# Small Game Hunter
# Lead Shot Study


# Appendices

A cooperative study conducted by:

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

# Small Game Hunter Lead Shot Study

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# Appendix A: Methodology

# Introduction

## Study Purpose and Objectives

In a recent report to the Minnesota Department of Natural Resources, the Nontoxic Shot Advisory Committee (NSAC) agreed that further restrictions on the use of lead shot are inevitable at some future time. While no consensus on specific regulations was reached, the NSAC did agree that more restrictive regulations on the use of lead shot in shotgun hunting are warranted. Five viable options were identified as deeming further consideration. Currently, there is potential legislation that would restrict the use of lead shot on public and/or private land in the farmland/prairie zone of Minnesota in the next few years.

The NSAC recognized that for more restrictive regulations to be implemented successfully, the impacted public must be well-informed and accepting of such regulations. The purpose of this study was to provide information about small game hunter perceptions and knowledge of using toxic/non-toxic shot and help identify appropriate message points for information and education programs addressing the issue of restricting the use of lead shot. Specific objectives of this study were to:

1. Identify levels of use of lead and non-toxic shot in the farmland zone by small game hunters;
2. Identify attitudes toward restrictions on toxic shot;
3. Identify support/opposition for restrictions on the use of toxic shot;
4. Identify the key beliefs affecting attitudes toward restrictions on toxic shot;
5. Identify the influence of conservation/stewardship values in shaping attitudes and beliefs about restricting the use of toxic shot;
6. Develop and test the effectiveness of targeted messages in changing attitude, beliefs, and behaviors concerning restrictions on the use of toxic shot.

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 all Minnesota residents who hunt small game. The sampling frame used to draw the study sample was the Minnesota Department of Natural Resource's (DNR) Electronic Licensing System (ELS). A stratified random sample of Minnesota resident small game hunters in the ELS was drawn. The initial study sample was stratified by residence of individuals (determined by ZIP code) and included 1) 800 individuals who lived in the seven-county Minneapolis/St. Paul metropolitan area, and 2) 1,200 individuals who lived outside the metropolitan area. five regions (Fig. I-1). The target sample size was n = 400 for the metropolitan region and 600 from the non-metropolitan region (n = 1,000 statewide).

### 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 September 2007 and January 2008. 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. Approximately eight weeks after the third survey mailing a short one-page survey was distributed to assess nonresponse bias.

**Survey Instrument**

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

- small game hunting activity and involvement,
- shotgun and shot use and preferences,
- beliefs, attitudes, and norms about lead shot,
- trust in the Minnesota Department of Natural Resources and media resources, and
- environmental values.

**Data Entry and Analysis**

Data were keypunched and the data were analyzed on a PC using the Statistical Program for the Social Sciences (SPSS for Windows 15.0). We computed basic descriptive statistics and frequencies for the statewide results. Metropolitan and non-metropolitan 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. 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 ANOVA 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 one-way ANOVA calculations in this report, to indicate the strength of the relationship. Like the Cramer's V statistic, eta ($\eta$) ranges from 0.0 (no association) to 1.0 (perfect association) (Norusis, 2002).

Scales of multiple items (i.e. questions) were included in the survey to measure constructs like involvement in small game hunting. The reliability of items 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. Factor analysis was used to explore the relationship between items in scales. Factor analysis "represents relations among observed variables in terms of latent constructs" (Knoke,

Bohrnstedt and Mee, 2002, p. 414). Presumably, the latent constructs generate the covariances observed among observed variables (Knoke, Bohrnstedt and Mee, 2002).

### Survey Response Rate

Of the 2,000 questionnaires mailed, 54 were undeliverable and 10 were sent to a person who had moved out of the state. Of the remaining 1,936 surveys, a total of 920 were returned, resulting in an overall response rate of 47.5%. Response rates for the metropolitan and non-metropolitan regions are summarized in Table I-1. Please note that the chart of response rates does not include 5 full-length surveys and 2 shortened surveys that were returned without identification numbers. These surveys were included in statewide results but could not be included in regional analyses.

**Table I-1: Response rates for each management region**

| | Initial sample size | Number invalid | Valid sample size | Number of full surveys returned | Response rate % | Number of shortened surveys returned | Total response rate % |
|---|---|---|---|---|---|---|---|
| Metropolitan region | 800 | 25 | 775 | 376 | 48.5% | 53 | 55.4% |
| Non-metropolitan region | 1,200 | 39 | 1,161 | 539 | 46.4% | 100 | 55.0% |
| Total | 2,000 | 64 | 1,936 | 915 | 47.3% | 153 | 55.2% |

## Population Estimates

### Statewide Estimates

The study sample was drawn using a stratified random sample defined by metropolitan versus non-metropolitan residence. For this reason the data had to be weighted to reflect the proportion of the population in each region when making overall estimates (Figure I-2). In order to address nonresponse bias, statewide data is also weighted based on differences in responses to the main survey and the shortened survey used to gauge nonresponse bias.

### Regional Estimates

At the regional level, estimates were calculated based on the region of residence. Weights correcting for nonresponse bias were calculated based on differences in responses to the main survey and the shortened survey used to gauge nonresponse bias and applied to these data. While there were a few statistically significant differences between the weighted and unweighted data, weighting the data did not change results beyond the margin of error for the survey and the effect size of all differences were minimal. For this reason, data were not weighted for the regional estimates reported here.

**Table I-2: Proportion of state small game hunters by region of residence in Minnesota.**

| Region of residence | Sample | | Population | |
|---|---|---|---|---|
| | Frequency | Proportion | Frequency[1] | Proportion |
| Metro | 376 | 41% | 92,105 | 31% |
| Non-metro | 539 | 59% | 205,009 | 69% |
| Statewide[2] | 915 | 100% | 297,114 | 100% |

[1] Source: DNR license database

# Appendix B: Tables of Survey Results

# Section 1: Small Game Hunting Activity and Involvement

Respondents were asked to report which types of small game they typically hunted for, and whether they hunted for different types of game in the Minnesota farmland zone. They were also asked to rate their involvement in small-game hunting.

**Small-game hunting participation**

Nearly three-fourths of respondents (72.0%) had hunted for small game in the Minnesota farmland zone during the past 5 years (Table 1-1). A significantly greater proportion of metropolitan residents (77. 3%) had hunted in the farmland zone compared to non-metropolitan residents (68.0%) ($\chi^2$= 8.893**; Cramer's V = 0.101).

Over half of respondents reported that they typically hunted for pheasant (67.8%) or grouse (58.3%), while about one-fourth reported that they hunted for squirrel (24.5%) or rabbits (24.0%). Less than one-fifth of the respondents typically hunted for woodcock (12.6%), dove (10.6%), or snipe/rail (3.2%). Significantly greater proportions of metropolitan respondents typically hunted for pheasant and grouse, and significantly smaller proportions hunted for squirrel and rabbits (Table 1-2). Table 1-3 displays the average number of days that respondents hunted for different types of small game.

Over half of respondents (59.9%) reported that they typically hunted for pheasant in the farmland zone, while less than one in five respondents reported that they typically hunted for the other types of small game in the farmland zone (Table 1-4). A significantly greater proportion of metropolitan respondents typically hunted for woodcock in the farmland zone, and significantly smaller proportions of metro respondents hunted for squirrel and rabbits in the farmland zone (Table 1-4). Table 1-5 displays the average number of days that respondents hunted for different types of small game in the farmland zone.

On average, respondents had been hunting small game in the Minnesota farmland zone for 21.4 years, and there was no significant difference between metropolitan and non-metropolitan respondents (Table 1-6). About half of respondents reported frequently or always hunting with a dog, with metropolitan respondents hunting more frequently with dogs (Table 1-7). About 60% of respondents reported hunting with children under age 12 at least some of the time, with respondents from outside the metro area hunting more frequently with children (Table 1-8).

**Involvement in small game hunting**

Respondents were asked to rate 20 items addressing their involvement and commitment to small game hunting, using the scale 1=strongly disagree to 5=strongly agree (Tables 1-9 to 1-29). The Cronbach's alpha for the 20-item scale was 0.907. Factor analysis identified four dimensions of involvement in small game hunting; (a) centrality, (b) knowledge/volitional control, (c) identity/social, and (d) importance (Table 1-29; Figure 1-1).

Six items loaded on the **knowledge/volitional control** factor ($\alpha$=0.759, $\bar{x}$=4.2). Knowledge and control items included: (a) small game hunting is one of the most enjoyable things I do ($\bar{x}$=4.2) (Table 1-9), (b) I am knowledgeable about small game hunting ($\bar{x}$=4.2) (Table 1-10), (c) the decision to go small game hunting is primarily my own ($\bar{x}$=4.4) (Table 1-11), (d) I don't really know much about small game hunting ($\bar{x}$=1.8) (Table 1-16), (e) small game hunting interests me ($\bar{x}$=4.5) (Table 1-14), and (f) the decision to go small game hunting is not entirely my own ($\bar{x}$=2.3) (Table 1-22).

Seven items loaded on the **centrality** factor (α=0.878, $\bar{x}$ =3.2). Centrality items included: (a) I find that a lot of my life is organized around small game hunting ( $\bar{x}$ =2.9) (Table 1-12), (b) small game hunting has a central role in my life ( $\bar{x}$ =2.9) (Table 1-13), (c) most of my friends are in some way connected with small game hunting ( $\bar{x}$ =3.4) (Table 1-14), (d) for me to change my preference from small game hunting to another leisure activity would require major rethinking ( $\bar{x}$ = 3.5) (Table 1-23), (e) I find a lot of my life organized around small game hunting activities ( $\bar{x}$ =2.9) (Table 1-24), (f) I have close friendships that are based on a common interest in small game hunting ( $\bar{x}$ =3.7) (Table 1-27), and (g) compared to other small game hunters, I own a lot of small game hunting equipment ( $\bar{x}$ =3.1) (Table 1-28).

Four items loaded on the **identity** factor (α=0.724, $\bar{x}$ =3.7). Identity items included: (a) when I am small game hunting, others see me the way I want them to see me ( $\bar{x}$ =3.6) (Table 1-15), (b) you can tell a lot about a person when you see them small game hunting ( $\bar{x}$ =3.4) (Table 1-20), (c) when I am small game hunting I can really be myself ( $\bar{x}$ =3.8) (Table 1-21), and (d) I enjoy discussing small game hunting with my friends ( $\bar{x}$ =4.0) (Table 1-22).

Three items loaded on the **importance** factor (α=0.650, $\bar{x}$ =3.9). Importance items included (a) I have acquired equipment that I would not use if I quit small game hunting ( $\bar{x}$ =4.0) (Table 1-18), (b) small game hunting is important to me ( $\bar{x}$ =4.1) (Table 1-25), and (c) even if close friends recommended another recreational activity, I would not change my preference from small game hunting ( $\bar{x}$ =3.6) (Table 1-26).

There were only a few significant differences between metropolitan and non-metropolitan respondents in their involvement with small game hunting. Non-metropolitan respondents agreed more strongly that most of their friends were in some way connected with small game hunting (Table 1-14). Metropolitan respondents agreed more strongly that they had acquired equipment that they would not use if they quit small game hunting (Table 1-18) and that even if close friends recommended another recreational activity that they would not change their preference from small game hunting (Table 1-25).

**Table 1-1: Proportion of respondents who hunted for small game in the Minnesota farmland zone during the past 5 years**

| Region of residence | % of hunters[1] indicating they hunted in the Minnesota farmland zone in past 5 years | | |
|---|---|---|---|
| | n | Yes | No |
| Statewide[2] | 823 | 72.0% | 28.0% |
| METRO | 357 | 77.3% | 22.7% |
| NONMETRO | 507 | 68.0% | 32.0% |
| | | $\chi^2$= 8.893**; Cramer's V = 0.101 | |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-2: Percentage of hunters who hunt for specific types of small game in Minnesota**

| | Pheasant | Grouse | Woodcock | Snipe/Rail | Dove | Rabbits | Squirrel |
|---|---|---|---|---|---|---|---|
| Statewide | 67.8% | 58.3% | 12.6% | 3.2% | 10.6% | 24.0% | 24.5% |
| METRO | 71.3% | 62.1% | 15.3% | 3.7% | 8.9% | 15.5% | 20.0% |
| NONMETRO | 64.0% | 55.6% | 11.5% | 2.9% | 11.7% | 27.8% | 26.3% |
| | $\chi^2$= 5.449*; CV = 0.077 | $\chi^2$= 3.931*; CV = 0.065 | $\chi^2$= 2.772 n.s.; CV = 0.055 | $\chi^2$= 0.413 n.s.; CV = 0.021 | $\chi^2$= 1.797 n.s.; CV = 0.044 | $\chi^2$= 19.176***; CV = 0.144 | $\chi^2$= 4.957*; CV = 0.073 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-3: Average number of days hunting for specific types of small game in Minnesota**

| | Pheasant | Grouse | Woodcock | Snipe/Rail | Dove | Rabbits | Squirrel |
|---|---|---|---|---|---|---|---|
| Statewide | 8.4 | 8.2 | 8.1 | 6.2 | 5.8 | 7.5 | 7.2 |
| METRO | 9.2 | 5.9 | 6.8 | 6.1 | 6.0 | 8.1 | 7.7 |
| NONMETRO | 6.9 | 9.4 | 8.7 | 6.6 | 5.6 | 7.5 | 7.4 |
| | F=6.238*; $\eta$=0.111 | F=20.882***; $\eta$=0.195 | F=0.699 n.s.; $\eta$=0.069 | F=0.249 n.s.; $\eta$=0.063 | F=0.127 n.s.; $\eta$=0.034 | F=0.005 n.s.; $\eta$=0.005 | F=0.004 n.s.; $\eta$=0.004 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-4: Percentage of hunters who hunt for specific types of small game in the farmland zone**

| | Pheasant | Grouse | Woodcock | Snipe/Rail | Dove | Rabbits | Squirrel |
|---|---|---|---|---|---|---|---|
| Statewide | 59.9% | 15.7% | 3.8% | 2.1% | 9.3% | 17.0% | 17.8% |
| METRO | 62.4% | 16.3% | 6.3% | 2.9% | 7.9% | 10.5% | 13.9% |
| NONMETRO | 56.5% | 15.0% | 2.7% | 1.8% | 10.2% | 19.9% | 19.6% |
| | $\chi^2$= 3.201 n.s.; CV = 0.059 | $\chi^2$= 0.300 n.s.; CV = 0.018 | $\chi^2$= 7.105**; CV = 0.088 | $\chi^2$= 1.152 n.s.; CV = 0.035 | $\chi^2$= 1.462 n.s.; CV = 0.040 | $\chi^2$= 14.689***; CV = 0.126 | $\chi^2$= 4.948*; CV = 0.073 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-5: Average number of days hunting for specific types of small game in the farmland zone**

| | Pheasant | Grouse | Woodcock | Snipe/Rail | Dove | Rabbits | Squirrel |
|---|---|---|---|---|---|---|---|
| Statewide | 10.5 | 6.5 | 7.3 | 7.7 | 5.3 | 7.7 | 7.4 |
| METRO | 7.4 | 5.1 | 6.2 | 6.4 | 5.5 | 6.4 | 6.7 |
| NONMETRO | 11.9 | 7.4 | 8.6 | 8.8 | 5.2 | 8.0 | 7.6 |
| | F=20.781***; $\eta$=0.186 | F=2.171 n.s.; $\eta$=0.077 | F=1.920 n.s.; $\eta$=0.129 | F=0.327 n.s.; $\eta$=0.075 | F=0.396 n.s.; $\eta$=0.059 | F=1.186 n.s.; $\eta$=0.077 | F=0.465 n.s.; $\eta$=0.047 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-6: Years hunting small game in the farmland area of Minnesota**

| | n | Years |
|---|---|---|
| Statewide | 825 | 21.4 |
| METRO | 356 | 21.2 |
| NONMETRO | 508 | 21.4 |
| | | F=0.028 n.s.; $\eta$=0.006 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-7: How often do you hunt with A DOG?**

