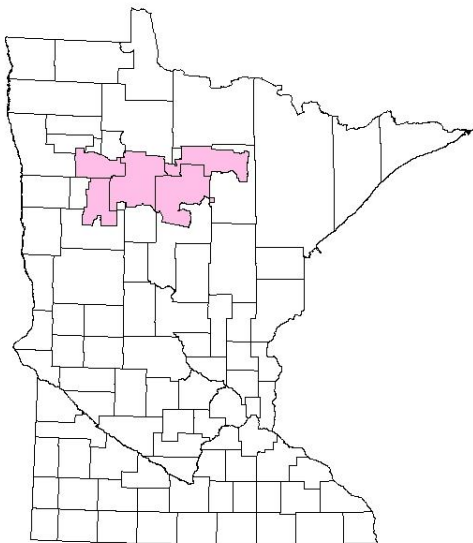


## Fish and Wildlife Division

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# Deer Goal Setting Attitude Survey Report

## Block 2: North Central Plains Moraines



# Contents

Deer Goal Setting Attitude Survey Report .....	1
Statement of Purpose and Scope of Data .....	6
Data Collection Process .....	6
Hunters .....	6
Landowners .....	6
Block 2: North Central Plains Moraines.....	7
Figure 1. Goal setting Block 2 DPA boundaries .....	7
Response Rates and Weighting .....	8
Hunters .....	8
Landowners .....	8
Table 1. Response rates for hunter samples, by DPA.....	9
Table 2. Population and sample proportions by age quantile, and weights .....	10
Table 3. Response rates for landowner samples, by DPA .....	11
Table 4. Population and sample proportions by acre strata, and weights.....	12
Summary of Deer Population Preferences .....	13
Figure 2. Landowners’ and hunters’ mean desired percent change in the deer population, by DPA .....	14
Figure 3. Deer permit area 169 deer hunters’ and landowners’ preference for future deer population ..	15
Figure 4. Deer permit area 184 landowners’ and hunters’ preference for future deer population.....	16
Figure 5. Deer permit area 197 landowners’ and hunters’ preference for future deer population .....	17
Figure 6. Deer permit area 210 landowners’ and hunters’ preference for future deer population .....	18
Figure 7. Deer permit area 298 landowners’ and hunters’ preference for future deer population .....	19
Hunters .....	20
Table 5. Percent of respondents reporting hunting deer during the last three years, by DPA .....	22
Table 6. Percent of 2019 deer hunters participating in deer hunting seasons, by DPA.....	23

Table 7. Percent of deer hunters' time spent hunting on different land ownership types, by DPA.....	24
Table 8. Deer hunters' satisfaction with their most recent deer hunting season, by DPA .....	25
Table 9. Deer hunters' agreement with elements of their satisfaction with their most recent deer hunting season, by DPA .....	26
Table 9. Continued. ....	27
Table 9. Continued .....	28
Table 10. Deer hunters' perceived change in the deer population over last 5 years, by DPA.....	29
Table 11. Deer hunters' satisfaction with the deer population where they hunt, by DPA.....	30
Table 12. Percent of deer hunters that would shoot an antlerless deer, by DPA.....	31
Table 13. Deer hunters' mean stated importance for factors to consider in making deer population goals, by DPA .....	32
Table 14. Deer hunters' perception of the deer population in the DPA where they hunt, by DPA.....	33
Table 15. Deer hunters' preference for future deer populations, by DPA.....	34
Table 16. Deer hunters' mean preferred percent change in the deer population, by DPA.....	35
Table 17. Deer hunters' support for regulations to increase proportion of antlered bucks in the area they hunt, by DPA.....	36
Table 18. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA.....	37
Table 19. Percent of deer hunters that set out food for deer to consume, by DPA .....	38
Table 20. Percent of deer hunters that set out minerals for deer to consume, by DPA.....	39
Table 21. Percent of deer hunters that belong to a deer hunting organization, by DPA.....	40
Table 22. Deer hunters' mean level of agreement with statements about the MNDNR, by DPA.....	41
Landowners .....	42
Table 23. Mean acres owned and leased by landowners, by DPA.....	44
Table 24. Percent of landowners with agriculture on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	45
Table 25. Percent of landowners with forest on their land, percent experiencing damage from deer, and severity of damage, by DPA.....	46

Table 26. Percent of landowners with residential land use on their land, percent experiencing damage from deer, and severity of damage, by DPA .....	47
Table 27. Landowners' perceived trend in damage from deer over 5 years, by DPA.....	48
Table 28. Landowners' perceived trend in the deer population over the last 5 years, by DPA.....	49
Table 29. Landowners' satisfaction with the current deer population in the area of their property, by DPA .....	50
Table 30. Landowners' satisfaction with the deer population on their land, by DPA and hunting status..	51
Table 31. Landowners' perception of the deer population on their land, by DPA .....	52
Table 32. Landowners' perception of the deer population on their land, by DPA and hunting status .....	53
Table 33. Landowners' preference for future deer populations, by DPA .....	54
Table 34. Landowners' preference for future deer populations, by DPA and hunting status .....	55
Table 35. Landowners' mean preferred percent change in the deer population, by DPA .....	56
Table 36. Percent of landowners aware that MNDNR offers technical and financial assistance for deer depredation problems, by DPA, and acres owned.....	57
Table 37. Percent of landowners that allow hunting on their property, by DPA, and acres owned .....	58
Table 38. Percent of landowners that leased their property for deer hunting, by DPA. ....	59
Table 39. Percent of landowners imposing different harvest restrictions on their property, by DPA .....	60
Table 40. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA .....	61
Table 41. Landowners' time spent hunting on different land ownership types, by DPA.....	62
Table 42. Percent of hunting landowners that would shoot an antlerless deer, by DPA .....	63
Table 43. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA .....	64
Table 44. Landowners' mean level of agreement with statements about the MNDNR, by DPA.....	65
Table 45. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA .....	66
Table 46. Percent of landowners that set out food for deer to consume, by DPA .....	67
Table 47. Percent of landowners that set out minerals for deer to consume, by DPA.....	68



