χ^2=1.676 n.s.

[1] A stratified sample based on region of residence was drawn. Overall 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 1-6: Regional distribution of hunting across Minnesota

	n	% of hunters indicating the region they MOST OFTEN hunted in Minnesota in 2005						
		NW	NE	EC	SW	SE	M	>1 region equally
Overall[1]	584	25.2%	13.7%	15.1%	23.0%	11.8%	4.6%	6.7%
Longtime participants	163	26.4%	17.8%	16.0%	20.9%	11.7%	2.5%	4.9%
Less-engaged participants	21	38.1%	14.3%	9.5%	14.3%	4.8%	9.5%	9.5%
Recreational-casual participants	140	25.0%	9.3%	15.0%	25.0%	10.7%	7.1%	7.9%
Social enthusiasts	86	17.4%	16.3%	15.1%	18.6%	15.1%	2.3%	15.1%
Individualist/ achievement-oriented enthusiasts	179	25.7%	10.6%	14.5%	27.4%	12.3%	5.6%	3.9%
		χ^2=4.758 n.s.	χ^2=6.630 n.s.	χ^2=0.643 n.s.	χ^2=4.453 n.s.	χ^2=2.094 n.s.	χ^2=6.118 n.s.	χ^2=12.852* CV=0.148

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001
CV=Cramer's V

Table 1-7: Hunting on public and private land during 2005

	% of hunters indicating that they hunted waterfowl…		
	Mostly on privately owned areas	**Mostly on public access areas**	**Public and private about the same**
Overall[1]	40.4%	38.7%	20.9%
Longtime participants	42.8%	35.2%	22.0%
Less-engaged participants	52.4%	28.6%	19.0%
Recreational-casual participants	38.2%	41.2%	20.6%
Social enthusiasts	34.1%	46.3%	19.5%
Individualist/ achievement- oriented enthusiasts	40.7%	39.0%	20.3%
	χ^2=4.609 n.s.		

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 2: Satisfaction With Most Recent 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. Satisfaction responses were based on hunters' most recent waterfowl-hunting season in Minnesota.

Satisfaction With the General Waterfowl Hunting Experience

Overall, about half (51.3%) of hunters reported being satisfied with the general waterfowl-hunting experience. The overall mean satisfaction score was 4.1. Mean satisfaction scores and pattern of responses differed among the five hunter segments. On average, less-engaged hunters were significantly more satisfied ($\bar{x}$ =4.9) with the general waterfowl-hunting experience, while social enthusiasts were less satisfied ($\bar{x}$ =3.7) (F=3.950, p<0.01). Nearly three-fourths of less-engaged hunters (72.2%) reported satisfaction with the general waterfowl hunting experience, compared to less than half (45.3%) of social enthusiasts (Table 2-1).

Satisfaction With Duck Hunting

Overall Results

Overall, about half of duck hunters (53.0%) were satisfied (slightly, moderately, or very) with their duck-hunting experience during their most recent waterfowl hunting season in Minnesota; of these about 1 in 5 (11.1%) were very satisfied (Table 2-2). Conversely, 40.2% of respondents were dissatisfied (slightly, moderately, or very), with less than 1 in 5 (15.1%) being very dissatisfied with their duck-hunting experience. Many fewer respondents were satisfied with their duck-hunting harvest (Table 2-3). Only about one-fourth of respondents (26.7%) were satisfied with their duck harvest, while nearly two-thirds (64.4%) of the respondents were dissatisfied with their duck harvest. Satisfaction with duck-hunting regulations was higher than satisfaction with harvest, with 46.6% of respondents reporting satisfaction with the regulations, including 34.1% of respondents who were moderately or very satisfied (Table 2-4). However, nearly one in four respondents (23.6%) felt neither satisfied nor dissatisfied about the duck-hunting regulations, compared to only 6.8% who felt neutral about the duck-hunting experience and only 9.0% who felt neutral about the duck-hunting harvest. The mean score for duck-harvest satisfaction ($\bar{x}$ =3.0) was significantly lower than the mean scores for experience ($\bar{x}$ = 4.2) or regulations ($\bar{x}$ =4.4) (F=217.655, p < 0.001).

Results by Hunter Segment

There were no differences in mean satisfaction scores or pattern of hunter responses among the hunter segments for duck-hunting experience, harvest, or regulations (Tables 2-2, 2-3, 2-4).

Section 2: Satisfaction with Most Recent Waterfowl Hunt

Satisfaction With Goose Hunting

Overall Results

Overall most goose hunters were satisfied (63.5%) with their general goose-hunting experience (Table 2-5). Most goose hunters were less satisfied with their harvest, however. Less than half of the respondents (48.5%) reported being satisfied with their harvest (Table 2-6). About half (51.5%) of respondents indicated that they were satisfied with the goose-hunting regulations with 22.9% moderately satisfied and 18.7% very satisfied (Table 2-7). The mean score for goose-harvest satisfaction ($\bar{x}$ =4.2) was significantly lower than the mean scores for experience ($\bar{x}$ = 4.8) or regulations ($\bar{x}$ =4.6) (F=47.291, p < 0.001).

Results by Hunter Segment

There were no differences in mean satisfaction scores or pattern of hunter responses among the hunter segments for goose-hunting experience, harvest, or regulations (Tables 2-5, 2-6, 2-7).

Comparison of Duck Hunting and Goose Hunting

We compared mean satisfaction levels for duck and goose hunting. Overall satisfaction levels were higher for goose hunting than for duck hunting. This held true for satisfaction with (a) experience—duck hunters ($\bar{x}$ = 4.1), goose hunters ($\bar{x}$ = 4.7), (b) harvest—duck hunters ($\bar{x}$ = 3.0), goose hunters ($\bar{x}$ = 4.1), and (c) regulations—ducks hunters ($\bar{x}$ = 4.3), goose hunters ($\bar{x}$ = 4.5) (Table 2-8).

Changes in Satisfaction Levels

Hunters were asked if their overall level of satisfaction for duck hunting and goose hunting had decreased or increased in the past three hunting seasons and since they had begun hunting ducks and geese. Responses were recorded on a 5-point scale on which 1 = greatly decreased, 2 = decreased, 3 = stayed the same, 4 = increased, and 5 = greatly increased.

Nearly three-fourths (74.1%) of duck hunters indicated their overall level of satisfaction with duck hunting had decreased during the past three seasons and only 4.9% indicated their satisfaction had increased (Table 2-9). Similarly, 81.8% indicated that their satisfaction had decreased since they began hunting (Table 2-11). There were no significant differences in these changes across hunter segments.

About one-third of goose hunters indicated their satisfaction had declined in the past three seasons (33.4%), or since they began goose hunting in the state (36.2%). There were no differences in changes in satisfaction levels by hunter segment (Tables 2-10, 2-12).

Hunters' satisfaction with duck hunting ($\bar{x}$ =2.0) had declined significantly more than goose hunting satisfaction ($\bar{x}$ =2.9) in the past three seasons (t=19.485, p<0.001). This was also true when comparing satisfaction with duck hunting ($\bar{x}$ =1.8) and goose hunting ($\bar{x}$ =3.0) since hunters' beginning of hunting (t=22.981, p<0.001).

Satisfaction With the Number of Birds Seen

Study participants were asked to rate their satisfaction with the number of ducks and geese seen during their most recent Minnesota waterfowl-hunting season using the 7-point scale of 1 = very dissatisfied, 2 = moderately dissatisfied, 3 = slightly dissatisfied, 4 = neither, 5 = slightly satisfied, 6 = moderately satisfied, and 7 = very satisfied.

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Nearly 8 of 10 respondents (79.8%) were dissatisfied with the number of ducks they had seen in the field during their most recent waterfowl-hunting season in Minnesota (Table 2-13). However, over half (57.7%) of respondents were satisfied with the number of geese they had seen in the field during their most recent hunting season in Minnesota (Table 2-14). There was a significant difference in satisfaction with the number of ducks ($\bar{x}$ =2.4) versus geese ($\bar{x}$ =4.6) seen in the field (t=26.047, p<0.001).

Number of Ducks and Geese Harvested to Feel Satisfied

Respondents were asked to indicate the number of ducks and geese they needed to harvest in a day and in a season to feel satisfied with their harvest. Respondents indicated that they needed to harvest 2.3 ducks per day (Table 2-15) and 14.3 ducks per season (Table 2-16) on average to feel satisfied. They indicated that they needed to harvest 1.4 geese per day (Table 2-17) and 7.3 geese per season (Table 2-18) to feel satisfied. In general, social enthusiasts indicated that they needed to harvest slightly more birds in a day to feel satisfied.

Satisfaction With Bag Limits

Respondents were asked to indicate whether they thought current bag limits were too low, about right, or too high. About two-thirds of respondents (67.5%) felt that the four duck daily bag limit in Minnesota was about right. Similar proportions felt that it was too low (16.8%) or too high (15.7%) (Table 2-19). Similarly, about two-thirds (68.3%) felt that the one hen mallard limit in Minnesota was about right, compared to 16.5% who felt it was too low and 15.1% who felt it was too high (Table 2-20). Results were similar among the different hunter segments.

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-1: Satisfaction with the general waterfowl-hunting experience for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	751	13.4%	14.0%	15.2%	6.2%	17.9%	23.6%	9.8%	4.1
Longtime participants	213	13.6%	15.5%	16.0%	6.6%	14.6%	23.0%	10.8%	4.1
Less-engaged participants	36	2.8%	11.1%	5.6%	8.3%	25.0%	44.4%	2.8%	4.9
Recreational-casual participants	191	14.7%	14.1%	15.2%	7.3%	18.8%	20.9%	8.9%	4.0
Social enthusiasts	97	23.7%	14.4%	12.4%	4.1%	16.5%	20.6%	8.2%	3.7
Individualist/ achievement-oriented enthusiasts	213	8.5%	11.3%	16.4%	4.7%	22.1%	26.3%	10.8%	4.4
		χ^2=36.868*, Cramer's V=0.111							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 3.950** for one-way ANOVA comparing means among clusters. Mean based on the scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-2: Satisfaction with the duck-hunting experience for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	767	15.1%	11.8%	13.3%	6.8%	18.3%	23.6%	11.1%	4.2
Longtime participants	220	14.5%	13.2%	12.3%	7.3%	19.5%	23.2%	10.0%	4.1
Less-engaged participants	32	12.5%	12.5%	0.0%	12.5%	12.5%	43.8%	6.3%	4.6
Recreational-casual participants	193	15.5%	12.4%	14.0%	7.3%	19.2%	17.6%	14.0%	4.1
Social enthusiasts	97	18.6%	9.3%	18.6%	4.1%	17.5%	23.7%	8.2%	4.0
Individualist/ achievement-oriented enthusiasts	222	14.4%	9.5%	13.5%	5.9%	16.2%	29.3%	11.3%	4.3
		χ^2=27.819 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.939 n.s. for one-way ANOVA comparing means among clusters. Mean based on the 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 Most Recent Waterfowl Hunt

Table 2-3: Satisfaction with the duck-hunting harvest for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	766	29.8%	18.5%	16.1%	9.0%	13.3%	10.0%	3.4%	3.0
Longtime participants	221	31.7%	18.1%	16.7%	9.0%	11.3%	9.5%	3.6%	2.9
Less-engaged participants	32	18.8%	9.4%	18.8%	12.5%	25.0%	12.5%	3.1%	3.7
Recreational-casual participants	192	28.6%	19.8%	14.6%	10.4%	13.5%	9.4%	3.6%	3.0
Social enthusiasts	97	34.0%	16.5%	16.5%	6.2%	13.4%	11.3%	2.1%	2.9
Individualist/ achievement-oriented enthusiasts	221	27.6%	19.5%	16.3%	7.7%	14.9%	10.9%	3.2%	3.1
		χ^2=12.550 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 1.212 n.s.for one-way ANOVA comparing means among clusters. Mean based on the scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-4: Satisfaction with the duck-hunting regulations for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]		7.7%	8.9%	13.2%	23.6%	12.5%	19.9%	14.2%	4.4
Longtime participants	213	8.5%	8.5%	13.6%	21.6%	12.2%	20.2%	15.5%	4.4
Less-engaged participants	32	6.3%	15.6%	3.1%	34.4%	6.3%	21.9%	12.5%	4.3
Recreational-casual participants	193	5.2%	8.8%	14.5%	27.5%	12.4%	17.1%	14.5%	4.4
Social enthusiasts	95	6.3%	14.7%	14.7%	25.3%	14.7%	14.7%	9.5%	4.1
Individualist/ achievement-oriented enthusiasts	221	10.5%	6.4%	11.4%	20.0%	13.2%	25.0%	13.6%	4.5
		χ^2=27.079 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.849 n.s.for one-way ANOVA comparing means among clusters. Mean based on the 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 Most Recent Waterfowl Hunt

Table 2-5: Satisfaction with the goose-hunting experience for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	648	7.9%	5.7%	9.8%	13.1%	18.5%	28.7%	16.3%	4.8
Longtime participants	179	9.5%	3.9%	9.5%	14.0%	17.9%	29.1%	16.2%	4.8
Less-engaged participants	32	9.4%	6.3%	9.4%	9.4%	18.8%	34.4%	12.5%	4.8
Recreational-casual participants	163	8.6%	4.9%	9.8%	15.3%	19.6%	24.5%	17.2%	4.7
Social enthusiasts	86	8.1%	8.1%	9.3%	14.0%	17.4%	27.9%	15.1%	4.7
Individualist/ achievement-oriented enthusiasts	192	4.2%	8.3%	10.4%	8.9%	18.8%	32.8%	16.7%	4.9
		χ^2=15.128 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.454 n.s. for one-way ANOVA comparing means among clusters. Mean based on the scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-6: Satisfaction with the goose-hunting harvest for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	645	14.8%	9.5%	12.2%	15.0%	16.9%	20.9%	10.7%	4.2
Longtime participants	179	16.8%	7.3%	9.5%	17.3%	15.6%	22.3%	11.2%	4.2
Less-engaged participants	31	19.4%	6.5%	19.4%	6.5%	12.9%	29.0%	6.5%	4.0
Recreational-casual participants	161	16.8%	8.7%	16.1%	16.1%	17.4%	14.3%	10.6%	3.9
Social enthusiasts	86	11.6%	10.5%	11.6%	11.6%	18.6%	24.4%	11.6%	4.3
Individualist/ achievement-oriented enthusiasts	191	9.9%	14.1%	11.0%	12.6%	18.3%	23.6%	10.5%	4.3
		χ^2=25.561 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.973 n.s. for one-way ANOVA comparing means among clusters. Mean based on the 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 Most Recent Waterfowl Hunt

Table 2-7: Satisfaction with the goose-hunting regulations for the 2005 season by hunter cluster.

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	647	9.8%	7.4%	11.2%	20.2%	9.9%	22.9%	18.7%	4.6
Longtime participants	179	11.2%	7.3%	9.5%	21.2%	7.8%	20.7%	22.3%	4.6
Less-engaged participants	32	12.5%	6.3%	9.4%	12.5%	6.3%	37.5%	15.6%	4.7
Recreational-casual participants	164	9.1%	6.1%	12.8%	22.0%	7.3%	25.0%	17.7%	4.6
Social enthusiasts	85	4.7%	11.8%	14.1%	18.8%	18.8%	22.4%	9.4%	4.4
Individualist/ achievement-oriented enthusiasts	190	10.0%	7.4%	11.1%	17.9%	13.2%	22.1%	18.4%	4.6
		χ^2=28.148 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.199 n.s.for one-way ANOVA comparing means among clusters. Mean based on the scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-8: Comparison of duck-hunting and goose-hunting satisfaction for most recent season

Satisfaction with…	N	Mean[1]
Duck-hunting experience	605	4.1
Goose-hunting experience		4.7
t=8.247, p<0.001[2]		
Duck-hunting harvest	605	3.0
Goose-hunting harvest		4.1
t=13.121, p<0.001		
Duck-hunting regulations	597	4.3
Goose-hunting regulations		4.5
t=2.769, p<0.01		

[1] 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.
[2] Paired sample t-test

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-9: Overall change in duck hunter's satisfaction over the past three seasons

	n	% of hunters indicating that their overall level of satisfaction has _____ over the past three years: Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Mean[2]
Overall[1]	729	29.5%	44.6%	21.0%	4.1%	0.8%	2.0
Longtime participants	206	30.1%	42.2%	22.3%	4.4%	1.0%	2.0
Less-engaged participants	30	16.7%	43.3%	40.0%	0.0%	0.0%	2.2
Recreational-casual participants	179	30.2%	52.0%	13.4%	4.5%	0.0%	1.9
Social enthusiasts	103	36.9%	36.9%	22.3%	1.9%	1.9%	2.0
Individualist/ achievement-oriented enthusiasts	213	25.8%	43.7%	24.9%	4.7%	0.9%	2.1
		χ^2=26.018, n.s.					

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 1.842 n.s. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = increased; 5 = greatly increased.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-10: Overall change in goose hunter's satisfaction over the past three seasons

	n	% of hunters indicating that their overall level of satisfaction has _____ over the past three years: Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Mean[2]
Overall[1]	644	8.6%	24.8%	43.0%	18.3%	5.2%	2.9
Longtime participants	180	7.2%	22.8%	45.0%	19.4%	5.6%	2.9
Less-engaged participants	30	3.3%	43.3%	43.3%	6.7%	3.3%	2.6
Recreational-casual participants	156	10.9%	25.0%	42.9%	15.4%	5.8%	2.8
Social enthusiasts	91	11.0%	19.8%	41.8%	22.0%	5.5%	2.9
Individualist/ achievement-oriented enthusiasts	191	7.9%	27.7%	40.3%	19.9%	4.2%	2.8
		χ^2=14.124, n.s.					

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.857 n.s. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = Increased; 5 = greatly increased.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-11: Overall change in duck hunter's satisfaction since they began hunting

	n	% of hunters indicating that their overall level of satisfaction has _____ since they began hunting: Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Mean[2]
Overall[1]	801	43.4%	38.4%	13.1%	4.4%	0.7%	1.8
Longtime participants	229	47.6%	37.1%	10.9%	3.5%	0.9%	1.7
Less-engaged participants	36	22.2%	50.0%	25.0%	2.8%	0.0%	2.1
Recreational-casual participants	198	40.4%	42.4%	13.1%	3.5%	0.5%	1.8
Social enthusiasts	104	49.0%	29.8%	17.3%	3.8%	0.0%	1.8
Individualist/ achievement-oriented enthusiasts	233	40.3%	37.8%	13.3%	7.7%	0.9%	1.9
		χ^2=23.852, n.s.					

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 2.144 n.s. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = increased; 5 = greatly increased.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-12: Overall change in goose hunter's satisfaction since they began hunting

	n	% of hunters indicating that their overall level of satisfaction has _____ since they began hunting: Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Mean[2]
Overall[1]	711	13.3%	22.9%	26.8%	25.8%	11.2%	3.0
Longtime participants	204	12.7%	21.1%	25.5%	29.9%	10.8%	3.0
Less-engaged participants	35	8.6%	37.1%	28.6%	14.3%	11.4%	2.8
Recreational-casual participants	173	16.2%	25.4%	26.6%	19.7%	12.1%	2.9
Social enthusiasts	92	10.9%	19.6%	26.1%	31.5%	12.0%	3.1
Individualist/ achievement-oriented enthusiasts	207	12.6%	22.2%	29.5%	25.1%	10.6%	3.0
		χ^2=14.454, n.s.					

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 1.129 n.s. Mean is based on the following scale: 1 = greatly decreased; 2 = decreased; 3 = stayed the same, 4 = increased; 5 = greatly increased.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-13: Satisfaction with number of ducks seen in the field during most recent Minnesota waterfowl hunting season

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	789	44.5%	22.1%	13.2%	3.6%	7.7%	6.5%	2.3%	2.4
Longtime participants	221	46.6%	20.4%	12.2%	4.1%	9.0%	5.0%	2.7%	2.3
Less-engaged participants	36	22.2%	16.7%	22.2%	11.1%	8.3%	16.7%	2.8%	3.3
Recreational-casual participants	200	43.0%	27.5%	14.0%	1.0%	5.5%	7.0%	2.0%	2.3
Social enthusiasts	105	46.7%	17.1%	20.0%	3.8%	6.7%	3.8%	1.9%	2.3
Individualist/ achievement-oriented enthusiasts	228	45.2%	21.5%	9.6%	4.8%	8.3%	8.3%	2.2%	2.4
		χ^2=37.995*, Cramer's V=							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 2.907*. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-14: Satisfaction with number of geese seen in the field during most recent Minnesota waterfowl hunting season

	n	% of hunters indicating that level of satisfaction:							Mean[2]
		Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	
Overall[1]	710	9.7%	9.6%	11.2%	11.8%	17.4%	23.4%	16.9%	4.6
Longtime participants	199	9.0%	8.0%	10.6%	12.1%	16.1%	25.6%	18.6%	4.7
Less-engaged participants	34	8.8%	11.8%	11.8%	17.6%	14.7%	20.6%	14.7%	4.4
Recreational-casual participants	177	9.0%	10.2%	10.2%	12.4%	17.5%	24.3%	16.4%	4.6
Social enthusiasts	94	11.7%	10.6%	13.8%	10.6%	17.0%	20.2%	16.0%	4.4
Individualist/ achievement-oriented enthusiasts	209	11.0%	11.0%	12.4%	10.0%	20.1%	20.1%	15.3%	4.4
		χ^2=8.613 n.s.							

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.907 n.s. Mean is based on the following scale: 1 = very dissatisfied; 2 = moderately dissatisfied; 3 = slightly dissatisfied, 4 = neither; 5 = slightly satisfied; 6 = moderately satisfied; 7 = very satisfied.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-15: Minimum number of ducks needed to harvest in a day to feel satisfied

	n	Mean number of ducks[2]
Overall[1]	812	2.3
Longtime participants	227	2.2
Less-engaged participants	42	2.3
Recreational-casual participants	205	2.2
Social enthusiasts	109	2.8
Individualist/achievement-oriented enthusiasts	231	2.3

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 3.477**, η=0.130
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 2: Satisfaction With Most Recent Waterfowl Hunt

Table 2-16: Minimum number of ducks needed to harvest in a season to feel satisfied

	n	Mean number of ducks[2]
Overall[1]	785	14.3
Longtime participants	222	13.4
Less-engaged participants	41	15.6
Recreational-casual participants	199	14.0
Social enthusiasts	100	15.7
Individualist/achievement-oriented enthusiasts	223	15.4

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 0.792 n.s.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-17: Minimum number of geese needed to harvest in a day to feel satisfied

	n	Mean number of geese[2]
Overall[1]	775	1.4
Longtime participants	218	1.2
Less-engaged participants	39	1.5
Recreational-casual participants	195	1.4
Social enthusiasts	105	2.0
Individualist/achievement-oriented enthusiasts	220	1.3

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 4.493**, η=0.151
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-18: Minimum number of geese needed to harvest in a season to feel satisfied

	n	Mean number of geese[2]
Overall[1]	757	7.3
Longtime participants	214	6.2
Less-engaged participants	39	12.6
Recreational-casual participants	190	7.3
Social enthusiasts	98	8.8
Individualist/achievement-oriented enthusiasts	217	7.5

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F = 3.716**, η=0.139
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-19: Opinion on the 4 duck bag limit in Minnesota

		% of hunters indicating that the bag limit is…		
	n	Too low	About right	Too high
Overall[1]	748	16.8%	67.5%	15.7%
Longtime participants	205	14.1%	67.8%	18.0%
Less-engaged participants	36	27.8%	63.9%	8.3%
Recreational-casual participants	190	13.7%	68.4%	17.9%
Social enthusiasts	101	18.8%	70.3%	10.9%
Individualist/achievement-oriented enthusiasts	221	22.6%	65.2%	12.2%
		χ^2=14.416, n.s.		

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 2-20: Opinion on the 1 hen mallard bag limit in Minnesota

		% of hunters indicating that the bag limit is…		
	n	Too low	About right	Too high
Overall[1]	756	16.5%	68.3%	15.1%
Longtime participants	209	13.4%	69.4%	17.2%
Less-engaged participants	36	30.6%	63.9%	5.6%
Recreational-casual participants	193	13.5%	70.5%	16.1%
Social enthusiasts	101	18.8%	67.3%	13.9%
Individualist/achievement-oriented enthusiasts	220	22.7%	65.0%	12.3%
		χ^2=15.517, n.s.		

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 3: Opinions on Youth Waterfowl Hunting Day

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

Support/Opposition to Youth Waterfowl Hunting Day

Respondents were first asked the degree to which 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 (Table 3-1). Overall, 63.9% of respondents supported the youth hunting day with 39.6% indicating strong support. In contrast, 26.5% opposed the hunt, with 16.3% strongly opposing it. There was no significant difference by hunter segment in support for the youth hunt.

Participation in Youth Waterfowl Hunting Day

All study respondents were asked if they took any youths hunting on Youth Waterfowl Hunting Day during their most recent waterfowl-hunting season in Minnesota (Table 3-2). Overall, 17.1% reported participating in the youth hunt. There was no significant difference by hunter segment in participation in the youth hunt.

Section 3: Opinions on Youth Waterfowl Hunting Day

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

	n	% of hunters indicating that they _____ the concept of Youth Waterfowl Hunting Day:					
		Strongly oppose	Oppose	Undecided/ neutral	Support	Strongly support	Mean[1]
Overall[2]	820	16.3%	10.2%	9.5%	24.3%	39.6%	3.6
Longtime participants	227	17.2%	10.1%	8.8%	20.7%	43.2%	3.6
Less-engaged participants	40	17.5%	5.0%	10.0%	32.5%	35.0%	3.6
Recreational-casual participants	206	14.1%	12.6%	11.2%	24.8%	37.4%	3.6
Social enthusiasts	112	15.2%	12.5%	8.9%	25.9%	37.5%	3.6
Individualist/achievement-oriented enthusiasts	239	18.0%	7.1%	8.8%	28.0%	38.1%	3.6
		χ^2=12.195 n.s.					

[1]F = 0.028 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 3-2: Participation in Youth Waterfowl Hunting Day in most recent season hunting.

Residence of hunter	n	% of all hunters who indicated that they took youth hunting on YWHD during their most recent season
Overall[1]	823	17.1%
Longtime participants	229	17.9%
Less-engaged participants	40	5.0%
Recreational-casual participants	207	15.9%
Social enthusiasts	112	21.4%
Individualist/achievement-oriented enthusiasts	239	17.2%
		χ^2=5.925 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 4: Opinions on Management and the Department of Natural Resources

Support for Management Strategies

Respondents were asked to indicate their level of support for each of five management strategies on a 5-point scale with 1 = strongly oppose, 2 = oppose, 3 = undecided, 4 = support, and 5 = strongly support.

Overall Results

Tables 4-1 through 4-5 show respondents' support for five waterfowl-management strategies. Approximately one-fifth of hunters (20.5%) supported the noon opener, while over half (56.8%) opposed it (Table 4-1). About one-third (32.7%) of hunters supported and 47.5% opposed ending shooting hours at 4 p.m. during the first part of the season (Table 4-2). Fewer opposed restrictions on either open-water hunting (34.2%) or outboard-motor use (29.4%), but relatively large percentages were undecided about either (open-water restrictions 37.2%, outboard restrictions 31.7%) (Tables 4-3, 4-4). However, a very large majority (79.0%) supported creating waterfowl refuges (Table 4-5).

The difference in support for management strategies was statistically significant. Creating waterfowl refuges had the highest level of support ($\bar{x}$ = 4.2); other management strategies, including: restrictions on outboard motors ($\bar{x}$ = 3.2), restrictions on open-water hunting ($\bar{x}$ = 2.9), the noon opener ($\bar{x}$ = 2.4), and ending shooting at 4 p.m. ($\bar{x}$ = 2.7) had levels of support close to neutral ($F=341.679$, $p<0.001$) (Table 4-6).

Results by Respondents Segment

There were two statistically significant differences in support for management strategies by hunter segment, but results were not substantive.

Attitudes About the Minnesota Department of Natural Resources

Respondents were asked to report their agreement with four statements about the Minnesota Department of Natural Resources using the scale 1=strongly disagree to 5=strongly agree.

Overall, survey respondents had neutral to mildly positive opinions about the Minnesota Department of Natural Resources (Tables 4-7 through 4-10). Overall, respondents agreed most with the statement: "The Minnesota DNR has waterfowl management staff who are well trained for their jobs" ($\bar{x}$ =3.3). Nearly half of respondents (44.9%) agreed with this statement. The statement "the Minnesota DNR answers questions honestly" had a similar mean response ($\bar{x}$ =3.2), with 38.2% of respondents in agreement. On average, responses were neutral in response to the statement: "the Minnesota DNR listens to waterfowl hunters' concerns" ($\bar{x}$ =3.0); 34.7% of respondents agreed. Finally, about one-fourth (23.7%) of respondents agreed that "the Minnesota DNR responds to waterfowl hunters' concerns" ($\bar{x}$ =2.8). There was a significant difference in overall agreement with the statements (Table 4-11), but there were no significant differences in agreement with the four statements by hunter segment.

Section 4: Opinions on Management and the Department of Natural Resources

Table 4-1: Support for beginning shooting hours at noon on the opening day of duck season

	n	% of hunters indicating that they _____ this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Overall[2]	819	31.1%	25.7%	22.7%	13.1%	7.4%	2.4
Longtime participants	227	28.6%	24.2%	24.2%	15.0%	7.9%	2.5
Less-engaged participants	38	13.2%	23.7%	44.7%	13.2%	5.3%	2.7
Recreational-casual participants	208	29.8%	31.3%	20.7%	13.0%	5.3%	2.3
Social enthusiasts	111	41.4%	23.4%	17.1%	11.7%	6.3%	2.2
Individualist/achievement-oriented enthusiasts	238	34.9%	22.7%	21.8%	10.5%	10.1%	2.4
		χ^2=29.201*, Cramer's V=0.094					

[1] F = 2.023 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-2: Support for ending shooting hours at 4 p.m. for the first part of Minnesota's waterfowl season

	n	% of hunters indicating that they _____ this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Overall[2]	820	23.3%	24.2%	19.9%	21.3%	11.4%	2.7
Longtime participants	228	22.8%	22.8%	19.3%	23.7%	11.4%	2.8
Less-engaged participants	39	12.8%	23.1%	28.2%	17.9%	17.9%	3.1
Recreational-casual participants	207	23.2%	27.5%	17.4%	20.8%	11.1%	2.7
Social enthusiasts	112	27.7%	18.8%	23.2%	18.8%	11.6%	2.7
Individualist/achievement-oriented enthusiasts	237	23.6%	25.3%	21.1%	19.4%	10.5%	2.7
		χ^2=11.312 n.s.					

[1] F =0.824 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-3: Support for restrictions on open-water hunting

	n	% of hunters indicating that they _____ this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Overall[2]	808	14.8%	19.4%	37.2%	18.3%	10.4%	2.9
Longtime participants	223	12.6%	17.5%	37.2%	19.7%	13.0%	3.0
Less-engaged participants	39	17.9%	15.4%	43.6%	12.8%	10.3%	2.8
Recreational-casual participants	206	15.5%	20.9%	36.9%	18.4%	8.3%	2.8
Social enthusiasts	111	18.0%	21.6%	36.9%	13.5%	9.9%	2.8
Individualist/achievement-oriented enthusiasts	232	15.5%	20.3%	36.6%	18.5%	9.1%	2.9
		χ^2=8.676 n.s.					

[1] F = 0.388 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-4: Support for restrictions on outboard-motor use

	n	% of hunters indicating that they _____ this management strategy: Strongly oppose	Oppose	Neutral	Support	Strongly support	Mean[1]
Overall[2]	810	12.3%	17.1%	31.7%	20.4%	18.5%	3.2
Longtime participants	224	11.2%	17.4%	28.6%	21.9%	21.0%	3.2
Less-engaged participants	39	12.8%	10.3%	38.5%	10.3%	28.2%	3.3
Recreational-casual participants	206	12.6%	17.5%	35.9%	17.0%	17.0%	3.1
Social enthusiasts	112	14.3%	17.9%	35.7%	17.9%	14.3%	3.0
Individualist/achievement-oriented enthusiasts	233	12.9%	16.7%	28.8%	24.9%	16.7%	3.2
		χ^2=15.893 n.s.					