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 17.5% | 12.9% | 17.5% | 23.6% | 28.5% | 3.3 |
| METRO | 372 | 13.4% | 15.3% | 18.3% | 19.4% | 33.6% | 3.4 |
| NONMETRO | 531 | 19.8% | 12.1% | 17.3% | 25.4% | 25.4% | 3.3 |
| | $\chi^2$= 15.566**; Cramer's V = 0.131 | | | | | | F=4.057*; $\eta$=0.067 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-8: How often do you hunt with CHILDREN UNDER 12?**

| 9 | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 847 | 40.3% | 23.9% | 25.2% | 9.0% | 1.7% | 2.1 |
| METRO | 366 | 50.3% | 23.5% | 17.5% | 8.2% | 0.5% | 1.9 |
| NONMETRO | 521 | 36.7% | 23.2% | 28.0% | 10.0% | 2.1% | 2.2 |
| | $\chi^2$= 23.843***; Cramer's V = 0.164 | | | | | | F=19.873*** $\eta$=0.148 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-9: Involvement in small game hunting: Small game hunting is one of the most enjoyable things I do.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 1.0% | 2.3% | 11.9% | 43.4% | 41.4% | 4.2 |
| METRO | 370 | 1.1% | 2.2% | 13.5% | 41.6% | 41.6% | 4.2 |
| NONMETRO | 532 | 0.9% | 2.3% | 11.1% | 44.2% | 41.5% | 4.2 |
| | $\chi^2$= 1.442 n.s.; Cramer's V = 0.040 | | | | | | F=0.218 n.s.; $\eta$=0.016 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-10: Involvement in small game hunting: I am knowledgeable about small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 0.3% | 1.2% | 12.6% | 52.5% | 33.3% | 4.2 |
| METRO | 369 | 0.3% | 1.4% | 13.0% | 51.5% | 33.9% | 4.2 |
| NONMETRO | 532 | 0.4% | 1.1% | 12.2% | 53.4% | 32.9% | 4.2 |
| | $\chi^2$=0.484 n.s.; Cramer's V = 0.023 | | | | | | F=0.000 n.s.; $\eta$=0.000 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-11: Involvement in small game hunting: The decision to go small game hunting is primarily my own.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 0.6% | 0.8% | 5.4% | 44.4% | 48.8% | 4.4 |
| METRO | 365 | 0.5% | 0.8% | 4.7% | 43.8% | 50.1% | 4.4 |
| NONMETRO | 526 | 0.6% | 1.0% | 5.7% | 44.5% | 48.3% | 4.4 |
| | $\chi^2$= 0.659 n.s.; Cramer's V = 0.027 | | | | | | F=0.477 n.s.; $\eta$=0.023 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-12: Involvement in small game hunting: I find that a lot of my life is organized around small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 8.3% | 28.1% | 35.1% | 20.1% | 8.3% | 2.9 |
| METRO | 369 | 8.9% | 28.5% | 36.6% | 17.3% | 8.7% | 2.9 |
| NONMETRO | 531 | 8.5% | 27.3% | 34.5% | 21.7% | 8.1% | 2.9 |
| | $\chi^2$= 2.558 n.s.; Cramer's V = 0.053 | | | | | | F=0.521 n.s.; $\eta$=0.024 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-13: Involvement in small game hunting: Small game hunting has a central role in my life.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 855 | 10.1% | 27.9% | 33.3% | 20.6% | 8.1% | 2.9 |
| METRO | 367 | 10.1% | 28.3% | 32.4% | 19.9% | 9.3% | 2.9 |
| NONMETRO | 526 | 10.3% | 27.8% | 32.9% | 21.5% | 7.6% | 2.9 |
| | $\chi^2$= 1.029 n.s.; Cramer's V = 0.034 | | | | | | F=0.041 n.s.; $\eta$=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-14: Involvement in small game hunting: Most of my friends are in some way connected with small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 4.6% | 19.7% | 22.8% | 42.1% | 10.7% | 3.4 |
| METRO | 369 | 6.0% | 23.3% | 24.4% | 38.2% | 8.1% | 3.2 |
| NONMETRO | 531 | 4.0% | 17.7% | 22.2% | 44.1% | 12.1% | 3.4 |
| | $\chi^2$= 10.696*; Cramer's V = 0.109 | | | | | | F=10.705**; $\eta$=0.109 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-15: Involvement in small game hunting: When I am small game hunting, others see me the way I want them to see me.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 858 | 2.9% | 6.5% | 33.9% | 41.0% | 15.8% | 3.6 |
| METRO | 369 | 3.3% | 9.2% | 33.1% | 38.2% | 16.3% | 3.6 |
| NONMETRO | 526 | 2.9% | 5.5% | 33.8% | 41.4% | 16.3% | 3.6 |
| | $\chi^2$= 4.940 n.s.; Cramer's V = 0.074 | | | | | | F=1.528 n.s.; $\eta$=0.041 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-16: Involvement in small game hunting: I don't really know much about small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 858 | 41.7% | 44.1% | 9.9% | 3.7% | 0.5% | 1.8 |
| METRO | 368 | 39.1% | 46.2% | 9.5% | 4.3% | 0.8% | 1.8 |
| NONMETRO | 528 | 42.6% | 43.6% | 9.8% | 3.6% | 0.4% | 1.8 |
| | $\chi^2$= 2.054 n.s.; Cramer's V = 0.048 | | | | | | F=1.151 n.s.; $\eta$=0.036 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-17: Involvement in small game hunting: Small game hunting interests me.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 845 | 0.5% | 1.1% | 6.6% | 52.9% | 38.9% | 4.3 |
| METRO | 366 | 0.8% | 0.8% | 5.7% | 53.8% | 38.8% | 4.3 |
| NONMETRO | 517 | 0.4% | 1.2% | 7.2% | 52.6% | 38.7% | 4.3 |
| | $\chi^2$= 1.670 n.s.; Cramer's V = 0.043 | | | | | | F=0.039 n.s.; $\eta$=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-18: Involvement in small game hunting: I have acquired equipment that I would not use if I quit small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 860 | 3.4% | 10.4% | 10.6% | 39.4% | 36.2% | 4.0 |
| METRO | 369 | 3.4% | 11.8% | 12.0% | 39.7% | 33.2% | 4.1 |
| NONMETRO | 527 | 4.3% | 7.0% | 8.1% | 38.2% | 42.3% | 3.9 |
| | $\chi^2$= 13.412**; Cramer's V = 0.122 | | | | | | F=6.932**; $\eta$=0.088 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-19: Involvement in small game hunting: You can tell a lot about a person when you see them small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 4.3% | 11.3% | 36.4% | 36.1% | 11.9% | 3.4 |
| METRO | 369 | 6.2% | 9.2% | 38.8% | 34.4% | 11.4% | 3.4 |
| NONMETRO | 529 | 3.6% | 11.9% | 34.8% | 37.8% | 11.9% | 3.4 |
| | $\chi^2$= 6.383 n.s.; Cramer's V = 0.084 | | | | | | F=1.107 n.s.; $\eta$=0.035 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-20: Involvement in small game hunting: When I am small game hunting I can really be myself.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 1.6% | 2.8% | 28.3% | 48.2% | 19.0% | 3.8 |
| METRO | 370 | 2.2% | 3.2% | 30.0% | 46.5% | 18.1% | 3.8 |
| NONMETRO | 530 | 1.3% | 2.6% | 27.5% | 49.1% | 19.4% | 3.8 |
| | $\chi^2$= 2.160 n.s.; Cramer's V = 0.049 | | | | | | F=1.758 n.s.; $\eta$=0.044 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-21: Involvement in small game hunting: I enjoy discussing small game hunting with my friends.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 859 | 1.1% | 2.6% | 16.3% | 60.3% | 19.7% | 4.0 |
| METRO | 367 | 1.1% | 4.4% | 12.5% | 59.4% | 22.6% | 4.0 |
| NONMETRO | 529 | 0.9% | 1.7% | 18.0% | 60.3% | 19.1% | 4.0 |
| | $\chi^2$= 10.924*; Cramer's V = 0.110 | | | | | | F=0.392 n.s.; $\eta$=0.021 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-22: Involvement in small game hunting: The decision to go small game hunting is not entirely my own.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 859 | 27.4% | 38.3% | 16.3% | 14.9% | 3.1% | 2.3 |
| METRO | 370 | 30.3% | 38.4% | 14.6% | 14.1% | 2.7% | 2.2 |
| NONMETRO | 527 | 25.8% | 37.4% | 17.6% | 15.7% | 3.4% | 2.3 |
| | $\chi^2$= ; Cramer's V = 0. | | | | | | F=2.978 n.s.; η=0.058 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-23: Involvement in small game hunting: For me to change my preference from small game hunting to another leisure activity would require major rethinking.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 5.1% | 18.6% | 24.5% | 26.4% | 25.4% | 3.5 |
| METRO | 370 | 4.1% | 21.4% | 20.3% | 29.7% | 24.6% | 3.5 |
| NONMETRO | 528 | 5.5% | 17.4% | 25.8% | 25.2% | 26.1% | 3.5 |
| | $\chi^2$= 7.328 n.s.; Cramer's V = 0.090 | | | | | | F=0.002 n.s.; η=0.002 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-24: Involvement in small game hunting: I find a lot of my life organized around small game-hunting activities.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 860 | 8.0% | 30.2% | 32.7% | 21.9% | 7.3% | 2.9 |
| METRO | 368 | 9.5% | 33.4% | 30.7% | 18.8% | 7.6% | 2.8 |
| NONMETRO | 529 | 7.6% | 29.3% | 32.7% | 22.7% | 7.8% | 2.9 |
| | $\chi^2$= 4.048 n.s.; Cramer's V = 0.067 | | | | | | F=2.830 n.s.; η=0.056 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-25: Involvement in small game hunting: Even if close friends recommended another recreational activity, I would not change my preference from small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 859 | 2.9% | 14.3% | 21.8% | 40.3% | 20.8% | 3.6 |
| METRO | 368 | 3.8% | 14.1% | 18.2% | 38.9% | 25.0% | 3.7 |
| NONMETRO | 528 | 2.7% | 14.6% | 22.7% | 41.1% | 18.9% | 3.6 |
| | $\chi^2$= 7.065 n.s.; Cramer's V = 0.089 | | | | | | F=1.227 n.s.; $\eta$=0.037 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-26: Involvement in small game hunting: Small game hunting is important to me.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 859 | 0.3% | 1.7% | 14.1% | 52.6% | 31.3% | 4.1 |
| METRO | 369 | 0.0% | 2.2% | 14.1% | 48.5% | 35.2% | 4.2 |
| NONMETRO | 527 | 0.6% | 1.5% | 14.4% | 53.9% | 29.6% | 4.1 |
| | $\chi^2$= 6.001 n.s.; Cramer's V = 0.082 | | | | | | F=1.608 n.s.; $\eta$=0.042 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-27: Involvement in small game hunting: I have close friendships that are based on a common interest in small game hunting.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 2.2% | 10.3% | 24.0% | 44.3% | 19.1% | 3.7 |
| METRO | 370 | 4.3% | 8.9% | 20.8% | 42.7% | 23.2% | 3.7 |
| NONMETRO | 528 | 1.1% | 11.4% | 25.6% | 44.9% | 17.0% | 3.7 |
| | $\chi^2$= 16.866**; Cramer's V = 0.137 | | | | | | F=0.889 n.s.; $\eta$=0.031 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 1-28: Involvement in small game hunting: Compared to other small game hunters, I own a lot of small game-hunting equipment.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 863 | 6.2% | 24.1% | 37.7% | 21.2% | 10.8% | 3.1 |
| METRO | 370 | 4.3% | 26.8% | 34.9% | 22.4% | 11.6% | 3.1 |
| NONMETRO | 530 | 6.8% | 24.0% | 38.3% | 20.6% | 10.4% | 3.0 |
| | $\chi^2$= 4.338 n.s.; Cramer's V = 0.069 | | | | | | F=0.815 n.s.; $\eta$=0.030 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

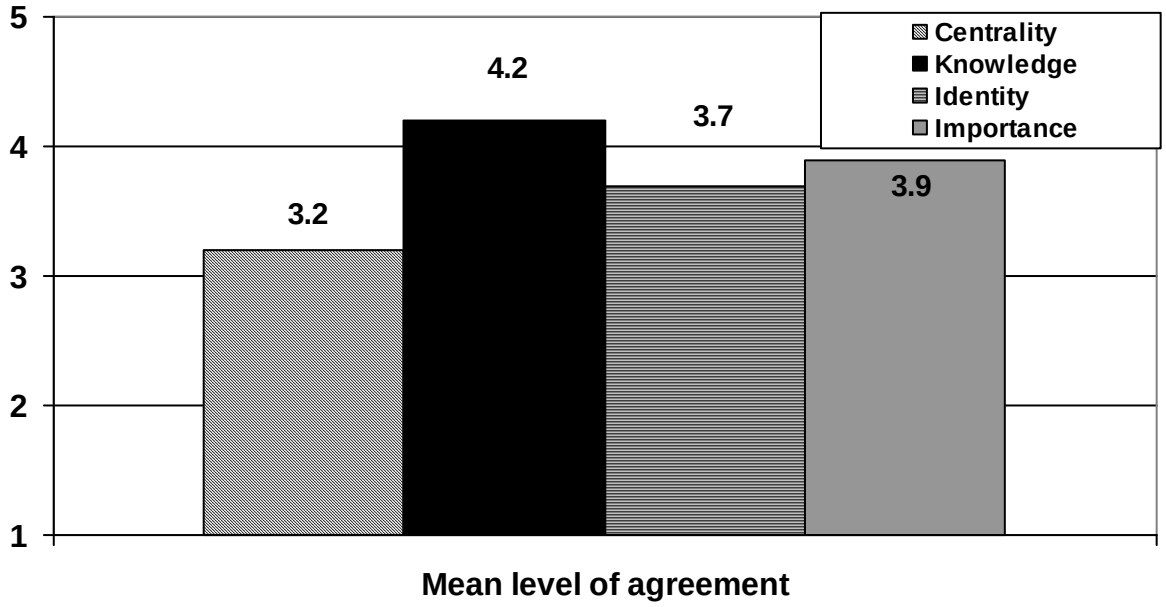
**Table 1-29: Involvement With and Commitment to Small game hunting**

| | Mean[1] |
|---|---|
| **Knowledge and control factor** | 4.2 |
| - The decision to go small game hunting is primarily my own. | 4.4 |
| - I don't really know much about small game hunting. (REVERSED) | 4.3 |
| - Small game hunting interests me. | 4.3 |
| - Small game hunting is one of the most enjoyable things I do. | 4.2 |
| - I am knowledgeable about small game hunting. | 4.2 |
| - The decision to go small game hunting is not entirely my own. (REVERSED) | 3.7 |
| **Importance factor** | 3.9 |
| - Small game hunting is important to me. | 4.1 |
| - I have acquired equipment that I would not use if I quit small game hunting. | 4.0 |
| - Even if close friends recommended another recreational activity, I would not change my preference from small game hunting. | 3.6 |
| **Identity factor** | 3.7 |
| - I enjoy discussing small game hunting with my friends. | 4.0 |
| - When I am small game hunting I can really be myself. | 3.8 |
| - When I am small game hunting, others see me the way I want them to see me. | 3.6 |
| - You can tell a lot about a person when you see them small game hunting. | 3.4 |
| **Centrality factor** | 3.2 |
| - I have close friendships that are based on a common interest in small game hunting. | 3.7 |
| - For me to change my preference from small game hunting to another leisure activity would require major rethinking. | 3.5 |
| - Most of my friends are in some way connected with small game hunting. | 3.4 |
| - Compared to other small game hunters, I own a lot of small game hunting equipment. | 3.1 |
| - I find a lot of my life organized around small game hunting activities. | 2.9 |
| - Small game hunting has a central role in my life. | 2.9 |
| - I find that a lot of my life is organized around small game hunting. | 2.9 |

[1] 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

## Section 1: Small Game Hunting Activity and Involvement

**Figure 1-1: Means on involvement/commitment factors to small game hunting.**



# Section 2: Shotgun and Shot Preferences and Use

Study participants were asked to indicate what gauge of shotgun they used most often to hunt for different types of game, how many boxes of shells they typically used in a season to hunt different types of game, and what type of shot they used most often.

**Shotgun Gauge Used for Hunting Small Game**

Respondents reported using 12-gauge shotguns most often to hunt the seven different types of small game hunted (Tables 2-1 to 2-7). Respondents also frequently reported using .410 and 20-gauge shotguns. There were no significant differences in shotgun use between metro and non-metro respondents

**Shot Used for Small-Game Hunting**

Survey recipients were asked if they always, mostly, occasionally, or never used lead shot for hunting small game (Table 2-8). Over one-third of respondents (37.9%) always used lead. Nearly one-fourth (28.8%) mostly used lead and 19.8% occasionally used lead. Less than one in five (13.6%) never used lead. Similarly, the majority of respondents reported using lead (compared to steel, bismuth or other) shot most often when targeting specific types of small game (Tables 2-9 to 2-15). In general respondents reported using less than one box of shot per season for hunting each type of small game (Tables 2-16 to 2-22). The majority of respondents reported that they bought loaded shotgun shells (94.1%) (Table 2-23). On average, respondents had 10 boxes of loaded shotgun shells on hand (Table 2-24). There was only one significant difference in shot use between metro and non-metro respondents—a smaller proportion of metro respondents who hunted dove reported using lead shot (46.2%) compared to lead shot use by non-metro respondents (82.4%) (Table 2-13).