## Statement of Purpose and Scope of Data

The Minnesota Department of Natural Resources (MNDNR) periodically conducts surveys of deer hunters and landowners to assess preferences for deer populations, experiences with deer hunting, and impacts of deer populations on private property to inform the deer population goal setting process. This report details one such effort. Results of this study directly inform decision making for deer populations. We randomly selected landowners and hunters from county tax parcel records, and MNDNR deer license information respectively for participation. Therefore, the results of this study are representative of the stakeholder group, and may differ substantially from results of self-selected public input processes, as a function of the scientific study design. The values in this report are estimates of the average for all individuals within a given population of interest (e.g., hunters in a deer permit area), not just respondents to the survey.

## Data Collection Process

We conducted our surveys of hunters and landowners using a mixed mode design that included three solicitations. We sent selected participants a letter directing them to complete a questionnaire online. Non-respondents received a second letter requesting their participation, followed by a paper copy of the survey with a postage-paid self-addressed return envelope. Copies of these questionnaires are found in Appendices A and B of this report.

### Hunters

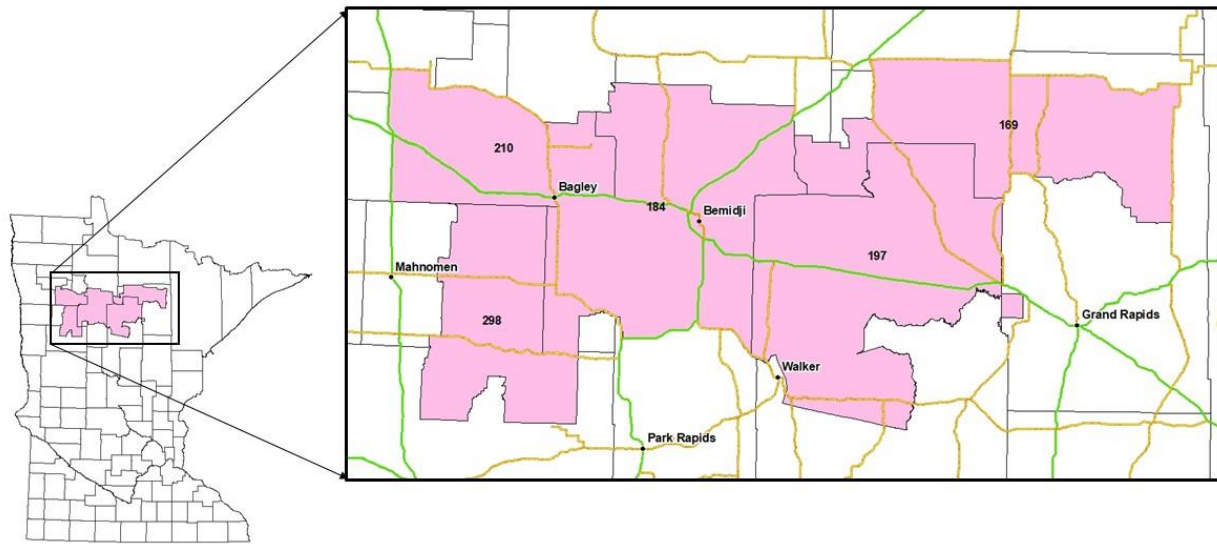
Within a deer permit area (DPA), we randomly selected hunters from the list of all firearm deer license holders in the given year to receive a goal setting survey. We only included adults over the age of 18 at the time the sample was drawn. The number of hunters selected in each DPA was determined by estimating the minimum sample size needed to make statistically valid inference about the population at the DPA level at 90% confidence. Participants may not be residents of the DPA, but have indicated that the given DPA is the primary location where they hunt deer.

### Landowners

Within a deer permit area, we randomly selected individual parcels from all parcels greater than or equal to 2 acres in size for inclusion. Stratification occurred by quantiles of parcels by acres to ensure a representative coverage of land use types and interests. Land acres strata were: 2-19, 20-79, 80-319, and  $\geq 320$  acres respectively. Similar to hunters, the number of landowners selected for each DPA was proportional to the total number of landowners in the DPA and after determining, the minimum sample size needed for statistically valid inference at the DPA scale, with 90% confidence.

## Block 2: North Central Plains Moraines

The data presented herein are from a statistically representative survey of Minnesota deer hunters and landowners in goal setting Block 2 (North Central Plains Moraines). This area includes deer permit area 169, 184, 197, 210, and 298 in the northcentral part of the state (Figure 1).



*Figure 1. Goal setting Block 2 DPA boundaries*

## Response Rates and Weighting

### Hunters

After accounting for undeliverable mail, the adjusted response rate for the Block 2 hunter sample was 42%. Response rates by DPA ranged from a low of 41% for DPA 298, to a high of 46% for DPA 197. A summary of response rates by DPA is located in Table 1.

We weighted responses in proportion to quantiles derived from the population of aged 18+ firearms deer hunters in Minnesota, during the 2020 hunting season. Respondents (M=52) were on average older than the population (M=46) from which the sample was drawn. To attend to this, we estimated population estimates according to the weight schedule presented in Table 2. Weights apply to the population rather than the block level, under an assumption that there is no correlation between age and preferred hunt location.

### Landowners

After accounting for undeliverable mail, the adjusted response rate for the Block 2 landowner sample was 42%. Response rates by DPA ranged from a low of 37% for DPA 210, to a high of 47% for DPAs 184. A summary of response rates by DPA is located in Table 3.

We drew samples of landowners equally within four strata (2-19, 20-70, 80-319, and 320+) corresponding to parcel acres to ensure representation of small, medium, and large landholders, and thus, the potential array of interests associated with different land uses. We calculated weights within Block to generate estimates representative of the population according to the schedule presented in Table 4.