[1] F = 0.995 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

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Table 4-5: Support for creating waterfowl refuges

	n	% of hunters indicating that they _____ this management strategy:					Mean[1]
		Strongly oppose	Oppose	Neutral	Support	Strongly support	
Overall[2]	812	2.6%	2.8%	15.7%	32.7%	46.3%	4.2
Longtime participants	226	1.3%	1.3%	14.2%	34.1%	49.1%	4.3
Less-engaged participants	38	2.6%	5.3%	23.7%	26.3%	42.1%	4.0
Recreational-casual participants	204	3.9%	2.9%	16.2%	30.9%	46.1%	4.1
Social enthusiasts	112	3.6%	6.3%	20.5%	30.4%	39.3%	4.0
Individualist/achievement-oriented enthusiasts	235	2.6%	3.0%	14.5%	34.5%	45.5%	4.2
		χ^2=16.155 n.s.					

[1] F = 2.462*, η=0.110. 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 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-6: Comparison of the level of support for the five strategies studied

Strategy	Overall mean[1]
Creating waterfowl refuges	4.2
Restrictions on outboard-motor use	3.2
Restrictions on open-water hunting	2.9
Ending shooting hours at 4 PM for the first part of MN's waterfowl season	2.7
Beginning shooting hours at noon on the opening day of duck season	2.4

[1] F = 341.679***. Mean is based on the following scale: 1 = strongly oppose; 2 = oppose; 3 = undecided, 4 = support; 5 = strongly support.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

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Table 4-7: The Minnesota DNR has waterfowl management staff who are well trained for their jobs.

	N	% of respondents who said that they _____					Mean[1]
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Overall[2]	725	4.8%	9.5%	40.8%	36.5%	8.4%	3.3
Longtime participants	202	5.0%	7.9%	42.6%	36.1%	8.4%	3.4
Less-engaged participants	34	0.0%	11.8%	38.2%	41.2%	8.8%	3.5
Recreational-casual participants	187	2.1%	11.8%	41.7%	36.9%	7.5%	3.4
Social enthusiasts	97	11.3%	8.2%	34.0%	33.0%	13.4%	3.3
Individualist/achievement-oriented enthusiasts	206	5.8%	9.7%	39.8%	37.4%	7.3%	3.3
		χ^2=19.693 n.s.					

[1]F=0.323 n.s. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-8: The Minnesota DNR listens to waterfowl hunters' concerns.

	N	% of respondents who said that they _____					Mean[1]
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Overall[2]	762	10.0%	23.6%	31.7%	29.8%	4.9%	3.0
Longtime participants	213	10.3%	21.6%	34.7%	29.1%	4.2%	3.0
Less-engaged participants	38	7.9%	21.1%	26.3%	34.2%	10.5%	3.2
Recreational-casual participants	191	6.8%	28.3%	30.4%	30.4%	4.2%	3.0
Social enthusiasts	105	16.2%	22.9%	29.5%	25.7%	5.7%	2.8
Individualist/achievement-oriented enthusiasts	218	11.0%	22.0%	29.8%	31.7%	5.5%	3.0
		χ^2=14.125 n.s.					

[1]F=0.905 n.s. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 4: Opinions on Management and the Department of Natural Resources

Table 4-9: The Minnesota DNR responds to waterfowl hunters' concerns.

	N	% of respondents who said that they _____					Mean[1]
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Overall[2]	765	10.2%	27.3%	38.9%	19.8%	3.9%	2.8
Longtime participants	213	8.5%	26.8%	42.3%	19.7%	2.8%	2.8
Less-engaged participants	36	2.8%	25.0%	44.4%	22.2%	5.6%	3.0
Recreational-casual participants	195	9.7%	28.7%	38.5%	18.5%	4.6%	2.8
Social enthusiasts	105	18.1%	24.8%	36.2%	16.2%	4.8%	2.6
Individualist/achievement-oriented enthusiasts	218	11.0%	28.0%	33.9%	22.9%	4.1%	2.8
		χ^2=15.051 n.s.					

[1]F=1.082 n.s. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-10: The Minnesota DNR answers questions honestly.

	N	% of respondents who said that they _____					Mean[1]
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Overall[2]	751	6.0%	13.6%	42.2%	30.0%	8.2%	3.2
Longtime participants	212	5.2%	16.5%	42.0%	28.3%	8.0%	3.2
Less-engaged participants	36	2.8%	5.6%	50.0%	30.6%	11.1%	3.4
Recreational-casual participants	191	5.2%	12.0%	46.1%	27.7%	8.9%	3.2
Social enthusiasts	100	11.0%	16.0%	35.0%	29.0%	9.0%	3.1
Individualist/achievement-oriented enthusiasts	211	6.6%	10.4%	39.8%	36.5%	6.6%	3.3
		χ^2=17.720 n.s.					

[1]F=0.995 n.s. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 4-11: Comparison of level of agreement with statements about the Minnesota DNR

Statement	Mean[1]
The Minnesota DNR has waterfowl management staff who are well trained for their jobs.	3.3
The Minnesota DNR answers questions honestly.	3.2
The Minnesota DNR listens to waterfowl hunters' concerns.	3.0
The Minnesota DNR responds to waterfowl hunters' concerns.	2.8

[1]F=116.426***. Mean is based on the following scale: 1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, 5=strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Section 5: Constraints to Waterfowl Hunting

Factors That Constrain Waterfowl-Hunting Participation

Overall Results

First, respondents were asked to rate the statement "if I want to, I can easily go waterfowl hunting," using the scale 1 (definitely false) to 7 (definitely true). On average, respondents rated this statement slightly to moderately true ($\bar{x} = 5.4$) (Table 5-1). Nearly three-fourths (73.7%) of respondents rated the statement true, with over one-third (34.8%) rating it definitely true.

Respondents were asked to rate 28 possible constraints to waterfowl hunting on the scale 1 (not at all limiting) to 7 (extremely limiting) (Tables 5-2 through 5-29). Four constraints, waterfowl populations too low ($\bar{x} = 4.9$), work commitments ($\bar{x} = 4.2$), access to private land for hunting ($\bar{x} = 4.0$), and crowding at hunting areas ($\bar{x} = 4.0$), had mean scores greater than or equal to the midpoint (4.0) on the scale. Nine constraints had mean ratings between 3.0 and 4.0: (a) travel costs ($\bar{x} = 3.8$), (b) not enough leisure time ($\bar{x} = 3.8$), (c) family commitments ($\bar{x} = 3.7$), (d) the timing of the waterfowl migration ($\bar{x} = 3.6$), (e) cost of equipment ($\bar{x} = 3.4$), (f) interest in other recreational activities ($\bar{x} = 3.3$), (g) cost of licenses ($\bar{x} = 3.2$), (h) access to public land for hunting ($\bar{x} = 3.1$), and (i) waterfowl hunting regulations too restrictive ($\bar{x} = 3.0$). All other constraints were rated less than 3.0 on the 7-point scale.

The Cronbach's alpha measure of reliability for the 28-item scale was 0.848. A factor analysis was conducted to reveal underlying correlations among the items. Seven underlying factors with Eigenvalues greater than 1.0 were identified. By examining which items loaded heavily on each factor, we found that the factors reflected different underlying motivations including: (a) costs and regulations, (b) physical ability, (c) access and crowding, (d) work/family commitments and limited time, (e) no need or desire for waterfowl as food, (f) concern for animals' pain and distress, and (g) waterfowl populations and weather. On average, respondents rated the work/family commitments and limited time factor ($\bar{x} = 3.9$) as the most limiting, followed by the waterfowl populations factor ($\bar{x} = 3.7$), the access and crowding factor ($\bar{x} = 3.5$), the costs and regulations factor ($\bar{x} = 3.4$), the no need or desire for waterfowl as food factor ($\bar{x} = 2.8$), the physical ability factor ($\bar{x} = 2.0$), and the concern for animals' pain and distress factor ($\bar{x} = 1.6$) ($F = 444.269$, $p < 0.001$, $\eta^2 = 0.942$) (Figure 5-1).

Four items loaded on the first constraint factor related to **costs and regulations** ($\bar{x} = 3.4$; $\alpha = 0.829$). The items included in this scale are: (a) cost of equipment ($\bar{x} = 3.4$) (Table 5-7), (b) cost of licenses ($\bar{x} = 3.2$) (Table 5-8), (c) travel costs ($\bar{x} = 3.8$) (Table 5-9), and (d) waterfowl hunting regulations too restrictive ($\bar{x} = 3.0$) (Table 5-10).

Four items loaded on the second factor related to **physical ability** ($\bar{x} = 2.0$; $\alpha = 0.819$). The items included in this scale are: (a) physically unable to go waterfowl hunting ($\bar{x} = 1.7$) (Table 5-12), (b) age ($\bar{x} = 2.1$) (Table 5-25), (c) the amount of effort required to go hunting ($\bar{x} = 2.4$) (Table 5-26), and (d) poor health ($\bar{x} = 1.6$) (Table 5-29).

Four items related to **access and crowding** loaded on the third factor ($\bar{x} = 3.5$; $\alpha = 0.733$). The items included in this scale are: (a) access to private land for hunting ($\bar{x} = 4.0$) (Table 5-4), (b) access to public land for hunting ($\bar{x} = 3.1$) (Table 5-5), (c) crowding at hunting areas ($\bar{x} = 4.0$) (Table 5-6), and (d) no hunting opportunities near my home ($\bar{x} = 2.8$) (Table 5-27).

Three items loaded on the fourth constraint factor related to **work/family commitments and limited time** ($\bar{x} = 3.9$; $\alpha = 0.755$). The items included in this scale are: (a) family commitments ($\bar{x} = 3.7$) (Table 5-2), (b) work commitments ($\bar{x} = 4.2$) (Table 5-3), and (c) not enough leisure time ($\bar{x} = 3.8$) (Table 5-22).

Three items related to **no need or desire for waterfowl as food** loaded on the fifth factor ($\bar{x} = 2.8$; $\alpha = 0.654$). The items in this scale are: (a) interest in other recreational activities ($\bar{x} = 3.3$) (Table 5-14), (b) no desire for waterfowl as food ($\bar{x} = 2.4$) (Table 5-17), and (c) no need for waterfowl as food ($\bar{x} = 2.6$) (Table 5-18).

Two items related to **concern for animals' pain and distress** loaded on the sixth factor ($\bar{x} = 1.6$; $\alpha = 0.806$). The items in this scale are: (a) personal concern for animals' pain and distress ($\bar{x} = 1.7$) (Table 5-19), and (b) other people's concern for animals' pain and distress ($\bar{x} = 1.6$) (Table 5-20).

Three items related to **waterfowl populations and weather** loaded on the seventh factor ($\bar{x} = 3.7$; $\alpha = 0.445$). The items in this scale are: (a) waterfowl populations too low ($\bar{x} = 4.9$) (Table 5-16), (b) weather conditions ($\bar{x} = 2.6$) (Table 5-21), and (c) the timing of the waterfowl migration ($\bar{x} = 3.6$) (Table 5-28).

Results by Hunter Segment

On average, less-engaged hunters rated the statement regarding ease of going waterfowl hunting significantly more difficult, while longtime waterfowl hunters and individualist/achievement-oriented enthusiasts rated it easier (Table 5-1).

There were significant differences in constraint factors by hunter segment. Looking at the seven combined constraint factors, two constraint factors—access and animal pain—were different among hunter groups at the $p<0.05$ level of significance. Two other factors, physical ability and waterfowl for food, were significantly different at the $p<0.10$ level. Access issues were seen as less limiting to participation for longtime ($\bar{x} = 3.3$) and less-engaged hunters ($\bar{x} = 3.3$), compared to the other groups ($\bar{x} = 3.6$ to 3.7) ($F=2.412$, $p<0.05$). Personal and others' concern for animal pain was more limiting to less-engaged waterfowl hunters ($\bar{x} = 2.2$), compared to the other groups ($\bar{x} = 1.5$ to 1.7) ($F=3.311$, $p<0.05$). Physical ability was also more limiting to less-engaged hunters ($\bar{x} = 2.4$) than to others ($\bar{x} = 1.9$ to 2.1) ($F=2.378$, $p<0.10$). No need or desire for waterfowl for food was more constraining to less-engaged hunters ($\bar{x} = 3.0$) and less constraining to individualist/achievement-oriented enthusiasts ($\bar{x} = 2.5$), than to the other groups ($\bar{x} = 2.7$ to 2.9) ($F=2.276$, $p<0.10$).

There were differences in mean constraint scores and pattern of hunter responses among the hunter segments for a number of the individual constraint items. For three items—insufficient hunting skills (Table 5-13), personal concern for animals' pain and distress (Table 5-19), and other people's concern for animals' pain and distress (Table 5-20)—both mean score and pattern of response differed among groups. For each of these three items, less-engaged hunters rated the item as more constraining. For four items—access to private land for hunting, cost of equipment, physically unable to go waterfowl hunting, and no desire for waterfowl as food—the mean scores among groups differed but the pattern of responses did not. Access to private land for hunting was seen as less limiting to longtime and less-engaged hunters (Table 5-4). Cost of equipment was more limiting to less-engaged and individualist/achievement-oriented

enthusiasts (Table 5-7). Physical ability to hunt was more limiting to less-engaged hunters (Table 5-12). No desire for waterfowl for food was more limiting to less-engaged hunters and less limiting to individualist/achievement-oriented enthusiasts (Table 5-17). For five items—cost of licenses (Table 5-8), availability of hunting partners (Table 5-11), weather conditions (Table 5-21), age (Table 5-25), and poor health (Table 5-29)—the mean scores among groups did not differ but the pattern of responses did.

Section 5: Constraints to Waterfowl Hunting

Table 5-1: If I want to, I can easily go waterfowl hunting.

	n	% of hunters indicating: Definitely false	Moderately false	Slightly false	Neutral	Slightly true	Moderately true	Definitely true	Mean[1]
All respondents[2]	804	2.6%	4.3%	6.6%	12.8%	14.9%	24.0%	34.8%	5.4
Longtime participants	221	1.8%	3.2%	6.3%	10.4%	10.0%	25.8%	42.5%	5.7
Less-engaged participants	39	0.0%	7.7%	10.3%	25.6%	20.5%	10.3%	25.6%	4.9
Recreational-casual participants	204	3.4%	6.9%	7.8%	11.3%	19.6%	19.6%	31.4%	5.2
Social enthusiasts	110	4.5%	1.8%	4.5%	20.9%	13.6%	30.0%	24.5%	5.3
Individualist/ achievement-oriented enthusiasts	221	1.8%	3.2%	6.3%	10.4%	10.0%	25.8%	42.5%	5.7
		χ^2=47.186**, Cramer's V=0.121							

[1] F=3.843**, η=0.137. Mean is based on the following scale: 1=definitely false, 2=moderately false, 3=slightly false, 4=neutral, 5=slightly true, 6=moderately true, 7=definitely true.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-2: Constraints to waterfowl hunting: family commitments

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	13.1%	14.0%	16.1%	23.0%	16.8%	11.6%	5.4%	3.7
Longtime participants	225	12.6%	15.6%	16.9%	25.3%	16.0%	10.2%	5.8%	3.8
Less-engaged participants	40	10.2%	10.0%	20.0%	30.0%	12.5%	7.5%	10.0%	3.9
Recreational-casual participants	208	10.0%	11.1%	14.4%	20.2%	19.2%	13.9%	5.3%	3.8
Social enthusiasts	111	15.9%	14.4%	16.2%	17.1%	14.4%	14.4%	5.4%	3.6
Individualist/ achievement-oriented enthusiasts	238	18.0%	15.5%	16.4%	24.4%	16.8%	10.1%	4.2%	3.6
		χ^2=19.326 n.s.							

[1] F=0.426 n.s.. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-3: Constraints to waterfowl hunting: work commitments

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	815	15.5%	8.1%	10.2%	18.2%	18.7%	17.3%	11.9%	4.2
Longtime participants	226	20.4%	8.4%	5.8%	19.9%	19.5%	17.3%	8.8%	4.0
Less-engaged participants	39	17.9%	17.9%	15.4%	17.9%	10.3%	7.7%	12.8%	3.6
Recreational-casual participants	206	13.1%	6.3%	12.1%	19.4%	17.0%	18.0%	14.1%	4.3
Social enthusiasts	111	12.6%	6.3%	12.6%	16.2%	25.2%	14.4%	12.6%	4.3
Individualist/ achievement-oriented enthusiasts	236	11.0%	9.3%	13.6%	14.8%	17.8%	19.5%	14.0%	4.3
		χ^2=35.807 n.s.							

[1] F=2.305 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-4: Constraints to waterfowl hunting: access to private land for hunting

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	804	21.4%	9.5%	10.6%	13.0%	14.5%	15.2%	15.7%	4.0
Longtime participants	221	29.0%	11.8%	10.4%	10.4%	10.4%	16.3%	11.8%	3.6
Less-engaged participants	39	25.6%	2.6%	12.8%	15.4%	23.1%	5.1%	15.4%	3.8
Recreational-casual participants	204	16.7%	7.8%	12.3%	13.2%	16.7%	15.2%	18.1%	4.2
Social enthusiasts	110	14.5%	10.0%	7.3%	14.5%	18.2%	17.3%	18.2%	4.4
Individualist/ achievement-oriented enthusiasts	234	17.1%	8.5%	10.3%	15.8%	15.8%	14.1%	18.4%	4.2
		χ^2=34.958 n.s.							

[1] F=4.210**, η=0.143. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-5: Constraints to waterfowl hunting: access to public land for hunting

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	27.0%	14.3%	14.4%	21.0%	12.3%	7.4%	3.6%	3.1
Longtime participants	226	30.5%	14.2%	11.9%	19.5%	11.1%	8.4%	4.4%	3.1
Less-engaged participants	40	30.0%	5.0%	17.5%	25.0%	20.0%	0.0%	2.5%	3.1
Recreational-casual participants	208	26.9%	12.5%	16.3%	23.6%	10.1%	8.2%	2.4%	3.1
Social enthusiasts	109	20.2%	15.6%	18.3%	20.2%	14.7%	6.4%	4.6%	3.3
Individualist/ achievement-oriented enthusiasts	236	23.7%	17.8%	14.0%	19.9%	14.8%	6.4%	3.4%	3.2
		χ^2=23.157 n.s.							

[1] F=0.324 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-6: Constraints to waterfowl hunting: crowding at hunting areas

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	813	10.5%	9.8%	16.5%	23.3%	16.5%	15.6%	7.7%	4.0
Longtime participants	225	11.6%	10.7%	18.7%	23.6%	13.8%	12.9%	8.9%	3.9
Less-engaged participants	38	21.1%	5.3%	23.7%	21.1%	10.5%	13.2%	5.3%	3.6
Recreational-casual participants	207	10.6%	9.2%	12.1%	27.5%	19.3%	15.9%	5.3%	4.0
Social enthusiasts	110	10.0%	7.3%	12.7%	19.1%	17.3%	20.9%	12.7%	4.4
Individualist/ achievement-oriented enthusiasts	236	7.2%	11.0%	19.1%	19.9%	18.2%	17.8%	6.8%	4.1
		χ^2=31.728 n.s.							

[1] F=2.349 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-7: Constraints to waterfowl hunting: cost of equipment

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	18.5%	14.5%	16.4%	23.1%	15.2%	8.5%	3.8%	3.4
Longtime participants	225	21.3%	14.2%	18.7%	23.6%	13.8%	5.3%	3.1%	3.2
Less-engaged participants	40	17.5%	10.0%	7.5%	32.5%	15.0%	12.5%	5.0%	3.8
Recreational-casual participants	208	19.7%	14.9%	15.4%	18.3%	18.3%	11.1%	2.4%	3.4
Social enthusiasts	111	17.1%	12.6%	19.8%	26.1%	13.5%	6.3%	4.5%	3.4
Individualist/ achievement-oriented enthusiasts	236	12.7%	16.1%	13.6%	25.8%	14.4%	11.0%	6.4%	3.7
		χ^2=29.976 n.s.							

[1] F=2.676*, η=0.114. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-8: Constraints to waterfowl hunting: cost of licenses

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	23.8%	15.9%	16.3%	22.7%	11.2%	6.3%	3.8%	3.2
Longtime participants	226	23.9%	17.3%	18.1%	21.7%	9.7%	6.2%	3.1%	3.1
Less-engaged participants	39	25.6%	7.7%	5.1%	20.5%	20.5%	7.7%	12.8%	3.8
Recreational-casual participants	208	27.4%	15.9%	16.3%	20.2%	10.6%	6.7%	2.9%	3.0
Social enthusiasts	111	19.8%	9.0%	19.8%	30.6%	15.3%	3.6%	1.8%	3.3
Individualist/ achievement-oriented enthusiasts	237	20.7%	18.1%	13.1%	24.1%	11.0%	7.2%	5.9%	3.3
		χ^2=37.114*, Cramer's V=0.106							

[1] F=2.302 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-9: Constraints to waterfowl hunting: travel costs

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	16.9%	12.3%	13.0%	20.1%	16.1%	13.7%	7.9%	3.8
Longtime participants	225	16.9%	14.7%	13.3%	19.6%	13.3%	16.0%	6.2%	3.7
Less-engaged participants	40	27.5%	7.5%	7.5%	17.5%	15.0%	17.5%	7.5%	3.7
Recreational-casual participants	208	17.8%	12.5%	11.5%	19.7%	16.8%	15.4%	6.3%	3.8
Social enthusiasts	111	14.4%	7.2%	13.5%	24.3%	19.8%	9.9%	10.8%	4.0
Individualist/ achievement-oriented enthusiasts	238	15.1%	11.3%	15.1%	19.7%	18.5%	8.8%	11.3%	3.9
		χ^2=26.688 n.s.							

[1] F=0.623 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-10: Constraints to waterfowl hunting: waterfowl hunting regulations too restrictive

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	813	24.1%	17.8%	16.2%	24.6%	9.1%	5.0%	3.2%	3.0
Longtime participants	224	25.9%	17.0%	14.7%	25.0%	9.8%	4.9%	2.7%	3.0
Less-engaged participants	40	22.5%	12.5%	12.5%	32.5%	10.0%	5.0%	5.0%	3.3
Recreational-casual participants	205	26.3%	20.5%	16.1%	24.4%	6.3%	4.9%	1.5%	2.8
Social enthusiasts	111	20.7%	11.7%	18.9%	27.9%	8.1%	9.0%	3.6%	3.3
Individualist/ achievement-oriented enthusiasts	238	20.2%	19.3%	18.1%	21.4%	11.8%	3.4%	5.9%	3.2
		χ^2=26.526 n.s.							

[1] F=2.179 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-11: Constraints to waterfowl hunting: availability of waterfowl hunting partners

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	29.5%	16.3%	16.4%	21.0%	9.7%	5.4%	1.7%	2.9
Longtime participants	226	31.9%	11.5%	17.3%	24.3%	9.3%	4.4%	1.3%	2.9
Less-engaged participants	40	20.0%	17.5%	10.0%	27.5%	12.5%	2.5%	10.0%	3.4
Recreational-casual participants	207	28.5%	17.4%	17.4%	18.4%	9.2%	9.2%	0.0%	2.9
Social enthusiasts	110	26.4%	19.1%	16.4%	20.0%	10.0%	6.4%	1.8%	2.9
Individualist/ achievement-oriented enthusiasts	237	29.5%	21.5%	14.8%	18.1%	10.5%	2.1%	3.4%	2.8
		χ^2=45.888**, Cramer's V=0.118							

[1] F=1.344 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-12: Constraints to waterfowl hunting: physically unable to go waterfowl hunting

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	70.2%	11.4%	6.5%	6.9%	2.1%	1.8%	1.2%	1.7
Longtime participants	226	65.5%	13.3%	7.1%	9.3%	2.7%	0.9%	1.3%	1.8
Less-engaged participants	40	57.5%	10.0%	15.0%	7.5%	5.0%	5.0%	0.0%	2.1
Recreational-casual participants	208	75.0%	12.5%	5.8%	3.8%	1.0%	1.4%	0.5%	1.5
Social enthusiasts	111	66.7%	10.8%	5.4%	9.0%	2.7%	3.6%	1.8%	1.9
Individualist/ achievement-oriented enthusiasts	237	75.9%	7.2%	5.5%	5.5%	1.7%	2.5%	1.7%	1.6
		χ^2=30.845 n.s.							

[1] F=2.912*, η=0.119. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-13: Constraints to waterfowl hunting: insufficient hunting skills

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	70.8%	15.3%	5.6%	5.4%	1.6%	0.6%	0.7%	1.6
Longtime participants	225	72.4%	16.4%	4.9%	4.4%	0.9%	0.4%	0.4%	1.5
Less-engaged participants	40	57.5%	7.5%	7.5%	20.0%	7.5%	0.0%	0.0%	2.1
Recreational-casual participants	208	68.3%	16.8%	5.8%	4.8%	2.4%	1.0%	1.0%	1.6
Social enthusiasts	110	76.4%	11.8%	7.3%	4.5%	0.0%	0.0%	0.0%	1.4
Individualist/ achievement-oriented enthusiasts	237	70.5%	14.3%	5.5%	5.9%	1.7%	0.8%	1.3%	1.6
		χ^2=36.581*, Cramer's V=0.172							

[1] F=3.752**, η=0.134. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-14: Constraints to waterfowl hunting: interest in other recreational activities

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	814	24.3%	13.0%	16.3%	19.4%	13.8%	7.5%	5.7%	3.3
Longtime participants	225	23.6%	14.7%	15.6%	18.7%	13.3%	9.3%	4.9%	3.3
Less-engaged participants	40	20.0%	17.5%	15.0%	15.0%	12.5%	10.0%	10.0%	3.5
Recreational-casual participants	207	22.2%	12.6%	16.4%	21.3%	12.1%	6.8%	8.7%	3.4
Social enthusiasts	110	28.2%	9.1%	18.2%	18.2%	17.3%	6.4%	2.7%	3.2
Individualist/ achievement-oriented enthusiasts	236	27.1%	11.9%	16.9%	19.5%	15.3%	5.5%	3.8%	3.2
		χ^2=19.026 n.s.							

[1] F=0.930 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-15: Constraints to waterfowl hunting: safety concerns

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	59.3%	17.3%	7.8%	10.0%	3.0%	1.0%	1.5%	1.9
Longtime participants	226	58.4%	19.0%	8.0%	8.8%	4.0%	0.9%	0.9%	1.9
Less-engaged participants	40	50.0%	17.5%	5.0%	17.5%	2.5%	0.0%	7.5%	2.4
Recreational-casual participants	207	60.9%	16.4%	9.2%	9.2%	1.9%	1.9%	0.5%	1.8
Social enthusiasts	110	61.8%	14.5%	4.5%	13.6%	2.7%	0.9%	1.8%	1.9
Individualist/ achievement-oriented enthusiasts	237	59.1%	16.9%	7.6%	10.1%	3.0%	0.4%	3.0%	1.9
		χ^2=24.651 n.s.							

[1] F=1.250 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-16: Constraints to waterfowl hunting: waterfowl populations too low

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	810	7.4%	8.1%	10.0%	11.8%	14.3%	20.4%	28.0%	4.9
Longtime participants	222	8.6%	8.6%	10.4%	11.7%	12.2%	20.7%	27.9%	4.8
Less-engaged participants	40	15.0%	7.5%	7.5%	20.0%	15.0%	17.5%	17.5%	4.4
Recreational-casual participants	206	5.8%	8.3%	12.1%	10.2%	17.0%	19.9%	26.7%	4.9
Social enthusiasts	110	9.1%	7.3%	6.4%	14.5%	9.1%	21.8%	31.8%	5.0
Individualist/ achievement-oriented enthusiasts	237	5.5%	7.6%	8.9%	11.4%	16.9%	20.3%	29.5%	5.1
		χ^2=20.092 n.s.							

[1] F=1.301 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-17: Constraints to waterfowl hunting: no desire for waterfowl as food

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	811	47.6%	15.2%	9.1%	15.8%	5.6%	3.3%	3.5%	2.4
Longtime participants	224	47.3%	14.7%	7.1%	17.0%	6.3%	4.5%	3.1%	2.5
Less-engaged participants	40	45.0%	15.0%	10.0%	15.0%	5.0%	2.5%	7.5%	2.6
Recreational-casual participants	205	42.0%	17.6%	11.7%	13.2%	8.3%	2.9%	4.4%	2.5
Social enthusiasts	108	48.1%	9.3%	11.1%	21.3%	5.6%	2.8%	1.9%	2.4
Individualist/ achievement-oriented enthusiasts	238	55.5%	15.5%	8.0%	14.7%	1.3%	2.1%	2.9%	2.1
		χ^2=31.517 n.s.							

[1] F=2.539*, η=0.111. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-18: Constraints to waterfowl hunting: no need for waterfowl as food

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	811	46.5%	12.8%	7.9%	18.6%	4.4%	3.8%	6.2%	2.6
Longtime participants	224	47.8%	11.6%	6.7%	17.9%	4.9%	4.0%	7.1%	2.6
Less-engaged participants	40	42.5%	7.5%	7.5%	22.5%	2.5%	2.5%	15.0%	3.0
Recreational-casual participants	205	43.4%	13.7%	6.8%	20.5%	4.9%	3.9%	6.8%	2.7
Social enthusiasts	111	43.2%	9.9%	10.8%	23.4%	5.4%	4.5%	2.7%	2.6
Individualist/ achievement-oriented enthusiasts	235	50.2%	15.7%	10.2%	14.5%	2.6%	3.0%	3.8%	2.3
		χ^2=26.187 n.s.							

[1] F=2.344 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-19: Constraints to waterfowl hunting: personal concern for animals' pain and distress

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	70.3%	12.4%	5.3%	7.3%	1.2%	1.6%	1.9%	1.7
Longtime participants	226	69.9%	11.5%	4.9%	9.3%	0.9%	2.2%	1.3%	1.7
Less-engaged participants	40	60.0%	7.5%	2.5%	12.5%	5.0%	2.5%	10.0%	2.4
Recreational-casual participants	208	73.1%	13.0%	6.3%	4.8%	1.4%	1.0%	0.5%	1.5
Social enthusiasts	110	67.3%	14.5%	5.5%	8.2%	2.7%	1.8%	0.0%	1.7
Individualist/ achievement-oriented enthusiasts	237	70.5%	13.1%	5.1%	5.9%	0.0%	1.3%	4.2%	1.7
		χ^2=41.709*, Cramer's V=0.113							

[1] F=3.660**, η=0.133 Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-20: Constraints to waterfowl hunting: other people's concern for animals' pain and distress

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	75.5%	11.0%	3.7%	6.5%	0.7%	1.2%	1.6%	1.6
Longtime participants	226	75.7%	9.3%	4.0%	8.8%	0.0%	1.3%	0.9%	1.6
Less-engaged participants	40	65.0%	10.0%	5.0%	10.0%	0.0%	5.0%	5.0%	2.1
Recreational-casual participants	207	77.8%	15.0%	1.9%	2.9%	1.4%	0.5%	0.5%	1.4
Social enthusiasts	111	77.5%	9.9%	2.7%	5.4%	1.8%	0.9%	1.8%	1.5
Individualist/ achievement-oriented enthusiasts	236	72.9%	9.3%	5.5%	6.8%	0.4%	1.3%	3.8%	1.7
		χ^2=37.692*, Cramer's V=0.107							

[1] F=3.319*, η=0.127. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-21: Constraints to waterfowl hunting: weather conditions

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	37.4%	19.5%	12.4%	16.7%	7.4%	4.4%	2.2%	2.6
Longtime participants	224	43.3%	18.8%	10.7%	15.2%	5.4%	4.5%	2.2%	2.4
Less-engaged participants	40	40.0%	7.5%	7.5%	25.0%	12.5%	5.0%	2.5%	2.9
Recreational-casual participants	208	29.3%	20.2%	14.4%	17.8%	10.6%	4.8%	2.9%	2.9
Social enthusiasts	111	43.2%	16.2%	10.8%	16.2%	9.0%	4.5%	0.0%	2.5
Individualist/ achievement-oriented enthusiasts	237	34.6%	23.2%	14.3%	16.9%	5.1%	3.8%	2.1%	2.5
		χ^2=28.561 n.s.							

[1] F=2.501*, η=0.110. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-22: Constraints to waterfowl hunting: not enough leisure time

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	816	21.8%	8.6%	14.1%	14.7%	14.6%	14.9%	11.4%	3.8
Longtime participants	225	24.9%	9.3%	15.1%	10.2%	14.7%	14.2%	11.6%	3.7
Less-engaged participants	39	25.6%	7.7%	2.6%	17.9%	17.9%	10.3%	17.9%	4.0
Recreational-casual participants	208	22.6%	7.2%	15.4%	13.9%	12.0%	17.8%	11.1%	3.8
Social enthusiasts	110	19.1%	6.4%	13.6%	21.8%	16.4%	12.7%	10.0%	3.9
Individualist/ achievement-oriented enthusiasts	238	16.4%	10.1%	12.6%	19.3%	16.4%	13.9%	11.3%	4.0
		χ^2=26.611 n.s.							