**Table 2-1: Gauge of shotgun used most often to hunt PHEASANT**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 579 | 0.0% | 0.2% | 9.8% | 1.7% | 88.1% | 0.2% |
| METRO | 263 | 0.0% | .4% | 9.9% | 1.5% | 88.2% | 0.0% |
| NONMETRO | 343 | 0.0% | 0.0% | 9.6% | 2.0% | 88.0% | 0.3% |
| | | $\chi^2$= 2.304 n.s.; Cramer's V = 0.062 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for pheasant
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-2: Gauge of shotgun used most often to hunt GROUSE**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 480 | 5.0% | 1.3% | 23.2% | 3.1% | 67.1% | 0.2% |
| METRO | 226 | 2.2% | 0.9% | 21.2% | 3.1% | 72.6% | 0.0% |
| NONMETRO | 284 | 6.0% | 1.4% | 24.3% | 3.5% | 64.4% | 0.4% |
| | | $\chi^2$= 7.046 n.s.; Cramer's V = 0.118 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for grouse
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-3: Gauge of shotgun used most often to hunt WOODCOCK**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 92 | 2.2% | 0.0% | 29.3% | 3.3% | 65.2% | 0.0% |
| METRO | 47 | 2.1% | 0.0% | 21.3% | 6.4% | 70.2% | 0.0% |
| NONMETRO | 53 | 1.9% | 0.0% | 37.7% | 1.9% | 58.5% | 0.0% |
| | | $\chi^2$= 4.050 n.s.; Cramer's V = 0.201 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for woodcock
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-4: Gauge of shotgun used most often to hunt SNIPE/RAIL**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 16 | 0.0% | 0.0% | 25.0% | 0.0% | 75.0% | 0.0% |
| METRO | 8 | 0.0% | 0.0% | 25.0% | 0.0% | 75.0% | 0.0% |
| NONMETRO | 8 | 0.0% | 0.0% | 25.0% | 0.0% | 75.0% | 0.0% |
| | | $\chi^2$=0.000 n.s.; Cramer's V = 0.000 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for snipe/rail
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-5: Gauge of shotgun used most often to hunt DOVE**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 76 | 3.9% | 2.6% | 15.8% | 1.3% | 76.3% | 0.0% |
| METRO | 28 | 7.1% | 3.6% | 7.1% | 3.6% | 78.6% | 0.0% |
| NONMETRO | 52 | 3.8% | 1.9% | 23.1% | 1.9% | 69.2% | 0.0% |
| | | $\chi^2$= 3.651 n.s.; Cramer's V = 0.214 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for dove
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-6: Gauge of shotgun used most often to hunt RABBITS**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 123 | 18.7% | 0.0% | 26.0% | 3.3% | 51.2% | 0.8% |
| METRO | 42 | 9.5% | 0.0% | 23.8% | 7.1% | 59.5% | 0.0% |
| NONMETRO | 82 | 22.0% | 0.0% | 25.6% | 3.7% | 47.6% | 1.2% |
| | | $\chi^2$= 4.433 n.s.; Cramer's V = 0.189 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for rabbits
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-7: Gauge of shotgun used most often to hunt SQUIRREL**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge |
| Statewide[2] | 98 | 26.5% | 0.0% | 25.5% | 1.0% | 46.9% | 0.0% |
| METRO | 39 | 17.9% | 0.0% | 23.1% | 5.1% | 53.8% | 0.0% |
| NONMETRO | 61 | 29.5% | 0.0% | 26.2% | 1.6% | 42.6% | 0.0% |
| | | $\chi^2$= 2.969 n.s.; Cramer's V = 0.172 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for squirrel
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-8: Typically use lead shot or non-lead shot when you hunt small game**

| | n | % of respondents who…[1] | | | |
|---|---|---|---|---|---|
| | | Never use lead | Occasionally use lead | Mostly use lead | Always use lead (except for waterfowl) |
| Statewide[2] | 873 | 13.6% | 19.8% | 28.8% | 37.9% |
| METRO | 365 | 16.2% | 18.4% | 31.2% | 34.2% |
| NONMETRO | 516 | 13.0% | 20.0% | 28.9% | 38.2% |
| | | $\chi^2$= 3.099 n.s.; Cramer's V = 0.059 | | | |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-9: Type of shot used most often to hunt PHEASANT**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 567 | 60.3% | 38.8% | 0.9% | 0.0% |
| METRO | 252 | 59.5% | 39.7% | 0.8% | 0.0% |
| NONMETRO | 335 | 60.0% | 38.8% | 1.2% | 0.0% |
| | | $\chi^2$= 0.259 n.s.; Cramer's V = 0.021 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for pheasant
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-10: Type of shot used most often to hunt GROUSE**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 482 | 83.2% | 16.0% | 0.8% | 0.0% |
| METRO | 224 | 83.5% | 16.5% | 0.0% | 0.0% |
| NONMETRO | 284 | 83.5% | 15.5% | 1.1% | 0.0% |
| | | $\chi^2$= 1.300 n.s.; Cramer's V = 0.069 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for grouse
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-11: Type of shot used most often to hunt WOODCOCK**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 91 | 82.4% | 16.5% | 1.1% | 0.0% |
| METRO | 49 | 73.5% | 26.5% | 0.0% | 0.0% |
| NONMETRO | 52 | 88.5% | 9.6% | 1.9% | 0.0% |
| | | $\chi^2$= 5.691 n.s.; Cramer's V = 0.237 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for woodcock
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-12: Type of shot used most often to hunt SNIPE/RAIL**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 16 | 62.5% | 37.5% | 0.0% | 0.0% |
| METRO | 8 | 62.5% | 37.5% | 0.0% | 0.0% |
| NONMETRO | 8 | 62.5% | 37.5% | 0.0% | 0.0% |
| | | $\chi^2$= 0.000 n.s.; Cramer's V = 0.000 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for snipe/rail
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-13: Type of shot used most often to hunt DOVE**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 77 | 72.7% | 26.0% | 1.3% | 0.0% |
| METRO | 26 | 46.2% | 53.8% | 0.0% | 0.0% |
| NONMETRO | 51 | 82.4% | 15.7% | 2.0% | 0.0% |
| | | $\chi^2$= 12.504**; Cramer's V = 0.403 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for dove
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-14: Type of shot used most often to hunt RABBITS**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 145 | 83.4% | 15.9% | 0.0% | 0.7% |
| METRO | 47 | 78.7% | 21.3% | 0.0% | 0.0% |
| NONMETRO | 99 | 84.8% | 14.1% | 0.0% | 1.0% |
| | | $\chi^2$= 1.606 n.s.; Cramer's V = 0.105 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for rabbits
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-15: Type of shot used most often to hunt SQUIRREL**

| | n | % of respondents who used…[1] | | | |
|---|---|---|---|---|---|
| | | Lead | Steel | Bismuth | Other |
| Statewide[2] | 139 | 84.9% | 14.4% | 0.0% | 0.7% |
| METRO | 52 | 87.6% | 11.2% | 0.0% | 1.1% |
| NONMETRO | 89 | 76.9% | 23.1% | 0.0% | 0.0% |
| | | $\chi^2$= 3.984 n.s.; Cramer's V = 0.168 | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for squirrel
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-16: Number of boxes of shells typically used in a season hunting PHEASANT in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 510 | 27.5% | 20.0% | 31.6% | 15.7% | 4.9% | 0.4% |
| METRO | 233 | 30.9% | 24.5% | 29.2% | 10.7% | 4.3% | 0.4% |
| NONMETRO | 298 | 26.2% | 17.8% | 32.2% | 18.1% | 5.0% | 0.7% |
| | | $\chi^2$= 9.328 n.s.; Cramer's V = 0.133 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for pheasant in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-17: Number of boxes of shells typically used in a season hunting GROUSE in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 110 | 50.0% | 18.2% | 26.4% | 4.5% | 0.9% | 0.0% |
| METRO | 52 | 51.9% | 19.2% | 23.1% | 5.8% | 0.0% | 0.0% |
| NONMETRO | 64 | 46.9% | 20.3% | 28.1% | 3.1% | 1.6% | 0.0% |
| | | $\chi^2$=1.726 n.s.; Cramer's V = 0.122 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for grouse in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-18: Number of boxes of shells typically used in a season hunting WOODCOCK in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 18 | 44.4% | 38.9% | 11.1% | 0.0% | 5.6% | 0.0% |
| METRO | 15 | 40.0% | 46.7% | 6.7% | 0.0% | 6.7% | 0.0% |
| NONMETRO | 6 | 50.0% | 33.3% | 16.7% | 0.0% | 0.0% | 0.0% |
| | | $\chi^2$= 1.128 n.s.; Cramer's V = 0.232 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for woodcock in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-19: Number of boxes of shells typically used in a season hunting SNIPE/RAIL in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 4 | 50.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% |
| METRO | 3 | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| NONMETRO | 2 | 0.0% | 50.0% | 50.0% | 0.0% | 0.0% | 0.0% |
| | | $\chi^2$=5.000 n.s. ; Cramer's V = 1.000 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for snipe/rail in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-20: Number of boxes of shells typically used in a season hunting DOVE in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 65 | 26.2% | 24.6% | 32.3% | 13.8% | 1.5% | 1.5% |
| METRO | 22 | 36.4% | 18.2% | 22.7% | 18.2% | 0.0% | 4.5% |
| NONMETRO | 45 | 24.4% | 26.7% | 33.3% | 13.3% | 2.2% | 0.0% |
| | | $\chi^2$= 4.510 n.s.; Cramer's V = 0.259 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for dove in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-21: Number of boxes of shells typically used in a season hunting RABBITS in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 103 | 50.5% | 22.3% | 16.5% | 8.7% | 1.0% | 1.0% |
| METRO | 25 | 52.0% | 20.0% | 20.0% | 8.0% | 0.0% | 0.0% |
| NONMETRO | 77 | 50.6% | 22.1% | 15.6% | 7.8% | 1.3% | 2.6% |
| | | $\chi^2$= 1.240 n.s.; Cramer's V = 0.110 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for rabbits in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-22: Number of boxes of shells typically used in a season hunting SQUIRREL in the farmland zone of Minnesota**

| | n | % of respondents who used…[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | ½ box or less | 1 box | 1-2 boxes | 3-5 boxes | 5-10 boxes | 10+ boxes |
| Statewide[2] | 105 | 57.1% | 27.6% | 11.4% | 3.8% | 0.0% | |
| METRO | 30 | 56.7% | 26.7% | 16.7% | .0% | 0.0% | 0.0% |
| NONMETRO | 75 | 57.3% | 26.7% | 10.7% | 4.0% | 0.0% | 1.3% |
| | | $\chi^2$= 2.225 n.s.; Cramer's V = 0.146 | | | | | |

[1] Percentages reflect only respondents that reported that they typically hunt for squirrel in the farmland zone
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-23: Self-load or buy shotgun shells loaded**

| | n | % of respondents who… | | |
|---|---|---|---|---|
| | | Buy loaded shells | Self-load | Both |
| Statewide[1] | 829 | 94.1% | 0.8% | 5.1% |
| METRO | 348 | 93.4% | 0.3% | 6.3% |
| NONMETRO | 510 | 94.5% | 1.0% | 4.5% |
| | | $\chi^2$= 2.743 n.s.; Cramer's V = 0.057 | | |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-24: If self-load, pounds of loose, lead shot currently on hand for self-loading**

| | n | Pounds on loose, lead shot on hand[1] |
|---|---|---|
| Statewide[2] | 47 | 52.9 |
| METRO | 21 | 57.0 |
| NONMETRO | 28 | 46.9 |
| | | F=0.185; η=0.063 |

[1] Results reflect only respondents that reported that they self-load
[2] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 2-25: Number of boxes of loaded shotgun shells currently on hand**

| | n | Boxes of loaded shotgun shells on hand |
|---|---|---|
| Statewide[1] | 794 | 10.0 |
| METRO | 334 | 10.1 |
| NONMETRO | 486 | 9.6 |
| | | F=0.060; η=0.009 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Section 3: Beliefs, Attitudes, and Norms About Lead Shot

**Beliefs About Lead Shot**

Respondents were asked to rate 11 items addressing their beliefs about the use of lead shot small game hunting, using the scale 1=extremely disagree to 7=extremely agree (Tables 1-1 to 1-11). Items addressed (a) the availability, cost, and effectiveness of lead shot alternatives, (b) the problems associated with lead shot, and (c) responsibility for reducing use of lead shot.

Respondents were asked four questions addressing their beliefs about alternatives to lead shot. About 60% of respondents disagreed that alternatives to lead shot were very difficult to find ($\bar{x}$=3.0) (Table 3-1). About two-thirds of respondents agreed that alternatives to lead shot are too expensive ($\bar{x}$=4.9) (Table 3-2). Nearly 60% of respondents agreed that lead is more effective than alternatives ($\bar{x}$=4.9) (Table 3-3). Nearly 40% disagreed that alternatives to lead shot might damage their shotgun, with about 30% neutral on this statement ($\bar{x}$=3.7) (Table 3-4).

Respondents were asked four questions addressing their beliefs about the problems and effects of lead shot. Slightly more than half of the respondents disagreed that they did not think lead shot causes any problems for wildlife ($\bar{x}$=3.5) (Table 3-5). Over 60% agreed that they were concerned about the effects of lead on wildlife ($\bar{x}$=4.9) (Table 3-6). Over half agreed that they were concerned about the effects of lead on human health ($\bar{x}$=4.7) (Table 3-7). Less than 40% agreed that they though lead from hunting was an environmental problem ($\bar{x}$=4.0) (Table 3-8).

Respondents were asked three questions to address responsibility for reducing use of lead shot. Nearly 40% of respondents disagreed that hunters have a responsibility to not use lead shot ($\bar{x}$=3.8) (Table 3-9). Similarly, about 40% of respondents disagreed that they had a personal responsibility to not use lead shot ($\bar{x}$=3.8) (Table 3-10). However, in a negatively worded item, slightly more that 40% of respondents disagreed that it was *not* their responsibility to stop using lead shot ($\bar{x}$=3.7) (Table 3-11).

**Attitudes About Banning Lead Shot in the Minnesota Farmland Zone**

Respondents were fairly evenly split in their intention to support a ban on lead shot for hunting small game in the Minnesota farmland zone within the next 5 years—44.2% said it was unlikely that they would support such a ban, while 42.2% indicated that it was likely ($\bar{x}$=3.8) (Table 3-12). On average, metro respondents were somewhat more supportive of the ban than non-metro respondents. Likelihood of supporting a ban on lead shot in the Minnesota farmland zone was positively correlated with trust in the Minnesota Department of Natural Resources (described in Section 4) ($r=0.547$, $p<0.001$) and pro-environmental values (Section 5) ($r=0.362$, $p<0.001$). It was negatively correlated with years of hunting in the farmland zone (Section 1) ($r=-0.086$, $p<0.05$), involvement in small game hunting ($r=-0.118$, $p<0.01$), frequency of hunting with a dog (Section 1) ($r=-0.096$, $p<0.01$), frequency of hunting with children under age 12 (Section 1) ($r=-0.143$, $p<0.001$), frequency of using lead shot (Section 2) ($r=-0.344$), and boxes of loaded shotgun shells on hand (Section 2) ($r=-0.139$).

Respondents were asked a series of questions asking whether a ban on lead shot in the farmland zone would be harmful or beneficial, bad or good, and foolish or wise. About 45% of respondents indicated that the ban would be beneficial (Table 3-13), good (Table 3-14), and wise (Table 3-15).

# Section 3: Beliefs, Attitudes, and Norms About Lead Shot

Respondents were asked to rate the likelihood of 12 possible outcomes of banning lead shot for small game hunting in the Minnesota farmland zone, using the scale 1=extremely unlikely to 7=extremely likely (Tables 3-16 to 3-27). Items addressed environmental effects and impacts to hunters. Responses suggest that many small game hunters may perceive both environmental benefits and challenges to hunters as likely outcomes of a ban on lead shot in the farmland zone. Over half of the respondents felt that it was likely that banning lead shot for hunting small game in the farmland zone in Minnesota would: (a) help protect wildlife from lead poisoning ($\bar{x}$=4.5) (Table 3-16), (b) benefit the quality of the environment ($\bar{x}$=4.4) (Table 3-17), (c) prevent the spread of lead in the natural environment ($\bar{x}$=4.8) (Table 3-23), (d) improve awareness about the dangers of lead in the environment ($\bar{x}$=4.6) (Table 3-27). However, over half the respondents also thought it was likely that a ban would: increase crippling and wounding loss for small game hunting ($\bar{x}$=4.5) (Table 3-19) and require using less effective shot while hunting small game ($\bar{x}$=4.7) (Table 3-20). Over three-fourths of respondents felt that the ban would require hunters to use more expensive ammunition ($\bar{x}$=5.7) (Table 3-21). Over 40% of respondents felt that a ban would be unnecessary government regulation ($\bar{x}$=4.3) (Table 3-18) and would make it more difficult for some people to hunt ($\bar{x}$=4.1) (Table 3-24). Although hunters reported that a ban might create some challenges, their response to several items suggests that hunters would adapt to a ban and that a ban might even improve the image of hunters. Nearly three-fourths of hunters said a ban is something most hunters would adjust to after a few seasons ($\bar{x}$=5.0) (Table 3-25). Nearly half of hunters felt that it was likely that a ban would improve the image of hunters ($\bar{x}$=4.2) (Table 3-22) and that it was unlikely that a ban would decrease hunting opportunity in Minnesota ($\bar{x}$=3.6) (Table 3-26).

Respondents were asked to rate how good or bad 12 outcomes of banning lead shot would be using the scale 1=extremely bad to 7=extremely good (Tables 3-28 to 3-39). The majority of respondents felt that environmental benefits were good outcomes. Over 7 in 10 respondents felt that it was good to: (a) protect wildlife from lead poisoning ($\bar{x}$=5.6) (Table 3-28), (b) benefit the quality of the environment ($\bar{x}$=5.7) (Table 3-29), (c) prevent the spread of lead in the natural environment ($\bar{x}$=5.3) (Table 3-35), and (d) improve awareness about the dangers of lead in the environment ($\bar{x}$=5.4) (Table 3-39). However, over two-thirds of respondents felt the following outcomes for hunters were bad: (a) unnecessary government regulation ($\bar{x}$=2.8) (Table 3-30), (b) increasing wounding loss for small game hunting ($\bar{x}$=2.8) (Table 3-31), (c) using less effective shot while hunting small game ($\bar{x}$=2.5) (Table 3-32), (d) using more expensive ammunition ($\bar{x}$=2.8) (Table 3-33), (e) making it more difficult to find shells for the shotgun I use ($\bar{x}$=2.7) (Table 3-34), and (f) decreasing hunting opportunities ($\bar{x}$=2.3) (Table 3-38). Nearly three-fourths of respondents felt that improving the image of hunters was a good outcome ($\bar{x}$=5.6) (Table 3-36). Nearly half of respondents felt that hunters adjusting to using non-lead shot was a good outcome, but over one-third were neutral about this outcome ($\bar{x}$=4.6) (Table 3-38).