*Table 1. Response rates for hunter samples, by DPA*

<b>DPA</b>	<b>Initial Sample</b>	<b>Undeliverable</b>	<b>Respondents</b>	<b>Adjusted sample</b>	<b>Raw response rate</b>	<b>Adjusted response rate</b>
169	529	13	228	516	0.43	0.44
184	541	21	211	520	0.39	0.41
197	523	27	227	496	0.43	0.46
210	508	23	178	485	0.35	0.37
298	503	14	200	489	0.40	0.41
<b>Block Average</b>	2604	98	1044	2506	0.40	0.42

Table 2. Population and sample proportions by age quantile, and weights

Age Quantile	Population Proportion	Sample Proportion	Weight*
18-32	0.5315	0.2931	1.8133
33-45	0.2732	0.2843	0.9609
45-58	0.1561	0.2794	0.5587
59+	0.0393	0.1431	0.2746

\*Weight =  $1/(\text{Sample Proportion}/\text{Population Proportion})$

Table 3. Response rates for landowner samples, by DPA

DPA	Initial Sample	Undeliverable	Respondents	Adjusted sample	Raw response rate	Adjusted response rate
169	410	9	165	401	0.44	0.44
184	549	8	240	541	0.46	0.47
197	467	9	213	458	0.36	0.37
210	508	10	185	498	0.44	0.45
298	408	14	171	394	0.42	0.43
<b>Block average</b>	2342	50	974	2292	0.42	0.42

Table 4. Population and sample proportions by acre strata, and weights

<b>Acres strata</b>	<b>Population proportion</b>	<b>Sample proportion</b>	<b>Weight*</b>
2-19	0.5315	0.2931	1.8133
20-79	0.2732	0.2843	0.9609
80-319	0.1561	0.2794	0.5586
320+	0.0393	0.1431	0.2746

\*Weight = 1/(Sample Proportion/Population Proportion)

## Summary of Deer Population Preferences

Figure 2 contains estimates of Goal Block 2 deer hunter and landowner preferences for change in the deer population where they hunt or their property is located respectively. Values are an estimate of the mean preferred percent change to the deer population by DPA, and its 95% confidence interval. Landowners reported a preference for a small (7-18%) increase in deer populations for all DPAs. Deer hunters, on average, and regardless of DPA preferred an increase in the deer population. Estimates for deer hunters' preference for change to the deer population ranged from +22% for DPAs 184 to 29% for DPAs 169 and 197.

Figures 3 through 7 contain DPA level estimates for the percent of hunters and landowners that preferred to see the deer population either decrease, stay the same, or increase. A majority of deer hunters expressed a preference for an increase in the deer population in each of the Block 2 DPAs. Landowners, however, had more diversity in their preferences for change in the deer population. Around half of landowners in DPAs 184, 197, and 210 indicated they would like to see the deer population stay the same. More than half of landowners in DPAs 169 and 298 reported a preference for an increase in the deer population.

Figure 2. Landowners' and hunters' mean desired percent change in the deer population, by DPA