[1] F=0.562 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-23: Constraints to waterfowl hunting: the type of people that hunt waterfowl

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	44.4%	18.5%	10.8%	17.9%	4.7%	2.0%	1.7%	2.3
Longtime participants	225	44.9%	18.2%	13.3%	14.7%	4.0%	3.1%	1.8%	2.3
Less-engaged participants	40	37.5%	12.5%	5.0%	30.0%	5.0%	2.5%	7.5%	2.9
Recreational-casual participants	208	46.6%	18.3%	7.7%	20.2%	5.3%	1.4%	0.5%	2.3
Social enthusiasts	111	45.0%	15.3%	12.6%	24.3%	1.8%	0.0%	0.9%	2.3
Individualist/ achievement-oriented enthusiasts	238	41.6%	21.8%	10.5%	15.5%	6.3%	1.7%	2.5%	2.4
		χ^2=35.226 n.s.							

[1] F=1.643 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-24: Constraints to waterfowl hunting: the amount of planning required to go hunting

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	819	46.6%	22.8%	10.9%	12.8%	4.4%	1.6%	0.9%	2.1
Longtime participants	226	47.3%	23.5%	13.7%	10.2%	3.1%	1.3%	0.9%	2.1
Less-engaged participants	40	37.5%	17.5%	15.0%	22.5%	2.5%	2.5%	2.5%	2.5
Recreational-casual participants	208	48.1%	23.1%	6.3%	16.8%	3.8%	1.0%	1.0%	2.1
Social enthusiasts	111	47.7%	19.8%	10.8%	9.0%	9.9%	2.7%	0.0%	2.2
Individualist/ achievement-oriented enthusiasts	238	44.5%	23.5%	11.3%	12.6%	5.0%	2.1%	0.8%	2.2
		χ^2=28.977 n.s.							

[1] F=1.101 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-25: Constraints to waterfowl hunting: age

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	812	54.5%	16.7%	8.3%	11.1%	5.4%	3.1%	1.0%	2.1
Longtime participants	226	50.9%	15.0%	8.8%	11.9%	6.6%	5.3%	1.3%	2.3
Less-engaged participants	39	46.2%	7.7%	15.4%	12.8%	10.3%	5.1%	2.6%	2.6
Recreational-casual participants	204	53.9%	19.1%	8.8%	11.3%	4.9%	2.0%	0.0%	2.0
Social enthusiasts	109	56.0%	19.3%	7.3%	9.2%	6.4%	1.8%	0.0%	2.0
Individualist/ achievement-oriented enthusiasts	238	62.2%	16.8%	5.9%	10.1%	2.5%	0.8%	1.7%	1.8
		χ^2=34.464 n.s.							

[1] F=4.334**, η=0.145. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-26: Constraints to waterfowl hunting: the amount of effort required to go hunting

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	815	39.1%	21.8%	12.4%	13.3%	9.5%	3.3%	0.5%	2.4
Longtime participants	225	39.6%	20.4%	11.6%	12.4%	10.7%	4.9%	0.4%	2.5
Less-engaged participants	40	32.5%	17.5%	17.5%	17.5%	7.5%	5.0%	2.5%	2.8
Recreational-casual participants	206	37.4%	20.9%	12.6%	17.0%	10.2%	1.9%	0.0%	2.5
Social enthusiasts	111	44.1%	26.1%	12.6%	7.2%	8.1%	0.9%	0.9%	2.2
Individualist/ achievement-oriented enthusiasts	237	39.2%	24.1%	12.7%	12.2%	7.6%	3.4%	0.8%	2.4
		χ^2=21.514 n.s.							

[1] F=1.588 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-27: Constraints to waterfowl hunting: no hunting opportunities near my home

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	818	36.7%	16.7%	11.8%	12.7%	10.0%	7.5%	4.7%	2.8
Longtime participants	226	41.2%	15.0%	11.5%	11.9%	8.8%	8.0%	3.5%	2.7
Less-engaged participants	40	40.0%	17.5%	7.5%	20.0%	7.5%	0.0%	7.5%	2.7
Recreational-casual participants	206	33.5%	15.5%	13.1%	12.6%	12.1%	7.8%	5.3%	3.0
Social enthusiasts	111	36.9%	20.7%	9.0%	9.9%	8.1%	8.1%	7.2%	2.8
Individualist/ achievement-oriented enthusiasts	239	32.6%	18.8%	12.6%	14.2%	10.5%	7.1%	4.2%	2.9
		χ^2=17.843 n.s.							

[1] F=0.738 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-28: Constraints to waterfowl hunting: the timing of the waterfowl migration

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	815	20.9%	12.5%	12.2%	19.9%	15.0%	11.7%	7.8%	3.6
Longtime participants	226	22.6%	13.3%	11.5%	21.7%	12.8%	10.2%	8.0%	3.5
Less-engaged participants	40	25.0%	10.0%	5.0%	32.5%	17.5%	5.0%	5.0%	3.4
Recreational-casual participants	206	17.5%	12.6%	13.6%	18.4%	18.4%	11.7%	7.8%	3.7
Social enthusiasts	109	17.4%	12.8%	10.1%	15.6%	13.8%	19.3%	11.0%	4.0
Individualist/ achievement-oriented enthusiasts	238	23.1%	11.3%	13.9%	18.5%	14.7%	11.8%	6.7%	3.5
		χ^2=23.543 n.s.							

[1] F=1.530 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-29: Constraints to waterfowl hunting: poor health

	n	% of hunters indicating: Not at all limiting 1	2	3	4	5	6	Very limiting 7	Mean[1]
All respondents[2]	820	71.8%	12.3%	5.2%	5.9%	3.0%	1.3%	0.6%	1.6
Longtime participants	227	69.2%	13.7%	5.3%	7.9%	3.5%	0.4%	0.0%	1.6
Less-engaged participants	40	55.0%	17.5%	7.5%	5.0%	7.5%	5.0%	2.5%	2.2
Recreational-casual participants	207	73.4%	13.5%	4.8%	4.3%	1.4%	1.4%	1.0%	1.6
Social enthusiasts	111	75.7%	7.2%	4.5%	2.7%	8.1%	1.8%	0.0%	1.7
Individualist/ achievement-oriented enthusiasts	239	74.9%	10.0%	5.4%	5.9%	0.8%	1.7%	1.3%	1.6
		χ^2=40.586*, Cramer's V=0.111							

[1] F=2.269 n.s. Mean is based on the following scale: 1=not at all limiting, 7=very limiting.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 5-30: Comparison of constraints to waterfowl hunting.

Constraint	Sample size (n)	Mean[1]
Waterfowl populations too low	810	4.9
Work commitments	815	4.2
Access to private land for hunting	804	4.0
Crowding at hunting areas	813	4.0
Travel costs	818	3.8
Not enough leisure time	816	3.8
Family commitments	818	3.7
The timing of the waterfowl migration	815	3.6
Cost of equipment	816	3.4
Interest in other recreational activities	814	3.3
Cost of licenses	818	3.2
Access to public land for hunting	816	3.1
Waterfowl hunting regulations too restrictive	813	3.0
Availability of waterfowl hunting partners	816	2.9
No hunting opportunities near my home	818	2.8
No need for waterfowl as food	811	2.6
Weather conditions	816	2.6
No desire for waterfowl as food	811	2.4
The amount of effort required to go hunting	815	2.4
The type of people that hunt waterfowl	818	2.3
The amount of planning required to go hunting	819	2.1
Age	812	2.1
Safety concerns	816	1.9
Physically unable to go waterfowl hunting	818	1.7
Personal concern for animals' pain and distress	818	1.7
Insufficient hunting skills	816	1.6
Other people's concern for animals' pain and distress	816	1.6
Poor health	820	1.6

[1] F=279.0*** Grand mean=2.9, η^2=0.276. Mean is based on a scale of: 1=not at all limiting to 7=very limiting.

Figure 5-1: Means on Combined Constraint Factors

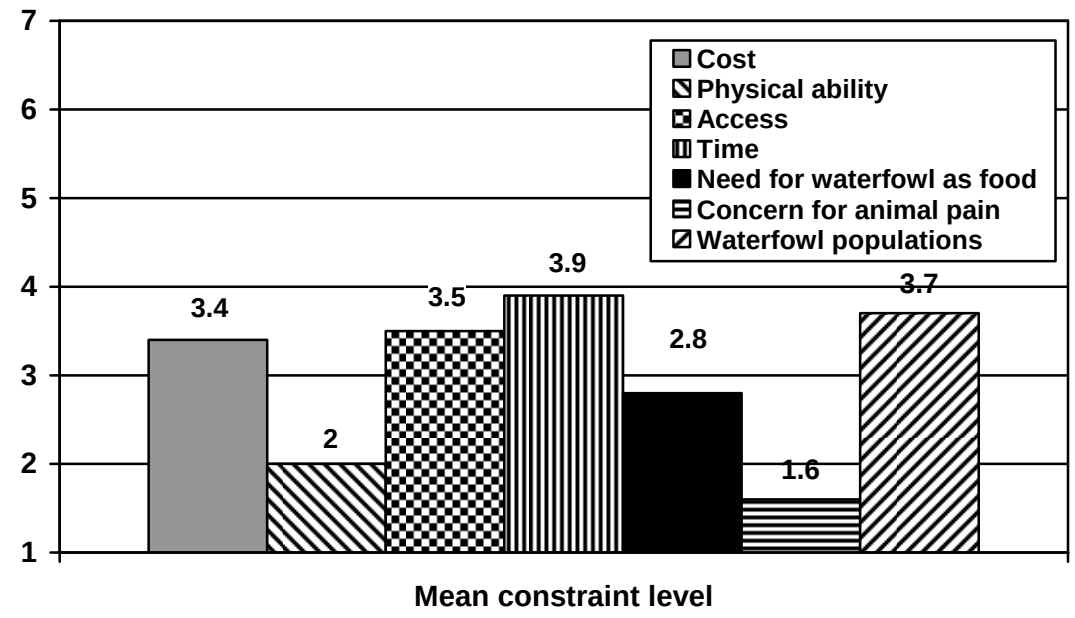
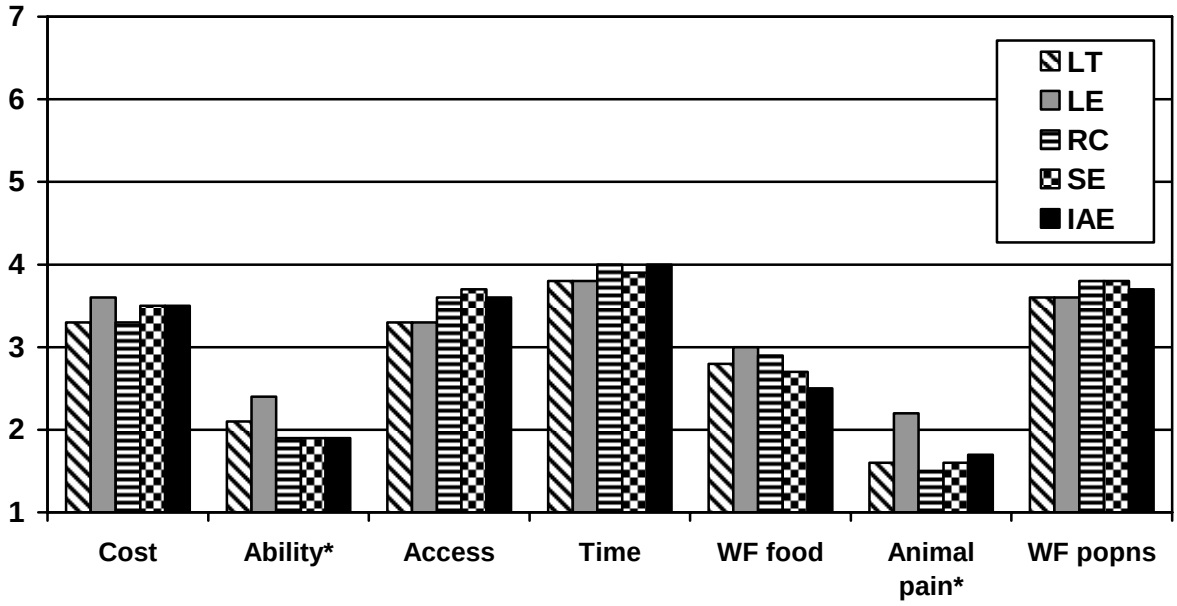


Figure 5-2: Mean Combined Constraint Factors by Hunter Strata



Differences based on analysis of variance and Student-Newman-Keuls test (different superscripts mean the group is significantly different at the 0.05 level).

Physical ability: SE—1.9 [b], RC—1.9[b], IAE—1.9[b], LT—2.1[ab], LE—2.4[a]

Animal pain: RC—1.5 [b], IAE—1.6[b], LT—1.6[b], SE—1.7[b], LE—2.2[a]

Section 6: Motivations for and Involvement in Waterfowl Hunting

Importance of Experiences

Overall Results

Respondents were asked to report the importance of 21 possible waterfowl hunting experiences using the scale 1 (not at all important) to 5 (extremely important). The Cronbach's alpha (α) measure of reliability for the 21-item scale was 0.831. Six experiences were rated very to extremely important: (a) enjoying nature and the outdoors ($\bar{x} = 4.6$), (b) good behavior among other waterfowl hunters ($\bar{x} = 4.5$), (c) getting away from crowds of people ($\bar{x} = 4.4$), (d) hunting areas open to the public ($\bar{x} = 4.0$), (e) reducing tension and stress ($\bar{x} = 4.0$), and (f) seeing lots of ducks and geese ($\bar{x} = 4.0$). Three items were rated only slightly important: (a) a large daily duck bag limit ($\bar{x} = 2.0$), (b) getting food for my family ($\bar{x} = 2.1$), and (c) getting my limit ($\bar{x} = 2.1$). All other items were rated somewhat to very important (Tables 6-1 to 6-22).

A factor analysis was conducted to reveal underlying correlations among the items. Six underlying factors with Eigenvalues greater than 1.0 were identified. By examining which items loaded heavily (> 0.500) on each factor, we found that the factors reflected different underlying motivations including: (a) bagging ducks and geese, (b) skills and values, (c) nature, good behavior, (d) affiliation, (e) access, and (f) solitude. On average, respondents rated the nature and good behavior factor ($\bar{x} = 4.5$) the highest, followed by the social and access factors ($\bar{x} = 3.7$), the solitude factor ($\bar{x} = 3.5$), the skills factor ($\bar{x} = 3.3$), and the bagging waterfowl factor ($\bar{x} = 2.4$) ($F=948.245$, $p<0.001$, $\eta^2 = 0.532$) (Figure 6-1).

Three experiences loaded on a first factor related to **bagging waterfowl** ($\bar{x} = 2.4$; $\alpha = 0.747$). The items included in this scale are: (a) a large daily duck bag limit ($\bar{x} = 2.0$) (Table 6-1), (b) bagging ducks and geese ($\bar{x} = 3.1$) (Table 6-3), and (c) getting my limit ($\bar{x} = 2.1$) (Table 6-12).

Five experiences loaded on a second factor related to **skills and values** ($\bar{x} = 3.3$; $\alpha = 0.666$). The items included in this scale are: (a) developing my skills and abilities ($\bar{x} = 3.5$) (Table 6-6), (b) getting food for my family ($\bar{x} = 2.1$) (Table 6-10), (c) getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service ($\bar{x} = 3.3$) (Table 6-11), (d) thinking about personal values ($\bar{x} = 3.7$) (Table 6-20), and (e) using my hunting equipment (decoys, boats, etc.) ($\bar{x} = 3.5$) (Table 6-21).

Three items related to **nature and good behavior** loaded on the third factor ($\bar{x} = 4.5$; $\alpha = 0.569$). The items included in this scale are: (a) enjoying nature and the outdoors ($\bar{x} = 4.6$) (Table 6-8), (b) getting away from crowds of people ($\bar{x} = 4.4$) (Table 6-9), and (c) good behavior among other waterfowl hunters ($\bar{x} = 4.5$) (Table 6-13).

Four **social** experience items loaded on the fourth factor ($\bar{x} = 3.7$; $\alpha = 0.578$). The items included in this scale are: (a) hunting with friends ($\bar{x} = 3.9$) (Table 6-5), (b) hunting with family ($\bar{x} = 3.9$) (Table 6-7), (c)

hunting with a dog ($\bar{x} = 3.6$) (Table 6-16), and (d) sharing my hunting skills and knowledge ($\bar{x} = 3.4$) (Table 6-19).

Four items related to **access** loaded on the fifth factor ($\bar{x} = 3.7$; $\alpha = 0.663$). The items in this scale are: (a) access to a lot of different hunting areas ($\bar{x} = 3.6$) (Table 6-2), (b) having a long duck season ($\bar{x} = 3.4$) (Table 6-14), (c) hunting areas open to the public ($\bar{x} = 4.0$) (Table 6-15), and (d) seeing a lot of ducks and geese ($\bar{x} = 4.0$) (Table 6-18).

Two items related to **solitude** loaded on the sixth factor ($\bar{x} = 3.5$; $\alpha = 0.314$). Items in this scale included: (a) being on my own ($\bar{x} = 3.0$) (Table 6-4) and (b) reducing tension and stress ($\bar{x} = 4.0$) (Table 6-17).

Results by Hunter Segment

There were significant differences in the importance of all six experience factors by hunter segment. Bagging waterfowl was less important to longtime ($\bar{x} = 2.3$) and recreational-casual hunters ($\bar{x} = 2.3$), and more important to social ($\bar{x} = 2.6$) and individualist ($\bar{x} = 2.7$) enthusiasts ($F=8.398$, $p<0.001$). Skills and values were less important to recreational-casual ($\bar{x} = 3.1$) and less-engaged hunters ($\bar{x} = 3.1$), and more important to social ($\bar{x} = 3.4$) and individualist ($\bar{x} = 3.5$) enthusiasts ($F=11.406$, $p<0.001$). Nature was slightly less important to less-engaged hunters ($\bar{x} = 4.3$), compared to the other groups ($\bar{x} = 4.4$ to 4.6) ($F=3.466$, $p<0.01$). Affiliation was also less important to less-engaged hunters ($\bar{x} = 2.8$) than to others ($\bar{x} = 3.6$ to 3.8) ($F=11.634$, $p<0.001$). Access was less important to less-engaged hunters ($\bar{x} = 3.2$) than to other groups ($\bar{x} = 3.7$ to 4.0) ($F=7.624$, $p<0.001$). Solitude was less important to less-engaged hunters ($\bar{x} = 3.2$) and recreational-casual hunters ($\bar{x} = 3.3$), and more important to longtime hunters ($\bar{x} = 3.6$) and individualist enthusiasts ($\bar{x} = 3.9$) ($F=9.687$, $p<0.001$).

Achievement of Experiences

Overall Results

Respondents were asked to report whether the 21 possible waterfowl hunting experiences happened during their most recent waterfowl hunting season using the scale 1 (not at all) to 5 (very much). One experience, enjoying nature and the outdoors ($\bar{x} = 4.4$), happened 'largely' to 'very much.' Two experiences happened 'not at all' to 'slightly:' (a) a large daily bag limit ($\bar{x} = 1.7$) and (b) getting my limit ($\bar{x} = 1.9$). All other items happened slightly to largely (Tables 6-23 to 6-44).

Results by Hunter Segment

Less-engaged hunters reported significantly lower levels of achievement of a number of experiences including: (a) access to a lot of different hunting areas (Table 6-24), (b) developing my skills and abilities (Table 6-28), (c) hunting with family (Table 6-29), (d) enjoying nature and the outdoors (Table 6-30), (e) having a long duck season (Table 6-36), (f) hunting with a dog (Table 6-38), (g) reducing tension and stress (Table 6-39), (h) sharing my hunting skills and knowledge (Table 6-41), (i) thinking about personal values (Table 6-42), and (j) using my hunting equipment (Table 6-43). Social enthusiasts reported significantly higher levels of achievement of: (a) being on my own (Table 6-24), (b) developing my skills and abilities (Table 6-28), and (c) hunting with a dog (Table 6-38). Longtime hunters reported higher levels of hunting with family (Table 6-29). Both types of enthusiast hunters reported higher levels of achievement of getting food for my family (Table 6-32). Individualist/achievement oriented enthusiasts reported less time hunting with a dog (Table 6-38).

Importance-Performance Analysis of Motivations and Experiences

Marketing researchers use importance-performance analyses to examine customer satisfaction with aspects of products and services. This easily understood technique identifies aspects where organizations should devote more attention and areas that may be consuming too many resources (Martilla & James, 1977). Using this method we identified six items that fall under the "concentrate here" quadrant of the importance-performance chart (Figure 6-3): (a) access to a lot of different hunting areas, (b) having a long duck season, (c) bagging ducks and geese, (d) seeing a lot of ducks and geese, (e) getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service, and (f) being on my own.

Importance of and Financial Investment in Waterfowl Hunting

Respondents answered a number of questions related to the importance of waterfowl hunting in their lives. One question asked respondents to select one of five statements that indicated how important waterfowl hunting was to them. The largest proportion of respondents (45.8%) indicated that waterfowl hunting was "one of my most important recreational activities" (Table 6-45). Respondents were also asked to indicate if they were casual, active, or committed waterfowl hunters. They were provided brief descriptions of these definitions. The largest proportion of respondents (44.3%) identified themselves as active waterfowl hunters (Table 6-46). Respondents were asked to report how much they spent on waterfowl hunting each year using the categories 1=$250 or less, 2=$251-1,000, 3=$1,001-5,000 and 4=over $5,000. The largest proportion of respondents (47.5%) indicated that they spent $250 or less on waterfowl hunting each year (Table 6-47).

Involvement/Commitment to Waterfowl Hunting

Respondents were asked to rate 21 items addressing their involvement and commitment to waterfowl hunting, using the scale 1=strongly disagree to 5=strongly agree (Table 6-48 to 6-69). The Cronbach's alpha for the 21-item scale was 0.897. Factor analysis identified four dimensions of waterfowl hunting; (a) centrality, (b) knowledge, (c) identity/social, and (d) volitional control (Figure 6-4).

Eight items loaded on the **centrality** factor (α=0.929, $\bar{x}$=3.4). Centrality items included: (a) waterfowl hunting is one of the most enjoyable things I do ($\bar{x}$=3.8) (Table 6-48), (b) I find that a lot of my life is organized around waterfowl hunting ($\bar{x}$=2.7) (Table 6-51), (c) waterfowl hunting has a central role in my life ($\bar{x}$=2.8) (Table 6-52), (d) waterfowl hunting interests me ($\bar{x}$=4.3) (Table 6-57), (e) waterfowl hunting is important to me ($\bar{x}$=4.0) (Table 6-58), (f) for me to change my preference from waterfowl hunting to another leisure activity would require major rethinking ($\bar{x}$= 3.3) (Table 6-63), (g) I find a lot of my life organized around waterfowl-hunting activities ($\bar{x}$=2.8) (Table 6-64), and (h) even if close friends recommended another recreational activity, I would not change my preference from waterfowl hunting ($\bar{x}$=3.3) (Table 6-65).

Three items loaded on the **identity** factor (α=0.695, $\bar{x}$=3.2). Identity items included: (a) when I am waterfowl hunting, others see me the way I want them to see me ($\bar{x}$=3.7) (Table 6-54), (b) you can tell a lot about a person when you see them waterfowl hunting ($\bar{x}$=3.5) (Table 6-59), and (c) when I am waterfowl hunting I can really be myself ($\bar{x}$=3.8) (Table 6-60).

Five items loaded on the **knowledge** factor (α=0.770, $\bar{x}$=3.9). Knowledge items included: (a) I am knowledgeable about waterfowl hunting ($\bar{x}$=4.1) (Table 6-49), (b) I don't really know much about waterfowl hunting ($\bar{x}$=1.7) (Table 6-55), (c) I consider myself an educated consumer regarding waterfowl hunting ($\bar{x}$=4.0) (Table 6-56), (d) I have acquired equipment that I would not use if I quit

waterfowl hunting ($\bar{x}$ =4.1) (Table 6-66), and (e) compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment ($\bar{x}$ =3.1) (Table 6-68).

Two items loaded on the **volitional control** factor (r=0.357, $\bar{x}$ =3.9). Control items included (a) the decision to go waterfowl hunting is primarily my own ($\bar{x}$ =4.2) (Table 6-50) and (b) the decision to go waterfowl hunting is not entirely my own (reversed) ($\bar{x}$ =2.4) (Table 6-62).

Three items did not load on any of the four factors at the cut-off level of 0.500. These included two items that loaded most heavily on the identity factor—most of my friends are in some way connected with waterfowl hunting ($\bar{x}$ =3.3) (Table 6-53) and I enjoy discussing waterfowl hunting with my friends ($\bar{x}$ =4.0) (Table 6-61). Another item loaded on the centrality and identity factors—I have close friendships that are based on a common interest in waterfowl hunting ($\bar{x}$ =3.7) (Table 6-67).

Results by Hunter Segment

There were significant differences in the involvement/commitment factors by hunter segment (Figure 6-5). Less-engaged hunters rated the items related to centrality significantly lower ($\bar{x}$ = 3.0) than respondents from the other groups did ($\bar{x}$ = 3.3 to 3.6) (F=7.578, p<0.001). Similarly, less-engaged hunters rated knowledge items lower ($\bar{x}$ = 3.5) than other respondents did ($\bar{x}$ = 3.9 to 4.1) (F=8.027, p<0.001). Less-engaged hunters ($\bar{x}$ = 3.4) and recreational-casual hunters ($\bar{x}$ = 3.5) rated identity items somewhat lower than the other groups did ($\bar{x}$ = 3.7 to 3.8) (F=5.023, p<0.01).