**Norms About Banning Lead Shot in the Minnesota Farmland Zone**

Respondents were asked to rate the likelihood of 8 groups thinking they should support a ban on lead shot in the Minnesota farmland zone, using the scale 1=extremely unlikely to 7=extremely likely (Tables 3-40 to 3-47). Over 40% of respondents felt it was unlikely that their friends ($\bar{x}$=3.5) (Table 3-40) or other hunters ($\bar{x}$=3.4) (Table 3-41) would think they should support a ban. Over 60% of respondents felt it was likely that environmental organizations would think they should support a ban ($\bar{x}$=5.2) (Table 3-42). Many respondents felt that Pheasants Forever ($\bar{x}$=4.4) (Table 3-43), Ducks Unlimited ($\bar{x}$=5.0) (Table 3-44), and the Minnesota Department of Natural Resources ($\bar{x}$=5.1) (Table 3-45) would also want them to support a ban. However, many respondents felt that the National Rifle Association ($\bar{x}$=3.8) (Table 3-46) and ammunition manufacturers ($\bar{x}$=3.7) (Table 3-47) would not want them to support a ban.

Respondents were asked to indicate how motivated they were to do what the referent groups wanted to do using the scale 1=extremely disagree to 7=extremely agree (Tables 3-48 to 3-54). Approximately 4 in 10 respondents reported that they would be less motivated to do what (a) their friends ( $\bar{x}$ =3.5) (Table 3-48), (b) other hunters ( $\bar{x}$ =3.6) (Table 3-49), (c) environmental organizations ( $\bar{x}$ =3.6) (Table 3-50), and (d) ammunition manufacturers ( $\bar{x}$ =3.3) (Table 3-55) wanted them to do. Between 35 and 40% of respondents indicated that they would be more motivated to do what (a) Pheasants Forever ( $\bar{x}$ =4.0) (Table 3-51), (b) Ducks Unlimited ( $\bar{x}$ =4.1) (Table 3-52), and (c) the Minnesota DNR ( $\bar{x}$ =4.2) (Table 3-53) wanted them to do. About one-fourth of respondents were motivated and about one-third were unmotivated to do what the NRA through they should do ( $\bar{x}$ =3.7) (Table 3-54). It should be noted that between one-third and one-half of respondents gave neutral responses to the items addressing whether they were motivated to do what referent groups thought they should do.

**Table 3-1: Beliefs about using lead shot: Alternatives to lead shot are very difficult to find.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 23.8% | 23.9% | 13.2% | 21.1% | 8.8% | 7.0% | 2.2% | 3.0 |
| METRO | 367 | 24.8% | 24.5% | 12.5% | 20.2% | 9.3% | 6.3% | 2.5% | 3.0 |
| NONMETRO | 520 | 23.5% | 23.7% | 13.3% | 21.5% | 8.7% | 7.5% | 1.9% | 2.9 |
| | $\chi^2$= 1.350 n.s.; Cramer's V = 0.039 | | | | | | | | F=0.218 n.s.; η=0.016 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-2: Beliefs about using lead shot: Alternatives to lead shot are too expensive.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 867 | 5.9% | 8.6% | 7.3% | 13.1% | 19.3% | 22.1% | 23.7% | 4.9 |
| METRO | 367 | 5.7% | 9.0% | 6.5% | 13.6% | 20.2% | 24.0% | 21.0% | 4.9 |
| NONMETRO | 522 | 6.1% | 8.8% | 7.9% | 13.6% | 18.6% | 21.6% | 23.4% | 4.9 |
| | $\chi^2$= 1.926 n.s.; Cramer's V = 0.047 | | | | | | | | F=0.010 n.s.; η=0.003 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-3: Beliefs about using lead shot: I think lead is more effective than alternatives**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 865 | 5.2% | 4.7% | 5.7% | 26.1% | 17.1% | 21.4% | 19.8% | 4.9 |
| METRO | 368 | 6.5% | 5.2% | 4.6% | 25.3% | 20.7% | 21.2% | 16.6% | 4.8 |
| NONMETRO | 520 | 4.8% | 4.8% | 6.2% | 26.3% | 15.8% | 21.5% | 20.6% | 4.9 |
| | $\chi^2$= 6.940 n.s.; Cramer's V = 0.088 | | | | | | | | F=1.147 n.s.; η=0.036 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-4: Beliefs about using lead shot: I think alternatives to lead shot might damage my shotgun**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 13.1% | 15.9% | 10.1% | 30.2% | 14.7% | 10.1% | 5.9% | 3.7 |
| METRO | 367 | 14.7% | 16.1% | 11.2% | 30.2% | 13.9% | 8.2% | 5.7% | 3.6 |
| NONMETRO | 519 | 12.7% | 16.4% | 9.2% | 30.3% | 15.0% | 10.6% | 5.8% | 3.7 |
| | $\chi^2$= 2.943 n.s.; Cramer's V = 0.058 | | | | | | | | F=1.337 n.s.; η=0.039 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-5: Beliefs about using lead shot: I do not think lead shot causes any problems for wildlife.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 865 | 16.3% | 17.9% | 18.4% | 21.3% | 9.0% | 9.4% | 7.6% | 3.5 |
| METRO | 367 | 16.1% | 25.6% | 15.0% | 20.2% | 7.6% | 8.2% | 7.4% | 3.3 |
| NONMETRO | 521 | 17.3% | 14.8% | 19.8% | 21.7% | 9.4% | 9.8% | 7.3% | 3.5 |
| | $\chi^2$= 17.715**; Cramer's V = 0.141 | | | | | | | | F=2.182 n.s.; η=0.050 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-6: Beliefs about using lead shot: I am concerned about the effects of lead on wildlife**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 866 | 5.7% | 6.0% | 3.8% | 22.4% | 22.0% | 23.5% | 16.8% | 4.9 |
| METRO | 366 | 4.9% | 4.9% | 4.9% | 19.9% | 20.8% | 23.2% | 21.3% | 5.0 |
| NONMETRO | 523 | 5.5% | 6.7% | 3.1% | 22.8% | 22.0% | 24.1% | 15.9% | 4.8 |
| | $\chi^2$= 7.767 n.s.; Cramer's V = 0.093 | | | | | | | | F=2.283 n.s.; η=0.051 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-7: Beliefs about using lead shot: I am concerned about the effects of lead on human health.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 8.3% | 8.5% | 4.5% | 24.0% | 14.3% | 23.3% | 17.0% | 4.7 |
| METRO | 365 | 9.6% | 7.9% | 3.6% | 22.7% | 13.4% | 22.2% | 20.5% | 4.7 |
| NONMETRO | 522 | 7.3% | 8.8% | 4.8% | 24.1% | 14.2% | 24.1% | 16.7% | 4.7 |
| | $\chi^2$= 4.725 n.s.; Cramer's V = 0.073 | | | | | | | | F=0.059 n.s.; η=0. 008 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-8: Beliefs about using lead shot: I do not think the lead from hunting is an environmental problem.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 867 | 11.6% | 14.2% | 15.1% | 19.2% | 15.9% | 14.4% | 9.6% | 4.0 |
| METRO | 368 | 13.9% | 14.9% | 17.7% | 16.0% | 16.8% | 12.0% | 8.7% | 3.8 |
| NONMETRO | 523 | 11.7% | 14.3% | 14.1% | 19.9% | 15.5% | 15.3% | 9.2% | 4.0 |
| | $\chi^2$= 6.381 n.s.; Cramer's V = 0.085 | | | | | | | | F=2.087 n.s.; η=0. 048 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-9: Beliefs about using lead shot: I think hunters have a responsibility to NOT USE lead shot.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 866 | 14.2% | 13.8% | 11.7% | 29.4% | 12.4% | 9.7% | 8.9% | 3.8 |
| METRO | 367 | 12.3% | 10.4% | 12.5% | 28.9% | 15.5% | 9.3% | 11.2% | 4.0 |
| NONMETRO | 522 | 14.4% | 14.8% | 10.7% | 29.1% | 11.5% | 10.5% | 9.0% | 3.8 |
| | $\chi^2$= 8.585 n.s.; Cramer's V = 0.098 | | | | | | | | F=3.015 n.s.; η=0. 058 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-10: Beliefs about using lead shot: I think I have a personal responsibility to NOT USE lead shot.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 15.1% | 13.7% | 11.3% | 26.0% | 13.0% | 10.9% | 10.0% | 3.8 |
| METRO | 366 | 11.2% | 10.7% | 10.9% | 27.9% | 16.1% | 11.7% | 11.5% | 4.1 |
| NONMETRO | 524 | 16.0% | 14.5% | 11.3% | 24.8% | 12.0% | 10.7% | 10.7% | 3.8 |
| | $\chi^2$= 9.820 n.s.; Cramer's V = 0.105 | | | | | | | | F=6.059*; η=0. 082 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-11: Beliefs about using lead shot: It is not my responsibility to stop using lead shot.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 13.1% | 14.7% | 15.0% | 31.7% | 9.3% | 8.6% | 7.5% | 3.7 |
| METRO | 366 | 14.5% | 14.5% | 18.3% | 31.1% | 9.8% | 6.0% | 5.7% | 3.5 |
| NONMETRO | 521 | 13.1% | 15.2% | 13.8% | 31.7% | 8.8% | 9.6% | 7.9% | 3.7 |
| | $\chi^2$= 8.208 n.s.; Cramer's V = 0.096 | | | | | | | | F=2.994 n.s.; η=0. 058 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-12: Likelihood of supporting a ban on lead shot to hunt small game in the farmland zone.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 873 | 22.0% | 14.9% | 7.3% | 13.5% | 12.8% | 16.4% | 13.0% | 3.8 |
| METRO | 369 | 17.1% | 14.4% | 6.8% | 10.6% | 14.9% | 19.2% | 17.1% | 4.2 |
| NONMETRO | 522 | 22.2% | 15.1% | 7.3% | 14.4% | 11.7% | 16.9% | 12.5% | 3.8 |
| | $\chi^2$= 11.078 n.s.; Cramer's V = 0.112 | | | | | | | | F= 7.308**; η=0.090 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-13: Supporting a ban on lead shot to hunt small game in the farmland zone: HARMFUL/BENEFICIAL**

| | N | Extremely harmful | Quite harmful | Slightly harmful | Neutral | Slightly beneficial | Quite beneficial | Extremely beneficial | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 870 | 8.3% | 3.8% | 6.2% | 35.0% | 18.4% | 15.4% | 12.9% | 4.5 |
| METRO | 370 | 7.8% | 2.7% | 7.6% | 28.4% | 21.1% | 16.5% | 15.9% | 4.7 |
| NONMETRO | 522 | 7.9% | 4.0% | 5.2% | 36.0% | 18.0% | 16.1% | 12.8% | 4.5 |
| | $\chi^2$= 9.510 n.s.; Cramer's V = 0. 103 | | | | | | | | F= 1.464 n.s.; η=0.041 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-14: Supporting a ban on lead shot to hunt small game in the farmland zone: BAD/GOOD**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 872 | 11.2% | 7.2% | 8.8% | 27.6% | 15.7% | 16.2% | 13.3% | 4.3 |
| METRO | 370 | 9.2% | 6.8% | 8.6% | 24.3% | 16.2% | 18.1% | 16.8% | 4.5 |
| NONMETRO | 523 | 11.1% | 6.9% | 8.4% | 28.1% | 16.1% | 16.4% | 13.0% | 4.3 |
| | $\chi^2$= 4.400; Cramer's V = 0.070 | | | | | | | | F= 2.775 n.s.; η=0.056 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-15: Supporting a ban on lead shot to hunt small game in the farmland zone: FOOLISH/WISE**