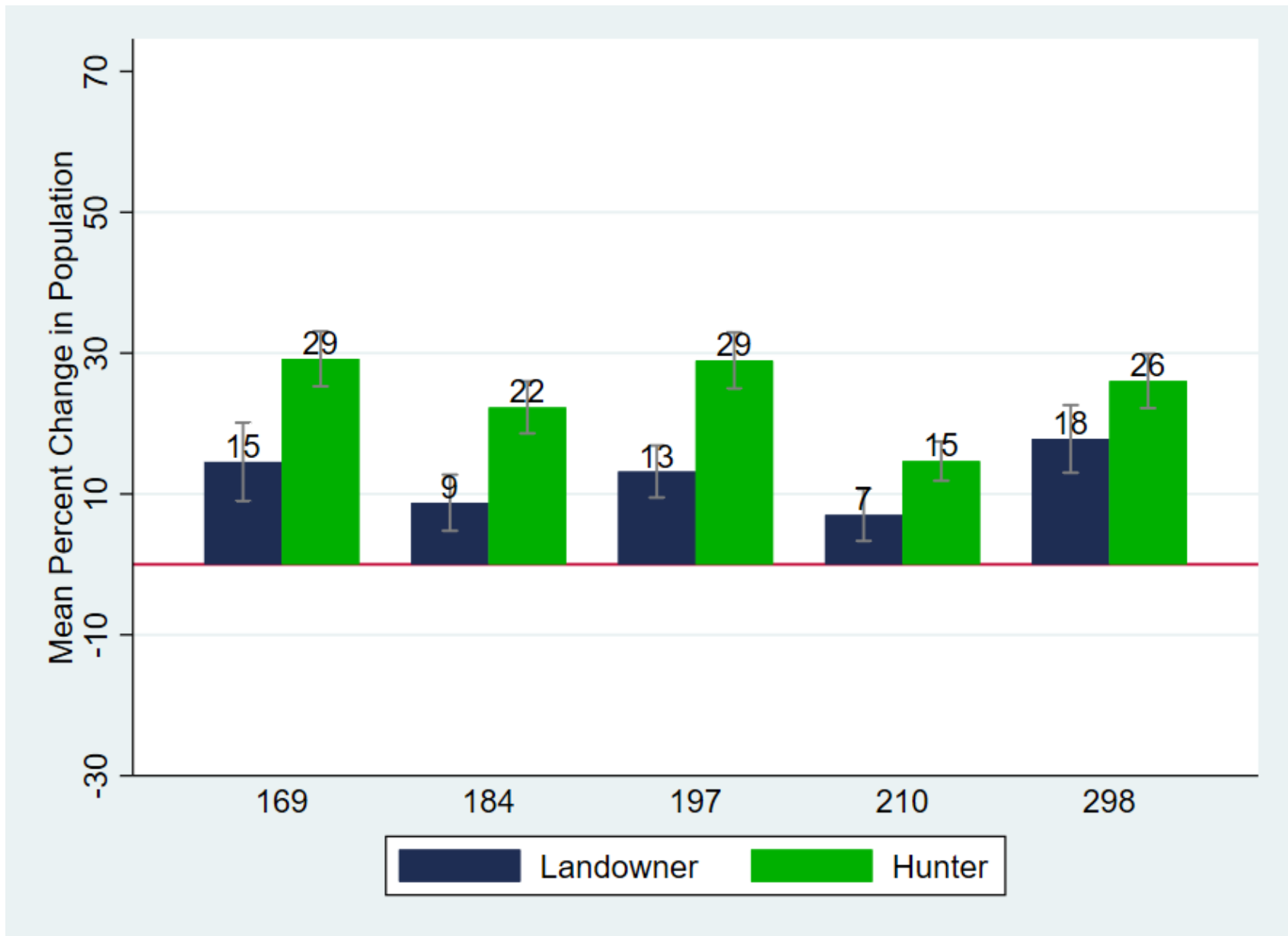


Figure 3. Deer permit area 169 deer hunters' and landowners' preference for future deer population

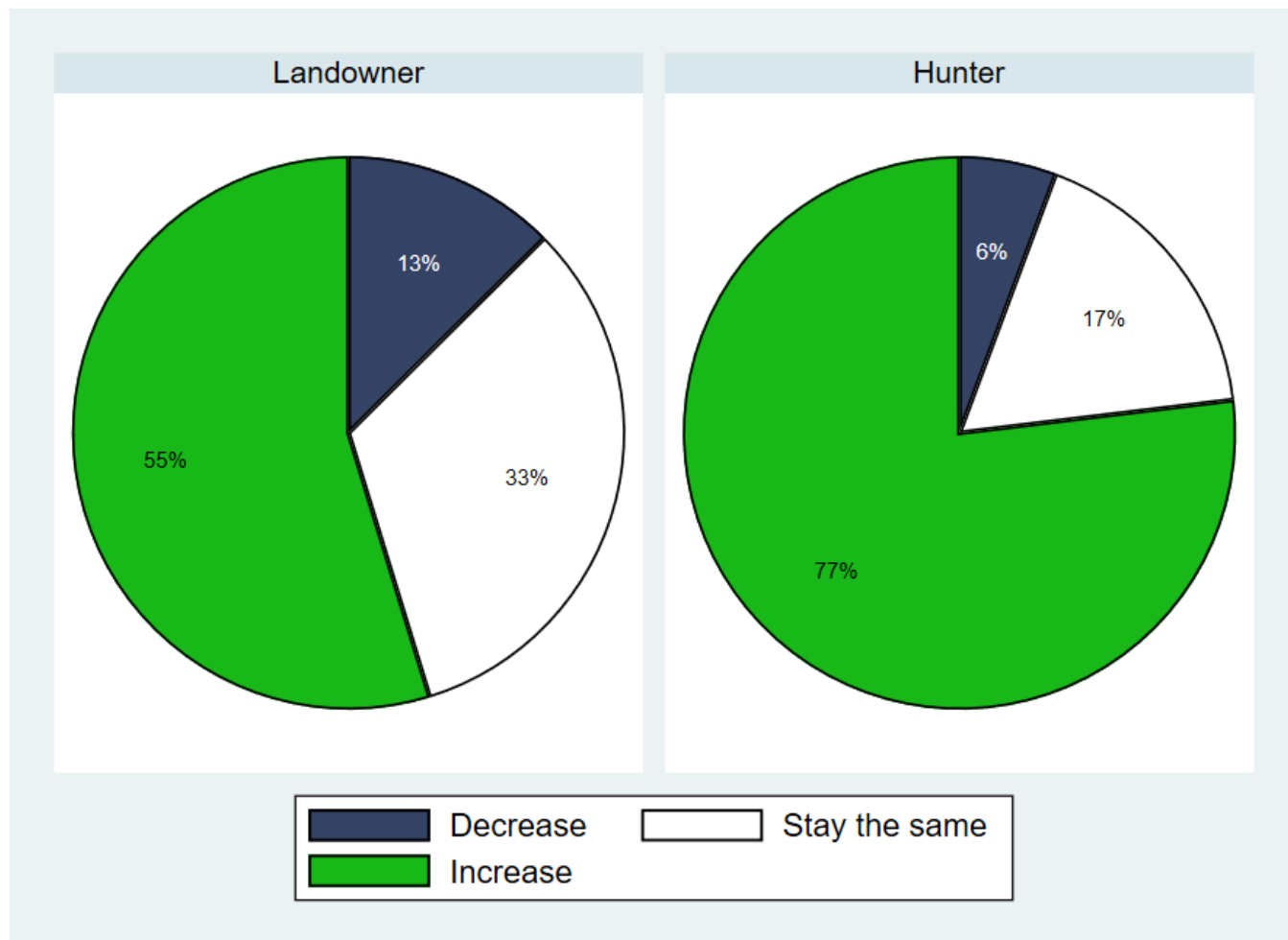


Figure 4. Deer permit area 184 landowners' and hunters' preference for future deer population