Table 6-1: Motivations for waterfowl hunting: Importance of… a large daily duck bag limit.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	833	36.9%	29.2%	28.8%	4.1%	0.9%	2.0
Longtime participants	231	42.0%	29.4%	24.2%	2.6%	1.7%	1.9
Less-engaged participants	43	39.5%	30.2%	25.6%	4.7%	0.0%	2.0
Recreational-casual participants	213	40.4%	29.1%	28.2%	2.3%	0.0%	1.9
Social enthusiasts	109	28.4%	26.6%	33.9%	11.0%	0.0%	2.3
Individualist/achievement oriented enthusiasts	240	27.1%	30.0%	35.8%	5.8%	1.3%	2.2
	χ^2=37.838**, Cramer's V=0.106						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=6.023***, η=0.168. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-2: Motivations for waterfowl hunting: Importance of… access to a lot of different hunting areas.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	829	6.4%	8.0%	26.9%	36.7%	22.0%	3.6
Longtime participants	230	8.7%	10.9%	28.7%	33.9%	17.8%	3.4
Less-engaged participants	42	21.4%	16.7%	31.0%	21.4%	9.5%	2.8
Recreational-casual participants	211	4.3%	5.2%	29.4%	39.3%	21.8%	3.7
Social enthusiasts	110	4.5%	5.5%	18.2%	37.3%	34.5%	3.9
Individualist/achievement oriented enthusiasts	239	3.3%	6.3%	23.8%	40.6%	25.9%	3.8
	χ^2=56.452***, Cramer's V=0.130						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=12.033***, η=0.235. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-3: Motivations for waterfowl hunting: Importance of… bagging ducks and geese.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	819	6.2%	16.7%	42.3%	28.2%	6.7%	3.1
Longtime participants	226	8.0%	19.0%	42.9%	24.8%	5.3%	3.0
Less-engaged participants	42	7.1%	14.3%	35.7%	38.1%	4.8%	3.2
Recreational-casual participants	211	5.7%	16.6%	47.4%	26.5%	3.8%	3.1
Social enthusiasts	109	3.7%	11.9%	34.9%	36.7%	12.8%	3.4
Individualist/achievement oriented enthusiasts	234	4.7%	15.4%	38.9%	30.8%	10.3%	3.3
	χ^2=27.597*, Cramer's V=0.092						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.839**, η=0.152. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-4: Motivations for waterfowl hunting: Importance of… being on my own.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	17.2%	14.1%	30.4%	26.1%	12.2%	3.0
Longtime participants	227	13.7%	14.1%	27.3%	29.1%	15.9%	3.2
Less-engaged participants	41	24.4%	4.9%	51.2%	14.6%	4.9%	2.7
Recreational-casual participants	211	22.7%	18.5%	31.8%	22.7%	4.3%	2.7
Social enthusiasts	110	4.5%	11.8%	22.7%	33.6%	27.3%	3.7
Individualist/achievement oriented enthusiasts	240	20.8%	10.8%	34.2%	23.8%	10.4%	2.9
	χ^2=78.555***, Cramer's V=0.154						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=14.388***, η=0.256. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-5: Motivations for waterfowl hunting: Importance of… hunting with friends.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	2.5%	4.3%	22.9%	41.3%	28.9%	3.9
Longtime participants	227	1.3%	4.4%	20.7%	43.2%	30.4%	4.0
Less-engaged participants	42	7.1%	9.5%	28.6%	31.0%	23.8%	3.5
Recreational-casual participants	210	2.9%	3.8%	24.3%	40.0%	29.0%	3.9
Social enthusiasts	110	2.7%	2.7%	28.2%	41.8%	24.5%	3.8
Individualist/achievement oriented enthusiasts	240	3.3%	4.6%	21.7%	41.3%	29.2%	3.9
	χ^2=13.603 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.823 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-6: Motivations for waterfowl hunting: Importance of… developing my skills and abilities.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	4.7%	7.5%	31.7%	42.7%	13.4%	3.5
Longtime participants	226	6.2%	9.7%	29.2%	41.6%	13.3%	3.5
Less-engaged participants	41	9.8%	12.2%	31.7%	41.5%	4.9%	3.2
Recreational-casual participants	213	5.2%	6.6%	40.4%	35.7%	12.2%	3.4
Social enthusiasts	110	0.9%	4.5%	27.3%	49.1%	18.2%	3.8
Individualist/achievement oriented enthusiasts	239	2.5%	5.4%	26.8%	51.0%	14.2%	3.7
	χ^2=34.988**, Cramer's V=0.103						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=5.843***, η=0.166. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-7: Motivations for waterfowl hunting: Importance of… hunting with family.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	7.5%	5.5%	16.6%	34.5%	35.9%	3.9
Longtime participants	227	2.2%	4.4%	12.8%	34.4%	46.3%	4.2
Less-engaged participants	40	22.5%	12.5%	32.5%	27.5%	5.0%	2.8
Recreational-casual participants	213	14.1%	7.5%	21.6%	36.2%	20.7%	3.4
Social enthusiasts	110	10.0%	7.3%	20.9%	30.0%	31.8%	3.7
Individualist/achievement oriented enthusiasts	238	4.6%	2.9%	12.2%	35.7%	44.5%	4.1
	χ^2=96.670***, Cramer's V=0.171						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=25.397***, η=0.331. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-8: Motivations for waterfowl hunting: Importance of… enjoying nature and the outdoors.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	831	0.4%	0.3%	2.8%	27.8%	68.8%	4.6
Longtime participants	229	0.4%	0.0%	2.2%	24.0%	73.4%	4.7
Less-engaged participants	42	0.0%	0.0%	4.8%	42.9%	52.4%	4.5
Recreational-casual participants	214	0.5%	0.5%	3.3%	30.8%	65.0%	4.6
Social enthusiasts	110	0.0%	1.8%	3.6%	24.5%	70.0%	4.6
Individualist/achievement oriented enthusiasts	239	0.4%	0.0%	2.5%	29.3%	67.8%	4.6
	χ^2=19.009 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.676 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-9: Motivations for waterfowl hunting: Importance of… getting away from crowds of people.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	822	1.9%	1.5%	9.4%	33.7%	53.5%	4.4
Longtime participants	228	2.2%	0.9%	8.8%	33.8%	54.4%	4.4
Less-engaged participants	42	7.1%	0.0%	11.9%	31.0%	50.0%	4.2
Recreational-casual participants	209	2.4%	2.9%	11.5%	38.3%	45.0%	4.2
Social enthusiasts	110	0.0%	0.9%	10.9%	22.7%	65.5%	4.5
Individualist/achievement oriented enthusiasts	236	0.8%	1.3%	6.8%	33.1%	58.1%	4.5
	χ^2=29.954*, Cramer's V=0.095						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.229**, η=0.142. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-10: Motivations for waterfowl hunting: Importance of… getting food for my family.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	826	41.3%	22.9%	24.0%	7.5%	4.5%	2.1
Longtime participants	227	49.8%	24.2%	18.9%	4.8%	2.2%	1.9
Less-engaged participants	42	31.0%	21.4%	28.6%	11.9%	7.1%	2.4
Recreational-casual participants	213	54.0%	23.0%	16.0%	4.2%	2.8%	1.8
Social enthusiasts	110	17.3%	21.8%	35.5%	14.5%	10.9%	2.8
Individualist/achievement oriented enthusiasts	238	22.7%	21.0%	37.0%	12.2%	7.1%	2.6
	χ^2=111.214***, Cramer's V=0.183						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=28.975***, η=0.351. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-11: Motivations for waterfowl hunting: Importance of… getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Services.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	831	8.8%	11.4%	34.8%	31.6%	13.3%	3.3
Longtime participants	229	8.3%	11.8%	36.2%	28.8%	14.8%	3.3
Less-engaged participants	42	9.5%	9.5%	26.2%	38.1%	16.7%	3.4
Recreational-casual participants	214	10.7%	15.4%	35.0%	29.0%	9.8%	3.1
Social enthusiasts	109	8.3%	8.3%	29.4%	35.8%	18.3%	3.5
Individualist/achievement oriented enthusiasts	240	7.5%	7.1%	35.8%	37.1%	12.5%	3.4
	χ^2=20.716 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=2.793*, η=0.115. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-12: Motivations for waterfowl hunting: Importance of… getting my limit.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	830	37.5%	25.5%	30.0%	5.7%	1.3%	2.1
Longtime participants	228	43.0%	28.1%	24.1%	3.9%	0.9%	1.9
Less-engaged participants	41	48.8%	9.8%	22.0%	19.5%	0.0%	2.1
Recreational-casual participants	214	41.1%	22.9%	31.3%	3.7%	0.9%	2.0
Social enthusiasts	110	20.0%	31.8%	35.5%	11.8%	0.9%	2.4
Individualist/achievement oriented enthusiasts	240	29.6%	24.2%	37.1%	6.3%	2.9%	2.3
	χ^2=58.338***, Cramer's V=0.132						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=7.120***, η=0.182. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-13: Motivations for waterfowl hunting: Importance of… good behavior among other waterfowl hunters.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	824	0.9%	0.6%	6.4%	36.1%	56.0%	4.5
Longtime participants	226	0.0%	0.0%	5.8%	34.1%	60.2%	4.5
Less-engaged participants	42	2.4%	2.4%	7.1%	33.3%	54.8%	4.4
Recreational-casual participants	212	1.9%	0.9%	7.1%	39.2%	50.9%	4.4
Social enthusiasts	109	0.0%	0.9%	5.5%	33.9%	59.6%	4.5
Individualist/achievement oriented enthusiasts	239	1.3%	0.8%	6.7%	37.2%	54.0%	4.4
	χ^2=13.366 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=2.247 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-14: Motivations for waterfowl hunting: Importance of… having a long duck season.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	830	8.8%	11.3%	33.7%	27.3%	18.9%	3.4
Longtime participants	228	10.1%	11.4%	33.3%	28.9%	16.2%	3.3
Less-engaged participants	42	21.4%	11.9%	28.6%	23.8%	14.3%	3.0
Recreational-casual participants	214	8.4%	15.0%	36.0%	22.9%	17.8%	3.3
Social enthusiasts	110	6.4%	6.4%	31.8%	30.9%	24.5%	3.6
Individualist/achievement oriented enthusiasts	240	6.3%	8.8%	32.9%	29.2%	22.9%	3.5
	χ^2=25.767 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.250**, η=0.142. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-15: Motivations for waterfowl hunting: Importance of… hunting areas open to the public.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	5.1%	6.0%	15.7%	34.7%	38.5%	4.0
Longtime participants	225	5.8%	4.4%	16.0%	36.4%	37.3%	4.0
Less-engaged participants	42	14.3%	9.5%	21.4%	33.3%	21.4%	3.4
Recreational-casual participants	214	6.1%	6.1%	14.5%	32.7%	40.7%	4.0
Social enthusiasts	110	1.8%	5.5%	13.6%	29.1%	50.0%	4.2
Individualist/achievement-oriented enthusiasts	238	2.5%	8.4%	16.8%	37.0%	35.3%	3.9
	χ^2=28.569*, Cramer's V=0.093						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.223**, η=0.142. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-16: Motivations for waterfowl hunting: Importance of… hunting with a dog.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	829	15.7%	7.0%	18.0%	23.7%	35.6%	3.6
Longtime participants	228	16.7%	5.3%	16.7%	25.9%	35.5%	3.6
Less-engaged participants	42	42.9%	14.3%	16.7%	19.0%	7.1%	2.3
Recreational-casual participants	213	8.9%	5.2%	18.3%	27.7%	39.9%	3.8
Social enthusiasts	110	1.8%	2.7%	14.5%	18.2%	62.7%	4.4
Individualist/achievement-oriented enthusiasts	240	25.0%	13.3%	21.7%	17.9%	22.1%	3.0
	χ^2=125.749***, Cramer's V=0.194						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=31.627***, η=0.364. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-17: Motivations for waterfowl hunting: Importance of… reducing tension and stress.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	832	3.7%	4.5%	19.3%	33.8%	38.6%	4.0
Longtime participants	229	3.1%	5.2%	15.7%	34.9%	41.0%	4.1
Less-engaged participants	42	9.5%	4.8%	26.2%	28.6%	31.0%	3.7
Recreational-casual participants	214	3.3%	6.1%	23.4%	33.2%	34.1%	3.9
Social enthusiasts	110	2.7%	4.5%	18.2%	30.9%	43.6%	4.1
Individualist/achievement-oriented enthusiasts	240	5.0%	1.3%	19.6%	35.0%	39.2%	4.0
	χ^2=20.548 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.996 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-18: Motivations for waterfowl hunting: Importance of… seeing a lot of ducks and geese.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	825	2.0%	2.6%	17.0%	49.1%	29.4%	4.0
Longtime participants	230	1.3%	3.0%	19.6%	48.7%	27.4%	4.0
Less-engaged participants	42	2.4%	9.5%	26.2%	47.6%	14.3%	3.6
Recreational-casual participants	209	2.4%	2.4%	14.4%	52.2%	28.7%	4.0
Social enthusiasts	110	0.9%	1.8%	10.0%	44.5%	42.7%	4.3
Individualist/achievement-oriented enthusiasts	237	3.0%	1.3%	17.7%	48.1%	30.0%	4.0
	χ^2=30.630*, Cramer's V=0.096						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.633**, η=0.148. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-19: Motivations for waterfowl hunting: Importance of… sharing my hunting skills and knowledge.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	809	4.1%	12.4%	35.8%	34.9%	12.8%	3.4
Longtime participants	224	3.6%	11.2%	33.5%	39.7%	12.1%	3.5
Less-engaged participants	42	21.4%	19.0%	28.6%	28.6%	2.4%	2.7
Recreational-casual participants	208	3.4%	15.9%	39.4%	28.8%	12.5%	3.3
Social enthusiasts	107	7.5%	8.4%	35.5%	32.7%	15.9%	3.4
Individualist/achievement-oriented enthusiasts	231	1.7%	10.8%	36.4%	36.4%	14.7%	3.5
	χ^2=51.242***, Cramer's V=0.126						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=6.361***, η=0.175. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-20: Motivations for waterfowl hunting: Importance of… thinking about personal values.

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	821	4.0%	5.7%	30.5%	39.8%	19.9%	3.7
Longtime participants	228	3.1%	4.4%	28.5%	39.5%	24.6%	3.8
Less-engaged participants	40	7.5%	10.0%	40.0%	32.5%	10.0%	3.3
Recreational-casual participants	211	5.2%	6.2%	34.1%	40.3%	14.2%	3.5
Social enthusiasts	109	6.4%	6.4%	23.9%	43.1%	20.2%	3.6
Individualist/achievement-oriented enthusiasts	235	2.6%	6.4%	31.1%	39.6%	20.4%	3.7
	χ^2=20.135 n.s., Cramer's V=0.078						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=3.429**, η=0.128. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-21: Motivations for waterfowl hunting: Importance of… using my hunting equipment (decoys, boats, etc.).

	N	Not at all	Slightly	Somewhat	Very	Extremely	Mean[2]
Overall[1]	829	4.3%	8.8%	33.6%	35.0%	18.5%	3.5
Longtime participants	230	4.8%	9.1%	34.3%	33.9%	17.8%	3.5
Less-engaged participants	42	11.9%	14.3%	33.3%	31.0%	9.5%	3.1
Recreational-casual participants	212	5.2%	9.0%	39.2%	31.1%	15.6%	3.4
Social enthusiasts	109	1.8%	7.3%	17.4%	47.7%	25.7%	3.9
Individualist/achievement-oriented enthusiasts	238	2.1%	7.6%	32.4%	36.6%	21.4%	3.7
	χ^2=36.628**, Cramer's V=0.105						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=6.596***, η=0.176. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-22: Importance of experiences…

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[1]
Enjoying nature and the outdoors	831	0.4%	0.3%	2.8%	27.8%	68.8%	4.6
Good behavior among other waterfowl hunters	824	0.9%	0.6%	6.4%	36.1%	56.0%	4.5
Getting away from crowds of people	822	1.9%	1.5%	9.4%	33.7%	53.5%	4.4
Hunting areas open to the public	825	5.1%	6.0%	15.7%	34.7%	38.5%	4.0
Reducing tension and stress	832	3.7%	4.5%	19.3%	33.8%	38.6%	4.0
Seeing a lot of ducks and geese	825	2.0%	2.6%	17.0%	49.1%	29.4%	4.0
Hunting with friends	825	2.5%	4.3%	22.9%	41.3%	28.9%	3.9
Hunting with family	825	7.5%	5.5%	16.6%	34.5%	35.9%	3.9
Thinking about personal values	821	4.0%	5.7%	30.5%	39.8%	19.9%	3.7
Access to a lot of different hunting areas	829	6.4%	8.0%	26.9%	36.7%	22.0%	3.6
Hunting with a dog	829	15.7%	7.0%	18.0%	23.7%	35.6%	3.6
Developing my skills and abilities	825	4.7%	7.5%	31.7%	42.7%	13.4%	3.5
Using my hunting equipment (decoys, boats, etc.)	829	4.3%	8.8%	33.6%	35.0%	18.5%	3.5
Having a long duck season	830	8.8%	11.3%	33.7%	27.3%	18.9%	3.4
Sharing my hunting skills and knowledge	809	4.1%	12.4%	35.8%	34.9%	12.8%	3.4
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	831	8.8%	11.4%	34.8%	31.6%	13.3%	3.3
Bagging ducks and geese	819	6.2%	16.7%	42.3%	28.2%	6.7%	3.1
Being on my own	825	17.2%	14.1%	30.4%	26.1%	12.2%	3.0
Getting food for my family	826	41.3%	22.9%	24.0%	7.5%	4.5%	2.1
Getting my limit	830	37.5%	25.5%	30.0%	5.7%	1.3%	2.1
A large daily duck bag limit	833	36.9%	29.2%	28.8%	4.1%	0.9%	2.0

[1] Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P ≤ 0.05, **P ≤ 0.01, ***P ≤ 0.001

Table 6-23: Did it happen: a large daily duck bag limit.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	803	58.1%	19.4%	17.8%	3.7%	1.1%	1.7
Longtime participants	225	59.6%	17.8%	16.9%	4.4%	1.3%	1.7
Less-engaged participants	39	61.5%	17.9%	20.5%			1.6
Recreational-casual participants	206	59.7%	20.4%	16.0%	3.4%	.5%	1.6
Social enthusiasts	105	54.3%	22.9%	17.1%	4.8%	1.0%	1.8
Individualist/achievement oriented enthusiasts	228	54.4%	19.7%	21.5%	2.6%	1.8%	1.8
	χ^2=9.414 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=0.716 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-24: Did it happen: access to a lot of different hunting areas.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	803	17.4%	27.0%	39.4%	12.9%	3.3%	2.6
Longtime participants	225	20.0%	25.8%	36.9%	13.3%	4.0%	2.6
Less-engaged participants	40	45.0%	20.0%	30.0%	2.5%	2.5%	2.0
Recreational-casual participants	203	14.3%	29.6%	42.9%	11.3%	2.0%	2.6
Social enthusiasts	106	17.9%	21.7%	44.3%	13.2%	2.8%	2.6
Individualist/achievement oriented enthusiasts	230	12.2%	29.6%	38.7%	15.7%	3.9%	2.7
	χ^2=35.815**, Cramer's V=0.106						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.380**, η=0.146. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-25: Did it happen: bagging ducks and geese.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	786	20.5%	32.5%	35.4%	9.7%	1.9%	2.4
Longtime participants	218	23.4%	33.0%	30.7%	10.1%	2.8%	2.4
Less-engaged participants	40	32.5%	25.0%	35.0%	5.0%	2.5%	2.2
Recreational-casual participants	201	18.4%	33.3%	39.8%	7.5%	1.0%	2.4
Social enthusiasts	105	19.0%	27.6%	38.1%	12.4%	2.9%	2.5
Individualist/achievement oriented enthusiasts	225	16.9%	33.8%	36.9%	11.6%	.9%	2.5
	χ^2=17.158 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.129 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-26: Did it happen: being on my own.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	800	17.4%	14.8%	35.0%	21.2%	11.5%	2.9
Longtime participants	224	15.6%	12.9%	35.7%	21.9%	13.8%	3.1
Less-engaged participants	40	27.5%	7.5%	32.5%	25.0%	7.5%	2.8
Recreational-casual participants	204	23.0%	14.7%	33.3%	22.5%	6.4%	2.7
Social enthusiasts	103	4.9%	19.4%	32.0%	21.4%	22.3%	3.4
Individualist/achievement oriented enthusiasts	230	17.4%	17.4%	37.8%	17.4%	10.0%	2.9
	χ^2=40.376**, Cramer's V=0.112						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=5.480***, η=0.164. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-27: Did it happen: hunting with friends.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	797	5.5%	7.3%	27.3%	35.7%	24.1%	3.7
Longtime participants	221	5.0%	5.9%	30.8%	32.1%	26.2%	3.7
Less-engaged participants	40	22.5%	5.0%	15.0%	32.5%	25.0%	3.3
Recreational-casual participants	204	5.4%	8.3%	24.0%	40.2%	22.1%	3.7
Social enthusiasts	105	7.6%	8.6%	30.5%	38.1%	15.2%	3.4
Individualist/achievement oriented enthusiasts	230	3.0%	8.3%	26.1%	35.7%	27.0%	3.8
	χ^2=36.725**, Cramer's V=0.107						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=2.353 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-28: Did it happen: developing my skills and abilities.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	801	6.9%	14.6%	46.8%	23.9%	7.8%	3.1
Longtime participants	222	9.5%	16.2%	44.6%	22.5%	7.2%	3.0
Less-engaged participants	39	15.4%	23.1%	38.5%	20.5%	2.6%	2.7
Recreational-casual participants	206	5.3%	14.1%	55.3%	19.4%	5.8%	3.1
Social enthusiasts	106	1.9%	14.2%	37.7%	32.1%	14.2%	3.4
Individualist/achievement oriented enthusiasts	230	5.7%	11.3%	45.2%	28.7%	9.1%	3.2
	χ^2=36.801**, Cramer's V=0.107						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=5.992***, η=0.171. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-29: Did it happen: hunting with family.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	798	16.1%	9.2%	21.2%	25.6%	28.0%	3.4
Longtime participants	222	10.8%	7.2%	19.8%	23.9%	38.3%	3.7
Less-engaged participants	38	39.5%	15.8%	26.3%	13.2%	5.3%	2.3
Recreational-casual participants	205	22.9%	9.3%	23.9%	24.9%	19.0%	3.1
Social enthusiasts	105	20.0%	17.1%	21.0%	21.9%	20.0%	3.0
Individualist/achievement oriented enthusiasts	229	10.9%	7.9%	19.2%	33.2%	28.8%	3.6
	χ^2=70.821***, Cramer's V=0.149						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=15.482***, η=0.269. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-30: Did it happen: enjoying nature and the outdoors.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	802	1.0%	1.1%	8.9%	33.3%	55.6%	4.4
Longtime participants	222	1.8%	1.8%	5.9%	34.2%	56.3%	4.4
Less-engaged participants	40	2.5%	0.0%	12.5%	30.0%	55.0%	4.4
Recreational-casual participants	206	1.0%	0.0%	12.6%	32.5%	53.9%	4.4
Social enthusiasts	106	0.0%	.9%	11.3%	34.9%	52.8%	4.4
Individualist/achievement oriented enthusiasts	230	0.0%	1.7%	7.8%	32.6%	57.8%	4.5
	χ^2=18.479 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=0.412 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-31: Did it happen: getting away from crowds of people.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	792	4.1%	8.5%	23.7%	32.5%	31.1%	3.8
Longtime participants	221	4.5%	9.0%	19.0%	33.9%	33.5%	3.8
Less-engaged participants	40	5.0%	10.0%	22.5%	30.0%	32.5%	3.7
Recreational-casual participants	200	5.0%	7.5%	29.5%	33.5%	24.5%	3.6
Social enthusiasts	106	1.9%	12.3%	24.5%	31.1%	30.2%	3.8
Individualist/achievement oriented enthusiasts	228	3.1%	7.0%	24.6%	29.8%	35.5%	3.9
	χ^2=15.545 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.278 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-32: Did it happen: getting food for my family.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	800	27.3%	29.3%	33.7%	6.8%	2.9%	2.3
Longtime participants	222	31.5%	32.9%	27.5%	5.4%	2.7%	2.1
Less-engaged participants	40	37.5%	15.0%	32.5%	10.0%	5.0%	2.3
Recreational-casual participants	205	33.2%	29.8%	29.8%	6.8%	0.5%	2.1
Social enthusiasts	106	14.2%	30.2%	39.6%	8.5%	7.5%	2.7
Individualist/achievement oriented enthusiasts	229	16.6%	24.5%	47.2%	7.9%	3.9%	2.6
	χ^2=56.994***, Cramer's V=0.133						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=10.188***, η=0.221. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-33: Did it happen: getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Services.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	798	12.3%	19.0%	39.6%	22.3%	6.9%	2.9
Longtime participants	220	10.5%	20.0%	37.7%	23.6%	8.2%	3.0
Less-engaged participants	40	15.0%	17.5%	42.5%	15.0%	10.0%	2.9
Recreational-casual participants	206	17.0%	19.9%	40.3%	18.9%	3.9%	2.7
Social enthusiasts	105	11.4%	19.0%	28.6%	30.5%	10.5%	3.1
Individualist/achievement oriented enthusiasts	230	9.1%	16.1%	46.5%	21.7%	6.5%	3.0
	χ^2=25.076 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=2.899*, η=0.120. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-34: Did it happen: getting my limit.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	801	47.5%	24.5%	23.4%	3.5%	1.1%	1.9
Longtime participants	222	50.5%	25.7%	19.8%	3.2%	0.9%	1.8
Less-engaged participants	39	46.2%	12.8%	33.3%	5.1%	2.6%	2.1
Recreational-casual participants	205	49.3%	21.5%	24.4%	4.4%	0.5%	1.9
Social enthusiasts	106	38.7%	28.3%	24.5%	5.7%	2.8%	2.1
Individualist/achievement oriented enthusiasts	231	44.2%	26.4%	26.4%	1.7%	1.3%	1.9
	χ^2=18.532 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.777 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-35: Did it happen: good behavior among other waterfowl hunters.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	792	4.2%	13.2%	31.5%	38.1%	13.1%	3.4
Longtime participants	218	4.1%	13.8%	26.1%	36.7%	19.3%	3.5
Less-engaged participants	40	7.5%	12.5%	22.5%	40.0%	17.5%	3.5
Recreational-casual participants	204	4.4%	12.7%	35.3%	39.2%	8.3%	3.3
Social enthusiasts	105	7.6%	17.1%	37.1%	29.5%	8.6%	3.1
Individualist/achievement oriented enthusiasts	228	1.8%	11.0%	34.6%	42.5%	10.1%	3.5
	χ^2=32.560**, Cramer's V=0.101						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=3.283*, η=0.128. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-36: Did it happen: having a long duck season.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	796	10.5%	18.3%	44.9%	20.2%	6.1%	2.9
Longtime participants	221	11.3%	15.4%	48.9%	20.8%	3.6%	2.9
Less-engaged participants	40	35.0%	15.0%	32.5%	10.0%	7.5%	2.4
Recreational-casual participants	203	8.9%	22.2%	44.8%	18.2%	5.9%	2.9
Social enthusiasts	105	8.6%	22.9%	41.0%	16.2%	11.4%	3.0
Individualist/achievement oriented enthusiasts	230	8.3%	17.0%	41.7%	25.2%	7.8%	3.1
	χ^2=45.370***, Cramer's V=0.119						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=3.936**, η=0.139. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-37: Did it happen: hunting areas open to the public.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	796	9.6%	16.4%	38.3%	25.5%	10.1%	3.1
Longtime participants	219	11.0%	15.1%	36.5%	27.4%	10.0%	3.1
Less-engaged participants	39	20.5%	5.1%	48.7%	17.9%	7.7%	2.9
Recreational-casual participants	206	9.7%	16.5%	41.7%	22.8%	9.2%	3.1
Social enthusiasts	106	6.6%	20.8%	31.1%	28.3%	13.2%	3.2
Individualist/achievement-oriented enthusiasts	229	7.0%	18.3%	38.4%	25.8%	10.5%	3.1
	χ^2=19.762 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=0.863 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-38: Did it happen: hunting with a dog.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	804	25.3%	8.2%	15.1%	19.7%	31.6%	3.2
Longtime participants	224	23.2%	6.3%	15.6%	21.4%	33.5%	3.4
Less-engaged participants	40	55.0%	15.0%	12.5%	7.5%	10.0%	2.0
Recreational-casual participants	205	18.5%	8.3%	15.1%	24.4%	33.7%	3.5
Social enthusiasts	106	13.2%	4.7%	12.3%	17.9%	51.9%	3.9
Individualist/achievement-oriented enthusiasts	231	38.5%	12.1%	16.0%	13.4%	19.9%	2.6
	χ^2=88.245***, Cramer's V=0.165						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=21.636***, η=0.312. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-39: Did it happen: reducing tension and stress.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	805	3.9%	4.9%	29.4%	34.7%	27.2%	3.8
Longtime participants	223	4.0%	5.8%	22.4%	38.1%	29.6%	3.8
Less-engaged participants	40	12.5%	12.5%	27.5%	30.0%	17.5%	3.3
Recreational-casual participants	207	2.9%	4.8%	35.3%	32.9%	24.2%	3.7
Social enthusiasts	106	1.9%	4.7%	33.0%	31.1%	29.2%	3.8
Individualist/achievement-oriented enthusiasts	231	4.3%	2.2%	32.5%	33.3%	27.7%	3.8
	χ^2=29.512*, Cramer's V=0.096						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=2.761*, η=0.117. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-40: Did it happen: seeing a lot of ducks and geese.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	791	26.0%	37.4%	26.3%	7.4%	2.9%	2.2
Longtime participants	219	33.3%	33.3%	23.7%	5.5%	4.1%	2.1
Less-engaged participants	41	17.1%	36.6%	31.7%	12.2%	2.4%	2.5
Recreational-casual participants	201	21.4%	41.8%	26.9%	8.5%	1.5%	2.3
Social enthusiasts	105	26.7%	33.3%	25.7%	11.4%	2.9%	2.3
Individualist/achievement-oriented enthusiasts	229	20.5%	41.0%	29.3%	6.6%	2.6%	2.3
	χ^2=22.625 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=1.373 n.s. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-41: Did it happen: sharing my hunting skills and knowledge.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	778	7.4%	19.3%	45.4%	21.2%	6.7%	3.0
Longtime participants	214	6.1%	21.0%	43.5%	22.4%	7.0%	3.0
Less-engaged participants	40	22.5%	22.5%	40.0%	15.0%		2.5
Recreational-casual participants	201	8.5%	21.4%	45.8%	17.9%	6.5%	2.9
Social enthusiasts	102	9.8%	19.6%	41.2%	22.5%	6.9%	3.0
Individualist/achievement-oriented enthusiasts	224	4.9%	12.9%	50.9%	23.7%	7.6%	3.2
	χ^2=28.801*, Cramer's V=0.096						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.767**, η=0.155. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-42: Did it happen: thinking about personal values.

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	788	3.9%	7.4%	40.0%	33.8%	14.9%	3.5
Longtime participants	218	2.8%	6.0%	38.1%	34.4%	18.8%	3.6
Less-engaged participants	39	10.3%	12.8%	43.6%	30.8%	2.6%	3.0
Recreational-casual participants	203	4.9%	7.4%	42.9%	34.0%	10.8%	3.4
Social enthusiasts	104	6.7%	10.6%	31.7%	37.5%	13.5%	3.4
Individualist/achievement-oriented enthusiasts	226	2.2%	7.5%	42.9%	31.4%	15.9%	3.5
	χ^2=24.911 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=3.810**, η=0.138. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-43: Did it happen: using my hunting equipment (decoys, boats, etc.).

	N	Not at all	Slightly	Somewhat	Largely	Very much	Mean[2]
Overall[1]	795	2.9%	12.4%	35.9%	32.0%	16.9%	3.5
Longtime participants	220	3.6%	12.3%	35.5%	30.5%	18.2%	3.5
Less-engaged participants	41	12.2%	19.5%	36.6%	22.0%	9.8%	3.0
Recreational-casual participants	203	1.5%	12.8%	41.4%	31.5%	12.8%	3.4
Social enthusiasts	104	1.0%	12.5%	23.1%	43.3%	20.2%	3.7
Individualist/achievement-oriented enthusiasts	230	2.6%	10.9%	35.2%	31.7%	19.6%	3.5
	χ^2=34.794**, Cramer's V=0.104						

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
[2] F=4.284**, η=0.145. Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-44: Achievement of experiences…

	n	Not at all	Slightly	Somewhat	Largely	Very much	Mean[1]
Enjoying nature and the outdoors	804	0.9%	1.1%	9.2%	33.2%	55.6%	4.4
Getting away from crowds of people	795	3.9%	8.6%	24.2%	32.1%	31.3%	3.8
Reducing tension and stress	807	4.0%	4.7%	30.2%	34.1%	27.0%	3.8
Hunting with friends	800	5.8%	7.5%	26.9%	36.0%	23.9%	3.6
Thinking about personal values	790	4.1%	7.7%	40.1%	33.7%	14.4%	3.5
Using my hunting equipment (decoys, boats, etc.)	798	2.9%	12.4%	35.3%	32.3%	17.0%	3.5
Hunting with family	799	16.5%	9.6%	21.2%	26.0%	26.7%	3.4
Good behavior among other waterfowl hunters	795	4.2%	13.1%	32.2%	38.2%	12.3%	3.4
Hunting with a dog	806	26.7%	8.7%	15.0%	18.7%	30.9%	3.2
Developing my skills and abilities	803	6.6%	14.3%	46.3%	24.7%	8.1%	3.1
Hunting areas open to the public	799	9.4%	16.6%	38.3%	25.4%	10.3%	3.1
Sharing my hunting skills and knowledge	781	7.7%	18.7%	45.7%	21.3%	6.7%	3.0
Being on my own	801	17.2%	15.2%	35.1%	20.8%	11.6%	2.9
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	801	12.1%	18.6%	40.0%	22.3%	7.0%	2.9
Having a long duck season	799	10.6%	18.5%	43.9%	20.3%	6.6%	2.9
Access to a lot of different hunting areas	804	17.3%	27.0%	39.6%	12.9%	3.2%	2.6
Bagging ducks and geese	789	20.2%	32.2%	36.0%	9.9%	1.8%	2.4
Getting food for my family	802	25.7%	28.4%	35.5%	7.1%	3.2%	2.3
Seeing a lot of ducks and geese	795	24.9%	37.9%	26.8%	7.7%	2.8%	2.3
Getting my limit	803	46.6%	24.5%	24.2%	3.5%	1.2%	1.9
A large daily duck bag limit	803	57.5%	19.7%	18.2%	3.5%	1.1%	1.7

[1] Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P ≤ 0.05, **P ≤ 0.01, ***P ≤ 0.001

Table 6-45: How important is waterfowl hunting to you?

	N	% of hunters indicating… …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.	Mean[1]
Overall[2]	839	8.2%	45.8%	27.9%	13.4%	4.7%	2.6
Longtime participants	235	8.5%	44.3%	29.4%	13.6%	4.3%	2.6
Less-engaged participants	43	0.0%	23.3%	39.5%	32.6%	4.7%	3.2
Recreational-casual participants	213	5.2%	44.1%	30.5%	12.7%	7.5%	2.7
Social enthusiasts	109	12.8%	53.2%	22.9%	6.4%	4.6%	2.4
Individualist/ achievement-oriented enthusiasts	240	10.8%	51.3%	22.1%	13.8%	2.1%	2.5
		χ^2=48.095***, Cramer's V=0.120					

[1] F=8.088***, η=0 .193.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Table 6-46: What type of waterfowl hunter do you consider yourself?

	N	% of hunters indicating… Casual	Active	Committed
Overall[1]	834	32.7%	44.3%	23.0%
Longtime participants	232	34.1%	45.3%	20.7%
Less-engaged participants	43	62.8%	30.2%	7.0%
Recreational-casual participants	212	35.4%	43.9%	20.8%
Social enthusiasts	110	20.9%	50.9%	28.2%
Individualist/achievement-oriented enthusiasts	240	27.5%	42.5%	30.0%
		χ^2=34.329***, Cramer's V=0.143		

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Table 6-47: How much do you spend on waterfowl hunting each year?

	N	% of hunters indicating…			
		$250 or less	$251-$1,000	$1,001-$5,000	Over $5,000
Overall[1]	835	47.5%	41.8%	10.4%	0.3%
Longtime participants	233	48.9%	41.2%	9.9%	0.0%
Less-engaged participants	42	66.7%	28.6%	4.8%	0.0%
Recreational-casual participants	213	45.5%	43.7%	9.9%	0.9%
Social enthusiasts	110	43.6%	42.7%	12.7%	0.9%
Individualist/achievement-oriented enthusiasts	239	46.0%	42.3%	11.7%	0.0%
		χ^2 =13.090 n.s.			