| | N | Extremely foolish | Quite foolish | Slightly foolish | Neutral | Slightly wise | Quite wise | Extremely wise | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 871 | 13.5% | 8.6% | 8.5% | 24.2% | 16.5% | 16.2% | 12.4% | 4.2 |
| METRO | 369 | 10.6% | 7.9% | 8.7% | 22.0% | 17.3% | 18.2% | 15.4% | 4.4 |
| NONMETRO | 523 | 13.8% | 8.4% | 8.0% | 24.3% | 16.4% | 16.6% | 12.4% | 4.2 |
| | $\chi^2$= 4.307 n.s.; Cramer's V = 0.069 | | | | | | | | F= 3.266 n.s.; η=0.060 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-16: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… help protect wildlife from lead poisoning.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 8.4% | 10.7% | 7.5% | 14.9% | 26.7% | 21.1% | 10.7% | 4.5 |
| METRO | 374 | 8.8% | 10.4% | 6.7% | 11.8% | 27.0% | 24.3% | 11.0% | 4.5 |
| NONMETRO | 533 | 7.7% | 10.1% | 7.3% | 15.4% | 27.4% | 20.8% | 11.3% | 4.5 |
| | $\chi^2$=3.804 n.s. ; Cramer's V = 0.065 | | | | | | | | F=0.040 n.s.; η=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-17: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… benefit the quality of the environment.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 869 | 7.8% | 11.4% | 7.8% | 19.2% | 25.5% | 19.0% | 9.3% | 4.4 |
| METRO | 373 | 7.2% | 11.0% | 7.8% | 17.4% | 24.9% | 22.8% | 8.8% | 4.5 |
| NONMETRO | 533 | 7.5% | 11.3% | 7.1% | 19.3% | 25.7% | 18.6% | 10.5% | 4.4 |
| | $\chi^2$=3.170 n.s.; Cramer's V = 0.059 | | | | | | | | F=0.084 n.s.; η=0.010 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-18: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… be unnecessary government regulation.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 9.2% | 11.6% | 8.4% | 27.4% | 11.5% | 16.3% | 15.6% | 4.3 |
| METRO | 371 | 8.6% | 12.9% | 9.4% | 27.0% | 10.2% | 18.1% | 13.7% | 4.3 |
| NONMETRO | 529 | 9.8% | 11.9% | 7.8% | 28.0% | 12.3% | 15.1% | 15.1% | 4.3 |
| | $\chi^2$=3.572 n.s.; Cramer's V = 0.063 | | | | | | | | F=0.001 n.s.; η=0.001 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-19: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… increase crippling and wounding loss for small game hunting.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 8.0% | 9.3% | 7.1% | 20.9% | 20.4% | 19.8% | 14.5% | 4.5 |
| METRO | 373 | 8.6% | 11.5% | 5.4% | 19.6% | 21.7% | 20.6% | 12.6% | 4.5 |
| NONMETRO | 533 | 7.7% | 9.0% | 7.9% | 21.2% | 20.1% | 19.5% | 14.6% | 4.5 |
| | $\chi^2$=5.004 n.s.; Cramer's V = 0.074 | | | | | | | | F=0.375 n.s.; η=0.020 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-20: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… require using less effective shot while hunting small game.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 4.8% | 7.9% | 6.8% | 23.9% | 19.9% | 21.5% | 15.2% | 4.7 |
| METRO | 373 | 4.6% | 9.4% | 7.8% | 20.6% | 21.2% | 22.3% | 14.2% | 4.7 |
| NONMETRO | 532 | 5.6% | 7.5% | 6.6% | 24.4% | 20.1% | 20.9% | 14.8% | 4.7 |
| | $\chi^2$=3.616 n.s.; Cramer's V = 0.063 | | | | | | | | F=0.000 n.s.; η=0.001 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-21: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… require using more expensive ammunition.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 869 | 2.6% | 2.6% | 1.6% | 11.1% | 18.1% | 28.9% | 35.1% | 5.7 |
| METRO | 373 | 1.9% | 2.4% | 1.3% | 11.0% | 18.2% | 35.9% | 29.2% | 5.7 |
| NONMETRO | 534 | 2.8% | 2.8% | 1.7% | 11.2% | 19.1% | 25.7% | 36.7% | 5.6 |
| | $\chi^2$=12.594 n.s.; Cramer's V = 0.118 | | | | | | | | F=0.015 n.s.; η=0.004 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-22: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… improve the image of hunters.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 11.5% | 10.2% | 7.4% | 25.5% | 20.8% | 16.8% | 7.7% | 4.2 |
| METRO | 371 | 10.2% | 8.6% | 7.3% | 24.0% | 23.2% | 18.1% | 8.6% | 4.3 |
| NONMETRO | 529 | 11.3% | 10.4% | 7.2% | 25.7% | 20.0% | 17.6% | 7.8% | 4.2 |
| | $\chi^2$= 2.454 n.s.; Cramer's V = 0.052 | | | | | | | | F=1.299 n.s.; η=0.038 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-23: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… prevent the spread of lead in the natural environment.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 867 | 6.0% | 6.4% | 7.0% | 18.1% | 24.3% | 22.6% | 15.4% | 4.8 |
| METRO | 374 | 4.5% | 7.5% | 5.6% | 16.3% | 22.5% | 24.3% | 19.3% | 4.9 |
| NONMETRO | 532 | 6.6% | 5.6% | 7.3% | 17.7% | 24.8% | 22.9% | 15.0% | 4.8 |
| | $\chi^2$= 6.983 n.s.; Cramer's V = 0.088 | | | | | | | | F=2.313 n.s.; η=0.051 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-24: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… make it more difficult for some people to hunt.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 870 | 10.7% | 14.3% | 10.3% | 22.9% | 18.3% | 12.5% | 11.1% | 4.1 |
| METRO | 374 | 13.1% | 14.2% | 9.4% | 20.9% | 20.3% | 12.6% | 9.6% | 4.0 |
| NONMETRO | 534 | 10.1% | 15.0% | 10.9% | 24.2% | 17.0% | 12.0% | 10.9% | 4.0 |
| | $\chi^2$= 5.040 n.s. Cramer's V = 0.075 | | | | | | | | F=0.173 n.s.; η=0.014 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-25: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota … is something most hunters would adjust to after a few seasons.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 867 | 4.0% | 5.4% | 4.4% | 15.6% | 25.0% | 30.0% | 15.5% | 5.0 |
| METRO | 373 | 2.1% | 5.9% | 4.6% | 12.6% | 26.5% | 31.6% | 16.6% | 5.2 |
| NONMETRO | 531 | 4.5% | 5.1% | 4.0% | 16.2% | 23.7% | 31.1% | 15.4% | 5.0 |
| | $\chi^2$= 6.783 n.s.; Cramer's V = 0.087 | | | | | | | | F=1.450 n.s.; η=0.040 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-26: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… decrease hunting opportunity in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 15.4% | 19.0% | 12.1% | 21.8% | 14.4% | 9.3% | 8.0% | 3.6 |
| METRO | 374 | 17.9% | 20.3% | 10.4% | 22.7% | 13.4% | 6.7% | 8.6% | 3.5 |
| NONMETRO | 532 | 15.0% | 19.2% | 13.0% | 21.6% | 14.5% | 9.6% | 7.1% | 3.6 |
| | $\chi^2$= 5.544 n.s.; Cramer's V = 0.078 | | | | | | | | F=0.806 n.s.; η=0.030 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-27: Likelihood that banning lead shot for hunting small game in the farmland zone in Minnesota would… improve awareness about the dangers of lead in the environment.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 868 | 6.4% | 7.3% | 6.8% | 23.1% | 26.6% | 20.1% | 9.6% | 4.6 |
| METRO | 373 | 6.4% | 6.7% | 7.0% | 20.9% | 26.0% | 20.6% | 12.3% | 4.6 |
| NONMETRO | 532 | 6.0% | 7.7% | 6.4% | 22.9% | 26.5% | 21.4% | 9.0% | 4.6 |
| | $\chi^2$= 3.279 n.s.; Cramer's V = 0.060 | | | | | | | | F=0.544 n.s.; η=0.025 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-28: How good or bad is the outcome of… Protecting wildlife from lead poisoning**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 1.0% | 0.6% | 1.0% | 18.1% | 18.3% | 34.7% | 26.4% | 5.6 |
| METRO | 371 | 1.1% | 0.8% | 1.3% | 14.6% | 17.3% | 35.3% | 29.6% | 5.7 |
| NONMETRO | 530 | 0.9% | 0.4% | 0.9% | 18.7% | 18.3% | 34.3% | 26.4% | 5.6 |
| | $\chi^2$= 4.295 n.s. Cramer's V = 0.069 | | | | | | | | F=1.194 n.s.; η=0.036 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-29: How good or bad is the outcome of… Benefiting the quality of the environment**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 0.7% | 0.2% | 0.8% | 18.1% | 16.4% | 32.6% | 31.1% | 5.7 |
| METRO | 371 | 1.1% | 0.3% | 0.8% | 13.5% | 17.3% | 31.3% | 35.8% | 5.8 |
| NONMETRO | 530 | 0.6% | 0.2% | 0.9% | 19.1% | 15.5% | 34.0% | 29.8% | 5.7 |
| | $\chi^2$= 8.272 n.s.; Cramer's V = 0.096 | | | | | | | | F=2.605 n.s.; η=0.054 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-30: How good or bad is the outcome of… Unnecessary government regulation**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 29.9% | 25.0% | 11.4% | 20.6% | 5.4% | 3.0% | 4.8% | 2.8 |
| METRO | 366 | 32.0% | 21.6% | 13.9% | 17.2% | 6.0% | 4.4% | 4.9% | 2.8 |
| NONMETRO | 524 | 27.3% | 26.5% | 10.9% | 22.7% | 5.0% | 2.9% | 4.8% | 2.8 |
| | $\chi^2$= 10.463 n.s.; Cramer's V = 0.108 | | | | | | | | F=.054 n.s.; η=0.008 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-31: How good or bad is the outcome of… Increasing wounding loss for small game hunting**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 29.9% | 26.7% | 12.8% | 15.9% | 3.7% | 6.0% | 5.0% | 2.8 |
| METRO | 370 | 28.6% | 26.2% | 17.6% | 13.0% | 3.8% | 7.3% | 3.5% | 2.7 |
| NONMETRO | 529 | 30.2% | 26.5% | 11.5% | 16.8% | 3.4% | 5.9% | 5.7% | 2.8 |
| | $\chi^2$= 10.877 n.s.; Cramer's V = 0.110 | | | | | | | | F=.113 n.s.; η=0.011 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-32: How good or bad is the outcome of… Using less effective shot while hunting small game**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 866 | 24.3% | 31.8% | 22.5% | 15.5% | 3.5% | 1.5% | 1.0% | 2.5 |
| METRO | 373 | 22.0% | 29.2% | 28.2% | 15.3% | 2.9% | 1.9% | 0.5% | 2.6 |
| NONMETRO | 531 | 24.9% | 32.6% | 21.1% | 15.1% | 3.8% | 1.3% | 1.3% | 2.5 |
| | $\chi^2$= 8.324 n.s.; Cramer's V = 0.096 | | | | | | | | F=0.526 n.s.; η=0.024 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-33: How good or bad is the outcome of… Using more expensive ammunition**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 20.7% | 20.8% | 29.7% | 24.0% | 2.2% | 1.9% | 0.7% | 2.8 |
| METRO | 371 | 20.2% | 19.7% | 33.4% | 21.8% | 2.2% | 1.6% | 1.1% | 2.8 |
| NONMETRO | 529 | 20.2% | 20.8% | 28.2% | 25.1% | 2.5% | 2.5% | 0.8% | 2.8 |
| | $\chi^2$= 4.193 n.s.; Cramer's V = 0.068 | | | | | | | | F=0.215 n.s.; η=0.015 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-34: How good or bad is the outcome of… Making it more difficult to find shells for the shotgun I use**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 863 | 19.5% | 25.1% | 25.0% | 27.4% | 1.5% | 1.0% | 0.5% | 2.7 |
| METRO | 372 | 19.6% | 25.5% | 27.7% | 24.7% | .8% | .5% | 1.1% | 2.7 |
| NONMETRO | 529 | 18.9% | 24.2% | 24.4% | 28.7% | 1.7% | 1.5% | 0.6% | 2.8 |
| | $\chi^2$= 6.343 n.s.; Cramer's V = 0.084 | | | | | | | | F=1.311 n.s.; η=0.038 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-35: How good or bad is the outcome of… Preventing the spread of lead in the natural environment**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 1.9% | 1.7% | 3.7% | 21.6% | 22.8% | 27.6% | 20.7% | 5.3 |
| METRO | 373 | 2.7% | .3% | 2.9% | 15.8% | 25.5% | 27.1% | 25.7% | 5.5 |
| NONMETRO | 529 | 1.5% | 2.5% | 4.2% | 22.5% | 21.2% | 28.2% | 20.0% | 5.2 |
| | $\chi^2$= 19.098**; Cramer's V = 0.146 | | | | | | | | F=5.333*; η=0.077 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-36: How good or bad is the outcome of… Improving the image of hunters**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 857 | 0.6% | 0.1% | 1.5% | 23.8% | 15.9% | 28.9% | 29.2% | 5.6 |
| METRO | 371 | 1.1% | 0.0% | 0.8% | 18.6% | 20.2% | 26.7% | 32.6% | 5.7 |
| NONMETRO | 524 | 0.4% | 0.2% | 1.7% | 25.2% | 13.7% | 30.2% | 28.6% | 5.6 |
| | $\chi^2$= 15.417*; Cramer's V = 0.131 | | | | | | | | F=1.637 n.s.; η=0.043 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-37: How good or bad is the outcome of… Hunters adjusting to using non-lead shot**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 3.6% | 3.8% | 8.0% | 38.4% | 17.8% | 20.2% | 8.2% | 4.6 |
| METRO | 371 | 2.4% | 2.7% | 7.5% | 35.3% | 21.3% | 23.2% | 7.5% | 4.7 |
| NONMETRO | 528 | 4.0% | 4.0% | 7.8% | 38.8% | 16.1% | 19.9% | 9.5% | 4.6 |
| | $\chi^2$= 8.609 n.s.; Cramer's V = 0.098 | | | | | | | | F=2.031 n.s.; η=0.048 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-38: How good or bad is the outcome of… Decreasing hunting opportunities**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 35.8% | 27.2% | 12.8% | 19.7% | 1.8% | 1.7% | 1.0% | 2.3 |
| METRO | 369 | 38.2% | 26.3% | 13.3% | 19.5% | 1.1% | 1.1% | 0.5% | 2.2 |
| NONMETRO | 529 | 34.2% | 27.4% | 12.3% | 20.6% | 2.3% | 2.1% | 1.1% | 2.4 |
| | $\chi^2$= 5.223 n.s.; Cramer's V = 0.076 | | | | | | | | F=2.927 n.s.; η=0.057 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-39: How good or bad is the outcome of… Improving awareness about the dangers of lead in the environment**

| | N | Extremely bad | Quite bad | Slightly bad | Neutral | Slightly good | Quite good | Extremely good | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 863 | 1.1% | 1.2% | 1.9% | 22.8% | 21.9% | 29.3% | 21.8% | 5.4 |
| METRO | 372 | 1.3% | 0.8% | 2.4% | 19.4% | 22.3% | 33.1% | 20.7% | 5.4 |
| NONMETRO | 528 | 1.1% | 1.3% | 1.5% | 23.3% | 21.4% | 27.8% | 23.5% | 5.4 |
| | $\chi^2$= 5.942 n.s.; Cramer's V = 0.081 | | | | | | | | F=.085 n.s.; η=0.010 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-40: Belief about whether MY FRIENDS think I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 860 | 18.1% | 14.0% | 9.3% | 36.7% | 9.7% | 8.0% | 4.2% | 3.5 |
| METRO | 365 | 12.3% | 13.7% | 9.0% | 39.2% | 12.1% | 9.0% | 4.7% | 3.7 |
| NONMETRO | 528 | 19.5% | 13.3% | 9.5% | 35.8% | 9.5% | 8.0% | 4.5% | 3.4 |
| | $\chi^2$=9.128 n.s.; Cramer's V = 0.101 | | | | | | | | F=5.348*; η=0.077 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-41: Belief about whether OTHER HUNTERS think I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 18.6% | 14.1% | 13.4% | 33.1% | 10.7% | 6.8% | 3.4% | 3.4 |
| METRO | 365 | 15.6% | 12.3% | 12.6% | 35.3% | 13.2% | 7.1% | 3.8% | 3.5 |
| NONMETRO | 529 | 18.7% | 14.2% | 13.2% | 32.3% | 10.4% | 7.4% | 3.8% | 3.4 |
| | $\chi^2$=3.832 n.s.; Cramer's V = 0.065 | | | | | | | | F=2.069 n.s.; η=0.048 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-42: Belief about whether ENVIRONMENTAL ORGANIZATIONS think I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 858 | 3.4% | 3.1% | 3.0% | 26.7% | 13.4% | 24.1% | 26.3% | 5.2 |
| METRO | 363 | 2.5% | 1.4% | 2.2% | 23.4% | 13.2% | 27.8% | 29.5% | 5.4 |
| NONMETRO | 527 | 3.4% | 3.8% | 3.4% | 27.1% | 13.5% | 22.8% | 26.0% | 5.2 |
| | $\chi^2$=10.504 n.s.; Cramer's V = 0.109 | | | | | | | | F=7.726**; η=0.093 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-43: Belief about whether PHEASANTS FOREVER thinks I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 5.9% | 5.0% | 4.1% | 48.7% | 12.7% | 16.2% | 7.4% | 4.4 |
| METRO | 360 | 5.0% | 4.7% | 5.6% | 46.4% | 12.2% | 17.8% | 8.3% | 4.4 |
| NONMETRO | 524 | 5.9% | 4.6% | 3.8% | 49.0% | 12.6% | 16.4% | 7.6% | 4.4 |
| | $\chi^2$=2.463 n.s.; Cramer's V = 0.053 | | | | | | | | F=0.274 n.s.; η=0.018 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-44: Belief about whether DUCKS UNLIMITED thinks I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 4.2% | 3.4% | 2.2% | 36.8% | 10.7% | 21.2% | 21.5% | 5.0 |
| METRO | 361 | 2.8% | 3.9% | 2.2% | 36.0% | 10.0% | 23.8% | 21.3% | 5.0 |
| NONMETRO | 522 | 4.4% | 2.9% | 2.3% | 37.0% | 10.9% | 20.3% | 22.2% | 5.0 |
| | $\chi^2$=3.718 n.s.; Cramer's V = 0.065 | | | | | | | | F=0.356 n.s.; η=0.020 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-45: Belief about whether THE MINNESOTA DNR thinks I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 2.8% | 3.0% | 1.3% | 33.7% | 13.0% | 25.6% | 20.5% | 5.1 |
| METRO | 362 | 1.9% | 2.8% | 1.1% | 32.0% | 13.8% | 26.5% | 21.8% | 5.2 |
| NONMETRO | 524 | 3.1% | 3.1% | 1.3% | 34.0% | 12.6% | 25.8% | 20.2% | 5.1 |
| | $\chi^2$=1.977 n.s.; Cramer's V = 0.047 | | | | | | | | F=1.365 n.s.; η=0.039 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-46: Belief about whether THE NATIONAL RIFLE ASSOCIATION thinks I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 850 | 12.6% | 8.7% | 8.9% | 48.2% | 9.3% | 7.7% | 4.7% | 3.8 |
| METRO | 360 | 11.9% | 11.9% | 8.3% | 45.6% | 8.9% | 8.1% | 5.3% | 3.7 |
| NONMETRO | 521 | 12.3% | 7.9% | 9.2% | 48.4% | 9.6% | 7.7% | 5.0% | 3.8 |
| | $\chi^2$=4.459 n.s.; Cramer's V = 0.071 | | | | | | | | F=0.256 n.s.; η=0.017 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-47: Belief about whether AMMUNITION MANUFACTURERS think I should support a ban on lead shot in the farmland zone in Minnesota.**