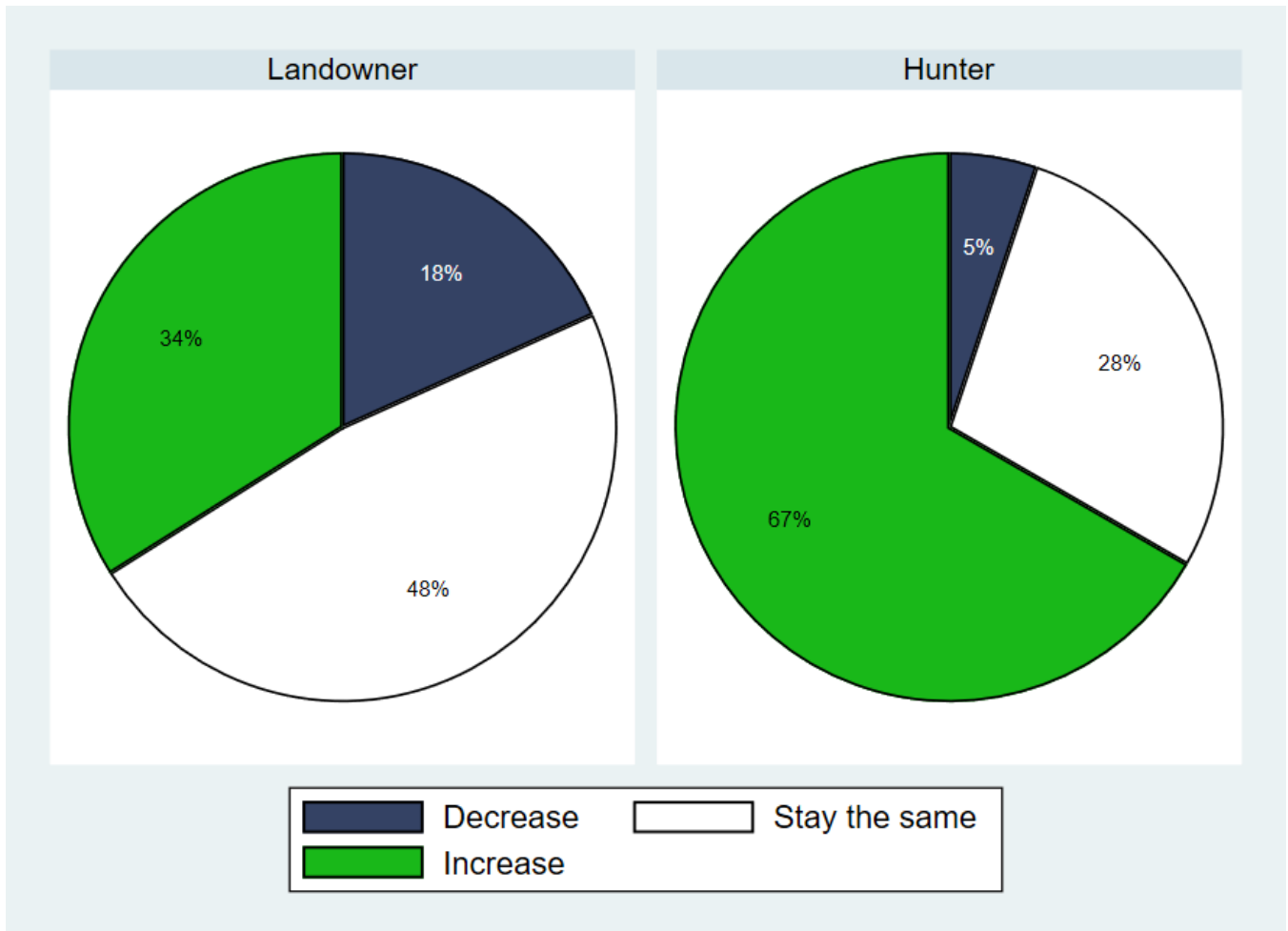




Figure 5. Deer permit area 197 landowners' and hunters' preference for future deer population