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Table 6-48: Involvement with and commitment to waterfowl hunting: Waterfowl hunting is one of the most enjoyable things I do.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	833	3.0%	6.7%	23.3%	39.8%	27.2%	3.8
Longtime participants	233	3.9%	5.6%	23.2%	39.5%	27.9%	3.8
Less-engaged participants	43	4.7%	14.0%	32.6%	37.2%	11.6%	3.4
Recreational-casual participants	210	3.8%	9.5%	23.3%	39.5%	23.8%	3.7
Social enthusiasts	110	.9%	6.4%	18.2%	40.9%	33.6%	4.0
Individualist/achievement-oriented enthusiasts	240	1.3%	4.2%	24.2%	40.4%	30.0%	3.9
	χ^2= 24.521 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F=4.745**, η=0.149. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-49: Involvement with and commitment to waterfowl hunting: I am knowledgeable about waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	832	0.8%	2.0%	13.2%	53.9%	30.2%	4.1
Longtime participants	233	0.9%	1.7%	12.0%	55.8%	29.6%	4.1
Less-engaged participants	43	2.3%	0.0%	32.6%	53.5%	11.6%	3.7
Recreational-casual participants	209	1.0%	2.9%	13.9%	53.6%	28.7%	4.1
Social enthusiasts	110	0.0%	0.9%	12.7%	50.9%	35.5%	4.2
Individualist/achievement-oriented enthusiasts	240	0.4%	2.1%	11.3%	52.5%	33.8%	4.2
	χ^2= 25.797 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 4.000**, η=0.138. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-50: Involvement with and commitment to waterfowl hunting: The decision to go waterfowl hunting is primarily my own.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	822	1.5%	3.7%	9.1%	45.3%	40.4%	4.2
Longtime participants	230	1.7%	3.5%	9.1%	45.7%	40.0%	4.2
Less-engaged participants	43	0.0%	11.6%	11.6%	48.8%	27.9%	3.9
Recreational-casual participants	205	2.0%	4.4%	9.3%	45.9%	38.5%	4.2
Social enthusiasts	110	0.0%	1.8%	9.1%	40.0%	49.1%	4.4
Individualist/achievement-oriented enthusiasts	238	1.3%	2.9%	8.4%	45.8%	41.6%	4.2
	χ^2=17.026 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 2.420*, η=0.108. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-51: Involvement with and commitment to waterfowl hunting: I find that a lot of my life is organized around waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	830	12.8%	30.4%	34.2%	15.5%	7.2%	2.7
Longtime participants	234	14.5%	30.8%	33.8%	14.1%	6.8%	2.7
Less-engaged participants	42	16.7%	47.6%	26.2%	9.5%	0.0%	2.3
Recreational-casual participants	208	14.9%	30.8%	36.1%	13.0%	5.3%	2.6
Social enthusiasts	109	4.6%	26.6%	38.5%	20.2%	10.1%	3.1
Individualist/achievement-oriented enthusiasts	239	10.0%	28.0%	31.8%	20.1%	10.0%	2.9
	χ^2= 30.383*, Cramer's V=0.096						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 6.346***, η=0.173. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-52: Involvement with and commitment to waterfowl hunting: Waterfowl hunting has a central role in my life.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	820	14.4%	27.3%	30.3%	21.0%	7.0%	2.8
Longtime participants	228	15.8%	27.2%	32.0%	17.5%	7.5%	2.7
Less-engaged participants	43	18.6%	44.2%	25.6%	11.6%	0.0%	2.3
Recreational-casual participants	208	17.3%	27.9%	27.4%	22.1%	5.3%	2.7
Social enthusiasts	110	8.2%	21.8%	38.2%	22.7%	9.1%	3.0
Individualist/achievement-oriented enthusiasts	234	10.3%	26.5%	28.2%	26.5%	8.5%	3.0
	χ^2= 29.189*, Cramer's V=0.094						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.077***, η=0.156. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-53: Involvement with and commitment to waterfowl hunting: Most of my friends are in some way connected with waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	828	6.2%	20.4%	24.4%	38.6%	10.4%	3.3
Longtime participants	233	6.4%	23.2%	22.3%	38.2%	9.9%	3.2
Less-engaged participants	43	9.3%	23.3%	30.2%	34.9%	2.3%	3.0
Recreational-casual participants	206	5.8%	19.4%	28.6%	35.4%	10.7%	3.3
Social enthusiasts	110	3.6%	18.2%	24.5%	39.1%	14.5%	3.4
Individualist/achievement-oriented enthusiasts	238	6.7%	17.2%	21.8%	43.7%	10.5%	3.3
	χ^2= 14.517 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 1.742 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-54: Involvement with and commitment to waterfowl hunting: When I am waterfowl hunting, others see me the way I want them to see me.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	826	3.7%	3.3%	30.2%	46.4%	16.3%	3.7
Longtime participants	232	5.6%	1.7%	29.7%	46.1%	16.8%	3.7
Less-engaged participants	43		11.6%	30.2%	53.5%	4.7%	3.5
Recreational-casual participants	208	2.9%	3.4%	36.5%	44.7%	12.5%	3.6
Social enthusiasts	107	.9%	1.9%	31.8%	44.9%	20.6%	3.8
Individualist/achievement-oriented enthusiasts	238	3.4%	5.5%	22.3%	48.7%	20.2%	3.8
	χ^2= 36.981**, Cramer's V=0.106						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 1.925 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-55: Involvement with and commitment to waterfowl hunting: I don't really know much about waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	831	48.0%	39.1%	9.0%	3.1%	0.7%	1.7
Longtime participants	234	50.0%	37.6%	9.4%	2.1%	0.9%	1.7
Less-engaged participants	43	16.3%	53.5%	20.9%	7.0%	2.3%	2.3
Recreational-casual participants	207	47.3%	39.1%	8.7%	4.3%	0.5%	1.7
Social enthusiasts	109	53.2%	36.7%	6.4%	3.7%	0.0%	1.6
Individualist/achievement-oriented enthusiasts	240	48.3%	40.4%	7.9%	2.5%	0.8%	1.7
	χ^2=27.073*, Cramer's V=0.090						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.649***, η=0.163. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-56: Involvement with and commitment to waterfowl hunting: I consider myself an educated consumer regarding waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	826	1.2%	3.9%	13.8%	59.8%	21.2%	4.0
Longtime participants	231	2.6%	4.3%	12.1%	58.9%	22.1%	3.9
Less-engaged participants	42	0.0%	14.3%	21.4%	54.8%	9.5%	3.6
Recreational-casual participants	210	1.0%	3.8%	17.1%	60.0%	18.1%	3.9
Social enthusiasts	109	0.0%	.9%	10.1%	62.4%	26.6%	4.2
Individualist/achievement-oriented enthusiasts	236	0.0%	3.0%	13.1%	60.6%	23.3%	4.0
	χ^2= 36.077**, Cramer's V=0.104						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.027**, η=0.154. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-57: Involvement with and commitment to waterfowl hunting: Waterfowl hunting interests me.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	829	0.3%	1.4%	7.5%	51.3%	39.6%	4.3
Longtime participants	233	0.0%	1.7%	8.6%	50.6%	39.1%	4.3
Less-engaged participants	42	0.0%	2.4%	21.4%	52.4%	23.8%	4.0
Recreational-casual participants	208	1.0%	0.0%	8.2%	54.8%	36.1%	4.3
Social enthusiasts	110	0.0%	1.8%	2.7%	52.7%	42.7%	4.4
Individualist/achievement-oriented enthusiasts	238	0.0%	2.1%	4.6%	47.1%	46.2%	4.4
	χ^2=35.600**, Cramer's V=0.103						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 3.699**, η=0.133. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-58: Involvement with and commitment to waterfowl hunting: Waterfowl hunting is important to me.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	823	1.4%	4.0%	16.4%	46.5%	31.7%	4.0
Longtime participants	228	1.8%	3.9%	15.4%	49.6%	29.4%	4.0
Less-engaged participants	42	4.8%	7.1%	31.0%	35.7%	21.4%	3.6
Recreational-casual participants	209	1.4%	4.3%	17.7%	50.2%	26.3%	4.0
Social enthusiasts	109	0.0%	4.6%	16.5%	43.1%	35.8%	4.1
Individualist/achievement-oriented enthusiasts	239	0.8%	2.9%	14.2%	39.7%	42.3%	4.2
	χ^2= 30.805*, Cramer's V=0.097						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.077***, η=0.155. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-59: Involvement with and commitment to waterfowl hunting: You can tell a lot about a person when you see them waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	830	3.4%	7.8%	36.0%	41.7%	11.0%	3.5
Longtime participants	232	4.3%	4.3%	35.8%	44.8%	10.8%	3.5
Less-engaged participants	43	2.3%	18.6%	39.5%	34.9%	4.7%	3.2
Recreational-casual participants	209	2.9%	9.1%	43.5%	34.4%	10.0%	3.4
Social enthusiasts	109	2.8%	15.6%	22.9%	41.3%	17.4%	3.6
Individualist/achievement-oriented enthusiasts	239	2.9%	7.1%	32.2%	46.9%	10.9%	3.6
	χ^2= 38.694**, Cramer's V=0.108						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 2.126 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-60: Involvement with and commitment to waterfowl hunting: When I am waterfowl hunting I can really be myself.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	830	0.8%	2.9%	32.0%	48.5%	15.8%	3.8
Longtime participants	233	0.9%	3.4%	31.3%	48.1%	16.3%	3.8
Less-engaged participants	43	2.3%	4.7%	48.8%	39.5%	4.7%	3.4
Recreational-casual participants	209	1.0%	2.9%	40.2%	44.5%	11.5%	3.6
Social enthusiasts	109	0.0%	3.7%	18.3%	58.7%	19.3%	3.9
Individualist/achievement-oriented enthusiasts	238	0.8%	1.3%	26.1%	51.3%	20.6%	3.9
	χ^2= 36.719**, Cramer's V=0.105						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 7.249***, η=0.184. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-61: Involvement with and commitment to waterfowl hunting: I enjoy discussing waterfowl hunting with my friends.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	828	0.7%	3.7%	14.6%	57.4%	23.6%	4.0
Longtime participants	233	0.4%	2.6%	15.9%	56.7%	24.5%	4.0
Less-engaged participants	43	4.7%	7.0%	25.6%	55.8%	7.0%	3.5
Recreational-casual participants	208	0.0%	6.7%	15.4%	58.2%	19.7%	3.9
Social enthusiasts	108	0.0%	.9%	13.0%	56.5%	29.6%	4.2
Individualist/achievement-oriented enthusiasts	237	1.7%	2.5%	10.1%	58.6%	27.0%	4.1
	χ^2= 39.860**, Cramer's V=0.110						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 6.218***, η=0.171. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-62: Involvement with and commitment to waterfowl hunting: The decision to go waterfowl hunting is not entirely my own.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	828	26.1%	34.4%	19.6%	16.5%	3.5%	2.4
Longtime participants	230	24.3%	36.1%	18.3%	17.4%	3.9%	2.4
Less-engaged participants	43	27.9%	27.9%	14.0%	30.2%		2.5
Recreational-casual participants	209	23.9%	34.4%	24.4%	14.8%	2.4%	2.4
Social enthusiasts	110	31.8%	33.6%	16.4%	13.6%	4.5%	2.3
Individualist/achievement-oriented enthusiasts	239	28.9%	32.6%	18.4%	15.9%	4.2%	2.3
	χ^2=16.673 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F=0.438 n.s. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-63: Involvement with and commitment to waterfowl hunting: For me to change my preference from waterfowl hunting to another leisure activity would require major rethinking.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	830	6.4%	22.8%	25.0%	27.3%	18.5%	3.3
Longtime participants	231	6.9%	24.2%	23.4%	25.5%	19.9%	3.3
Less-engaged participants	43	9.3%	25.6%	34.9%	20.9%	9.3%	3.0
Recreational-casual participants	209	5.7%	27.8%	28.7%	25.4%	12.4%	3.1
Social enthusiasts	110	9.1%	12.7%	28.2%	28.2%	21.8%	3.4
Individualist/achievement-oriented enthusiasts	240	4.6%	18.3%	20.0%	33.3%	23.8%	3.5
	χ^2= 33.521**, Cramer's V=0.100						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 4.901**, η=0.152. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-64: Involvement with and commitment to waterfowl hunting: I find a lot of my life organized around waterfowl-hunting activities.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	827	11.1%	33.4%	31.3%	17.2%	7.0%	2.8
Longtime participants	230	13.9%	31.7%	31.3%	12.6%	10.4%	2.7
Less-engaged participants	42	19.0%	38.1%	38.1%	4.8%	0.0%	2.3
Recreational-casual participants	209	11.0%	38.3%	28.7%	19.6%	2.4%	2.6
Social enthusiasts	109	8.3%	25.7%	35.8%	21.1%	9.2%	3.0
Individualist/achievement-oriented enthusiasts	240	6.3%	32.9%	31.3%	22.5%	7.1%	2.9
	χ^2= 41.607***, Cramer's V=0.112						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.068***, η=0.155. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-65: Involvement with and commitment to waterfowl hunting: Even if close friends recommended another recreational activity, I would not change my preference from waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	829	5.6%	16.7%	31.2%	32.7%	13.7%	3.3
Longtime participants	231	6.1%	17.3%	31.6%	32.5%	12.6%	3.3
Less-engaged participants	43	11.6%	18.6%	37.2%	30.2%	2.3%	2.9
Recreational-casual participants	209	5.7%	19.1%	35.9%	29.2%	10.0%	3.2
Social enthusiasts	109	5.5%	14.7%	27.5%	29.4%	22.9%	3.5
Individualist/achievement-oriented enthusiasts	240	3.8%	13.3%	25.4%	39.6%	17.9%	3.6
	χ^2= 32.140*, Cramer's V=0.098						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.610***, η=0.163. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-66: Involvement with and commitment to waterfowl hunting: I have acquired equipment that I would not use if I quit waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	831	2.6%	5.8%	7.0%	47.5%	37.2%	4.1
Longtime participants	232	3.4%	3.9%	6.5%	47.8%	38.4%	4.1
Less-engaged participants	43	4.7%	7.0%	16.3%	51.2%	20.9%	3.8
Recreational-casual participants	210	2.4%	7.6%	7.6%	49.0%	33.3%	4.0
Social enthusiasts	109	0.9%	4.6%	6.4%	45.9%	42.2%	4.2
Individualist/achievement-oriented enthusiasts	240	1.7%	7.1%	5.8%	45.0%	40.4%	4.2
	χ^2= 18.992 n.s., Cramer's V=0.075						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 2.475*, η=0.109. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-67: Involvement with and commitment to waterfowl hunting: I have close friendships that are based on a common interest in waterfowl hunting.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	826	3.2%	12.1%	19.8%	45.5%	19.3%	3.7
Longtime participants	230	4.3%	11.7%	18.7%	43.5%	21.7%	3.7
Less-engaged participants	43	9.3%	20.9%	20.9%	41.9%	7.0%	3.2
Recreational-casual participants	208	1.9%	13.0%	21.6%	46.2%	17.3%	3.6
Social enthusiasts	109	0.9%	10.1%	20.2%	46.8%	22.0%	3.8
Individualist/achievement-oriented enthusiasts	240	2.9%	11.3%	19.2%	48.3%	18.3%	3.7
	χ^2= 18.881 n.s.						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 3.063*, η=0.121. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-68: Involvement with and commitment to waterfowl hunting: Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.

	N	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean[2]
Overall[1]	827	6.5%	24.6%	31.0%	26.3%	11.6%	3.1
Longtime participants	229	7.0%	24.5%	27.1%	29.7%	11.8%	3.2
Less-engaged participants	43	18.6%	34.9%	30.2%	11.6%	4.7%	2.5
Recreational-casual participants	210	6.2%	26.2%	35.7%	22.4%	9.5%	3.0
Social enthusiasts	109	6.4%	13.8%	38.5%	23.9%	17.4%	3.3
Individualist/achievement-oriented enthusiasts	240	4.2%	26.3%	28.3%	28.8%	12.5%	3.2
	χ^2= 36.913**, Cramer's V=0.105						

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] F= 5.157***, η=0.156. Mean is based on the scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4= agree, 5 = strongly agree.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 6-69: Involvement With and Commitment to Waterfowl Hunting

	n	Not at all	Slightly	Somewhat	Very	Extremely	Mean[1]
Waterfowl hunting interests me.	829	0.3%	1.4%	7.5%	51.3%	39.6%	4.3
The decision to go waterfowl hunting is primarily my own.	822	1.5%	3.7%	9.1%	45.3%	40.4%	4.2
I am knowledgeable about waterfowl hunting.	832	0.8%	2.0%	13.2%	53.9%	30.2%	4.1
I have acquired equipment that I would not use if I quit waterfowl hunting.	831	2.6%	5.8%	7.0%	47.5%	37.2%	4.1
I consider myself an educated consumer regarding waterfowl hunting.	826	1.2%	3.9%	13.8%	59.8%	21.2%	4.0
Waterfowl hunting is important to me.	823	1.4%	4.0%	16.4%	46.5%	31.7%	4.0
I enjoy discussing waterfowl hunting with my friends.	828	0.7%	3.7%	14.6%	57.4%	23.6%	4.0
Waterfowl hunting is one of the most enjoyable things I do.	833	3.0%	6.7%	23.3%	39.8%	27.2%	3.8
When I am waterfowl hunting I can really be myself.	830	0.8%	2.9%	32.0%	48.5%	15.8%	3.8
When I am waterfowl hunting, others see me the way I want them to see me.	826	3.7%	3.3%	30.2%	46.4%	16.3%	3.7
I have close friendships that are based on a common interest in waterfowl hunting.	826	3.2%	12.1%	19.8%	45.5%	19.3%	3.7
You can tell a lot about a person when you see them waterfowl hunting.	830	3.4%	7.8%	36.0%	41.7%	11.0%	3.5
Most of my friends are in some way connected with waterfowl hunting.	828	6.2%	20.4%	24.4%	38.6%	10.4%	3.3
For me to change my preference from waterfowl hunting to another leisure activity would require major rethinking.	830	6.4%	22.8%	25.0%	27.3%	18.5%	3.3
Even if close friends recommended another recreational activity, I would not change my preference from waterfowl hunting.	829	5.6%	16.7%	31.2%	32.7%	13.7%	3.3
Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.	827	6.5%	24.6%	31.0%	26.3%	11.6%	3.1
Waterfowl hunting has a central role in my life.	820	14.4%	27.3%	30.3%	21.0%	7.0%	2.8
I find a lot of my life organized around waterfowl-hunting activities.	827	11.1%	33.4%	31.3%	17.2%	7.0%	2.8
I find that a lot of my life is organized around waterfowl hunting.	830	12.8%	30.4%	34.2%	15.5%	7.2%	2.7
The decision to go waterfowl hunting is not entirely my own.	828	26.1%	34.4%	19.6%	16.5%	3.5%	2.4
I don't really know much about waterfowl hunting.	831	48.0%	39.1%	9.0%	3.1%	0.7%	1.7

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

n.s.=not significant, *P ≤ 0.05, **P ≤ 0.01, ***P ≤ 0.001

Figure 6-1: Means: Experience factors reflecting underlying motivations for waterfowl hunting.

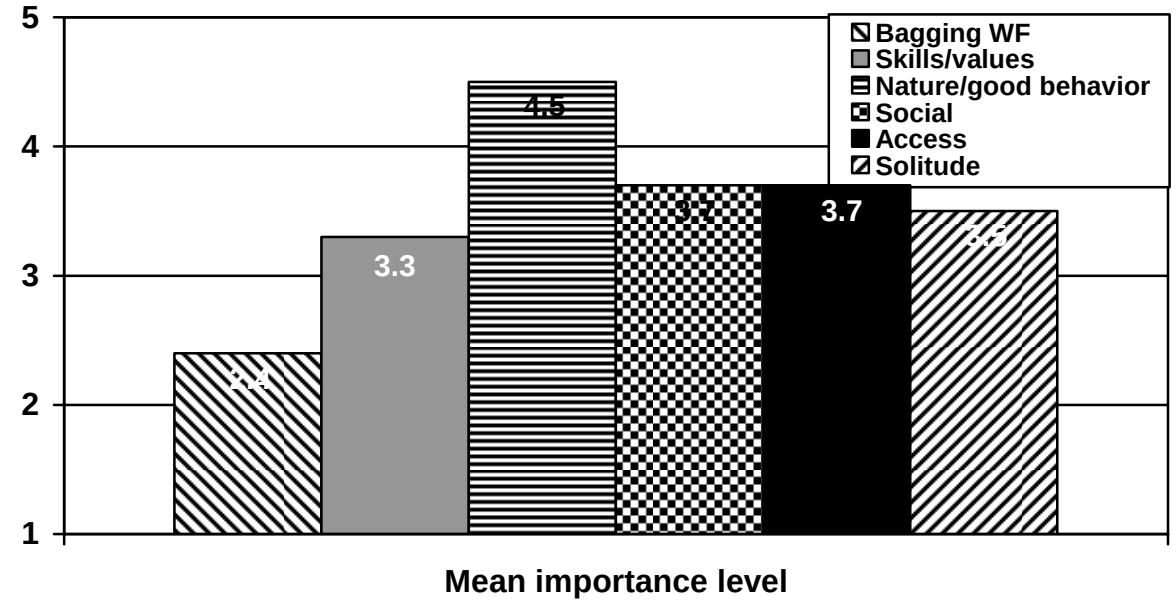
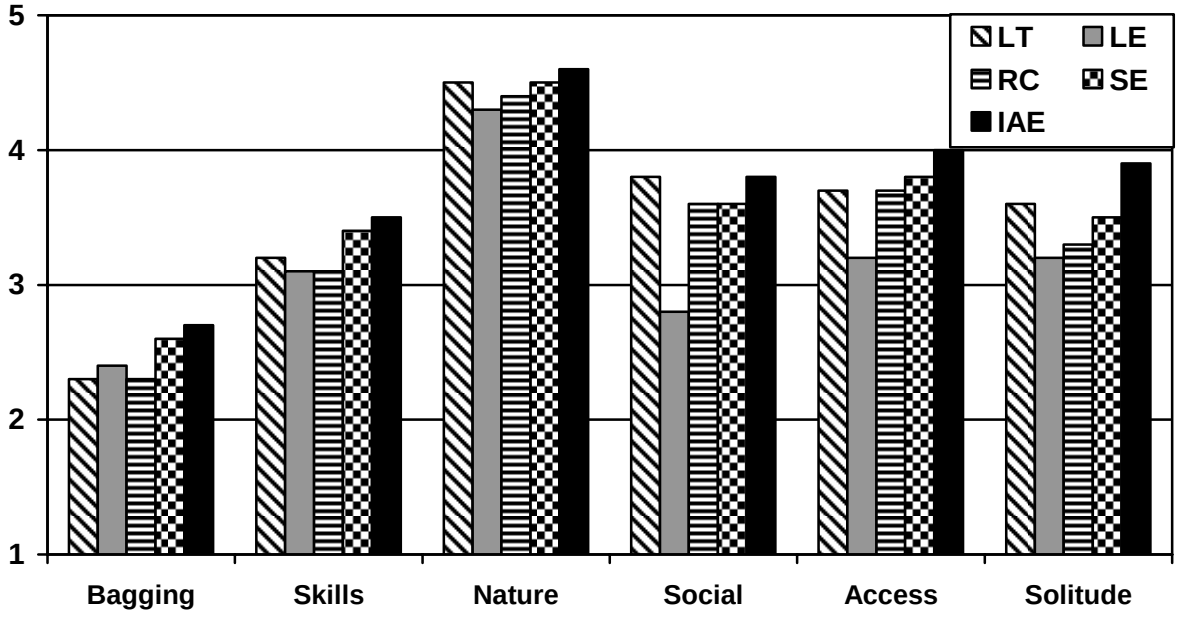


Figure 6-2: Means: Experience factors reflecting underlying motivations by hunter strata.



Differences based on analysis of variance and Student-Newman-Keuls test (different superscripts mean the group is significantly different at the 0.05 level).

Bagging: LT—2.3^{c}, RC—2.3^{c}, LE—2.4^{bc}, SE—2.6^{ab}, IAE—2.7^{a}
Skills: RC—3.1^{b}, LE—3.1^{b},LT—3.2^{b}, SE—3.4^{a}, IAE—3.5^{a}
Nature: LE—4.3^{b}, RC—4.4^{ab}, SE—4.5^{ab}, LT—4.5^{a}, IAE—4.6^{a}
Social: LE—2.8^{b}, RC—3.6^{a}, SE—3.6^{a}, LT—3.8^{a}, IAE—3.8^{a}
Access: LE—3.2^{c}, LT—3.7^{b}, RC—3.7^{b}, SE—3.8^{ab}, IAE—4.0^{a}
Solitude: LE—3.2^{c}, RC—3.3^{c}, SE—3.5^{bc}, LT—3.6^{b}, IAE—3.9^{a}

Figure 6-3: Importance-performance for waterfowl-hunting motivations

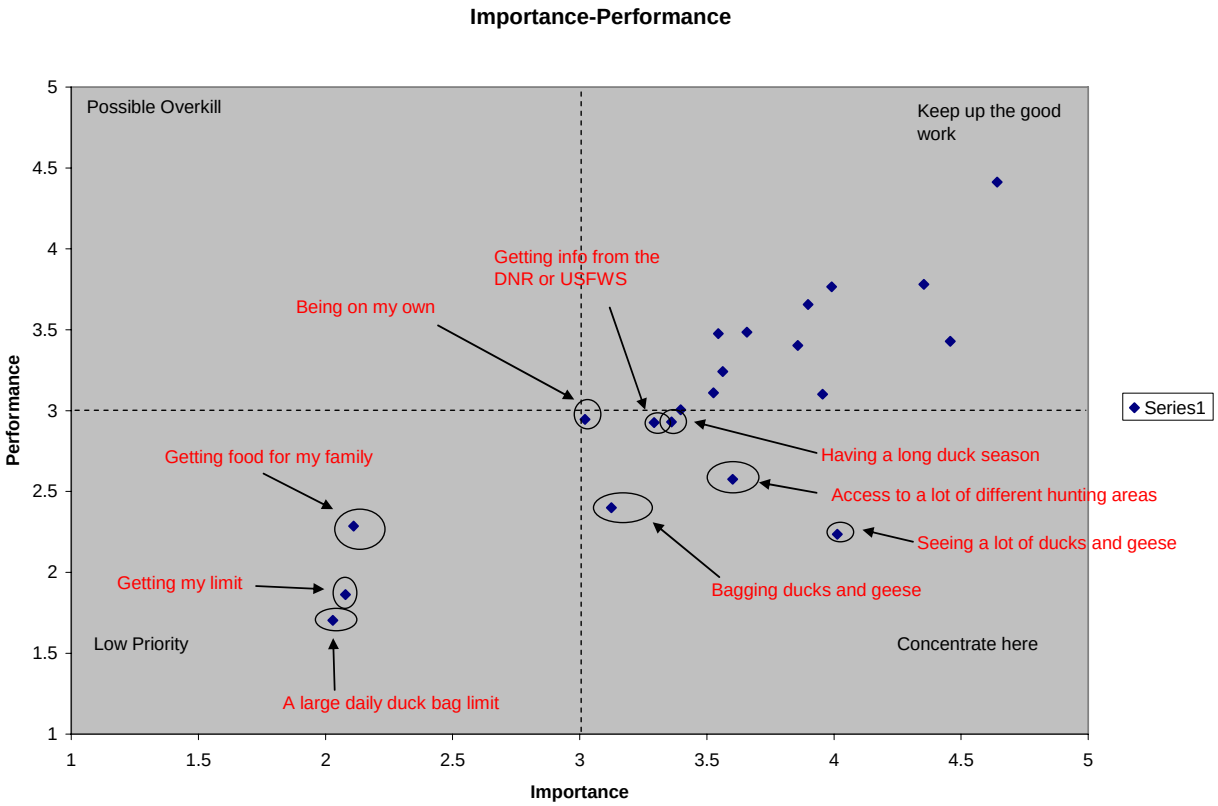


Figure 6-4: Means on involvement/commitment factors to waterfowl hunting.

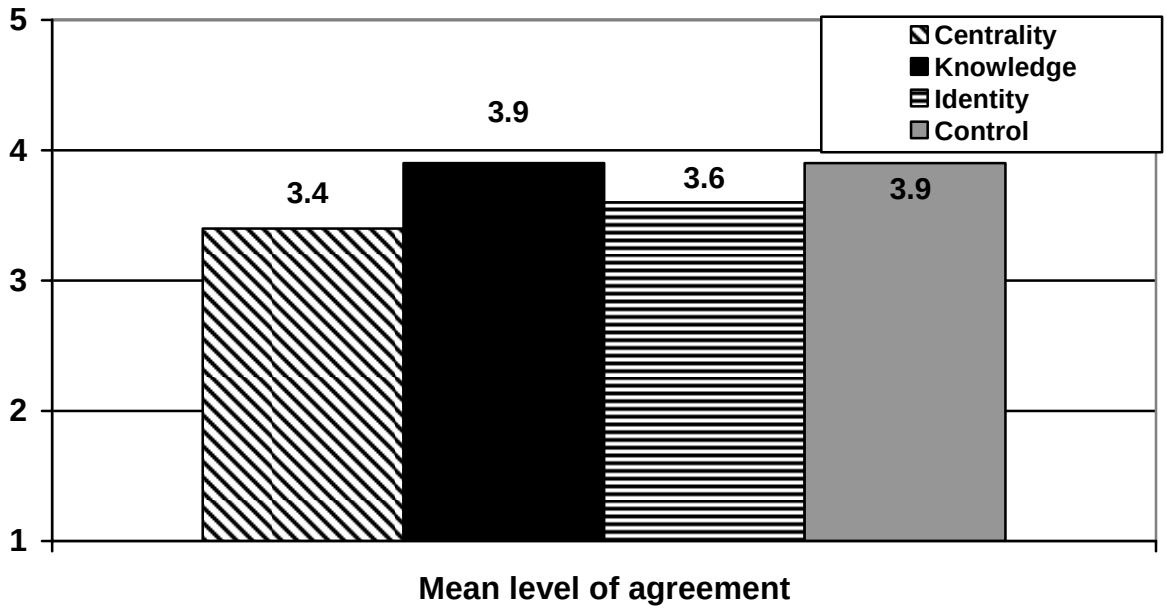
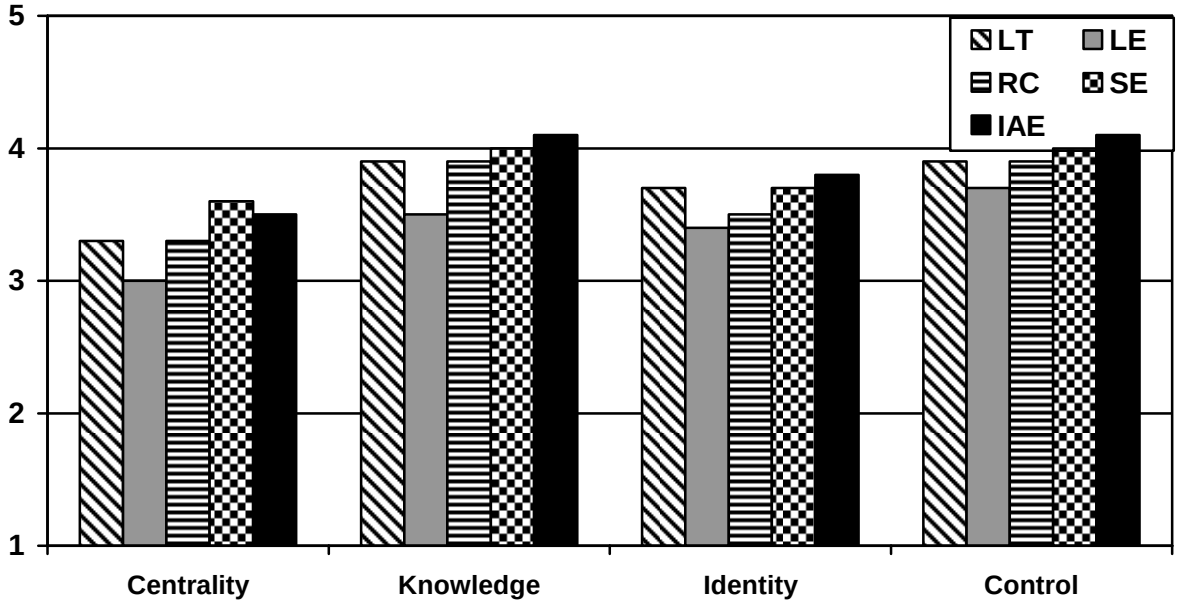


Figure 6-5: Involvement/commitment factors to waterfowl hunting by hunter strata



Differences based on analysis of variance and Student-Newman-Keuls test (different superscripts mean the group is significantly different at the 0.05 level).

Centrality: LE—3.0[b], RC—3.3[a], LT—3.3[a], IAE—3.5[a], SE—3.6[a],
Knowledge: LE—3.5[b], RC—3.9[a], LT—3.9[a], SE—4.0[a], IAE—4.1[a]
Identity: LE—3.4[b], RC—3.5[ab], LT—3.7[a], SE—3.7[a], IAE—3.8[a]
Control: LE—3.7[b], RC—3.9[ab], LT—3.9[ab],SE—4.0[ab], IAE—4.1[a]

Section 7: Use of and Opinions on Battery-Operated, Spinning-Wing Decoys

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

Overall, 28.2% of respondents reported that they owned a battery-operated, spinning-wing decoy, and 26.4% reported using these decoys during their most-recent Minnesota waterfowl season. Ownership ranged from a low of 7.0% among less-engaged waterfowl hunters to a high of 31.8% for social waterfowl-hunting enthusiasts (Table 7-1). Use of spinning-wing decoys ranged from 7.0% among less-engaged hunters to 31.3% among individualist/achievement-oriented enthusiasts (Table 7-2).

Table 7-1: Do you own a battery-operated, spinning-wing decoy?

Hunter type	n	Yes (%)
Overall[1]	841	28.2%
Longtime participants	236	26.7%
Less-engaged participants	43	7.0%
Recreational-casual participants	213	30.5%
Social enthusiasts	110	31.8%
Individualist/achievement-oriented enthusiasts	240	29.6%
		χ^2 = 11.344*, CV =0.116

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Table 7-2: Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during your most recent waterfowl season?