| | N | Extremely unlikely | Quite unlikely | Slightly unlikely | Neutral | Slightly likely | Quite likely | Extremely likely | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 13.7% | 12.3% | 9.0% | 45.1% | 6.3% | 5.8% | 7.8% | 3.7 |
| METRO | 363 | 13.2% | 12.1% | 9.4% | 45.7% | 8.0% | 5.2% | 6.3% | 3.6 |
| NONMETRO | 523 | 14.0% | 12.4% | 8.6% | 44.6% | 5.7% | 6.1% | 8.6% | 3.7 |
| | $\chi^2$=3.667 n.s.; Cramer's V = 0.064 | | | | | | | | F=0.145 n.s.; η=0.013 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-48: I want to do what MY FRIENDS think I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 855 | 14.8% | 14.7% | 11.8% | 36.8% | 14.3% | 5.6% | 1.9% | 3.5 |
| METRO | 364 | 12.9% | 13.2% | 13.2% | 37.6% | 17.0% | 4.4% | 1.6% | 3.5 |
| NONMETRO | 526 | 14.6% | 15.4% | 11.6% | 35.4% | 13.9% | 6.5% | 2.7% | 3.5 |
| | $\chi^2$=5.970 n.s.; Cramer's V = 0.082 | | | | | | | | F=0.150 n.s.; η=0.013 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-49: I want to do what OTHER HUNTERS think I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 12.9% | 12.0% | 12.5% | 34.5% | 19.6% | 6.3% | 2.3% | 3.6 |
| METRO | 364 | 9.9% | 10.7% | 15.1% | 34.1% | 20.9% | 7.4% | 1.9% | 3.8 |
| NONMETRO | 525 | 13.3% | 12.4% | 11.2% | 34.3% | 19.2% | 6.3% | 3.2% | 3.7 |
| | $\chi^2$=7.240 n.s.; Cramer's V = 0.090 | | | | | | | | F=0.892 n.s.; η=0.032 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-50: I want to do what ENVIRONMENTAL ORGANIZATIONS think I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 16.1% | 12.9% | 9.8% | 33.3% | 15.1% | 7.9% | 4.8% | 3.6 |
| METRO | 365 | 14.5% | 12.1% | 9.9% | 31.0% | 17.8% | 10.4% | 4.4% | 3.7 |
| NONMETRO | 524 | 16.0% | 13.0% | 9.7% | 33.4% | 14.3% | 8.2% | 5.3% | 3.6 |
| | $\chi^2$=4.079 n.s.; Cramer's V = 0.068 | | | | | | | | F=0.957 n.s.; η=0.033 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-51: I want to do what PHEASANTS FOREVER thinks I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 10.8% | 7.7% | 7.5% | 37.5% | 20.0% | 10.8% | 5.5% | 4.0 |
| METRO | 364 | 8.5% | 5.8% | 6.9% | 38.2% | 22.3% | 12.4% | 6.0% | 4.2 |
| NONMETRO | 525 | 11.2% | 8.4% | 7.4% | 36.6% | 18.9% | 11.6% | 5.9% | 4.0 |
| | $\chi^2$=5.153 n.s.; Cramer's V = 0.076 | | | | | | | | F=3.213 n.s.; η=0.060 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-52: I want to do what DUCKS UNLIMITED thinks I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 10.6% | 7.1% | 6.8% | 36.8% | 18.6% | 12.1% | 8.0% | 4.1 |
| METRO | 365 | 8.2% | 5.8% | 5.5% | 35.3% | 20.8% | 15.9% | 8.5% | 4.4 |
| NONMETRO | 524 | 11.1% | 7.4% | 7.1% | 36.8% | 17.4% | 11.3% | 9.0% | 4.1 |
| | $\chi^2$=8.574 n.s.; Cramer's V = 0.098 | | | | | | | | F=4.950*; η=0.074 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-53: I want to do what THE MINNESOTA DNR thinks I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 11.5% | 6.6% | 6.4% | 34.0% | 19.3% | 13.0% | 9.3% | 4.2 |
| METRO | 362 | 8.8% | 3.9% | 5.5% | 31.2% | 22.9% | 18.0% | 9.7% | 4.5 |
| NONMETRO | 525 | 11.8% | 7.4% | 6.5% | 34.3% | 17.3% | 12.2% | 10.5% | 4.2 |
| | $\chi^2$=15.714*; Cramer's V = 0.133 | | | | | | | | F=7.572**; η=0.092 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-54: I want to do what THE NATIONAL RIFLE ASSOCIATION thinks I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 855 | 14.2% | 8.6% | 9.2% | 43.3% | 12.9% | 7.5% | 4.3% | 3.7 |
| METRO | 364 | 12.9% | 9.1% | 8.8% | 42.6% | 14.8% | 7.4% | 4.4% | 3.8 |
| NONMETRO | 526 | 14.3% | 8.4% | 9.1% | 42.8% | 12.0% | 8.7% | 4.8% | 3.8 |
| | $\chi^2$=2.294 n.s.; Cramer's V = 0.051 | | | | | | | | F=0.038 n.s.; η=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 3-55: I want to do what AMMUNITION MANUFACTURERS think I should do.**

| | N | Extremely disagree | Quite disagree | Slightly disagree | Neutral | Slightly agree | Quite agree | Extremely agree | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 18.1% | 12.5% | 10.0% | 47.5% | 6.4% | 3.0% | 2.6% | 3.3 |
| METRO | 364 | 18.1% | 12.9% | 9.6% | 46.2% | 8.5% | 1.9% | 2.7% | 3.3 |
| NONMETRO | 524 | 17.7% | 12.0% | 10.3% | 47.5% | 5.5% | 4.0% | 2.9% | 3.4 |
| | $\chi^2$=6.139 n.s.; Cramer's V = 0.083 | | | | | | | | F=0.138 n.s.; η=0.012 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Section 4: Trust in the Minnesota Department of Natural Resources and Media Resources

### Attitudes About the Minnesota Department of Natural Resources and Research on Lead Shot

Respondents were asked to rate six statements to indicate their trust in the Minnesota Department of Natural Resources and in research about lead shot.

On average respondents were fairly neutral in their trust of the Minnesota DNR. Between 40% and 50% of respondents agreed that: (a) When deciding about the use of lead shot for small game hunting in Minnesota, the MnDNR will be open and honest in the things they do and say ($\bar{x}$=3.2) (Table 4-1), (b) The MnDNR can be trusted to make decisions about using lead shot for small game management that are good for the resource ($\bar{x}$=3.3) (Table 4-2), (c) The MnDNR will make decisions about using lead shot for small game in a way that is fair ($\bar{x}$=3.2) (Table 4-3), (d) The MnDNR listens to small game hunters' concerns ($\bar{x}$=3.1) (Table 4-4). Between one-fourth and one-third of the respondents neither agreed nor disagreed with these statements. Metropolitan respondents agreed more strongly with the first three statements (Tables 4-1 to 4-3).

Two statements addressed the influence of research on support for a ban on lead shot. Results suggest that approximately two-thirds of respondents would be more likely to support a ban on lead shot if research shows that it has a negative effect on game species ($\bar{x}$=3.8) (Table 4-5) or on non-game species ($\bar{x}$=3.7) (Table 4-6). Metropolitan respondents were significantly more likely to agree with these two statements.

### Trust in and Use of Media Resources

Respondents were asked to indicate how much they rely on and trust information about hunting from 14 sources (Tables 4-7 to 4-20). Respondents relied most frequently on the DNR hunting regulations ($\bar{x}$=3.7) (Table 4-20), outdoor magazines ($\bar{x}$=3.4) (Table 4-4), *Outdoor News* ($\bar{x}$=3.3) (Table 4-19), outdoor shows on TV ($\bar{x}$=3.2) (Table 4-10), and sportsmen's groups ($\bar{x}$=3.1) (Table 4-18). The listed sources that were relied on the least were the St. Paul Pioneer Press ($\bar{x}$=2.1) (Table 4-15) and the Minneapolis Star Tribune ($\bar{x}$=2.3) (Table 4-14). All other sources fell between these groups. Compared to non-metropolitan residents, metropolitan residents relied more heavily on the Internet, the two Twin Cities newspapers, and the Minnesota DNR Website.

# Media Resources

**Table 4-1: Trust in MNDNR: When deciding about the use of lead shot for small game hunting in Minnesota, the MNDNR will be open and honest in the things they do and say**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 8.4% | 18.0% | 28.7% | 34.4% | 10.5% | 3.2 |
| METRO | 369 | 6.8% | 13.8% | 24.4% | 42.8% | 12.2% | 3.4 |
| NONMETRO | 529 | 8.7% | 19.1% | 29.7% | 32.5% | 10.0% | 3.2 |
| | $\chi^2$=14.017**; Cramer's V = 0.125 | | | | | | F=10.135** ; η=0.106 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 4-2: Trust in MNDNR: The MNDNR can be trusted to make decisions about using lead shot for small game management that are good for the resource.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 864 | 8.7% | 16.6% | 26.4% | 36.9% | 11.5% | 3.3 |
| METRO | 370 | 7.3% | 13.5% | 22.4% | 42.4% | 14.3% | 3.4 |
| NONMETRO | 530 | 8.5% | 17.4% | 27.5% | 36.0% | 10.6% | 3.2 |
| | $\chi^2$=9.515*; Cramer's V = 0.103 | | | | | | F=7.101**; η=0.089 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 4-3: Trust in MNDNR: The MNDNR will make decisions about using lead shot for small game in a way that is fair.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 860 | 8.8% | 18.7% | 28.0% | 35.4% | 9.2% | 3.2 |
| METRO | 370 | 7.3% | 15.7% | 24.9% | 40.3% | 11.9% | 3.3 |
| NONMETRO | 526 | 8.4% | 19.4% | 28.7% | 35.2% | 8.4% | 3.2 |
| | $\chi^2$=7.441 n.s.; Cramer's V = 0.091 | | | | | | F=5.857*; η=0.081 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

**Table 4-4: Trust in MNDNR: The MNDNR listens to small game hunters' concerns**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 857 | 10.7% | 18.0% | 31.3% | 32.0% | 8.0% | 3.1 |
| METRO | 367 | 10.4% | 15.5% | 30.2% | 35.1% | 8.7% | 3.2 |
| NONMETRO | 524 | 9.9% | 18.5% | 31.3% | 31.9% | 8.4% | 3.1 |
| | $\chi^2$=1.951 n.s.; Cramer's V = 0.047 | | | | | | F=0.638 n.s.; η=0.027 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 4-5: Trust in MNDNR: If research shows lead shot has negative effects on game species, I would be likely to support a ban.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 862 | 4.0% | 7.6% | 20.9% | 44.2% | 23.3% | 3.8 |
| METRO | 369 | 1.9% | 7.6% | 14.6% | 47.4% | 28.5% | 3.9 |
| NONMETRO | 529 | 4.5% | 7.2% | 22.7% | 43.5% | 22.1% | 3.7 |
| | $\chi^2$=15.990**; Cramer's V = 0.133 | | | | | | F=10.068**; η=0.105 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 4-6: Trust in MNDNR: If research shows lead shot has negative effects on non-game wildlife, I would be likely to support a ban.**

| | N | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 861 | 4.5% | 7.2% | 23.5% | 43.5% | 21.3% | 3.7 |
| METRO | 370 | 2.7% | 7.8% | 14.6% | 48.4% | 26.5% | 3.9 |
| NONMETRO | 528 | 4.9% | 6.8% | 26.5% | 41.7% | 20.1% | 3.7 |
| | $\chi^2$=23.442***; Cramer's V = 0.162 | | | | | | F=11.256**; η=0.111 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

### Table 4-7: Trust and reliability of media sources: Newspapers in general

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 850 | 13.4% | 20.6% | 44.3% | 20.5% | 1.3% | 2.8 |
| METRO | 369 | 14.9% | 22.0% | 42.3% | 19.0% | 1.9% | 2.7 |
| NONMETRO | 520 | 12.3% | 19.4% | 45.0% | 21.9% | 1.3% | 2.8 |
| | $\chi^2$=3.452 n.s.; Cramer's V = 0.062 | | | | | | F=2.071 n.s.; η=0.048 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-8: Trust and reliability of media sources: Outdoor Magazines in general

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 850 | 3.6% | 10.3% | 37.0% | 45.0% | 4.0% | 3.4 |
| METRO | 369 | 1.9% | 9.8% | 36.6% | 47.2% | 4.6% | 3.4 |
| NONMETRO | 520 | 4.8% | 10.0% | 37.5% | 44.0% | 3.7% | 3.3 |
| | $\chi^2$=6.088 n.s.; Cramer's V = 0.083 | | | | | | F=3.660 n.s.; η=0.064 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-9: Trust and reliability of media sources: Television in general

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 13.3% | 23.5% | 42.2% | 19.5% | 1.6% | 2.7 |
| METRO | 368 | 12.5% | 27.4% | 41.3% | 17.1% | 1.6% | 2.7 |
| NONMETRO | 521 | 13.1% | 21.7% | 42.8% | 20.7% | 1.7% | 2.8 |
| | $\chi^2$=4.608 n.s.; Cramer's V = 0.072 | | | | | | F=1.640 n.s.; η=0.043 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

### Table 4-10: Trust and reliability of media sources: Outdoor shows on TV

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 847 | 6.1% | 12.0% | 42.7% | 35.0% | 4.2% | 3.2 |
| METRO | 366 | 4.9% | 12.8% | 41.0% | 37.7% | 3.6% | 3.2 |
| NONMETRO | 518 | 6.6% | 11.8% | 42.9% | 34.4% | 4.4% | 3.2 |
| | $\chi^2$=2.451 n.s.; Cramer's V = 0.053 | | | | | | F=0.367 n.s.; η=0.020 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-11: Trust and reliability of media sources: Radio in general

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 848 | 12.0% | 24.8% | 44.5% | 17.5% | 1.2% | 2.7 |
| METRO | 364 | 12.9% | 26.4% | 41.5% | 18.7% | 0.5% | 2.7 |
| NONMETRO | 521 | 11.5% | 24.2% | 45.1% | 17.9% | 1.3% | 2.7 |
| | $\chi^2$=2.809 n.s.; Cramer's V = 0.056 | | | | | | F=0.807 n.s.; η=0.030 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-12: Trust and reliability of media sources: Outdoor shows on radio

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 11.8% | 22.6% | 41.9% | 22.5% | 1.3% | 2.8 |
| METRO | 367 | 10.1% | 24.8% | 37.9% | 25.9% | 1.4% | 2.8 |
| NONMETRO | 521 | 12.7% | 21.7% | 42.8% | 21.5% | 1.3% | 2.8 |
| | $\chi^2$=5.208 n.s.; Cramer's V = 0.077 | | | | | | F=0.964 n.s.; η=0.033 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

### Table 4-13: Trust and reliability of media sources: The Web or internet

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 841 | 20.2% | 21.4% | 37.0% | 18.8% | 2.5% | 2.6 |
| METRO | 364 | 13.5% | 24.2% | 39.0% | 21.4% | 1.9% | 2.7 |
| NONMETRO | 515 | 22.5% | 20.4% | 35.9% | 18.4% | 2.7% | 2.6 |
| | $\chi^2$=12.800*; Cramer's V = 0.121 | | | | | | F=4.642*; η=0.073 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-14: Trust and reliability of media sources: Minneapolis Star-Tribune

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 841 | 33.5% | 20.3% | 30.2% | 14.7% | 1.2% | 2.3 |
| METRO | 365 | 25.8% | 23.3% | 33.2% | 15.6% | 2.2% | 2.5 |
| NONMETRO | 515 | 35.7% | 18.8% | 29.1% | 15.5% | 0.8% | 2.3 |
| | $\chi^2$=13.036*; Cramer's V = 0.122 | | | | | | F=5.813*; η=0.081 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-15: Trust and reliability of media sources: St. Paul Pioneer Press

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 838 | 37.5% | 25.0% | 27.1% | 9.6% | 0.8% | 2.1 |
| METRO | 363 | 30.0% | 27.8% | 29.5% | 11.6% | 1.1% | 2.3 |
| NONMETRO | 512 | 40.2% | 23.4% | 26.2% | 9.6% | 0.6% | 2.1 |
| | $\chi^2$=10.131*; Cramer's V = 0.108 | | | | | | F=7.044**; η=0.089 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

### Table 4-16: Trust and reliability of media sources: Minnesota DNR Conservation Volunteer

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 847 | 18.4% | 15.8% | 32.1% | 24.6% | 9.1% | 2.9 |
| METRO | 369 | 15.2% | 14.6% | 34.4% | 27.4% | 8.4% | 3.0 |
| NONMETRO | 517 | 19.1% | 15.9% | 30.9% | 23.8% | 10.3% | 2.9 |
| | $\chi^2$=4.823 n.s.; Cramer's V = 0.074 | | | | | | F=1.190 n.s.; η=0.037 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-17: Trust and reliability of media sources: Minnesota DNR website

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 841 | 20.3% | 16.2% | 29.5% | 24.7% | 9.3% | 2.9 |
| METRO | 365 | 13.7% | 15.1% | 33.4% | 31.5% | 6.3% | 3.0 |
| NONMETRO | 515 | 22.3% | 16.1% | 27.8% | 22.9% | 10.9% | 2.8 |
| | $\chi^2$=21.841***; Cramer's V = 0.158 | | | | | | F=4.436*; η=0.071 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

### Table 4-18: Trust and reliability of media sources: Sportmen's groups

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 845 | 9.7% | 15.0% | 36.1% | 34.2% | 5.0% | 3.1 |
| METRO | 368 | 8.7% | 15.5% | 34.8% | 34.2% | 6.8% | 3.1 |
| NONMETRO | 516 | 10.1% | 14.5% | 36.6% | 34.7% | 4.1% | 3.1 |
| | $\chi^2$=3.842 n.s.; Cramer's V = 0.066 | | | | | | F=.928 n.s.; η=0.032 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Media Resources

**Table 4-19: Trust and reliability of media sources: Outdoor news**

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 846 | 7.7% | 12.8% | 31.6% | 38.7% | 9.3% | 3.3 |
| METRO | 367 | 6.8% | 13.1% | 32.4% | 37.9% | 9.8% | 3.3 |
| NONMETRO | 518 | 8.3% | 12.4% | 30.9% | 39.6% | 8.9% | 3.3 |
| | $\chi^2$=1.230 n.s.; Cramer's V = 0.037 | | | | | | F=.113 n.s.; η=0.011 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 4-20: Trust and reliability of media sources: DNR Hunter Handbook (hunting regs)**

| | N | Not at all | Seldom | Occasionally | Frequently | Always | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 848 | 3.9% | 6.2% | 28.4% | 37.9% | 23.6% | 3.7 |
| METRO | 368 | 2.4% | 7.1% | 29.3% | 38.9% | 22.3% | 3.7 |
| NONMETRO | 519 | 4.4% | 5.6% | 27.2% | 37.4% | 25.4% | 3.7 |
| | $\chi^2$=4.487 n.s.; Cramer's V = 0.071 | | | | | | F=.114 n.s.; η=0.011 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Section 5: Environmental Values

### Environmental Values

Survey recipients completed 15 items that measure the new ecological paradigm (Dunlap et al., 2000) (Tables 5-1 to 5-15). More than half of the respondents agreed that: (a) when humans interfere with nature it often produces disastrous consequences ( $\bar{x}$ =3.5) (Table 5-2), (b) humans are severely abusing the environment ( $\bar{x}$ =3.4) (Table 5-4), (c) the earth has plenty of natural resources if we just learn how to develop them ( $\bar{x}$ =3.4) (Table 5-5), (d) plants and animals have as much right as humans to exist ( $\bar{x}$ =3.4) (Table 5-6), (e) despite our special abilities humans are still subject to the laws of nature ( $\bar{x}$ =4.1) (Table 5-8), (f) the earth is like a spaceship with very limited room and resources ( $\bar{x}$ =3.4) (Table 5-10), and (g) the balance of nature is very delicate and easily upset ( $\bar{x}$ =3.7) (Table 5-12). More than half of the respondents disagreed that: (a) humans have the right to modify the natural environment to suit their needs ( $\bar{x}$ =2.5) (Table 5-1), (b) the balance of nature is strong enough to cope with the impacts of modern industrial nations ( $\bar{x}$ =2.3) (Table 5-7), and (c) humans will eventually learn enough about how nature works to be able to control it ( $\bar{x}$ =2.4) (Table 5-13).