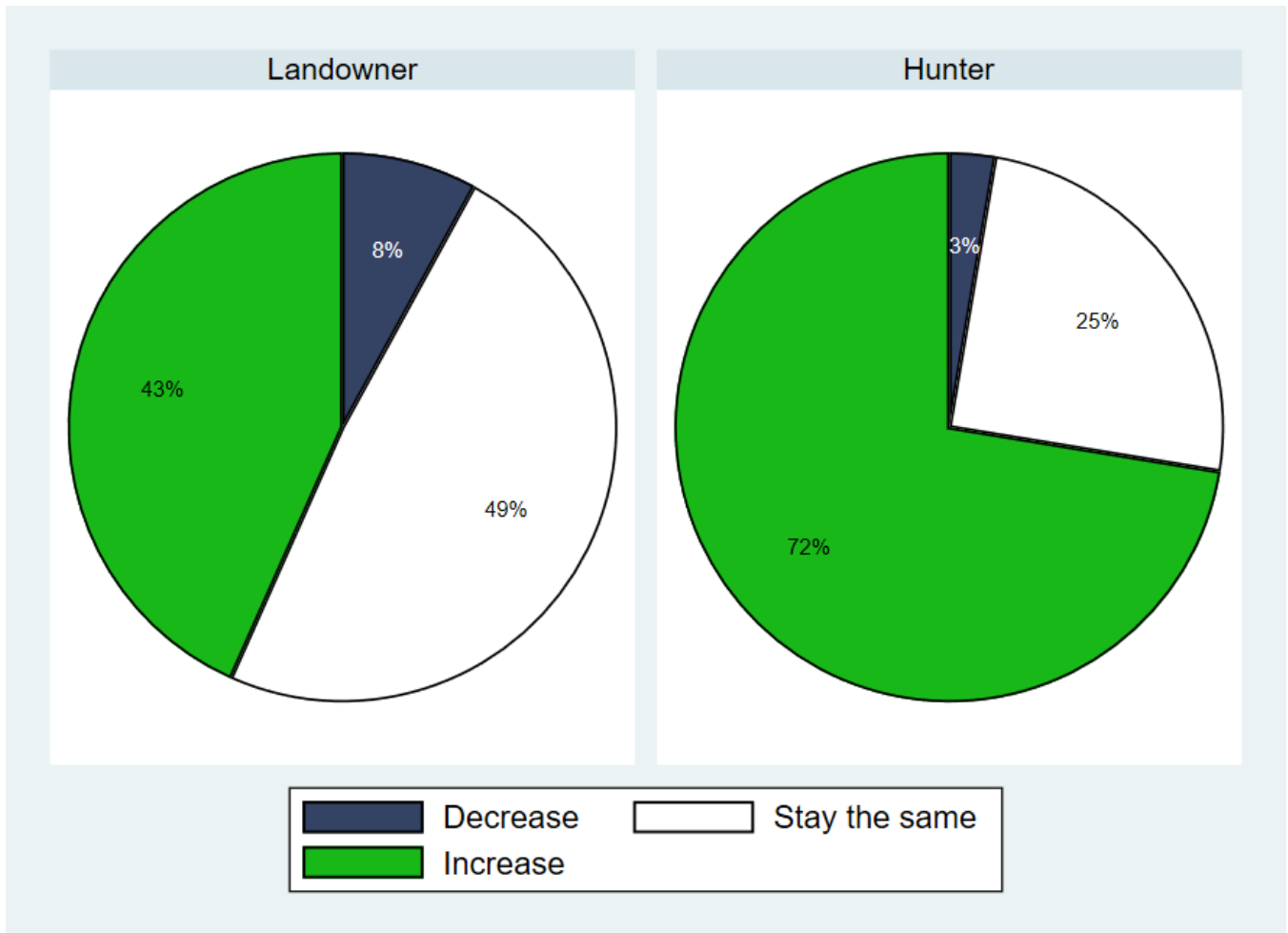


Figure 6. Deer permit area 210 landowners' and hunters' preference for future deer population

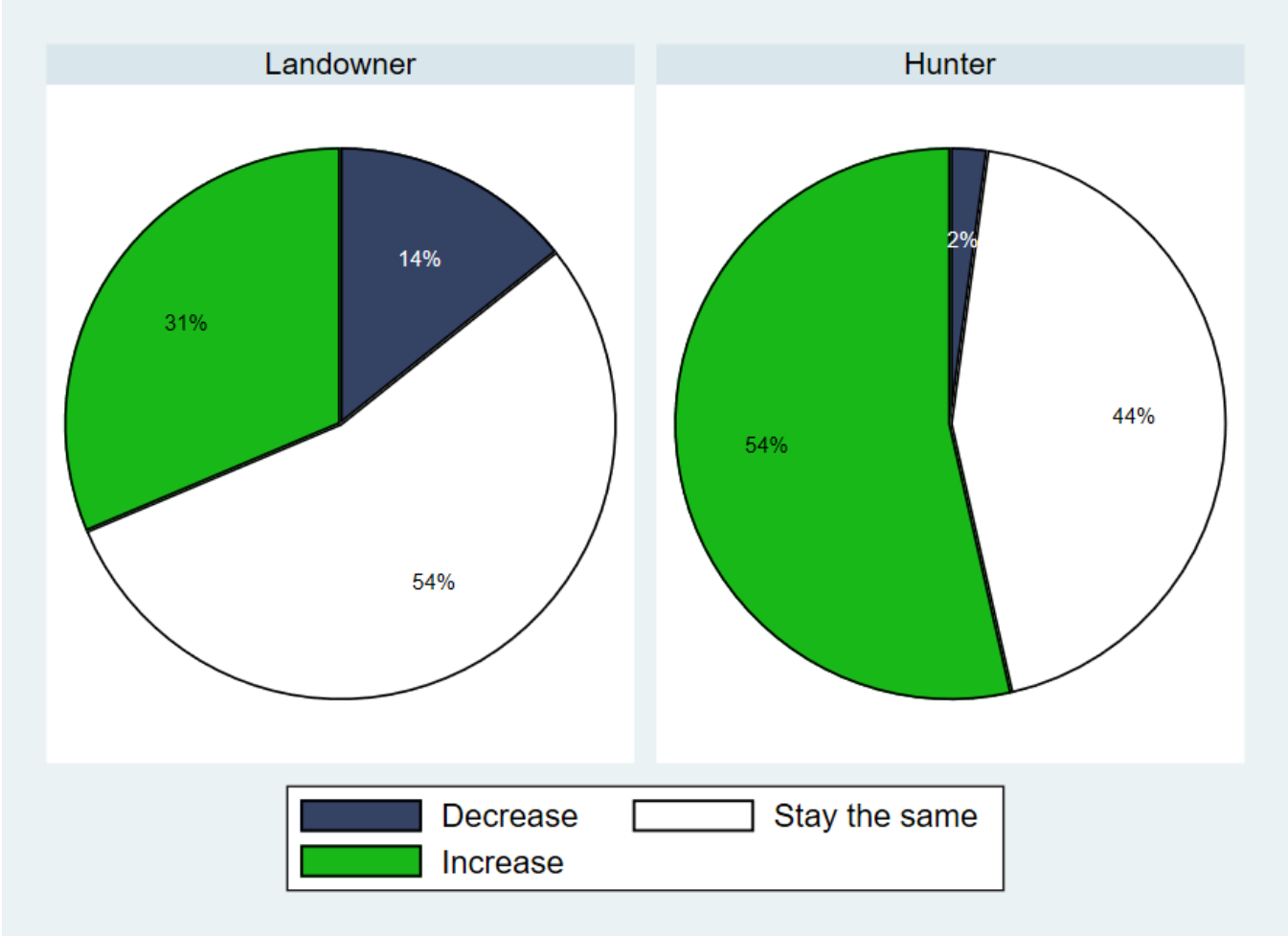
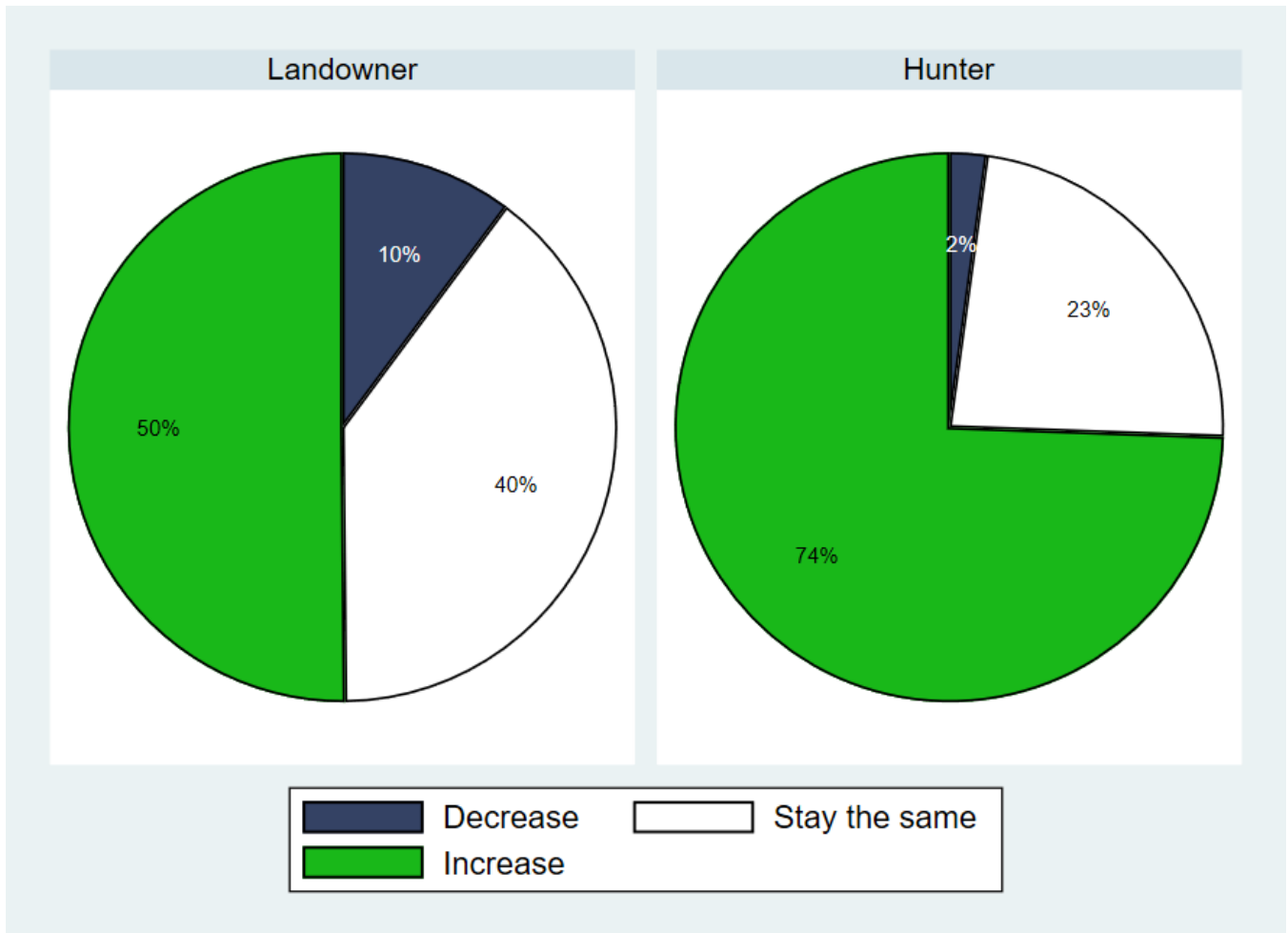