Hunter type	N	Yes (%)
Overall[1]	840	26.4%
Longtime participants	235	25.1%
Less-engaged participants	43	7.0%
Recreational-casual participants	213	27.7%
Social enthusiasts	111	24.3%
Individualist/achievement-oriented enthusiasts	240	31.3%
		χ^2 = 11.861*, CV =0.119

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Section 8: Quality of Minnesota Waterfowl Hunting

Changes in Hunting Quality

Overall Results

Respondents were asked to respond to nine statements about changes in hunting quality over the last 5 years in Minnesota using the scale 1 (much worse), 3 (neither better nor worse), to 5 (much better) (Tables 8-1 to 8-9, Figure 8-1). None of the items was rated greater than 3.0. Overall waterfowl numbers ($\bar{x} = 1.9$) (Table 8-5), the length of time waterfowl are staying in my area ($\bar{x} = 2.0$) (Table 8-3), and when waterfowl are arriving in my area ($\bar{x} = 2.1$) (Table 8-2) were the items that were rated lowest. Ease of understanding regulations was rated as neither better nor worse ($\bar{x} = 3.0$) (Table 8-6).

Results by Hunter Segment

There were significant differences in mean perceived changes in hunting quality by hunter segment for three of the nine items. In each case, the less-engaged waterfowl hunters rated the item higher (i.e. they felt that the quality had not declined as much as other groups thought it had). The three changes with significant differences were: (a) the length of time waterfowl are staying in my area (Table 8-3), (b) timing of waterfowl seasons (Table 8-4), and (c) overall waterfowl numbers (Table 8-5).

Hunting Problems

Overall Results

Respondents were asked to respond to eight statements about changes in problems associated with waterfowl hunting over the last 5 years in Minnesota using the scale 1 (much worse), 3 (neither better nor worse), to 5 (much better) (Tables 8-10 to 8-17, Figure 8-2). None of the items was rated 3.0 or greater. Shifting waterfowl migration routes ($\bar{x} = 1.8$) (Table 8-13), waterfowl numbers on opening weekend ($\bar{x} = 2.1$) (Table 8-17), and waterfowl concentrating on fewer areas ($\bar{x} = 2.3$) (Table 8-16) were the items that were rated lowest.

Results by Hunter Segment

There were significant differences in mean perceived changes in hunting problems by hunter segment for four of the eight items. Again, the less-engaged waterfowl hunters tended to rate the item higher (i.e. they felt that the problem had not gotten as much worse as other groups thought it had). The four changes with significant differences were: (a) crowding at hunting areas (Table 8-10), (b) hunting pressure (Table 8-11), (c) interference from other hunters (Table 8-14), and (d) waterfowl arriving after the season is closed (Table 8-15).

Section 8: Quality of Minnesota Waterfowl Hunting

Table 8-1: Changes in hunting quality: waterfowl habitat where I hunt.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	814	15.5%	35.1%	36.0%	11.6%	1.8%	2.5
Longtime participants	225	16.4%	32.0%	35.6%	14.7%	1.3%	2.5
Less-engaged participants	41	12.2%	36.6%	31.7%	19.5%	0.0%	2.6
Recreational-casual participants	206	16.5%	36.4%	36.4%	8.7%	1.9%	2.4
Social enthusiasts	110	20.0%	30.0%	36.4%	10.0%	3.6%	2.5
Individualist/achievement-oriented enthusiasts	236	11.0%	41.1%	36.9%	9.3%	1.7%	2.5
		χ^2 =19.174 n.s.					

[1]F=0.385 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-2: Changes in hunting quality: when waterfowl are arriving in my area.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	798	25.4%	45.8%	22.7%	5.3%	0.8%	2.1
Longtime participants	220	25.5%	47.3%	20.9%	5.5%	0.9%	2.1
Less-engaged participants	41	14.6%	41.5%	31.7%	12.2%	0.0%	2.4
Recreational-casual participants	203	26.1%	45.8%	23.2%	4.4%	0.5%	2.1
Social enthusiasts	106	33.0%	40.6%	19.8%	5.7%	0.9%	2.0
Individualist/achievement-oriented enthusiasts	232	22.8%	46.6%	25.0%	4.7%	0.9%	2.1
		χ^2 =13.245 n.s.					

[1]F=1.814 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-3: Changes in hunting quality: the length of time waterfowl are staying in my area.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	805	30.6%	41.5%	23.2%	4.5%	0.3%	2.0
Longtime participants	224	31.3%	40.6%	23.7%	4.0%	0.4%	2.0
Less-engaged participants	41	19.5%	36.6%	31.7%	12.2%	0.0%	2.4
Recreational-casual participants	202	32.7%	41.1%	21.8%	4.0%	0.5%	2.0
Social enthusiasts	109	38.5%	39.4%	18.3%	3.7%	0.0%	1.9
Individualist/achievement-oriented enthusiasts	233	24.9%	45.1%	24.9%	5.2%	0.0%	2.1
		χ^2=18.211 n.s.					

[1]F=3.068*, η=0.123. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-4: Changes in hunting quality: timing of waterfowl seasons.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	800	8.4%	20.2%	62.4%	8.3%	0.6%	2.7
Longtime participants	223	8.1%	19.7%	65.5%	5.8%	0.9%	2.7
Less-engaged participants	40	5.0%	22.5%	52.5%	17.5%	2.5%	2.9
Recreational-casual participants	200	8.5%	18.5%	64.0%	9.0%	0.0%	2.7
Social enthusiasts	107	15.0%	27.1%	51.4%	6.5%	0.0%	2.5
Individualist/achievement-oriented enthusiasts	233	6.4%	19.7%	61.8%	11.2%	0.9%	2.8
		χ^2=25.395 n.s.					

[1]F=3.606**, η=0.133. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-5: Changes in hunting quality: overall waterfowl numbers.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	808	42.6%	36.2%	13.5%	7.1%	0.6%	1.9
Longtime participants	225	46.2%	32.4%	13.8%	6.7%	0.9%	1.8
Less-engaged participants	41	24.4%	34.1%	19.5%	22.0%	0.0%	2.4
Recreational-casual participants	205	40.5%	42.9%	10.7%	5.4%	0.5%	1.8
Social enthusiasts	108	45.4%	30.6%	15.7%	7.4%	0.9%	1.9
Individualist/achievement-oriented enthusiasts	232	40.5%	37.1%	14.7%	7.8%	0.0%	1.9
		χ^2 =27.102*, Cramer's V=0.091					

[1]F=3.353*, η=0.128. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-6: Changes in hunting quality: ease of understanding regulations.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	815	3.8%	13.4%	66.8%	13.0%	3.0%	3.0
Longtime participants	229	4.4%	14.8%	67.2%	11.8%	1.7%	2.9
Less-engaged participants	40	2.5%	17.5%	65.0%	10.0%	5.0%	3.0
Recreational-casual participants	205	2.9%	9.3%	69.8%	14.1%	3.9%	3.1
Social enthusiasts	109	4.6%	18.3%	60.6%	12.8%	3.7%	2.9
Individualist/achievement-oriented enthusiasts	234	3.8%	13.2%	65.4%	14.1%	3.4%	3.0
		χ^2 =10.622 n.s.					

[1]F=1.332 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-7: Changes in hunting quality: the number of places to hunt.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	813	10.9%	27.3%	53.1%	7.6%	1.1%	2.6
Longtime participants	227	10.1%	25.6%	59.0%	5.3%	0.0%	2.6
Less-engaged participants	39	10.3%	28.2%	51.3%	7.7%	2.6%	2.6
Recreational-casual participants	206	12.6%	26.7%	50.5%	9.2%	1.0%	2.6
Social enthusiasts	109	12.8%	24.8%	51.4%	7.3%	3.7%	2.6
Individualist/achievement-oriented enthusiasts	234	9.4%	32.1%	47.0%	9.8%	1.7%	2.6
		χ^2 =19.133 n.s.					

[1]F=.112 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-8: Changes in hunting quality: amount of time I have to hunt waterfowl.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	818	11.0%	27.1%	41.5%	13.1%	7.4%	2.8
Longtime participants	227	9.1%	27.8%	38.7%	13.9%	10.4%	2.9
Less-engaged participants	39	19.0%	19.0%	45.2%	7.1%	9.5%	2.7
Recreational-casual participants	206	10.8%	27.5%	43.1%	13.7%	4.9%	2.8
Social enthusiasts	109	12.7%	23.6%	46.4%	14.5%	2.7%	2.7
Individualist/achievement-oriented enthusiasts	234	12.3%	28.1%	41.7%	11.1%	6.8%	2.7
		χ^2 =17.200 n.s.					

[1]F=1.055 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-9: Changes in hunting quality: weather patterns for waterfowl hunting.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	796	6.4%	24.7%	64.5%	4.2%	0.3%	2.7
Longtime participants	219	4.6%	26.5%	65.8%	2.7%	0.5%	2.7
Less-engaged participants	40	5.0%	20.0%	67.5%	7.5%	0.0%	2.8
Recreational-casual participants	202	7.4%	22.3%	64.9%	5.4%	0.0%	2.7
Social enthusiasts	107	8.4%	25.2%	63.6%	2.8%	0.0%	2.6
Individualist/achievement-oriented enthusiasts	232	7.3%	25.0%	62.1%	5.2%	0.4%	2.7
		χ^2 =9.168 n.s.					

[1]F=0.506 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-10: Problems in last 5 years: crowding at hunting areas.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	803	13.1%	34.5%	46.4%	5.1%	0.9%	2.5
Longtime participants	222	11.3%	33.0%	48.0%	5.9%	1.8%	2.5
Less-engaged participants	40	7.5%	37.5%	50.0%	2.5%	2.5%	2.6
Recreational-casual participants	204	11.3%	38.2%	45.6%	4.9%	0.0%	2.4
Social enthusiasts	109	22.9%	34.9%	38.5%	2.8%	0.9%	2.2
Individualist/achievement-oriented enthusiasts	233	14.6%	31.8%	47.6%	5.6%	0.4%	2.5
		χ^2 =21.154 n.s.					

[1]F=2.634*, η=0.114. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-11: Problems in last 5 years: hunting pressure.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	803	11.8%	34.6%	44.4%	8.5%	0.7%	2.5
Longtime participants	224	9.9%	31.8%	45.3%	11.7%	1.3%	2.6
Less-engaged participants	40	5.0%	40.0%	45.0%	7.5%	2.5%	2.6
Recreational-casual participants	202	11.4%	38.1%	45.5%	5.0%	0.0%	2.4
Social enthusiasts	110	20.0%	31.8%	40.9%	6.4%	0.9%	2.4
Individualist/achievement-oriented enthusiasts	232	12.9%	35.3%	43.1%	8.6%	0.0%	2.5
		χ^2=24.050 n.s.					

[1]F=2.596*, η=0.113. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-12: Problems in last 5 years: waterfowl unable to find rest areas.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	762	11.0%	27.0%	51.9%	9.2%	0.9%	2.6
Longtime participants	211	10.9%	26.1%	52.1%	9.5%	1.4%	2.6
Less-engaged participants	39	10.3%	33.3%	43.6%	12.8%	0.0%	2.6
Recreational-casual participants	191	8.4%	26.7%	53.4%	11.0%	0.5%	2.7
Social enthusiasts	104	17.3%	17.3%	59.6%	5.8%	0.0%	2.5
Individualist/achievement-oriented enthusiasts	222	11.7%	32.4%	47.3%	7.7%	0.9%	2.5
		χ^2=19.782 n.s.					

[1]F=1.120 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-13: Problems in last 5 years: shifting waterfowl migration routes.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	776	43.4%	37.2%	17.7%	1.5%	0.3%	1.8
Longtime participants	217	45.2%	34.6%	18.0%	1.8%	0.5%	1.8
Less-engaged participants	37	29.7%	43.2%	27.0%	0.0%	0.0%	2.0
Recreational-casual participants	191	44.5%	34.6%	19.4%	1.0%	0.5%	1.8
Social enthusiasts	108	48.1%	32.4%	19.4%	0.0%	0.0%	1.7
Individualist/achievement-oriented enthusiasts	227	38.8%	46.3%	12.8%	2.2%	0.0%	1.8
		χ^2 =20.795 n.s.					

[1]F=0.735 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-14: Problems in last 5 years: interference from other hunters.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	799	9.6%	27.9%	57.4%	4.3%	0.9%	2.6
Longtime participants	221	9.0%	25.3%	58.4%	5.4%	1.8%	2.7
Less-engaged participants	39	5.1%	33.3%	53.8%	5.1%	2.6%	2.7
Recreational-casual participants	203	8.9%	26.1%	61.1%	3.4%	0.5%	2.6
Social enthusiasts	107	17.8%	29.9%	47.7%	4.7%	0.0%	2.4
Individualist/achievement-oriented enthusiasts	232	8.2%	32.8%	56.0%	3.0%	0.0%	2.5
		χ^2 =23.968 n.s.					

[1]F=2.598*, η=0.113. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-15: Problems in last 5 years: waterfowl arriving after the season is closed.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	766	14.1%	31.2%	50.2%	3.3%	1.2%	2.5
Longtime participants	214	10.7%	29.0%	56.5%	2.8%	0.9%	2.5
Less-engaged participants	36	5.6%	27.8%	61.1%	5.6%	0.0%	2.7
Recreational-casual participants	191	11.0%	36.1%	48.7%	2.6%	1.6%	2.5
Social enthusiasts	106	26.4%	34.0%	35.8%	1.9%	1.9%	2.2
Individualist/achievement-oriented enthusiasts	222	19.4%	27.9%	46.4%	5.4%	0.9%	2.4
		χ^2 =34.729**, Cramer's V=.106					

[1]F=4.141**, η=0.146. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-16: Problems in last 5 years: waterfowl concentrating on fewer areas.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	762	14.0%	43.5%	39.9%	2.3%	0.3%	2.3
Longtime participants	211	13.3%	46.4%	37.4%	2.8%	0.0%	2.3
Less-engaged participants	39	10.3%	43.6%	41.0%	5.1%	0.0%	2.4
Recreational-casual participants	188	12.8%	44.1%	41.5%	0.5%	1.1%	2.3
Social enthusiasts	106	21.7%	32.1%	44.3%	1.9%	0.0%	2.3
Individualist/achievement-oriented enthusiasts	224	13.8%	43.3%	39.7%	3.1%	0.0%	2.3
		χ^2 =20.536 n.s.					

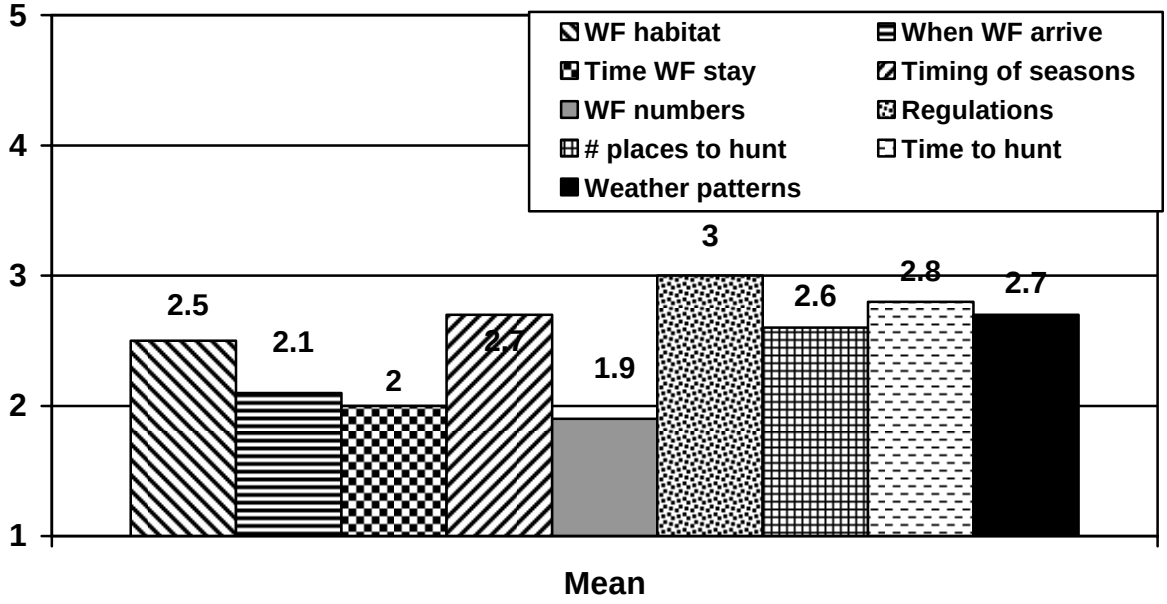
[1]F=0.324 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 8-17: Problems in last 5 years: waterfowl numbers on opening weekend.

	N	% of respondents who said that quality is…					Mean[1]
		Much worse	Somewhat worse	Neither better or worse	Somewhat better	Much better	
Overall[2]	800	32.8%	34.9%	26.6%	4.7%	1.1%	2.1
Longtime participants	224	33.0%	34.4%	26.3%	4.5%	1.8%	2.1
Less-engaged participants	37	24.3%	35.1%	29.7%	8.1%	2.7%	2.3
Recreational-casual participants	200	32.0%	37.5%	26.0%	4.0%	0.5%	2.0
Social enthusiasts	108	38.0%	24.1%	33.3%	3.7%	0.9%	2.1
Individualist/achievement-oriented enthusiasts	233	32.2%	37.3%	24.0%	6.0%	0.4%	2.1
		χ^2 =14.619 n.s.					

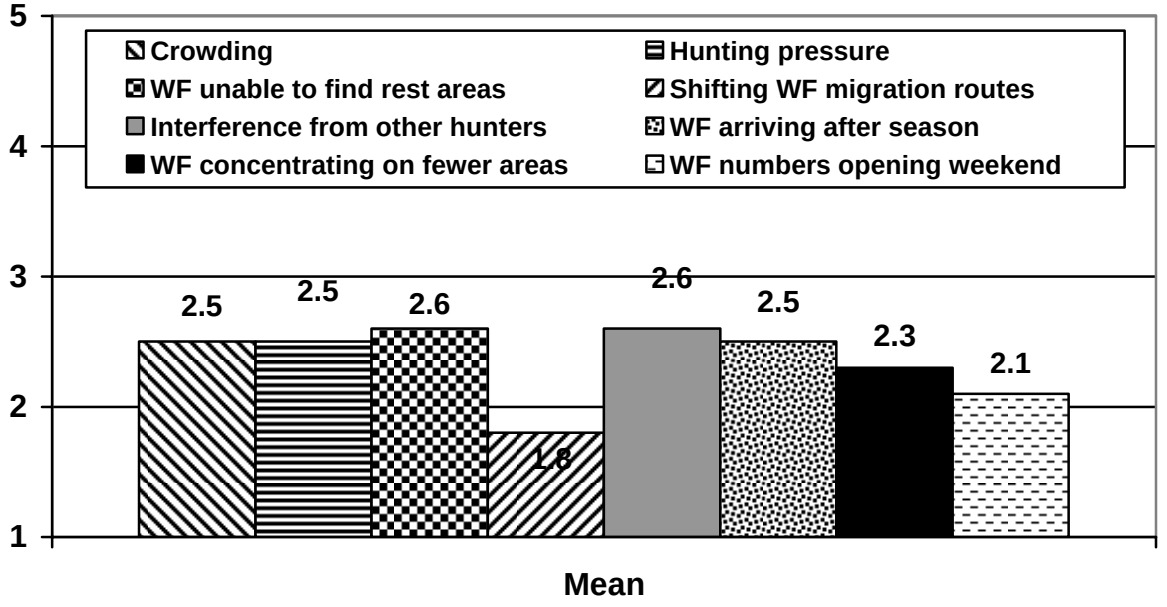
[1]F=0.642 n.s. Mean based on scale: 1=much worse, 2=somewhat worse, 3=neither, 4=somewhat better, 5=much better.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Figure 8-1: Means on changes in waterfowl hunting quality in the last 5 years in Minnesota.



Scale: 1=much worse, 3=neither better nor worse, 5=much better

Figure 8-2: Mean changes in problems with waterfowl hunting in Minnesota during the last 5 years.



Scale: 1=much worse, 3=neither better nor worse, 5=much better

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Section 9: Other Hunting Activities

Participation in Other Hunting Activities

Overall Results

Respondents were asked to indicate if they had ever hunted for: (a) deer with a firearem, (b) deer with archery, (c) deer with a muzzleloader, (d) pheasants, (e) grouse/woodcock, (f) turkeys, or (g) small game (doves, rabbits, squirrels, fox) (Tables 9-1 to 9-7) (Figure 9-1). If they had done the type of hunting they were asked to indicate how many of the past 5 years that they had hunted (Tables 9-8 to 9-14) (Figure 9-2). Then they were asked to indicate if they had done that kind of hunting in Minnesota during the 2005 season (Tables 9-15 to 9-21) (Figure 9-3), and, if so, how many days they had hunted during that previous season (Tables 9-22 to 9-28) (Figure 9-4).

More than half of the respondents had hunted for: (a) deer with a firearm (86.7%) (Table 9-1), (b) pheasants (76.5%) (Table 9-4), (c) grouse/woodcock (59.1%) (Table 9-5), and (d) small game (51.3%) (Table 9-7) at some point in the past. Nearly half of respondents had hunted for deer using archery (44.9%) (Table 9-2), and about one-third had hunted for deer with muzzleloaders (32.7%) (Table 9-3) or turkey (31.8%) (Table 9-6).

On average, respondents who had hunted for deer using firearms in the past had hunted 4.3 of the previous 5 years for deer using firearms (Table 9-8). They had hunted between 3 and 4 of the previous 5 years for pheasants ($\bar{x} = 3.8$) (Table 9-11), grouse/woodcock ($\bar{x} = 3.7$) (Table 9-12), small game ($\bar{x} = 3.7$) (Table 9-14), deer with archery ($\bar{x} = 3.5$) (Table 9-9), and deer with muzzleloaders ($\bar{x} = 3.1$) (Table 9-15). They had hunted for 2.8 of the previous 5 years for turkeys (Table 9-13).

Nearly three-fourths of the respondents (71.9%) had hunted for deer using a firearm during the 2005 Minnesota season (Table 9-15). Over half (57.9%) had hunted for pheasants during 2005 (Table 9-18). About 4 in 10 had hunted for grouse/woodcock (41.7%) (Table 9-19) or small game (39.1%) (Table 9-21) during the previous season. Between one-fourth and one-third had hunted for deer using archery (30.5%) Table 9-16) or muzzleloaders (26.6%) (Table 9-17). Less than 20% of respondents had hunted for turkeys (18.6%) (Table 9-20) during the 2005 season.

Of respondents who hunted for a type of game during 2005, individuals spent the greatest average number of days hunting for deer using archery ($\bar{x}$ =16.3 days) (Table 9-23). On average, during 2005 respondents hunted 8.9 days for pheasants (Table 9-25), 8.7 days for small game (Table 9-28), 7.8 days for grouse/woodcock (Table 9-26), 6.2 days for deer using muzzleloaders (Table 9-24), 6.0 days for deer using firearms (Table 9-22), and 3.5 days for turkey (Table 9-27).

Results by Hunter Segment

Compared to the other groups, smaller proportions of less-engaged (33.3%) and recreational-casual (38.6%) hunters had ever participated in archery deer hunting (χ^2=10.142, $p<0.05$, Cramer's V=0.121) (Table 9-2). Similarly, only about half of less-engaged hunters (51.2%) had ever hunted pheasants compared to about three-fourths of the respondents from other segments (χ^2=29.274, $p<0.001$, Cramer's V=0.190) (Table 9-4). Only 10.3% of less-engaged hunters had ever hunted for turkeys, compared to

42.4% of social waterfowl-hunting enthusiasts, about 30% of respondents in the other segments (χ^2=13.649, p<0.01, Cramer's V=0.134) (Table 9-6). About six in ten waterfowl-hunting enthusiasts had hunted for small game in the past compared to about half of the respondents in the other segments (χ^2=17.388, p<0.01, Cramer's V=0.148) (Table 9-7).

Among hunters who had ever hunted for pheasants, those from the less-engaged segment hunted significantly fewer ($\bar{x} = 3.0$) of the previous 5 years than those from the other segments (F=2.732, p<0.05, η=0.133) (Table 9-11). Similarly, among hunters who had ever hunted for grouse/woodcock, those from the less-engaged segment hunted significantly fewer ($\bar{x} = 3.0$) of the previous 5 years than those from the other segments (F=3.048, p<0.05, η=0.161) (Table 9-12).

Compared to the other groups, smaller proportions of less-engaged (64.3%) and recreational-casual (62.2%) hunters had hunted for deer using firearms during the 2005 season (χ^2=19.070, p<0.01, Cramer's V=0.153) (Table 9-15). Similarly, only 21.1% of less-engaged hunters and 18.7% of recreational-casual hunters had hunted for deer using muzzleloaders during 2005, compared to 26.6% of hunters overall (χ^2=10.164, p<0.05, Cramer's V=0.120) (Table 9-17). Only 27.5% of less-engaged hunters hunted for pheasant in 2005, compared to 57.9% overall (χ^2=28.947, p<0.001, Cramer's V=0.190) (Table 9-18). Fewer less-engaged (38.5%) and recreational-casual (32.7%) hunters hunted for grouse or woodcock in 2005 (χ^2=18.834, p<0.01, Cramer's V=0.156) (Table 9-19). Finally, fewer less-engaged hunters (22.5%) hunted for small game in 2005, compared to about half of the two segments of enthusiasts and about one-third of the respondents in the other two groups (χ^2=18.607, p<0.01, Cramer's V=0.154) (Table 9-21).

Among hunters who hunted for deer with firearms during 2005, those from the recreational-casual ($\bar{x} = 5.5$) and the individualist/achievement-oriented ($\bar{x} = 5.6$) segments hunted significantly fewer days during the season, compared those from the other segments (F=2.794, p<0.05, η=0.137) (Table 9-22).

Section 9: Other Hunting Activities

Table 9-1: Proportion of respondents, by cluster, who have ever hunted for deer with firearms

	N	% Yes
Overall[1]	819	86.7%
Longtime participants	227	88.5%
Less-engaged participants	43	81.4%
Recreational-casual participants	208	81.7%
Social enthusiasts	108	89.8%
Individualist/achievement-oriented enthusiasts	237	89.5%
		χ^2 =8.715 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-2: Proportion of respondents, by cluster, who have ever hunted for deer with archery

	N	% Yes
Overall[1]	690	44.9%
Longtime participants	178	45.5%
Less-engaged participants	36	33.3%
Recreational-casual participants	189	38.6%
Social enthusiasts	93	53.8%
Individualist/achievement-oriented enthusiasts	201	50.2%
		χ^2 =10.142*, Cramer's V=0.121

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-3: Proportion of respondents, by cluster, who have ever hunted for deer with muzzleloader

	N	% Yes
Overall[1]	686	32.7%
Longtime participants	187	36.9%
Less-engaged participants	35	25.7%
Recreational-casual participants	181	24.9%
Social enthusiasts	89	33.7%
Individualist/achievement-oriented enthusiasts	196	36.7%
		χ^2 =8.817 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-4: Proportion of respondents, by cluster, who have ever hunted for pheasants

	N	% Yes
Overall[1]	809	76.5%
Longtime participants	223	73.5%
Less-engaged participants	41	51.2%
Recreational-casual participants	210	85.2%
Social enthusiasts	108	82.4%
Individualist/achievement-oriented enthusiasts	229	71.6%
		χ^2 =29.274***, Cramer's V=0.190

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-5: Proportion of respondents, by cluster, who have ever hunted for grouse or woodcock

	N	% Yes
Overall[1]	776	59.1%
Longtime participants	212	57.5%
Less-engaged participants	40	57.5%
Recreational-casual participants	202	56.9%
Social enthusiasts	103	70.9%
Individualist/achievement-oriented enthusiasts	222	59.5%
		χ^2 =6.483 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-6: Proportion of respondents, by cluster, who have ever hunted for turkeys

	N	% Yes
Overall[1]	759	31.8%
Longtime participants	207	31.4%
Less-engaged participants	39	10.3%
Recreational-casual participants	199	32.2%
Social enthusiasts	99	42.4%
Individualist/achievement-oriented enthusiasts	218	30.7%
		χ^2 = 13.649**, Cramer's V=0.134

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-7: Proportion of respondents, by cluster, who have ever hunted for small game

	N	% Yes
Overall[1]	790	51.3%
Longtime participants	215	47.9%
Less-engaged participants	40	42.5%
Recreational-casual participants	207	45.9%
Social enthusiasts	103	61.2%
Individualist/achievement-oriented enthusiasts	228	61.4%
		χ^2 =17.388**, Cramer's V=0.148

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-8: Years of previous 5 hunting for deer with firearms, by cluster

	N	Years
Overall[1]	708	4.3
Longtime participants	200	4.4
Less-engaged participants	34	4.2
Recreational-casual participants	169	4.0
Social enthusiasts	97	4.3
Individualist/achievement-oriented enthusiasts	212	4.4
		F= 2.154 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-9: Years of previous 5 hunting for deer with archery, by cluster

	N	Years
Overall[1]	307	3.5
Longtime participants	81	3.8
Less-engaged participants	10	3.1
Recreational-casual participants	72	3.2
Social enthusiasts	50	3.3
Individualist/achievement-oriented enthusiasts	101	3.5
		F= 1.139 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-10: Years of previous 5 hunting for deer with muzzleloaders, by cluster

	N	Years
Overall[1]	226	3.1
Longtime participants	70	3.3
Less-engaged participants	8	3.9
Recreational-casual participants	46	2.8
Social enthusiasts	31	2.9
Individualist/achievement-oriented enthusiasts	71	3.0
		F= 1.072 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-11: Years of previous 5 hunting for pheasants, by cluster

	N	Years
Overall[1]	607	3.8
Longtime participants	158	3.6
Less-engaged participants	21	3.0
Recreational-casual participants	175	4.0
Social enthusiasts	90	4.0
Individualist/achievement-oriented enthusiasts	164	3.8
		F= 2.732* , η=0.133

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-12: Years of previous 5 hunting for grouse/woodcock, by cluster

	N	Years
Overall[1]	458	3.7
Longtime participants	123	3.9
Less-engaged participants	20	3.0
Recreational-casual participants	115	3.3
Social enthusiasts	74	3.9
Individualist/achievement-oriented enthusiasts	131	3.8
		F= 3.048* , η=0.161

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-13: Years of previous 5 hunting for turkeys, by cluster

	N	Years
Overall[1]	243	2.8
Longtime participants	66	2.9
Less-engaged participants	4	3.0
Recreational-casual participants	64	2.6
Social enthusiasts	41	2.8
Individualist/achievement-oriented enthusiasts	68	2.7
		F=0.405 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-14: Years of previous 5 hunting for small game, by cluster

	N	Years
Overall[1]	405	3.7
Longtime participants	105	3.6
Less-engaged participants	16	3.4
Recreational-casual participants	93	3.5
Social enthusiasts	63	3.7
Individualist/achievement-oriented enthusiasts	140	3.8
		F=0.370 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-15: Proportion of respondents, by cluster, who hunted for deer with firearms in 2005

	N	% Yes
Overall[1]	818	71.9%
Longtime participants	229	74.7%
Less-engaged participants	42	64.3%
Recreational-casual participants	209	62.2%
Social enthusiasts	106	75.5%
Individualist/achievement-oriented enthusiasts	233	79.4%
		χ^2 =19.070**, Cramer's V=0.153

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-16: Proportion of respondents, by cluster, who hunted for deer with archery in 2005

	N	% Yes
Overall[1]	708	30.5%
Longtime participants	190	32.1%
Less-engaged participants	39	23.1%
Recreational-casual participants	186	24.7%
Social enthusiasts	93	34.4%
Individualist/achievement-oriented enthusiasts	205	35.1%
		χ^2=6.814 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-17: Proportion of respondents, by cluster, who hunted for deer with muzzleloader in 2005

	N	% Yes
Overall[1]	709	26.6%
Longtime participants	195	30.3%
Less-engaged participants	38	21.1%
Recreational-casual participants	187	18.7%
Social enthusiasts	88	28.4%
Individualist/achievement-oriented enthusiasts	202	31.2%
		χ^2=10.164*, Cramer's V=0.120

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-18: Proportion of respondents, by cluster, who hunted for pheasants in 2005

	N	% Yes
Overall[1]	801	57.9%
Longtime participants	223	52.5%
Less-engaged participants	40	27.5%
Recreational-casual participants	210	67.6%
Social enthusiasts	102	65.7%
Individualist/achievement-oriented enthusiasts	226	55.8%
		χ^2 = 28.947***, Cramer's V=0.190

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-19: Proportion of respondents, by cluster, who hunted for grouse or woodcock in 2005

	N	% Yes
Overall[1]	770	41.7%
Longtime participants	211	44.1%
Less-engaged participants	39	38.5%
Recreational-casual participants	199	32.7%
Social enthusiasts	101	58.4%
Individualist/achievement-oriented enthusiasts	224	42.4%
		χ^2 = 18.834**, Cramer's V=0.156