### Consequences of Environmental Problems

Respondents were asked to respond to nine items to indicate why they were concerned about environmental problems (Tables 5-16 to 5-24). Respondents were most concerned about environmental problems because of consequences for children ( $\bar{x}$ =6.0) (Table 5-20), future generations ( $\bar{x}$ =6.0) (Table 5-22), and nature ( $\bar{x}$ =5.7) (Table 5-24). They were least concerned about consequences for: (a) themselves ( $\bar{x}$ =5.1) (Table 5-16), their future ( $\bar{x}$ =5.3) (Table 5-19), and their own health ( $\bar{x}$ =5.3) (Table 5-23).

**Table 5-1: Environmental values: Humans have the right to modify the natural environment to suit their needs**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 855 | 24.0% | 31.7% | 17.6% | 20.2% | 6.5% | 2.5 |
| METRO | 369 | 25.2% | 28.2% | 15.4% | 23.8% | 7.3% | 2.6 |
| NONMETRO | 524 | 24.4% | 32.8% | 18.1% | 18.9% | 5.7% | 2.5 |
| | $\chi^2$=5.875 n.s., Cramer's V=0.081 | | | | | | F=1.765 n.s.; η=0.044 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-2: Environmental values: When humans interfere with nature it often produces disastrous consequences**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 7.2% | 16.5% | 14.2% | 40.6% | 21.4% | 3.5 |
| METRO | 368 | 8.2% | 18.5% | 14.7% | 37.8% | 20.9% | 3.4 |
| NONMETRO | 524 | 6.5% | 15.3% | 13.9% | 42.0% | 22.3% | 3.6 |
| | $\chi^2$=3.410 n.s., Cramer's V=0.062 | | | | | | F=2.750 n.s.; η=0.056 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-3: Environmental values: Human ingenuity will ensure that we do <u>not</u> make the earth unlivable**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 850 | 12.0% | 25.6% | 26.9% | 27.2% | 8.4% | 2.9 |
| METRO | 367 | 12.3% | 24.5% | 25.3% | 28.6% | 9.3% | 3.0 |
| NONMETRO | 521 | 11.9% | 26.3% | 27.1% | 26.9% | 7.9% | 2.9 |
| | $\chi^2$=1.262 n.s., Cramer's V=0.038 | | | | | | F=0.496 n.s.; η=0.024 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-4: Environmental values: Humans are severely abusing the environment**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 841 | 10.1% | 15.4% | 17.3% | 38.7% | 18.5% | 3.4 |
| METRO | 361 | 11.1% | 16.1% | 14.7% | 37.4% | 20.8% | 3.4 |
| NONMETRO | 517 | 9.5% | 15.3% | 18.2% | 39.5% | 17.6% | 3.4 |
| | $\chi^2$=3.545 n.s., Cramer's V=0.064 | | | | | | F=0.001 n.s.; η=0.001 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-5: Environmental values: The earth has plenty of natural resources if we just learn how to develop them**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 7.6% | 18.8% | 19.4% | 38.8% | 15.4% | 3.4 |
| METRO | 367 | 9.5% | 20.7% | 17.2% | 37.1% | 15.5% | 3.3 |
| NONMETRO | 523 | 7.1% | 18.4% | 20.5% | 39.0% | 15.1% | 3.4 |
| | $\chi^2$=3.698 n.s., Cramer's V=0.064 | | | | | | F=1.079 n.s.; η=0.035 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-6: Environmental values: Plants and animals have as much right as humans to exist**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 11.2% | 15.2% | 20.6% | 28.7% | 24.3% | 3.4 |
| METRO | 367 | 13.6% | 15.3% | 19.6% | 24.8% | 26.7% | 3.4 |
| NONMETRO | 522 | 9.0% | 15.1% | 20.9% | 30.7% | 24.3% | 3.5 |
| | $\chi^2$=7.483 n.s., Cramer's V=0.092 | | | | | | F=1.383 n.s.; η=0.039 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-7: Environmental values: The balance of nature is strong enough to cope with the impacts of modern industrial nations**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 26.0% | 38.7% | 17.2% | 14.1% | 4.1% | 2.3 |
| METRO | 368 | 24.7% | 39.7% | 15.5% | 15.8% | 4.3% | 2.4 |
| NONMETRO | 524 | 26.7% | 38.7% | 17.6% | 13.2% | 3.8% | 2.3 |
| | $\chi^2$=2.104 n.s., Cramer's V=0.049 | | | | | | F=0.769 n.s.; η=0.029 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-8: Environmental values: Despite our special abilities humans are still subject to the laws of nature**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 1.0% | 2.8% | 14.4% | 48.9% | 32.9% | 4.1 |
| METRO | 368 | 1.4% | 2.2% | 12.2% | 45.9% | 38.3% | 4.2 |
| NONMETRO | 523 | 0.8% | 3.3% | 15.3% | 49.5% | 31.2% | 4.1 |
| | $\chi^2$=6.914 n.s., Cramer's V=0.088 | | | | | | F=3.613 n.s.; η=0.064 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-9: Environmental values: The so-called "ecological crisis" facing humankind has been greatly exaggerated**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 12.5% | 19.8% | 27.2% | 26.2% | 14.4% | 3.1 |
| METRO | 366 | 15.0% | 19.9% | 24.0% | 26.0% | 15.0% | 3.1 |
| NONMETRO | 522 | 12.3% | 19.7% | 28.7% | 25.9% | 13.4% | 3.1 |
| | $\chi^2$=3.402 n.s., Cramer's V=0.062 | | | | | | F=0.081 n.s.; η=0.010 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-10: Environmental values: The earth is like a spaceship with very limited room and resources**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 848 | 6.2% | 16.4% | 26.0% | 37.0% | 14.4% | 3.4 |
| METRO | 366 | 7.9% | 16.4% | 21.6% | 38.0% | 16.1% | 3.4 |
| NONMETRO | 520 | 5.0% | 16.0% | 27.5% | 37.7% | 13.8% | 3.4 |
| | $\chi^2$=6.738 n.s., Cramer's V=0.087 | | | | | | F=0.036 n.s.; η=0.006 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-11: Environmental values: Humans were meant to rule over the rest of nature**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 848 | 18.8% | 24.6% | 24.7% | 20.6% | 11.4% | 2.8 |
| METRO | 366 | 19.9% | 23.5% | 23.2% | 20.8% | 12.6% | 2.8 |
| NONMETRO | 520 | 18.5% | 24.4% | 25.2% | 21.7% | 10.2% | 2.8 |
| | $\chi^2$=1.845 n.s., Cramer's V=0.046 | | | | | | F=0.040 n.s.; η=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-12: Environmental values: The balance of nature is very delicate and easily upset**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 847 | 3.1% | 13.4% | 19.0% | 42.5% | 22.0% | 3.7 |
| METRO | 368 | 3.5% | 14.4% | 18.8% | 38.9% | 24.5% | 3.7 |
| NONMETRO | 518 | 2.7% | 12.4% | 18.7% | 44.2% | 22.0% | 3.7 |
| | $\chi^2$=3.196 n.s., Cramer's V=0.060 | | | | | | F=0.331 n.s.; η=0.019 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-13: Environmental values: Humans will eventually learn enough about how nature works to be able to control it**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 23.5% | 35.7% | 22.7% | 16.4% | 1.8% | 2.4 |
| METRO | 368 | 23.1% | 36.7% | 20.9% | 18.2% | 1.1% | 2.4 |
| NONMETRO | 524 | 23.5% | 35.7% | 23.3% | 15.6% | 1.9% | 2.4 |
| | $\chi^2$=2.388 n.s., Cramer's V=0.052 | | | | | | F=0.009 n.s.; η=0.003 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-14: Environmental values: If things continue on their present course, we will soon experience a major ecological catastrophe**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 14.0% | 21.6% | 27.3% | 24.9% | 12.2% | 3.0 |
| METRO | 368 | 17.1% | 22.8% | 24.7% | 24.7% | 10.6% | 2.9 |
| NONMETRO | 522 | 11.9% | 21.5% | 28.0% | 25.5% | 13.2% | 3.1 |
| | $\chi^2$=6.528 n.s., Cramer's V=0.086 | | | | | | F=4.538*; η=0.071 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-15: Environmental values: We are approaching the limit of the number of people the earth can support**

| | N | Strongly disagree | Mildly disagree | Neutral | Mildly agree | Strongly agree | Mean |
|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 10.6% | 18.7% | 29.0% | 27.1% | 14.7% | 3.2 |
| METRO | 367 | 12.3% | 17.7% | 26.4% | 27.2% | 16.3% | 3.2 |
| NONMETRO | 524 | 9.4% | 19.1% | 30.3% | 26.9% | 14.3% | 3.2 |
| | $\chi^2$=3.702 n.s., Cramer's V=0.064 | | | | | | F=0.000 n.s.; η=0.000 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-16: I am concerned about environmental problems because of the consequences for: MYSELF**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 2.6% | 4.7% | 7.7% | 19.6% | 23.2% | 17.4% | 24.8% | 5.1 |
| METRO | 364 | 3.3% | 4.4% | 10.2% | 17.6% | 20.9% | 16.8% | 26.9% | 5.1 |
| NONMETRO | 525 | 2.5% | 4.4% | 6.7% | 20.0% | 23.8% | 18.1% | 24.6% | 5.1 |
| | $\chi^2$=5.925 n.s., Cramer's V=0.082 | | | | | | | | F=0.173 n.s.; η=0.014 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-17: I am concerned about environmental problems because of the consequences for: HUMANITY IN GENERAL**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 2.0% | 2.2% | 5.4% | 16.1% | 22.9% | 21.8% | 29.5% | 5.4 |
| METRO | 366 | 1.6% | 2.5% | 6.0% | 16.1% | 18.3% | 24.0% | 31.4% | 5.4 |
| NONMETRO | 524 | 2.3% | 1.9% | 4.8% | 16.0% | 23.9% | 21.0% | 30.2% | 5.4 |
| | $\chi^2$=5.476 n.s., Cramer's V=0.078 | | | | | | | | F=0.157 n.s.; η=0.013 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-18: I am concerned about environmental problems because of the consequences for: WILDLIFE**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 849 | 1.2% | 1.8% | 5.7% | 13.2% | 20.6% | 26.2% | 31.2% | 5.5 |
| METRO | 364 | 0.8% | 1.4% | 7.7% | 12.1% | 19.2% | 26.4% | 32.4% | 5.6 |
| NONMETRO | 522 | 1.5% | 1.9% | 4.4% | 13.2% | 20.5% | 26.2% | 32.2% | 5.6 |
| | $\chi^2$=5.655 n.s., Cramer's V=0.080 | | | | | | | | F=0.002 n.s.; η=0.001 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-19: I am concerned about environmental problems because of the consequences for: MY FUTURE**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 2.2% | 4.3% | 5.8% | 15.4% | 23.5% | 21.0% | 27.8% | 5.3 |
| METRO | 364 | 2.2% | 4.1% | 7.7% | 14.3% | 22.8% | 21.2% | 27.7% | 5.3 |
| NONMETRO | 524 | 2.1% | 4.4% | 5.0% | 15.3% | 23.7% | 21.0% | 28.6% | 5.3 |
| | $\chi^2$=2.948 n.s., Cramer's V=0.058 | | | | | | | | F=0.290 n.s.; η=0.018 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-20: I am concerned about environmental problems because of the consequences for: CHILDREN**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 851 | 1.8% | 1.5% | 2.6% | 8.1% | 11.4% | 21.7% | 52.9% | 6.0 |
| METRO | 366 | 1.4% | 1.1% | 2.7% | 8.2% | 10.9% | 23.2% | 52.5% | 6.1 |
| NONMETRO | 523 | 1.9% | 1.5% | 2.5% | 7.6% | 11.1% | 21.0% | 54.3% | 6.0 |
| | $\chi^2$=1.431 n.s., Cramer's V=0.040 | | | | | | | | F=0.011 n.s.; η=0.003 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-21: I am concerned about environmental problems because of the consequences for: BIRDS**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 852 | 1.6% | 2.8% | 4.9% | 16.5% | 21.9% | 23.1% | 29.2% | 5.4 |
| METRO | 364 | 1.1% | 3.3% | 5.8% | 12.9% | 20.1% | 28.0% | 28.8% | 5.5 |
| NONMETRO | 525 | 1.7% | 2.5% | 4.4% | 17.1% | 22.3% | 20.8% | 31.2% | 5.4 |
| | $\chi^2$=10.086 n.s., Cramer's V=0.107 | | | | | | | | F=0.159 n.s.; η=0.013 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# Section 5: Environmental Values

**Table 5-22: I am concerned about environmental problems because of the consequences for: FUTURE GENERATIONS**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 854 | 1.7% | 1.3% | 2.5% | 9.5% | 12.7% | 24.7% | 47.7% | 6.0 |
| METRO | 366 | 1.4% | 0.8% | 1.9% | 9.8% | 11.5% | 24.6% | 50.0% | 6.0 |
| NONMETRO | 525 | 1.7% | 1.5% | 2.5% | 8.8% | 12.8% | 24.0% | 48.8% | 6.0 |
| | $\chi^2$=1.998 n.s., Cramer's V=0.047 | | | | | | | | F=0.532 n.s.; η=0.024 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-23: I am concerned about environmental problems because of the consequences for: MY OWN HEALTH**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 2.3% | 4.2% | 4.9% | 15.9% | 21.5% | 22.1% | 29.2% | 5.3 |
| METRO | 365 | 2.2% | 3.6% | 6.8% | 16.4% | 20.3% | 21.6% | 29.0% | 5.3 |
| NONMETRO | 525 | 2.3% | 4.4% | 4.2% | 15.0% | 21.7% | 21.7% | 30.7% | 5.4 |
| | $\chi^2$=3.916 n.s., Cramer's V=0.066 | | | | | | | | F=0.466 n.s.; η=0.023 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

**Table 5-24: I am concerned about environmental problems because of the consequences for: NATURE**

| | N | Not at all important | | | | | | Extremely important | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Statewide[1] | 853 | 1.3% | 1.2% | 4.3% | 10.8% | 17.5% | 26.8% | 38.0% | 5.7 |
| METRO | 365 | 0.8% | 1.6% | 4.4% | 9.9% | 18.1% | 27.4% | 37.8% | 5.8 |
| NONMETRO | 525 | 1.5% | 1.1% | 3.8% | 10.9% | 16.6% | 26.1% | 40.0% | 5.8 |
| | $\chi^2$=2.325 n.s., Cramer's V=0.051 | | | | | | | | F=0.044 n.s.; η=0.007 |

[1] A stratified sample based on region of residence was drawn. Statewide data is weighted to reflect metropolitan/non-metropolitan proportions in the population and to correct for non-response bias.
n.s. = not significant, *p < 0.05, **p< 0.01, ***p< 0.001

# References Cited

Dillman, D. (2000). *Mail and Internet surveys: The tailored design method*. New York: John Wiley & Sons, Inc.

Dunlap, R. E., K. D. Van Liere, A. G. Mertig, and R. E. Jones. 2000. Measuring endorsement of the New Ecological Paradigm: A revised NEP scale. *Journal of Social Issues* 56:425-442.

Eagly, A. H. & Chaiken, S. (1993). *The Psychology of Attitudes.* Belmont, CA: Wadsworth.

Knoke, D., Bohrnstedt, G. W., & Mee, A. P. (2002). *Statistics for social data analysis* (4th ed.): Wadsworth.

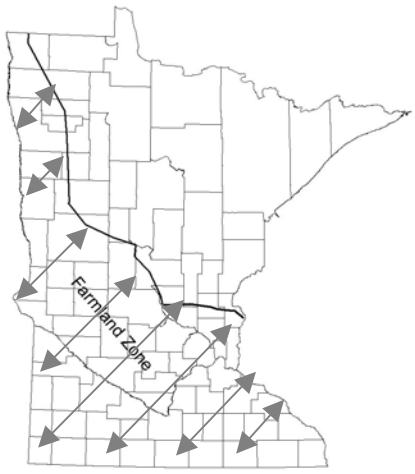
Norusis, M.J. (2002). *SPSS 11.0: Guide to data analysis*. Upper Saddle River, NJ: Prentice Hall.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* (Third ed.). New York: McGraw-Hill, Inc.