Figure 7. Deer permit area 298 landowners' and hunters' preference for future deer population



## Hunters

We asked hunters to report their recent deer hunting activity. The vast majority (>90%) of hunters reported having hunted deer during the last three years (Table 5). Among these hunters, around 15% reported that they hunted during the archery season in 2020, while 9% participated in muzzleloader season, and 90% reported hunting during the firearms season A (Table 6). Fewer Block 2 hunters reported hunting during firearm season B (12%), and very few participated in the early antlerless season (>1%). Around a third (31%) of Block 2 hunters reported spending all of their time hunting on private land that they own, while 17% reported spending most of their time hunting on private land that they own, 16% some of their time, and 37% reporting none. Hardly any Block 2 hunters reported spending any time hunting on land that they lease (2%). An average of 27% of Block 2 hunters reported spending all of their time hunting on private land that they do not own. Slightly more than a third of Block 2 hunters (35%) reported spending all of their deer hunting time on private land (Table 7).

Slightly more than half of Block 2 hunters (51%) were either slightly satisfied or “very satisfied” with their most recent deer hunting season, while 13% were neutral, and 35% either slightly or very dissatisfied (Table 8). Hunters also reported their agreement with statements about their satisfaction elements of their most recent deer hunting season. (Table 9). A majority of hunters disagreed that they were satisfied with “...the number of legal bucks” (67%), “...the quality of bucks” (59%), and “...the number of deer I saw while hunting” (51%) (Table 9).

Hunters evaluated the trend in the deer population over the last 5 years in the DPA where they hunt, their satisfaction with the deer population in the DPA where they hunt, and their likelihood to harvest an antlerless deer given the opportunity. Roughly, 57% of hunters reported seeing fewer deer compared to 5 years ago (Table 10). Fifty-eight percent of Block 2 hunters reported feeling either “slightly dissatisfied” or “very dissatisfied” with the deer population in the DPA where they hunt (Table 11). A clear majority (83%) of hunters reported that they would shoot an antlerless deer given the opportunity (Table 12).

Hunters rated the importance of several competing priorities MNDNR could consider when setting deer population goals on scale where 1= not at all important and 5 = very important. Among these priorities, Block 2 hunters rated “deer hunting heritage and tradition” (M = 4.1), “the amount of deer mortality during a severe winter” (M = 4.0), and “potential health risks to the deer herd” (M = 3.9), the highest (Table 13).

Hunters evaluated the current deer population in the DPA where they hunt, on a scale of much too low to much too high. Most hunters (58%) felt that the current population where they hunt is either too low or much too low (Table 14).