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-20: Proportion of respondents, by cluster, who hunted for turkeys in 2005

	N	% Yes
Overall[1]	756	18.6%
Longtime participants	209	19.6%
Less-engaged participants	38	10.5%
Recreational-casual participants	200	18.0%
Social enthusiasts	94	23.4%
Individualist/achievement-oriented enthusiasts	215	16.7%
		χ^2 =3.759 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-21: Proportion of respondents, by cluster, who hunted for small game in 2005

	N	% Yes
Overall[1]	783	39.1%
Longtime participants	214	36.4%
Less-engaged participants	40	22.5%
Recreational-casual participants	206	34.5%
Social enthusiasts	99	47.5%
Individualist/achievement-oriented enthusiasts	227	48.9%
		χ^2 = 18.607**, Cramer's V=0.154

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-22: Days hunting for deer with firearms in 2005, by cluster

	N	Days
Overall[1]	582	6.0
Longtime participants	170	6.2
Less-engaged participants	27	6.9
Recreational-casual participants	129	5.5
Social enthusiasts	78	6.9
Individualist/achievement-oriented enthusiasts	182	5.6
		F= 2.794* , η=0.137

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-23: Days hunting for deer with archery in 2005, by cluster

	N	Days
Overall[1]	220	16.3
Longtime participants	63	17.3
Less-engaged participants	9	14.6
Recreational-casual participants	47	13.8
Social enthusiasts	32	19.4
Individualist/achievement-oriented enthusiasts	72	16.0
		F= 0.839 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-24: Days hunting for deer with muzzleloaders in 2005, by cluster

	N	Days
Overall[1]	190	6.2
Longtime participants	60	5.5
Less-engaged participants	8	7.1
Recreational-casual participants	35	6.1
Social enthusiasts	25	7.8
Individualist/achievement-oriented enthusiasts	63	6.7
		F= 1.635 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-25: Days hunting for pheasants in 2005, by cluster

	N	Days
Overall[1]	460	8.9
Longtime participants	118	8.8
Less-engaged participants	10	6.2
Recreational-casual participants	142	8.8
Social enthusiasts	64	9.3
Individualist/achievement-oriented enthusiasts	123	9.2
		F=0.414 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-26: Days hunting for grouse/woodcock in 2005, by cluster

	N	Days
Overall[1]	317	7.8
Longtime participants	94	7.3
Less-engaged participants	13	9.1
Recreational-casual participants	65	7.5
Social enthusiasts	56	7.6
Individualist/achievement-oriented enthusiasts	92	8.8
		F= 0.532 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-27: Days hunting for turkeys in 2005, by cluster

	N	Days
Overall[1]	141	3.5
Longtime participants	43	3.7
Less-engaged participants	4	5.0
Recreational-casual participants	35	3.2
Social enthusiasts	21	4.0
Individualist/achievement-oriented enthusiasts	36	3.2
		F= 1.662 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population. n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 9-28: Days hunting for small game in 2005, by cluster

	N	Days
Overall[1]	305	8.7
Longtime participants	79	8.7
Less-engaged participants	9	11.6
Recreational-casual participants	71	8.1
Social enthusiasts	45	9.8
Individualist/achievement-oriented enthusiasts	109	8.7
		F=0.507 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Figure 9-1: Percent of respondents who had ever hunted for…

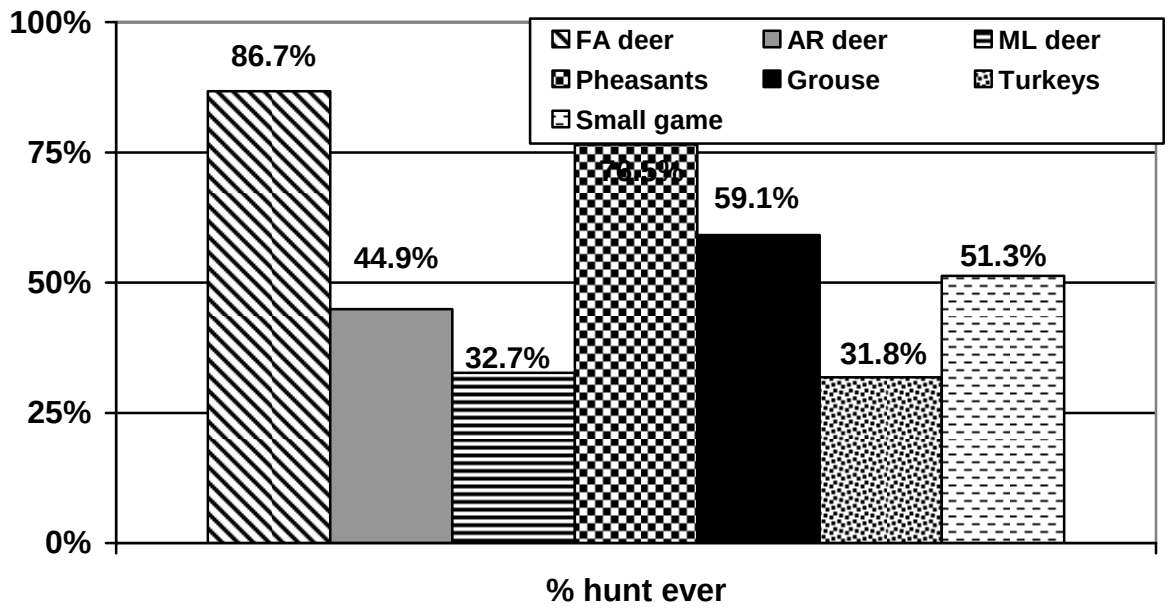


Figure 9-2: Mean number of years of past 5 years hunting for…

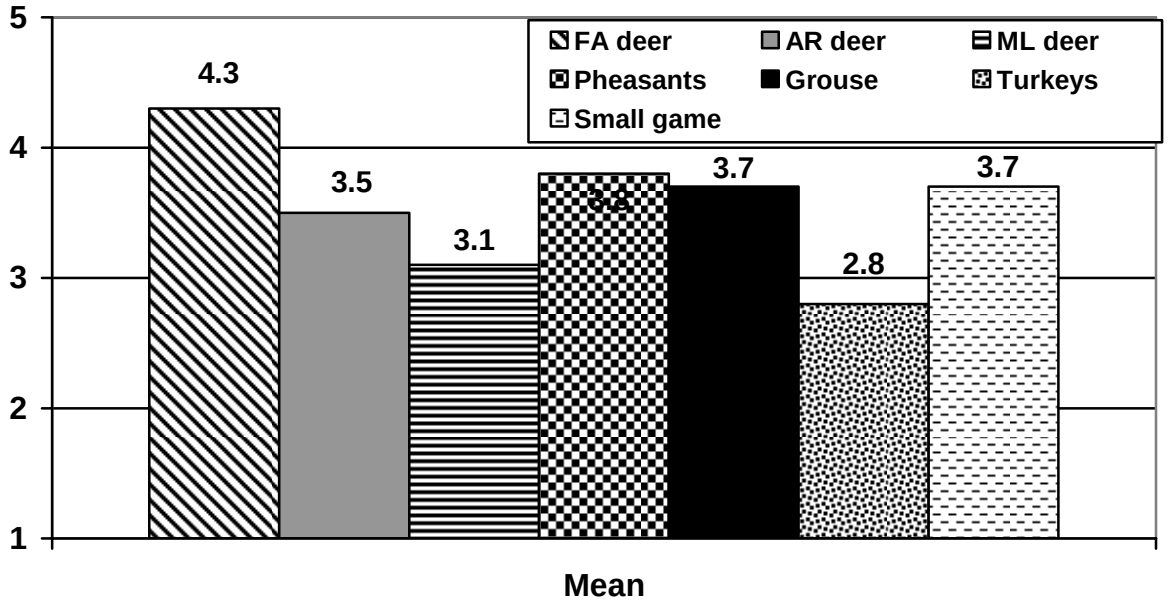


Figure 9-3: Percent of respondents who hunted for… in 2005

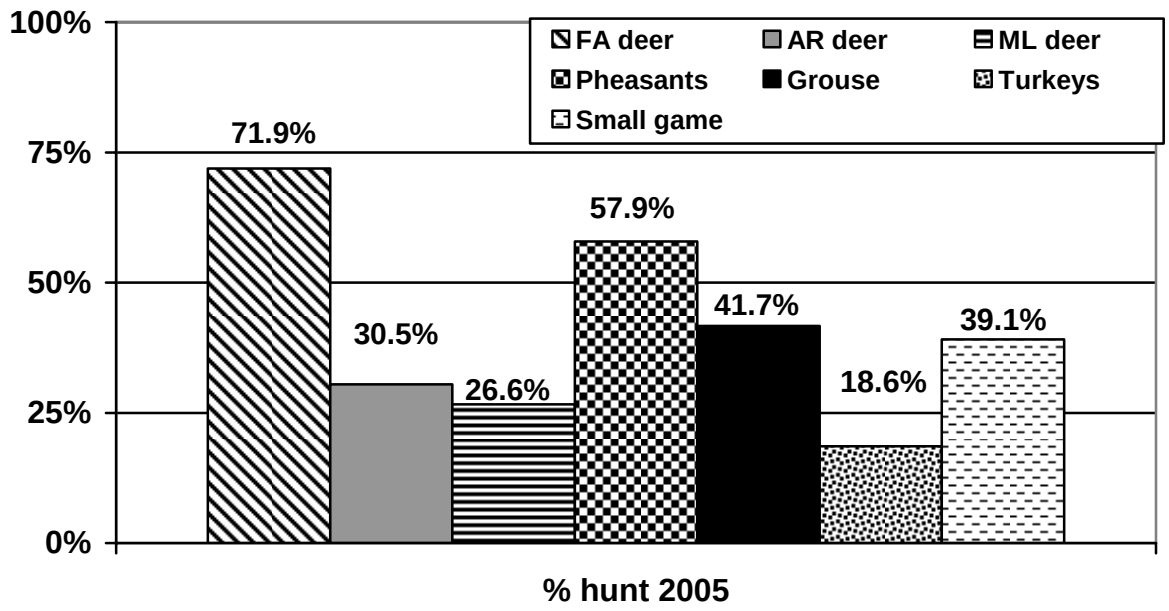
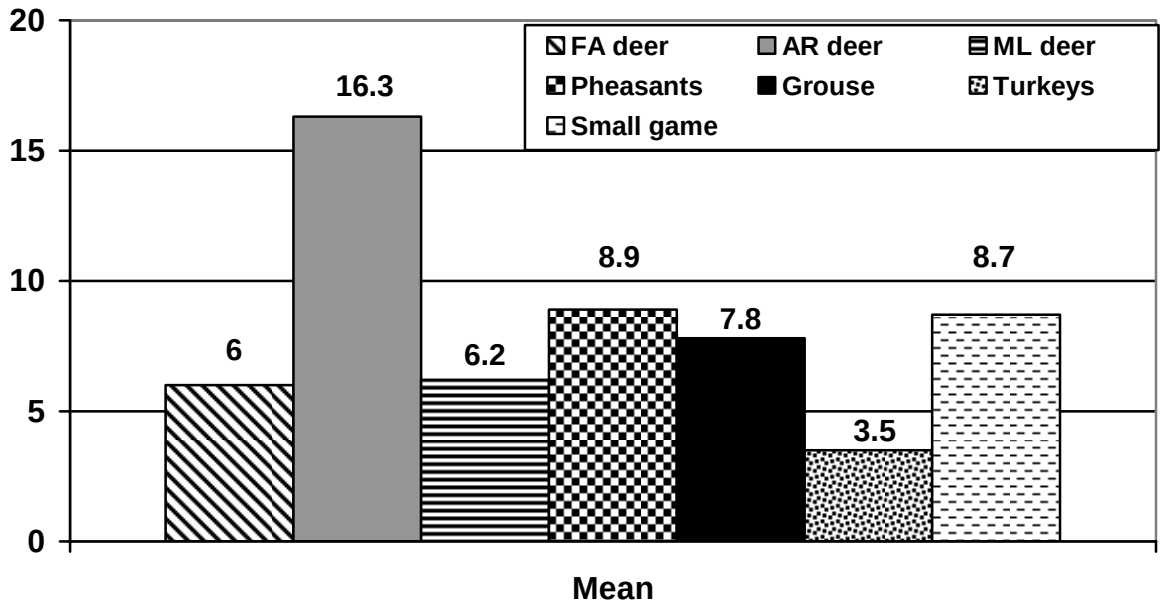


Figure 9-4: Mean number of days in 2005 hunting for…



Section 10: Characteristics of Respondents

Hunter Age

The average age of respondents was 46.1 years. Average respondent age differed by hunter segment (F=8.770, p<0.001, η=0.199) (Table 10-1). Longtime ($\bar{x} = 50$ years) and less-engaged ($\bar{x} = 48$ years) hunters were oldest on average, followed by social enthusiasts ($\bar{x} =$ 46 years), recreational-casual hunters ($\bar{x} = 44$ years), and individualist/achievement-oriented enthusiasts ($\bar{x} = 44$ years).

Recent Waterfowl Hunting

Nearly 9 of 10 respondents (86.0%) indicated that they still considered themselves to be a waterfowl hunter (Table 10-2). Over 90% of enthusiast participants still considered themselves to be waterfowl hunters, compared to 84.5% of longtime hunters, 86.0% of less-engaged hunters, and 81.6% of recreational-casual hunters. It was somewhat surprising to see higher drop out among hunters classified as recreational-casual compared to those classified as less-engaged. A significantly larger proportion of social waterfowl-hunting enthusiasts (74.5%) and a significantly smaller proportion of less-engaged waterfowl hunters (45.5%) hunted during the 2005 Minnesota waterfowl season (χ^2=18.851, p<0.01) (Table 10-3). Overall, a majority (69.4%) of the respondents had hunted for waterfowl in Minnesota every year between 2000 and 2004 (Table 10-4). Consistency of participation was higher for the two groups of enthusiast hunters. About three-fourths of enthusiasts had hunted every year of the previous 5 years, compared to 70.4% of longtime hunters, 63.0% for recreational-casual hunters, and only 54.5% of less-engaged hunters (χ^2=15.616, p<0.01, Cramer's V=0.135). Participation declined from 88.6% in 2000 to 74.9% in 2004 (Table 10-4) and 67.2% in 2005 (Table 1.1). The original sample was selected based upon duck stamp purchase or HIP registration in 2000.

Future Waterfowl Hunting

On average, respondents indicated that they were slightly to somewhat likely to hunt ducks ($\bar{x} = 5.4$) and geese ($\bar{x} = 5.4$) in Minnesota in the next 5 years (Tables 10-5 and 10-6). Over half of respondents (51.3%) indicated that they would be 'very likely' to hunt ducks in Minnesota in the next 5 years. There was no significant difference in average intention to hunt ducks among the different hunter segments, but smaller proportions of less-engaged (44.2%) and recreational-casual (46.0%) hunters indicated that they would be 'very likely' to hunt ducks in the next 5 years. Fewer less-engaged participants indicated it was very or somewhat unlikely they would hunt ducks in the next 5 years, with more believing it was slightly unlikely. Slightly less than half of the respondents (49.3%) indicated that they would be 'very likely' to hunt geese in Minnesota in the next 5 years. Individualist/achievement-oriented enthusiasts ($\bar{x} = 5.8$) and social enthusiasts ($\bar{x} = 5.5$) reported a higher average likelihood of hunting geese in Minnesota in the next 5 years, compared to longtime, less-engaged, and recreational-casual hunters ($\bar{x} = 5.3$). Over half of individualist/achievement-oriented enthusiasts (60.4%) and social enthusiasts (50.9%) indicated that they would be very likely to hunt for geese in the next 5 years compared to only 46.4% of longtime, 45.2% of recreational-casual, and 38.1% of less-engaged hunters.

Membership in Conservation and Hunting Organizations

More than half (61.0%) of the waterfowl hunters reported that they belonged to a conservation/hunting organization. As shown in Table 10-7, respondents reported membership in a wide variety of organizations. More than 4 in 10 (42.3%) of respondents reported membership in Ducks Unlimited and

nearly one in ten (8.4%) reported membership in Minnesota Waterfowl Association. Less-engaged waterfowl hunters reported lower rates of membership in conservation/hunting organizations. Only 23.3% of less-engaged waterfowl hunters reported a membership in Ducks Unlimited (χ^2 =11.001, p<0.05, Cramer's V=0.114). Over half (55.6%) of the less-engaged respondents did not report any memberships, compared to 41.7% of longtime hunters, 41.5% of individualist/achievement-oriented hunters, 34.8% of recreational-casual hunters, and only 29.8% of social enthusiasts (χ^2 =12.210, p<0.05, CV=0.119).

Getting Information About Waterfowl Hunting

Respondents were asked to indicate where they got information about waterfowl hunting, by checking from a list of nine possible resources. Nearly three-fourths (69.1%) of the respondents indicated that they got information from friends, family, and other individuals (Table 10-8). Nearly half of the respondents got information from Minnesota DNR news releases and publications (45.7%) and weekly/monthly outdoor publications (47.4%). About one-third got information from the Minnesota DNR Web site (32.0%), the Minneapolis Star Tribune newspaper (28.5%), other newspapers (33.9%), and television/radio (31.9%).

Hunting Outside of Minnesota

More than half of the respondents (53.3%) had hunted for waterfowl outside of Minnesota at some point in their lives (Table 10-9). A smaller proportion of less-engaged hunters (34.9%) had hunted for waterfowl outside of Minnesota compared to longtime hunters (55.6%), recreational-casual hunters (53.7%), social enthusiasts (62.4%), and individualist/achievement-oriented enthusiasts (55.6%) (χ^2 =13.034, p<0.05, CV=0.125). Approximately one-third (35.7%) of respondents hunted for waterfowl outside of Minnesota in 2005. A smaller proportion of less-engaged waterfowl hunters (21.4%) hunted outside of Minnesota in 2005, but this result was not significant likely because of a smaller sample size.

Section 10: Characteristics of Respondents

Table 10-1: Age of respondents

Residence of hunter	n	16-17	18-19	20 – 29	30 – 39	40 – 49	50 - 59	60 - 64	65 +	Average age[1]
Overall[2]	854	0.0%	0.0%	11.8%	18.3%	28.8%	25.5%	6.9%	8.7%	46.1
Longtime participants	244	0.0%	0.0%	7.4%	11.9%	26.6%	33.6%	9.8%	10.7%	49.7
Less-engaged participants	41	0.0%	0.0%	7.3%	17.1%	36.6%	12.2%	9.8%	17.1%	48.1
Recreational-casual participants	217	0.0%	0.0%	14.3%	24.0%	26.7%	21.2%	6.0%	7.8%	44.2
Social enthusiasts	112	0.0%	0.0%	8.9%	14.3%	38.4%	25.9%	3.6%	8.9%	46.3
Individualist/achievement-oriented enthusiasts	240	0.0%	0.0%	16.3%	21.7%	27.1%	23.3%	5.8%	5.8%	43.8

[1] $F=8.770$, $p<0.001$.
[2] A stratified sample based on 2001 hunter cluster was drawn. Overall data in this table is weighted to reflect proportions in the population.

Table 10-2: Do you still consider yourself a waterfowl hunter?

	n	% Yes
Overall[1]	849	86.0%
Longtime participants	239	84.5%
Less-engaged participants	43	86.0%
Recreational-casual participants	217	81.6%
Social enthusiasts	110	90.9%
Individualist/achievement-oriented enthusiasts	240	92.1%
		χ^2=13.769**, Cramer's V=0.127

[1] A stratified sample based on region of residence was drawn. Overall 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 10-3: Proportion, by cluster, who actually hunted waterfowl in Minnesota in the year 2005

	N	% Yes
Overall[1]	847	67.2%
Longtime participants	238	67.2%
Less-engaged participants	44	45.5%
Recreational-casual participants	216	62.5%
Social enthusiasts	110	74.5%
Individualist/achievement-oriented enthusiasts	216	62.5%
		χ^2=18.851**, Cramer's V=0.149

[1] A stratified sample based on region of residence was drawn. Overall 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 10-4: Hunting in the last five years

	% of hunters who hunted that particular year:						
	2000	2001	2002	2003	2004	Hunted every year	Did not hunt during any of these years
Overall[1]	88.6%	87.4%	84.3%	82.2%	74.9%	69.4%	4.1%
Longtime participants	88.3%	86.7%	84.9%	82.9%	77.1%	70.4%	5.0%
Less-engaged participants	88.6%	81.8%	81.8%	75.0%	54.5%	54.5%	4.5%
Recreational-casual participants	84.5%	84.5%	79.0%	78.5%	68.0%	63.0%	5.5%
Social enthusiasts	93.6%	93.6%	90.9%	90.0%	79.1%	74.5%	0.0%
Individualist/ achievement-oriented enthusiasts	92.1%	90.8%	87.5%	83.3%	81.7%	76.3%	2.5%
χ^2=26.864, n.s.	X^2=9.507 n.s.	χ^2=9.651* CV=0.106	χ^2=10.539* CV=0.111	χ^2=8.488 n.s.	χ^2=22.788*** CV=0.163	χ^2=15.616** CV=0.135	χ^2=8.252 n.s.

[1] A stratified sample based on region of residence was drawn. Overall data in this table is weighted to reflect regional proportions in the population. Because this question is strongly correlated to age, this data is also weighted to correct for age.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-5: How likely it is you will hunt ducks at sometime during the next 5 years in Minnesota?

	N	% of respondents who said…							Mean[1]
		Very unlikely	Somewhat unlikely	Slightly unlikely	Undecided	Slightly likely	Somewhat likely	Very likely	
Overall[2]	828	8.7%	7.2%	2.5%	11.2%	6.4%	12.7%	51.3%	5.4
Longtime participants	229	9.6%	8.3%	1.3%	8.7%	6.1%	14.8%	51.1%	5.4
Less-engaged participants	43	4.7%	2.3%	7.0%	25.6%	11.6%	4.7%	44.2%	5.3
Recreational-casual participants	211	8.5%	9.5%	4.7%	11.4%	9.0%	10.9%	46.0%	5.2
Social enthusiasts	110	11.8%	3.6%	1.8%	10.9%	6.4%	14.5%	50.9%	5.4
Individualist/ achievement-oriented enthusiasts	239	6.7%	5.0%	1.3%	13.0%	2.5%	11.7%	59.8%	5.7
		χ^2 =49.182**, Cramer's V=0.122							

[1]F=2.123 n.s. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

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Table 10-6: How likely it is you will hunt geese at sometime during the next 5 years in Minnesota?

	N	% of respondents who said…							Mean[1]
		Very unlikely	Somewhat unlikely	Slightly unlikely	Undecided	Slightly likely	Somewhat likely	Very likely	
Overall[2]	796	9.7%	4.6%	2.2%	11.3%	9.2%	13.7%	49.3%	5.4
Longtime participants	224	12.5%	5.4%	1.8%	10.3%	9.4%	14.3%	46.4%	5.3
Less-engaged participants	42	2.4%	2.4%	7.1%	23.8%	19.0%	7.1%	38.1%	5.3
Recreational-casual participants	197	8.1%	7.1%	3.0%	11.7%	11.2%	13.7%	45.2%	5.3
Social enthusiasts	106	12.3%	0.9%	0.9%	10.4%	8.5%	16.0%	50.9%	5.5
Individualist/ achievement-oriented enthusiasts	230	7.0%	2.2%	1.7%	10.9%	5.2%	12.6%	60.4%	5.8
		χ^2=48.822**, Cramer's V=0.124							

[1]F=3.013*, η=0.122. Mean based on scale: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree.
[2] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-7: Membership in hunting-related groups

	% of hunters indicating membership in:					
	DU[2]	DW[2]	MWA[2]	LSC[2]	Other	None[3]
Overall[1]	42.3%	3.1%	8.4%	24.3%	15.3%	39.0%
Longtime participants	44.2%	2.1%	9.6%	25.4%	15.0%	41.5%
Less-engaged participants	23.3%	0.0%	0.0%	16.3%	9.3%	55.6%
Recreational-casual participants	45.6%	2.8%	7.4%	22.8%	13.5%	34.8%
Social enthusiasts	44.6%	8.0%	10.7%	28.6%	17.9%	29.8%
Individualist/ achievement-oriented enthusiasts	36.5%	3.7%	7.9%	23.8%	17.8%	41.7%
	χ^2=11.001*, CV=0.114	χ^2=10.410*, CV=0.111	χ^2=5.571 n.s.	χ^2=3.087 n.s.	χ^2=3.454 n.s.	χ^2=12.210*, CV=0.119

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] DU-Ducks Unlimited, DW-Delta Waterfowl, MWA-Minnesota Waterfowl Association, LSC-Local sportsman's club.
[3]"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.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-8: Where do you get information about waterfowl hunting?

	DNR pubs[2]	DNR Web[3]	Strib[4]	SPPP[5]	Other newspapers[6]	Outdoor pubs[7]	TV/radio[8]	Friends/ family[9]
Overall[1]	45.7%	32.0%	28.5%	5.9%	33.9%	47.4%	31.9%	69.1%
Longtime participants	47.1%	32.5%	31.3%	6.3%	38.3%	47.1%	33.3%	68.8%
Less-engaged participants	37.2%	14.0%	30.2%	4.7%	30.2%	44.2%	37.2%	62.8%
Recreational-casual participants	41.4%	33.5%	29.3%	7.4%	25.6%	46.5%	27.9%	66.0%
Social enthusiasts	46.4%	29.5%	21.4%	3.6%	39.3%	48.2%	34.8%	69.6%
Individualist/ achievement-oriented enthusiasts	49.8%	33.2%	25.3%	4.6%	34.9%	49.4%	32.4%	74.3%

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
[2] χ^2 =4.683 n.s.
[3] χ^2 =7.158 n.s.
[4] Strib-Minneapolis Star Tribune, χ^2 =4.806 n.s.
[5] SPPP-St. Paul Pioneer Press, χ^2 =2.983 n.s.
[6] χ^2 =10.558*, Cramer's V=0.111
[7] χ^2 =0.651 n.s.
[8] χ^2 =2.806 n.s.
[9] χ^2 =4.773 n.s.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-9: Have you ever hunted for waterfowl in a state or province other than Minnesota?

	n	% Yes
Overall[1]	838	53.3%
Longtime participants	234	55.6%
Less-engaged participants	43	34.9%
Recreational-casual participants	214	53.7%
Social enthusiasts	109	62.4%
Individualist/ achievement-oriented enthusiasts	234	55.6%
		χ^2 =13.034*, Cramer's V=0.125

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-10: If you have hunted for waterfowl outside of Minnesota, did you hunt for waterfowl in a state or province other than Minnesota in 2005?

	n	% Yes
Overall[1]	438	35.7%
Longtime participants	126	31.0%
Less-engaged participants	14	21.4%
Recreational-casual participants	113	38.9%
Social enthusiasts	68	38.2%
Individualist/ achievement-oriented enthusiasts	113	40.7%
		χ^2 =4.290 n.s.

[1] A stratified sample based on 2001 hunter cluster was drawn. Data in this table is weighted to reflect proportions in the population.
n.s.=not significant, *P < 0.05, **P < 0.01, ***P < 0.001

Table 10-11: Proportion of all respondents who hunted in North Dakota in 2005.

Residence of hunter	n	% of all respondents who hunted ND in 2005	Average # of days spent hunting in ND in 2005
Overall[1]	862	9.1%	6.0
Longtime participants	241	5.4%	5.8
Less-engaged participants	45	2.2%	5.0
Recreational-casual participants	221	13.1%	6.3
Social enthusiasts	114	14.0%	5.4
Individualist/ achievement-oriented enthusiasts	242	9.5%	6.2
		χ^2 =13.595**, Cramer's V=0.126	F=0.353 n.s.

[1] A stratified sample based on region of residence was drawn. Overall 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 11: Comparison of 2000 and 2005 Season Findings

In this section, we compare results from this survey to the previous survey of this group of hunters.

Respondent age and Days Hunting During the Season

The average age of respondents to the 2001 survey was approximately 41 years. As would be expected in a follow-up survey of the same group of hunters conducted 5 years later, the average age of respondents to this survey was 46 years.

The average number of days hunted was lower in 2005 ($\bar{x} = 10.6$) than in 2000 ($\bar{x} = 11.6$) (t=4.516, p<0.001). The average number of days hunted was significantly lower for all hunter segments except less-engaged hunters. Less-engaged hunters also hunted fewer days but the difference did not reach statistical significance with the small sample of less-engaged hunters (Table 11-1).

There was not a significant difference in the proportion of respondents who reported hunting on the opening Saturday of the season, but a significantly smaller proportion of hunters reported hunting on the opening Sunday (67.6%) in 2005, compared to in 2000 (70.0%) (t=2.165, p<0.05). Looking at hunting opening weekend by hunter segment, a greater proportion of longtime hunters hunted opening Saturday in 2005 (68.5%) compared to in 2000 (62.0%) (χ^2=15.481, p<0.001). There was no significant difference in hunting on opening Saturday for the other hunter segments (Table 11-2). Significantly smaller proportions of longtime and social enthusiast hunters hunted on opening Sunday during 2005 than in 2000. There was no significant difference in the proportion of hunters from other segments hunting on the opening Sunday of the season (Table 11-3).

Waterfowl Harvest

Reported number of ducks bagged during the season per hunter in this survey ($\bar{x} = 9.0$) was significantly lower than the average number bagged in the previous survey ($\bar{x} = 9.9$) (t=3.418, p<0.01). The significantly lower number of ducks bagged was observed among all user segments except less-engaged hunters. Less-engaged hunters also bagged fewer ducks, but the difference did not reach statistical significance (Table 11-4). The average number of Canada Geese bagged was higher in 2005 ($\bar{x} = 5.6$) than in 2000 ($\bar{x} = 2.9$) (t=22.530, p<0.001). There was a significant difference in the number of Canada Geese bagged for each of the hunter segments except less-engaged hunters (Table 11-5).

Hunting Satisfaction

Satisfaction levels were generally lower for the 2005 season than for the 2000 season (Table 11-6). Based on a 7-point satisfaction scale, respondents to this year's survey reported lower levels of satisfaction for: (a) the general waterfowl hunting experience ($\bar{x} = 4.1$ vs. 4.8), (b) duck hunting experience ($\bar{x} = 4.2$ vs. 5.1), (c) duck harvest ($\bar{x} = 3.0$ vs. 3.8), (d) duck regulations ($\bar{x} = 4.4$ vs. 4.8), and (e) goose hunting experience ($\bar{x} = 4.8$ vs. 5.0). Satisfaction with the goose harvest was higher in 2005 ($\bar{x} = 4.2$) than in 2000 ($\bar{x} = 4.0$). There was no significant difference in satisfaction with goose regulations between the 2000 and 2005 seasons. For general waterfowl hunting satisfaction (Table 11-7), satisfaction with duck-hunting harvest (Table 11-9), duck-hunting regulations (Table 11-10), and goose-hunting experience (Table 11-11), satisfaction was lower in 2005 for all hunter segments except less-engaged hunters. For duck-hunting experience (Table 11-8), satisfaction was significantly lower in 2005 for all hunter segments. Satisfaction

with goose-hunting harvest was higher in 2005 than in 2000 for individualist, achievement-oriented waterfowl hunting enthusiasts, and there was no significant difference for the other hunters segments (Table 11-12). There was no significant difference in satisfaction with goose-hunting regulations between the two seasons for any of the hunter segments (Table 11-13).

Based on a 5-point scale, hunters reported that their satisfaction with duck hunting had declined more in the past 3 years in the survey of the 2005 season ($\bar{x} = 2.0$) than in the survey from the 2000 season ($\bar{x} = 2.5$) (t=22.006, p<0.001). This was true for each of the hunter segments (Table 11-14). Overall, the decline in satisfaction with goose hunting in the past 3 years was not significantly lower in 2005 ($\bar{x} = 2.9$) than in 2000 ($\bar{x} = 2.9$). However, differences were significant by hunter segment (Table 11-15). Results were similar for declines in satisfaction since hunters had begun hunting. Satisfaction had declined significantly for both duck and goose hunting, and the declines were significant in all hunter segments (Tables 11-16, 11-17).

Youth Waterfowl Hunting Day

Reported support for Youth Waterfowl Hunting Day, based on a 5-point scale, declined slightly from 2000 ($\bar{x} = 3.8$) to 2005 ($\bar{x} = 3.6$) (t=6.027, p<0.001). Significant declines in support for Youth Waterfowl Hunting Day were observed in each of the hunter segments (Table 11-18).