# Appendix C: Survey Instrument

## Appendix A: Survey Instrument

# Small Game Hunter
# Lead Shot Study




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

## Your help on this study is greatly appreciated!

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

Minnesota Cooperative Fish and Wildlife Research Unit,
Department of Fisheries, Wildlife and Conservation Biology
University of Minnesota
St. Paul, Minnesota 55108-6124
(612) 624-3479
sas@umn.edu

**Q1. Did you <u>hunt for small game in the farmland zone</u> of Minnesota at anytime during the <u>past 5 years</u>? *(See map on the front cover that identifies the farmland zone.)***

❒ YES
❒ NO

**Q2. In a typical year how many days do you hunt for the following small game <u>in Minnesota</u>?**

| | DAYS HUNTED STATEWIDE | DAYS HUNTED IN FARMLAND ZONE | DO NOT HUNT THIS SPECIES |
|---|---|---|---|
| PHEASANT | _____ DAYS | _____ DAYS | ❒ |
| GROUSE | _____ DAYS | _____ DAYS | ❒ |
| WOODCOCK | _____ DAYS | _____ DAYS | ❒ |
| SNIPE/RAIL | _____ DAYS | _____ DAYS | ❒ |
| DOVE | _____ DAYS | _____ DAYS | ❒ |
| RABBITS | _____ DAYS | _____ DAYS | ❒ |
| SQUIRREL | _____ DAYS | _____ DAYS | ❒ |

**Q3. What gauge of shotgun do you use <u>most often</u> to hunt the following game animals? *(Check one box for each row.)***

| | .410 | 28 gauge | 20 gauge | 16 gauge | 12 gauge | 10 gauge | DO NOT HUNT WITH A SHOTGUN |
|---|---|---|---|---|---|---|---|
| PHEASANT | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| GROUSE | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| WOODCOCK | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| SNIPE/RAIL | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| DOVE | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| RABBITS | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| SQUIRREL | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |

**Q4. How many <u>boxes of shells</u> (25 to a box) do you typically use <u>in a season</u> hunting the following types of small game <u>in the FARMLAND ZONE</u> of Minnesota?** ***(Check one response for each row.)***

| | 1/2 a box or less | 1 box | 1-2 boxes | 3-5 boxes | 5 to 10 boxes | 10+ boxes | I DO NOT HUNT FOR THIS SPECIES IN THE FARMLAND ZONE |
|---|---|---|---|---|---|---|---|
| PHEASANT | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| GROUSE | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| WOODCOCK | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| SNIPE/RAIL | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| DOVE | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| RABBITS | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |
| SQUIRREL | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ | ❒ |

**Q5. What type of shot do you use <u>most often</u> when hunting for the following small game?** ***(Check one box for each row.)***

| | LEAD | STEEL | BISMUTH | OTHER |
|---|---|---|---|---|
| PHEASANT | ❒ | ❒ | ❒ | ❒ |
| GROUSE | ❒ | ❒ | ❒ | ❒ |
| WOODCOCK | ❒ | ❒ | ❒ | ❒ |
| SNIPE/RAIL | ❒ | ❒ | ❒ | ❒ |
| DOVE | ❒ | ❒ | ❒ | ❒ |
| RABBITS | ❒ | ❒ | ❒ | ❒ |
| SQUIRREL | ❒ | ❒ | ❒ | ❒ |

**Q6. Do you typically buy your shotgun shells loaded or do you self-load?**

❒ BUY LOADED SHELLS→→SKIP TO Q8
❒ SELF-LOAD
❒ BOTH

**Q7. How much loose, lead shot do you currently have for self-loading?** _____pounds

**Q8. About how many boxes of loaded shotgun shells do you currently have**? _____boxes

**Q9. Do you typically use lead shot or non-lead shot (steel, bismuth) when you hunt small game?** ***(Check one.)***

- ❒ NEVER USE LEAD
- ❒ OCCASIONALLY USE LEAD
- ❒ MOSTLY USE LEAD
- ❒ ALWAYS USE LEAD (EXCEPT FOR WATERFOWL)

**Q10. We would like to find out some of your beliefs about using or not using lead shot at the current time. Please indicate the level to which you disagree or agree.** ***(Circle one for each row.)***

| | Extremely Disagree | Quite Disagree | Slightly Disagree | Neutral | Slightly Agree | Quite Agree | Extremely Agree |
|---|---|---|---|---|---|---|---|
| Alternatives to lead shot are very difficult to find. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Alternatives to lead shot are too expensive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think lead is more effective than alternatives | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think alternatives to lead shot might damage my shotgun | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I do not think lead shot causes any problems for wildlife. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am concerned about the effects of lead on wildlife. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am concerned about the effects of lead on human health. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I do not think the lead from hunting is an environmental problem. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think hunters have a responsibility to NOT USE lead shot. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think I have a personal responsibility to NOT USE lead shot. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| It is not my responsibility to stop using lead shot. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Nationwide there is concern about the effects of using lead shot while hunting small game. Although lead is the primary component of shot and has been used for a couple of centuries, there are environmental concerns associated with its continued use. The use of lead shot for waterfowl hunting has been banned nationwide since 1991.

The Minnesota Department of Natural Resources is examining the issue of further restricting the use of lead shot in the state. Some other states are also examining this issue and some have already taken action. One recommendation of an advisory committee to the DNR is to phase out the use of lead shot for all small game species in the farmland zone on all public and private lands. The farmland zone includes a large area in southern and western Minnesota that was historically prairie and has now been largely converted to row crops and pasture. The Farmland Zone generally does not include the forested areas in central and northern Minnesota.

**Q11. Would you be likely or unlikely to support a ban on using lead shot to hunt small game in the farmland zone of Minnesota within the next five years? *(Circle one response below.)***

| **UNLIKELY** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **LIKELY** |
|---|---|---|---|---|---|---|---|---|
| | extremely | quite | slightly | neither | slightly | quite | extremely | |

**Q12. Would you say supporting a ban on lead shot in the farmland zone of Minnesota is…HARMFUL OR BENEFICIAL? *(Circle one response below.)***

| **HARMFUL** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **BENEFICIAL** |
|---|---|---|---|---|---|---|---|---|
| | extremely | quite | slightly | neither | slightly | quite | extremely | |

**Q13. Would you say supporting a ban on lead shot in the farmland zone of Minnesota is GOOD OR BAD. *(Circle one response below.)***

| **BAD** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **GOOD** |
|---|---|---|---|---|---|---|---|---|
| | extremely | quite | slightly | neither | slightly | quite | extremely | |

**Q14. Would you say supporting a ban on lead shot in the farmland zone of Minnesota is WISE OR FOOLISH? *(Circle one response below.)***

| **FOOLISH** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | **WISE** |
|---|---|---|---|---|---|---|---|---|
| | extremely | quite | slightly | neither | slightly | quite | extremely | |

**Q15. We would like to know how <u>likely or unlikely</u> you believe the <u>following outcomes</u> would be <u>if lead shot was banned for hunting small game in the farmland zone in Minnesota</u>. *(Please circle the number that best represents your answer in each row.)***

| **Banning lead shot for hunting small game in the farmland zone in Minnesota…** | **Extremely Unlikely** | **Quite Unlikely** | **Slightly Unlikely** | **Neutral** | **Slightly Likely** | **Quite Likely** | **Extremely Likely** |
|---|---|---|---|---|---|---|---|
| …would help protect wildlife from lead poisoning. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would benefit the quality of the environment. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| … would be unnecessary government regulation. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would increase crippling and wounding loss for small game hunting. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would require using less effective shot while hunting small game. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would require using more expensive ammunition. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| ...would improve the image of hunters. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| ...would prevent the spread of lead in the natural environment. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| ...would make it more difficult for some people to hunt. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …is something most hunters would adjust to after a few seasons. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would decrease hunting opportunity in Minnesota. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| …would improve awareness about the dangers of lead in the environment. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

**Q16. Next we would like to know <u>how good or bad</u> you think the following outcomes are.** ***(Please circle the number that best represents your answer in each row.)***

| | Extremely Bad | Quite Bad | Slightly Bad | Neutral | Slightly Good | Quite Good | Extremely Good |
|---|---|---|---|---|---|---|---|
| Protecting wildlife from lead poisoning is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Benefiting the quality of the environment is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Unnecessary government regulation is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Increasing wounding loss for small game hunting is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Using less effective shot while hunting small game is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Using more expensive ammunition is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Making it more difficult to find shells for the shotgun I use is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Preventing the spread of lead in the natural environment is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Improving the image of hunters is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hunters adjusting to using non-lead shot... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Decreasing hunting opportunities... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Improving awareness about the dangers of lead in the environment is... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Q17. Next we would like to know how other people and groups feel about you supporting a ban on lead shot in the farmland zone in Minnesota. *(Please circle the number that best represents your answer in each row.)***

| | Extremely Unlikely | Quite Unlikely | Slightly Unlikely | Neutral | Slightly Likely | Quite Likely | Extremely Likely |
|---|---|---|---|---|---|---|---|
| Most of my friends think I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Most other hunters I know think I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Most environmental organizations think I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Pheasants Forever thinks I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Ducks Unlimited thinks I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The Minnesota DNR thinks I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The National Rifle Association (NRA) thinks I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Ammunition manufacturers think I SHOULD support a ban on lead shot in the farmland zone. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Q18. Next we would like to know how motivated you are to do what those people or groups would most want you to do. *(Please circle the number that best represents your answer in each row.)***

| **Generally speaking I want to do what…** | **Extremely Disagree** | **Quite Disagree** | **Slightly Disagree** | **Neutral** | **Slightly Agree** | **Quite Agree** | **Extremely Agree** |
|---|---|---|---|---|---|---|---|
| Most of my friends think I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Most other hunters I know think I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Most environmental organizations think I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Pheasants Forever thinks I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Ducks Unlimited thinks I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| The Minnesota DNR thinks I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| The National Rifle Association (NRA) thinks I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| Ammunition manufacturers think I should do. | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

**Q19. Please let us know how you feel about the Minnesota Department of Natural Resources and research about lead shot. (*Please circle one response for each of the following statements).***

| | **Strongly Disagree** | **Disagree** | **Neither Agree nor Disagree** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| When deciding about the use of lead shot for small game hunting in Minnesota, the MnDNR will be open and honest in the things they do and say | **1** | **2** | **3** | **4** | **5** |
| The MnDNR can be trusted to make decisions about using lead shot for small game management that are good for the resource. | **1** | **2** | **3** | **4** | **5** |
| The MnDNR will make decisions about using lead shot for small game in a way that is fair. | **1** | **2** | **3** | **4** | **5** |
| The MnDNR listens to small game hunters' concerns | **1** | **2** | **3** | **4** | **5** |
| If research shows lead shot has negative effects on game species, I would be likely to support a ban. | **1** | **2** | **3** | **4** | **5** |
| If research shows lead shot has negative effects on non-game wildlife, I would be likely to support a ban. | **1** | **2** | **3** | **4** | **5** |

**Q20. In recent years some people have expressed concern about global warming and other environmental issues, but not everyone agrees. We are interested in knowing what you believe about people and the environment. Please indicate whether you agree or disagree with the following statements. *(Circle one response for each statement.*)**

| Statement | Strongly Disagree | Mildly Disagree | Neutral | Mildly Agree | Strongly Agree |
|---|---|---|---|---|---|
| Humans have the right to modify the natural environment to suit their needs | 1 | 2 | 3 | 4 | 5 |
| When humans interfere with nature it often produces disastrous consequences | 1 | 2 | 3 | 4 | 5 |
| Human ingenuity will ensure that we do **not** make the earth unlivable | 1 | 2 | 3 | 4 | 5 |
| Humans are severely abusing the environment | 1 | 2 | 3 | 4 | 5 |
| The earth has plenty of natural resources if we just learn how to develop them | 1 | 2 | 3 | 4 | 5 |
| Plants and animals have as much right as humans to exist | 1 | 2 | 3 | 4 | 5 |
| The balance of nature is strong enough to cope with the impacts of modern industrial nations | 1 | 2 | 3 | 4 | 5 |
| Despite our special abilities humans are still subject to the laws of nature | 1 | 2 | 3 | 4 | 5 |
| The so-called "ecological crisis" facing humankind has been greatly exaggerated | 1 | 2 | 3 | 4 | 5 |
| The earth is like a spaceship with very limited room and resources | 1 | 2 | 3 | 4 | 5 |
| Humans were meant to rule over the rest of nature | 1 | 2 | 3 | 4 | 5 |
| The balance of nature is very delicate and easily upset | 1 | 2 | 3 | 4 | 5 |
| Humans will eventually learn enough about how nature works to be able to control it | 1 | 2 | 3 | 4 | 5 |
| If things continue on their present course, we will soon experience a major ecological catastrophe | 1 | 2 | 3 | 4 | 5 |
| We are approaching the limit of the number of people the earth can support | 1 | 2 | 3 | 4 | 5 |

**Q 21. People are generally concerned about environmental problems because of the consequences that result from the problems. However, people differ in the consequences that concern them the most. Please rate the following items from 1 (not at all important) to 7 (extremely important) in response to the question:**

**I am concerned about environmental problems because of the consequences for _____.**

| | Not at all Important | | | | | | Extremely Important |
|---|---|---|---|---|---|---|---|
| Myself | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Humanity in general | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Wildlife | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| My future | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Children | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Birds | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Future generations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| My own health | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Nature | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Q22. For the following media sources please indicate how much you rely on and trust the information about hunting and natural resources from that source? *(Please circle the number that best represents your answer in each row).***

| | Not at all | Seldom | Occasionally | Frequently | Always |
|---|---|---|---|---|---|
| Newspapers in general | 1 | 2 | 3 | 4 | 5 |
| Outdoor Magazines in general | 1 | 2 | 3 | 4 | 5 |
| Television in general | 1 | 2 | 3 | 4 | 5 |
| Outdoor shows on TV | 1 | 2 | 3 | 4 | 5 |
| Radio in general | 1 | 2 | 3 | 4 | 5 |
| Outdoor shows on radio | 1 | 2 | 3 | 4 | 5 |
| The Web or internet | 1 | 2 | 3 | 4 | 5 |
| Minneapolis Star-Tribune | 1 | 2 | 3 | 4 | 5 |
| St. Paul Pioneer Press | 1 | 2 | 3 | 4 | 5 |
| Minnesota DNR Conservation Volunteer | 1 | 2 | 3 | 4 | 5 |
| Minnesota DNR website | 1 | 2 | 3 | 4 | 5 |
| Sportmen's groups | 1 | 2 | 3 | 4 | 5 |
| Outdoor news | 1 | 2 | 3 | 4 | 5 |
| DNR Hunter Handbook (hunting regs) | 1 | 2 | 3 | 4 | 5 |

# Appendix A: Survey Instrument

**Q23. Please indicate how much you agree or disagree with the following statements about small game hunting. (*Please circle <u>one</u> response <u>for each.</u>):***

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| Small game hunting is one of the most enjoyable things I do. | 1 | 2 | 3 | 4 | 5 |
| I am knowledgeable about small game hunting. | 1 | 2 | 3 | 4 | 5 |
| The decision to go small game hunting is primarily my own. | 1 | 2 | 3 | 4 | 5 |
| I find that a lot of my life is organized around small game hunting. | 1 | 2 | 3 | 4 | 5 |
| Small game hunting has a central role in my life. | 1 | 2 | 3 | 4 | 5 |
| Most of my friends are in some way connected with small game hunting. | 1 | 2 | 3 | 4 | 5 |
| When I am small game hunting, others see me the way I want them to see me. | 1 | 2 | 3 | 4 | 5 |
| I don't really know much about small game hunting. | 1 | 2 | 3 | 4 | 5 |
| Small game hunting interests me. | 1 | 2 | 3 | 4 | 5 |
| I have acquired equipment that I would not use if I quit small game hunting. | 1 | 2 | 3 | 4 | 5 |
| You can tell a lot about a person when you see them small game hunting. | 1 | 2 | 3 | 4 | 5 |
| When I am small game hunting I can really be myself. | 1 | 2 | 3 | 4 | 5 |
| I enjoy discussing small game hunting with my friends. | 1 | 2 | 3 | 4 | 5 |
| The decision to go small game hunting is not entirely my own. | 1 | 2 | 3 | 4 | 5 |
| For me to change my preference from small game hunting to another leisure activity would require major rethinking. | 1 | 2 | 3 | 4 | 5 |
| I find a lot of my life organized around small game-hunting activities. | 1 | 2 | 3 | 4 | 5 |
| Even if close friends recommended another recreational activity, I would not change my preference from small game hunting. | 1 | 2 | 3 | 4 | 5 |
| Small game hunting is important to me. | 1 | 2 | 3 | 4 | 5 |
| I have close friendships that are based on a common interest in small game hunting. | 1 | 2 | 3 | 4 | 5 |
| Compared to other small game hunters, I own a lot of small game-hunting equipment. | 1 | 2 | 3 | 4 | 5 |

**Q24. How many years have you hunted small game in the farmland area of Minnesota?**

**_____YEARS**

| **Q25. How often do you hunt with…** | **Not at all** | **Seldom** | **Occasionally** | **Frequently** | **Always** |
|---|---|---|---|---|---|
| A dog | **1** | **2** | **3** | **4** | **5** |
| Children under 12 | **1** | **2** | **3** | **4** | **5** |

**Thanks for your help! Please return your survey in the enclosed, self-addressed, stamped envelope.**