Support for Management Strategies

Support for various management strategies decreased from 2000 to 2005 (Table 11-2). Based on a five-point scale from 1 (strongly oppose) to 5 (strongly support), the mean level of support for beginning shooting hours at noon on opening day dropped from 3.0 in 2000 to 2.4 in 2005. Significant declines in support for the noon start to shooting hours were observed in each of the hunter segments except less-engaged hunters (Table 11-20). Likewise, support for ending shooting hours at 4 p.m. for the first part of the season dropped from 3.0 to 2.7. Significant declines in support for the 4 p.m. close to shooting hours were observed among longtime hunters, recreational-casual hunters, and individualist, achievement-oriented enthusiasts (Table 11-21). Support for restriction on open-water hunting dropped from 3.7 to 2.9 (Table 11-22), and support for restrictions on outboard-motor use dropped from 3.8 to 3.2 (Table 11-23). Finally, support for creating waterfowl refuges dropped from 4.5 in 2000 to 4.2 in 2005. Decline in support for creating waterfowl refuges was observed in all hunter segments (Table 11-24).

Importance and Achievement of Waterfowl-Hunting Experiences

There were slight but significant differences in the reported importance of a number of waterfowl-hunting experiences between 2000 and 2005 (Table 11-25). The reported importance of two experiences, hunting areas open to the public and hunting with a dog, increased slightly. All other significant changes in reported importance were declines. There were also slight but significant differences in the reported achievement of a number of waterfowl-hunting experiences between 2000 and 2005 (Table 11-26). Achievement of 'being on my own' was the only experience that increased slightly. All other significant changes in reported achievement were declines.

Section 11: Comparison of 2000 and 2005 Seasons

Table 11-1: Total Days Hunting Waterfowl During Season, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	11.3	10.6	2.131*
Less-engaged participants	10.3	9.0	1.315 n.s.
Recreational-casual participants	11.3	9.8	3.401**
Social enthusiasts	14.2	10.6	3.745***
Individualist/achievement-oriented enthusiasts	14.1	11.8	4.189***

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

Table 11-2: Hunting Opening Saturday, by Hunter Segment

	2000 respondents	2005 respondents	χ^2
Longtime participants	62.0%	68.5%	15.481***
Less-engaged participants	54.3%	47.6%	1.254 n.s.
Recreational-casual participants	61.4%	64.0%	1.611 n.s.
Social enthusiasts	62.5%	61.4%	0.102 n.s.
Individualist/achievement-oriented enthusiasts	64.8%	63.9%	0.156 n.s.

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

Table 11-3: Hunting Opening Sunday, by Hunter Segment

	2000 respondents	2005 respondents	χ^2
Longtime participants	70.5%	64.8%	11.440**
Less-engaged participants	55.6%	65.0%	2.823 n.s.
Recreational-casual participants	65.8%	68.1%	1.331 n.s.
Social enthusiasts	78.8%	71.4%	5.292*
Individualist/achievement-oriented enthusiasts	71.4%	70.2%	0.304 n.s.

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

Table 11-4: Ducks Bagged, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	9.5	8.2	3.756***
Less-engaged participants	7.6	8.4	0.580 n.s.
Recreational-casual participants	9.7	8.3	2.308*
Social enthusiasts	12.5	10.8	2.137*
Individualist/achievement-oriented enthusiasts	11.8	10.4	2.259*

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

Table 11-5: Geese Bagged, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.1	5.2	8.121***
Less-engaged participants	2.0	2.4	1.099 n.s.
Recreational-casual participants	2.9	4.8	7.750***
Social enthusiasts	4.9	7.8	5.392***
Individualist/achievement-oriented enthusiasts	3.9	6.3	7.285***

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

Table 11-6: Satisfaction

	2000 respondents	2005 respondents	t-test
General waterfowl hunting experience	4.8	4.1	14.394***
Duck hunting experience	5.1	4.2	20.661***
Duck hunting harvest	3.8	3.0	16.660***
Duck hunting regulations	4.8	4.4	9.659***
Goose hunting experience	5.0	4.8	4.293***
Goose hunting harvest	4.0	4.2	4.601***
Goose hunting regulations	4.6	4.6	n.s.

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

Table 11-7: General Waterfowl-Hunting Satisfaction, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	4.7	4.1	7.729***
Less-engaged participants	5.0	4.9	0.520 n.s.
Recreational-casual participants	4.7	4.0	7.275***
Social enthusiasts	4.8	3.7	7.417***
Individualist/achievement-oriented enthusiasts	5.0	4.4	6.821***

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

Table 11-8: Satisfaction With Duck-Hunting Experience, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	5.0	4.1	12.961***
Less-engaged participants	5.1	4.6	2.014*
Recreational-casual participants	5.0	4.1	11.152***
Social enthusiasts	5.2	4.0	8.812***
Individualist/achievement-oriented enthusiasts	5.3	4.3	10.881***

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

Table 11-9: Satisfaction With Duck-Hunting Harvest, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.7	2.9	10.766***
Less-engaged participants	3.9	3.7	0.951 n.s.
Recreational-casual participants	3.6	3.0	7.591***
Social enthusiasts	3.8	2.9	6.412***
Individualist/achievement-oriented enthusiasts	3.9	3.1	8.160***

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

Table 11-10: Satisfaction With Duck-Hunting Regulations, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	4.8	4.4	5.615***
Less-engaged participants	4.5	4.3	1.034 n.s.
Recreational-casual participants	4.8	4.4	5.089***
Social enthusiasts	4.5	4.1	2.990**
Individualist/achievement-oriented enthusiasts	5.0	4.5	6.309***

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

Table 11-11: Satisfaction With Goose-Hunting Experience, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	5.1	4.8	3.359**
Less-engaged participants	5.1	4.8	1.134 n.s.
Recreational-casual participants	4.9	4.7	2.655**
Social enthusiasts	5.2	4.7	3.342**
Individualist/achievement-oriented enthusiasts	5.2	4.9	2.858**

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

Table 11-12: Satisfaction With Goose-Hunting Harvest, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	4.1	4.2	1.444 n.s.
Less-engaged participants	4.0	4.0	0.066 n.s.
Recreational-casual participants	3.9	3.9	0.428 n.s.
Social enthusiasts	4.3	4.3	0.168 n.s.
Individualist/achievement-oriented enthusiasts	4.0	4.3	2.560*

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

Table 11-13: Satisfaction With Goose-Hunting Regulations, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	4.7	4.6	0.707 n.s.
Less-engaged participants	4.5	4.7	0.760 n.s.
Recreational-casual participants	4.5	4.6	1.084 n.s.
Social enthusiasts	4.5	4.4	0.456 n.s.
Individualist/achievement-oriented enthusiasts	4.8	4.6	1.914 n.s.

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

Table 11-14: Overall Change in Duck Hunters' Satisfaction Over the Past Three Seasons, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	2.4	2.0	12.296***
Less-engaged participants	2.7	2.2	4.355***
Recreational-casual participants	2.5	1.9	13.680***
Social enthusiasts	2.6	2.0	7.131***
Individualist/achievement-oriented enthusiasts	2.6	2.1	10.060***

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

Table 11-15: Overall Change in Goose Hunters' Satisfaction Over the Past Three Seasons, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	2.9	2.9	0.207 n.s.
Less-engaged participants	3.1	2.6	3.827***
Recreational-casual participants	2.9	2.8	2.761**
Social enthusiasts	3.1	2.9	2.837**
Individualist/achievement-oriented enthusiasts	3.0	2.8	4.079***

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

Table 11-16: Overall Change in Duck Hunters' Satisfaction Since Beginning Hunting, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	2.2	1.7	12.667***
Less-engaged participants	2.6	2.1	3.459**
Recreational-casual participants	2.3	1.8	11.710***
Social enthusiasts	2.5	1.8	8.037***
Individualist/achievement-oriented enthusiasts	2.5	1.9	10.407***

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

Table 11-17: Overall Change in Goose Hunters' Satisfaction Since Beginning Hunting, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.1	3.0	3.000**
Less-engaged participants	3.2	2.8	2.515*
Recreational-casual participants	3.2	2.9	5.789***
Social enthusiasts	3.4	3.1	3.236**
Individualist/achievement-oriented enthusiasts	3.2	3.0	2.892**

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

Table 11-18: Support for the Concept of Youth Waterfowl Hunting Day, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.8	3.6	3.468**
Less-engaged participants	4.0	3.6	3.313**
Recreational-casual participants	3.8	3.6	3.394**
Social enthusiasts	3.9	3.6	3.117**
Individualist/achievement-oriented enthusiasts	3.9	3.6	5.137***

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

Table 11-19: Support for Management Strategies: 2000 and 2005 seasons

	2000 respondents	2005 respondents	t-test
Beginning shooting hours at noon on the opening day of duck season.	3.0	2.4	19.461***
Ending shooting hours at 4 PM for the first part of MN's waterfowl season.	3.0	2.7	11.266***
Restrictions on open-water hunting.	3.7	2.9	22.212***
Restrictions on outboard-motor use	3.8	3.2	17.272***
Creating waterfowl refuges.	4.5	4.2	13.766***

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

Table 11-20: Support for Beginning Shooting Hours at Noon on the Opening day of Duck Season, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.1	2.5	11.778***
Less-engaged participants	3.0	2.7	1.664 n.s.
Recreational-casual participants	2.9	2.3	9.752***
Social enthusiasts	2.8	2.2	5.061***
Individualist/achievement-oriented enthusiasts	2.9	2.4	6.483***

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

Table 11-21: Support for Ending Shooting Hours at 4 p.m. for the First Part of Minnesota's Waterfowl Season, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.0	2.8	4.674***
Less-engaged participants	2.9	3.1	0.988 n.s.
Recreational-casual participants	3.0	2.7	4.988***
Social enthusiasts	2.8	2.7	1.018 n.s.
Individualist/achievement-oriented enthusiasts	2.9	2.7	3.593***

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

Table 11-22: Support for Restrictions on Open-Water Hunting, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.8	3.0	12.740***
Less-engaged participants	3.4	2.8	2.543*
Recreational-casual participants	3.8	2.8	12.007***
Social enthusiasts	3.3	2.8	4.326***
Individualist/achievement-oriented enthusiasts	3.5	2.9	7.405***

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

Table 11-23: Support for Restrictions on Outboard Motor Use, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	3.9	3.2	11.831***
Less-engaged participants	3.6	3.3	1.277 n.s.
Recreational-casual participants	3.8	3.1	9.012***
Social enthusiasts	3.6	3.0	4.969***
Individualist/achievement-oriented enthusiasts	3.7	3.2	5.935***

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

Table 11-24: Support for Creating Waterfowl Refuges, by Hunter Segment

	2000 respondents	2005 respondents	t-test
Longtime participants	4.5	4.3	6.561***
Less-engaged participants	4.4	4.0	2.524*
Recreational-casual participants	4.5	4.1	8.348***
Social enthusiasts	4.5	4.0	5.607***
Individualist/achievement-oriented enthusiasts	4.4	4.2	3.865***

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

Table 11-25: Importance of experiences…

	2002 Mean	2005 Mean[1]	t-test
Enjoying nature and the outdoors	4.7	4.6	9.463***
Good behavior among other waterfowl hunters	4.5	4.5	n.s.
Getting away from crowds of people	4.4	4.4	n.s.
Hunting areas open to the public	3.9	4.0	5.397***
Reducing tension and stress	4.0	4.0	n.s.
Seeing a lot of ducks and geese	4.2	4.0	7.601***
Hunting with friends	4.0	3.9	5.101***
Hunting with family	3.9	3.9	n.s.
Thinking about personal values	3.8	3.7	4.093***
Access to a lot of different hunting areas	3.6	3.6	n.s.
Hunting with a dog	3.5	3.6	4.362***
Developing my skills and abilities	3.8	3.5	11.871***
Using my hunting equipment (decoys, boats, etc.)	3.8	3.5	11.998***
Having a long duck season	3.6	3.4	6.982***
Sharing my hunting skills and knowledge	3.6	3.4	8.080***
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	3.4	3.3	5.834***
Bagging ducks and geese	3.2	3.1	6.150***
Being on my own	3.0	3.0	n.s.
Getting food for my family	2.3	2.1	9.345***
Getting my limit	2.2	2.1	6.311***
A large daily duck bag limit	2.4	2.0	16.597***

[1] Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P ≤ 0.05, **P ≤ 0.01, ***P ≤ 0.001

Table 11-26: Achievement of experiences…

	2002 Mean	2005 Mean[1]	t-test
A large daily duck bag limit	1.9	1.9	n.s.
Access to a lot of different hunting areas	2.6	2.6	n.s.
Bagging ducks and geese	2.4	2.4	n.s.
Being on my own	2.8	2.9	3.261**
Hunting with friends	3.9	3.6	12.783***
Developing my skills and abilities	3.3	3.1	8.715***
Hunting with family	3.4	3.4	n.s.
Enjoying nature and the outdoors	4.5	4.4	5.415***
Getting away from crowds of people	3.8	3.8	n.s.
Getting food for my family	2.5	2.3	7.645***
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	3.0	2.9	3.098**
Getting my limit	1.9	1.9	n.s.
Good behavior among other waterfowl hunters	3.4	3.4	n.s.
Having a long duck season	3.1	2.9	6.763***
Hunting areas open to the public	3.1	3.1	n.s.
Hunting with a dog	3.1	3.2	2.043*
Reducing tension and stress	3.8	3.8	n.s.
Seeing a lot of ducks and geese	2.7	2.3	14.869***
Sharing my hunting skills and knowledge	3.2	3.0	8.547***
Thinking about personal values	3.6	3.5	4.180***
Using my hunting equipment (decoys, boats, etc.)	3.7	3.5	10.531***

[1] Mean is based on the scale: 1 = not at all unimportant, 2 = slightly important, 3 = somewhat important, 4= very important, 5 = extremely important.
n.s.=not significant, *P ≤ 0.05, **P ≤ 0.01, ***P ≤ 0.001

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Appendix A: Survey Instrument

WATERFOWL HUNTING IN MINNESOTA

A follow-up study of respondents to the 2001 waterfowl survey

Ruddy 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
University of Minnesota
St. Paul, Minnesota 55108-6124
(612) 624-3479
sas@umn.edu

Part I. Your Waterfowl Hunting Background

We would like to know about your background and experience as a waterfowl hunter.

Q1. Do you still consider yourself a waterfowl hunter?

- ❑ No
- ❑ Yes

Q2. For the previous 5 years, excluding the most recent (2005) waterfowl hunting season, please indicate which years you hunted waterfowl in Minnesota? (*Check all that apply*.)

- ❑ 2004
- ❑ 2003
- ❑ 2002
- ❑ 2001
- ❑ 2000

Q3. Did you hunt waterfowl in Minnesota during the 2005 season? (*Please check one.)*

- ❑ No. → (***Skip to Part III, question Q10.)***
- ❑ Yes. (Please continue with *Part II, Q4*.)

Part II. Your 2005 Minnesota Waterfowl Hunting Season

Next we have a few questions about your hunting experiences during the 2005 Minnesota waterfowl-hunting season.
(*If you did not hunt waterfowl in Minnesota in 2005 please skip to Part III, question Q10.)*

Q4. Please indicate whether you hunted for the following kinds of waterfowl in Minnesota in 2005. If you did hunt, estimate the total number of that kind of waterfowl you bagged (shot and retrieved).

During the 2005 waterfowl season, did you hunt in Minnesota for:	*Please circle no or yes.*		If yes, how many did you personally bag in Minnesota? (*Write in number bagged.)*
Ducks	no	yes	_____ducks
Canada Geese during:			
Early September Canada Goose Season	no	yes	_____geese
Regular Canada Goose Season (October—Early December)	no	yes	_____geese
Late Goose Season (December)	no	yes	_____geese
Other Geese (Snow Geese, etc.)	no	yes	_____geese

Q5. During the 2005 Minnesota waterfowl season, about how many days did you hunt on…

Weekend days or holidays: _____days

Weekdays (Monday-Friday): _____days

Q6. Did you hunt the opening Saturday (Oct. 1) of the 2005 Minnesota Season? (*Please check one*.)

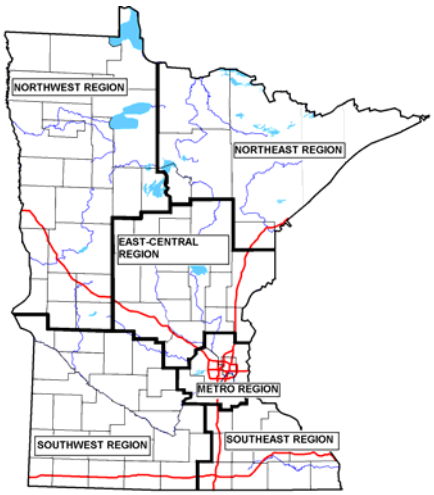
- ❑ No
- ❑ Yes

Q7. Did you hunt the first Sunday (Oct. 2) of the 2005 Minnesota Season? (*Please check one*.)

- ❑ No
- ❑ Yes

Q8. During the 2005 Minnesota waterfowl-hunting season, how many days did you hunt in each region? (*See map.*) *Do not include days hunted during the special September or December goose seasons.*

Region	Number of Days
Northwest region	days
Northeast region	days
East-central region	days
Southwest region	days
Southeast region	days
Metro region	days



Q9. During the 2005 Minnesota waterfowl-hunting season, I hunted waterfowl… (*Check one of the following.*)

- ❑ mostly on privately owned areas
- ❑ mostly on public access areas (Wildlife Management Areas, Waterfowl Production Areas, public access waters)
- ❑ public and private about the same

Part III. Your Hunting Satisfaction

Q10. During your most recent Minnesota waterfowl-hunting season, how satisfied or dissatisfied were you with the following? (*Please 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

Q11. During the past three duck and goose hunting seasons in Minnesota, would you say your overall level of satisfaction with waterfowl hunting in Minnesota has generally decreased or increased? *(Please circle one for each.) (If you did not hunt waterfowl during the past 3 seasons, please skip to the next question.)*

	Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Did not hunt ducks/geese
Ducks	1	2	3	4	5	9
Geese	1	2	3	4	5	9

Q12. Since you began hunting ducks and geese in Minnesota, would you say your overall satisfaction with duck and goose hunting in Minnesota has decreased or increased? (*Please circle one response for each.*)

	Greatly decreased	Decreased	Stayed the same	Increased	Greatly increased	Did not hunt ducks/geese
Ducks	1	2	3	4	5	9
Geese	1	2	3	4	5	9

Q13. During your most recent 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 ducks/geese
Number of ducks **seen**	1	2	3	4	5	6	7	9
Number of geese **seen**	1	2	3	4	5	6	7	9

Part IV. Future Waterfowl Hunting in Minnesota

Q14. Please indicate how likely it is you will hunt ducks and geese at some time during the next 5 years in Minnesota. (*Please circle one response for each activity.)*

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

Part V. General Waterfowl Hunting Information

Q15. 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.

Q16. What type of waterfowl hunter do you consider yourself:

- ❑ **Casual** (for example, waterfowl hunting is incidental to your other travel and outdoor interests, you only go waterfowl hunting when asked by a family member or friend, or waterfowl hunting is not a particularly important outdoor activity)
- ❑ **Active** (for example, you infrequently travel away from home specifically to waterfowl hunt, or for you waterfowl hunting is an important but not exclusive outdoor activity)
- ❑ **Committed** (for example, you are willing to travel on short notice to go waterfowl hunting, you purchase ever-increasing amounts of equipment to hunt waterfowl, or waterfowl hunting is a primary outdoor activity)

Q17. About how much do you spend on waterfowl hunting each year? ***(Estimate your annual expenditures on equipment including decoys, calls, shells, guns, travel, etc. Please check one.)***

- ❑ $250 or less
- ❑ $251-$1,000
- ❑ $1,001-$5,000
- ❑ Over $5,000

Q18. Please indicate how much you agree or disagree with the following statements about waterfowl hunting. ***Please circle one response for each:***

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Waterfowl hunting is one of the most enjoyable things I do.	1	2	3	4	5
I am knowledgeable about waterfowl hunting.	1	2	3	4	5
The decision to go waterfowl hunting is primarily my own.	1	2	3	4	5
I find that a lot of my life is organized around waterfowl hunting.	1	2	3	4	5
Waterfowl hunting has a central role in my life.	1	2	3	4	5
Most of my friends are in some way connected with waterfowl hunting.	1	2	3	4	5
When I am waterfowl hunting, others see me the way I want them to see me.	1	2	3	4	5
I don't really know much about waterfowl hunting.	1	2	3	4	5
I consider myself an educated consumer regarding waterfowl hunting.	1	2	3	4	5
Waterfowl hunting interests me.	1	2	3	4	5
Waterfowl hunting is important to me.	1	2	3	4	5
You can tell a lot about a person when you see them waterfowl hunting.	1	2	3	4	5
When I am waterfowl hunting I can really be myself.	1	2	3	4	5
I enjoy discussing waterfowl hunting with my friends.	1	2	3	4	5
The decision to go waterfowl hunting is not entirely my own.	1	2	3	4	5
For me to change my preference from waterfowl hunting to another leisure activity would require major rethinking.	1	2	3	4	5
I find a lot of my life organized around waterfowl-hunting activities.	1	2	3	4	5
Even if close friends recommended another recreational activity, I would not change my preference from waterfowl hunting.	1	2	3	4	5
I have acquired equipment that I would not use if I quit waterfowl hunting.	1	2	3	4	5
I have close friendships that are based on a common interest in waterfowl hunting.	1	2	3	4	5
Compared to other waterfowl hunters, I own a lot of waterfowl-hunting equipment.	1	2	3	4	5

Q19. What is the minimum number of ducks you need to harvest in a day's hunt to feel satisfied with your harvest?

_____ ducks

Q20. What is the minimum number of ducks you need to harvest in a season to feel satisfied with your harvest?

_____ ducks

Q21. What is the minimum number of geese you need to harvest in a day's hunt to feel satisfied with your harvest?

_____ geese

Q22. What is the minimum number of geese you need to harvest in a season to feel satisfied with your harvest?

_____ geese

Q23. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2005. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (4 ducks)?

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

Q24. The U.S. Fish and Wildlife Service allowed states to have a 2 hen mallard daily bag limit in 2005. Which one statement best describes how you feel about the hen mallard daily bag limit in Minnesota (1 hen mallard)?

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

Part VI. Motivations for Waterfowl Hunting

Q25. Below is a list of possible experiences that might affect how satisfied you are with waterfowl hunting. For each one:

- **Tell us how important it is to your waterfowl hunting satisfaction**
- **Next, tell us the degree to which each happened during your most recent 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
A large daily duck bag limit	1	2	3	4	5	1	2	3	4	5
Access to a lot of different hunting areas	1	2	3	4	5	1	2	3	4	5
Bagging ducks and geese	1	2	3	4	5	1	2	3	4	5
Being on my own	1	2	3	4	5	1	2	3	4	5
Hunting with friends	1	2	3	4	5	1	2	3	4	5
Developing my skills and abilities	1	2	3	4	5	1	2	3	4	5
Hunting with family	1	2	3	4	5	1	2	3	4	5
Enjoying nature and the outdoors	1	2	3	4	5	1	2	3	4	5
Getting away from crowds of people	1	2	3	4	5	1	2	3	4	5
Getting food for my family	1	2	3	4	5	1	2	3	4	5
Getting information about hunting seasons and conditions from the DNR or US Fish and Wildlife Service	1	2	3	4	5	1	2	3	4	5
Getting my limit	1	2	3	4	5	1	2	3	4	5
Good behavior among other waterfowl hunters	1	2	3	4	5	1	2	3	4	5
Having a long duck season	1	2	3	4	5	1	2	3	4	5
Hunting areas open to the public	1	2	3	4	5	1	2	3	4	5
Hunting with a dog	1	2	3	4	5	1	2	3	4	5
Reducing tension and stress	1	2	3	4	5	1	2	3	4	5

Seeing a lot of ducks and geese	1	2	3	4	5		1	2	3	4	5
Sharing my hunting skills and knowledge	1	2	3	4	5		1	2	3	4	5
Thinking about personal values	1	2	3	4	5		1	2	3	4	5
Using my hunting equipment (decoys, boats, etc.)	1	2	3	4	5		1	2	3	4	5

Q26. Thinking about changes in hunting quality over the last 5 years in Minnesota, how much better or worse do you think the following have become?

	Much worse	Somewhat worse	Neither better nor worse	Somewhat better	Much better	Don't know
Waterfowl habitat where I hunt	1	2	3	4	5	9
When waterfowl are arriving in my area	1	2	3	4	5	9
The length of time waterfowl are staying in my area	1	2	3	4	5	9
Timing of waterfowl seasons	1	2	3	4	5	9
Overall waterfowl numbers	1	2	3	4	5	9
Ease of understanding regulations	1	2	3	4	5	9
The number of places to hunt	1	2	3	4	5	9
Amount of time I have to hunt waterfowl	1	2	3	4	5	9
Weather patterns for waterfowl hunting	1	2	3	4	5	9

Q27. Indicate how much more or less of a problem the following have become over the last 5 years in Minnesota.

	Much worse	Somewhat worse	Neither better nor worse	Somewhat better	Much better	Don't know
Crowding at hunting areas	1	2	3	4	5	9
Hunting pressure	1	2	3	4	5	9
Waterfowl unable to find rest areas	1	2	3	4	5	9
Shifting waterfowl migration routes	1	2	3	4	5	9
Interference from other hunters	1	2	3	4	5	9
Waterfowl arriving after the season is closed	1	2	3	4	5	9
Waterfowl concentrating on fewer areas	1	2	3	4	5	9
Waterfowl numbers on opening weekend	1	2	3	4	5	9

Part VII. Constraints to Your Waterfowl Hunting Activity

	Definitely False	Moderately False	Slightly False	Neutral	Slightly True	Moderately True	Definitely True
Q28. If I want to, I can easily go waterfowl hunting.	1	2	3	4	5	6	7

Q29. How much do the following factors limit your waterfowl hunting participation? Circle the response that indicates how much the factor limits the amount & type of waterfowl hunting you do. *Circle one response for each:*

	HOW MUCH DO THE LISTED FACTORS LIMIT THE AMOUNT AND TYPES OF WATERFOWL HUNTING YOU DO?						
	Not at all Limiting						**Very Limiting**
Family commitments	1	2	3	4	5	6	7
Work commitments	1	2	3	4	5	6	7
Access to private land for hunting	1	2	3	4	5	6	7
Access to public land for hunting	1	2	3	4	5	6	7
Crowding at hunting areas	1	2	3	4	5	6	7
Cost of equipment	1	2	3	4	5	6	7
Cost of licenses	1	2	3	4	5	6	7
Travel costs	1	2	3	4	5	6	7
Waterfowl hunting regulations too restrictive	1	2	3	4	5	6	7
Availability of waterfowl hunting partners	1	2	3	4	5	6	7
Physically unable to go waterfowl hunting	1	2	3	4	5	6	7
Insufficient hunting skills	1	2	3	4	5	6	7
Interest in other recreational activities	1	2	3	4	5	6	7
Safety concerns	1	2	3	4	5	6	7
Waterfowl populations too low	1	2	3	4	5	6	7
No desire for waterfowl as food	1	2	3	4	5	6	7
No need for waterfowl as food	1	2	3	4	5	6	7
Personal concern for animals' pain and distress	1	2	3	4	5	6	7
Other people's concern for animals' pain and distress	1	2	3	4	5	6	7
Weather conditions	1	2	3	4	5	6	7
Not enough leisure time	1	2	3	4	5	6	7
The type of people that hunt waterfowl	1	2	3	4	5	6	7

The amount of planning required to go hunting	1	2	3	4	5	6	7
Age	1	2	3	4	5	6	7
The amount of effort required to go hunting	1	2	3	4	5	6	7
No hunting opportunities near my home	1	2	3	4	5	6	7
The timing of the waterfowl migration	1	2	3	4	5	6	7
Poor health	1	2	3	4	5	6	7

Part VIII. Waterfowl Management and Special Regulations

Q30. We would like to know if you oppose or support each of these different strategies. (*Please circle one for each.*)

	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support	Don't know
Beginning shooting hours at noon on the opening day of duck season.	1	2	3	4	5	9
Ending shooting hours at 4:00 PM for the first part of Minnesota's waterfowl season.	1	2	3	4	5	9
Restrictions on open water hunting.	1	2	3	4	5	9
Restrictions on outboard motor use.	1	2	3	4	5	9
Creating waterfowl refuges.	1	2	3	4	5	9

Part IX. Youth Waterfowl Hunting Day

Since 1997, the U.S. Fish and Wildlife Service has allowed states to select a Youth Waterfowl Hunting Day outside the regular waterfowl season for youth age 15 and younger to take ducks and geese. Beginning in 2000, states could designate two days for the Youth Waterfowl Hunt. 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 1997.

Q31. Do you support or oppose the concept of Youth Waterfowl Hunting Day? (*Please check one.*)

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

Q32. During your most recent waterfowl hunting season, did you take any youth hunting on Youth Waterfowl Hunting Day? (*Please check one.*)

- ❑ No
- ❑ Yes

Part X. Battery-Operated Spinning-Wing Decoys

Q33. Do you own a battery-operated, spinning-wing decoy? *(Please check one.)*

- ❑ No
- ❑ Yes

Q34. Did you use battery-operated, spinning-wing decoys when hunting in Minnesota during your most recent waterfowl season? (*Please check one.*)

- ❑ No
- ❑ Yes

Part XI. The Minnesota Department of Natural Resources

Q35. How do you feel about the Minnesota Department of Natural Resources (DNR)? *Please circle one response for each of the following statements:*

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know
The Minnesota DNR has waterfowl management staff who are well trained for their jobs.	1	2	3	4	5	9
The Minnesota DNR listens to waterfowl hunters' concerns.	1	2	3	4	5	9
The Minnesota DNR responds to waterfowl hunters' concerns.	1	2	3	4	5	9
Minnesota DNR answers questions honestly.	1	2	3	4	5	9

Part XII. About You

Q36. 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*: _____

Q37. Where do you get information about waterfowl hunting? (*Please check all that apply.*)

- ❑ Minnesota DNR news releases and publications
- ❑ Minnesota DNR Web site
- ❑ Minneapolis Star Tribune
- ❑ St. Paul Pioneer Press
- ❑ Other newspapers
- ❑ Weekly/monthly outdoor publications
- ❑ Television/radio
- ❑ Friends, family, and other individuals
- ❑ Other: _____

Q38. Have you ever hunted for waterfowl in a state or province other than Minnesota?

- ❑ No
- ❑ Yes. (*Please answer question Q39.*)

Q39. Did you hunt for waterfowl in a state or province other than Minnesota in 2005? (*Please check one.*)

- ❑ No
- ❑ Yes. (*Please answer question Q40.*)

Q40. If yes, list locations, number of days you hunted waterfowl, and number you personally bagged in that area during 2005:

STATE OR PROVINCE	NUMBER OF DAYS HUNTED WATERFOWL	NUMBER OF DUCKS YOU PERSONALLY BAGGED	NUMBER OF GEESE YOU PERSONALLY BAGGED
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese
_____	_____ days	_____ ducks	_____ geese

Part XIII. Other Hunting Activities

Q41. Please indicate whether you have ever hunted for the following game animals. If you have hunted for a type of game, please indicate how many years during the previous 5 years that you hunted for that type of game.

Have you ever hunted in Minnesota for:	Please circle no or yes.		If yes, during the previous 5 years, how many years did you hunt for each kind of game?					
Deer - firearm	no	yes	0	1	2	3	4	5
- archery	no	yes	0	1	2	3	4	5
- muzzleloader	no	yes	0	1	2	3	4	5
Pheasants	no	yes	0	1	2	3	4	5
Grouse/woodcock	no	yes	0	1	2	3	4	5
Turkeys	no	yes	0	1	2	3	4	5
Small game (dove, rabbits, squirrels, fox)	no	yes	0	1	2	3	4	5

Q42. Please indicate whether you hunted for the following game animals in Minnesota during 2005. If you did hunt, estimate the total number of days that you hunted.

During 2005 in Minnesota, did you hunt for:	Please circle no or yes.		If yes, how many days did you hunt in Minnesota in 2005?
Deer - firearm	no	yes	_____ days
- archery	no	yes	_____ days
- muzzleloader	no	yes	_____ days
Pheasants	no	yes	_____ days
Grouse/woodcock	no	yes	_____ days
Turkeys	no	yes	_____ days
Small game (dove, rabbits, squirrels, fox)	no	yes	_____ days

Please write additional comments below or on additional sheets. Survey results will be available in the fall of 2006 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 sas@umn.edu or 612-624-3479. If you have a specific question about waterfowl hunting, please contact the Minnesota DNR at 1-888-MINNDNR.