When asked if hunters prefer to see the deer population decrease, stay the same, or increase, 69% reported a preference for an increase (Table 15). On average, hunters in Block 2 wish to see a 25% increase in the deer population (Table 16). A majority of hunters in Block 2 (62%) supported establishing regulations to increase the proportion of adult bucks in the DPA where they hunt (Table 17).

We asked hunters how long they have been hunting deer in Minnesota, whether they place feed or minerals out for deer to consume, and if they belong to a deer hunting organization. On average, Block 2 deer hunters have been hunting in Minnesota for 31 years (Table 18). Roughly, 2% of hunters reported that they set

out feed for deer (Table 19), while 29% reported placing minerals for deer to consume (Table 20). Around 8% of Block 2 hunters reported that they belong to a deer hunting organization (Table 21).

Hunters reported their agreement with statements about their trust in the MNDNR on a scale where 1 = strongly disagree, 3 = neither, and 5 = strongly agree. On average, hunters reported moderate amounts of trust with mean values falling between 3.2 and 3.6 (Table 22).

Table 5. Percent of respondents reporting hunting deer during the last three years, by DPA

<b>DPA</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Did not hunt</b>
169	91	93	98	1
184	87	89	97	0
197	92	94	99	1
210	89	89	97	2
298	92	11	98	0
<b>Block average</b>	<b>90</b>	<b>92</b>	<b>98</b>	<b>1</b>

Table 6. Percent of 2019 deer hunters participating in deer hunting seasons, by DPA

DPA	Archery	Firearm A	Firearm B	Muzzleloader	Early Antlerless
169	18	92	12	12	0
184	16	92	10	8	1
197	15	93	8	4	0
210	16	84	15	11	1
298	12	90	15	11	0
<b>Block average</b>	<b>15</b>	<b>90</b>	<b>12</b>	<b>9</b>	<b>0</b>

Table 7. Percent of deer hunters' time spent hunting on different land ownership types, by DPA

Question	Response	169	184	197	210	298	Avg.
Private land that I own	None	37	39	41	30	36	37
	Some	24	15	17	6	15	16
	Most	21	15	14	16	17	17
	All	19	31	28	48	32	31
Private land that I lease for hunting	None	95	96	95	91	96	95
	Some	1	2	3	2	1	2
	Most	3	0	2	2	1	2
	All	1	2	0	5	2	2
Private land that I do not own or lease	None	53	32	48	33	41	41
	Some	25	23	20	11	13	19
	Most	14	16	11	11	10	12
	All	7	29	20	45	37	27
Public land	None	9	21	13	59	27	27
	Some	26	29	26	33	21	21
	Most	25	19	17	4	17	17
	All	40	31	44	3	35	35

values are the percent of respondents reporting each category



*Table 8. Deer hunters' satisfaction with their most recent deer hunting season, by DPA*

<b>DPA</b>	<b>Very dissatisfied</b>	<b>Slightly dissatisfied</b>	<b>Neither</b>	<b>Slightly satisfied</b>	<b>Very satisfied</b>
169	20	22	15	28	14
184	13	21	12	27	26
197	20	19	14	27	19
210	5	12	15	38	30
298	14	27	10	23	25
<b>Block average</b>	<b>15</b>	<b>20</b>	<b>13</b>	<b>28</b>	<b>23</b>

values are the percent of respondents reporting each category

*Table 9. Deer hunters' agreement with elements of their satisfaction with their most recent deer hunting season, by DPA*

<b>I was satisfied with the...</b>	<b>Response</b>	<b>169</b>	<b>184</b>	<b>197</b>	<b>210</b>	<b>298</b>	<b>Avg.</b>
Number of legal bucks	Strongly disagree	51	32	50	16	38	39
	Slightly disagree	29	30	22	33	28	28
	Neither	6	12	10	11	11	10
	Slightly agree	9	19	12	29	16	17
	Strongly agree	5	7	6	10	7	7
Quality of bucks	Strongly disagree	52	35	42	20	34	37
	Slightly disagree	18	24	18	25	27	22
	Neither	11	16	18	21	17	16
	Slightly agree	13	16	14	23	17	16
	Strongly agree	7	9	8	11	7	8

Table 9. Continued.

I was satisfied with the...	Response	169	184	197	210	298	Avg.
I heard about or saw legal bucks while hunting	Strongly disagree	25	21	30	9	24	22
	Slightly disagree	14	16	12	14	17	15
	Neither	11	10	12	13	18	13
	Slightly agree	27	32	29	35	24	29
	Strongly agree	23	21	17	29	18	21
The number of antlerless deer I saw	Strongly disagree	24	18	25	7	21	19
	Slightly disagree	21	21	20	22	23	21
	Neither	15	13	13	10	12	13
	Slightly agree	17	25	20	32	22	23
	Strongly agree	24	23	22	29	26	24

Table 9. Continued

I was satisfied with the...	Response	169	184	197	210	298	Avg.
The number of deer I saw while hunting	Strongly disagree	32	22	34	11	28	26
	Slightly disagree	25	28	19	23	28	25
	Neither	20	13	11	13	9	13
	Slightly agree	15	25	22	27	24	22
	Strongly agree	8	12	13	26	12	14

values are the percent of respondents reporting each category

Table 10. Deer hunters' perceived change in the deer population over last 5 years, by DPA

DPA	Many fewer deer	Slightly fewer deer	About the same	Slightly more deer	Many more deer
169	36	20	29	9	7
184	25	33	28	9	4
197	39	25	25	9	3
210	12	35	3	16	4
298	30	29	25	14	2
<b>Block average</b>	<b>29</b>	<b>28</b>	<b>28</b>	<b>11</b>	<b>4</b>

values are the percent of respondents reporting each category

Table 11. Deer hunters' satisfaction with the deer population where they hunt, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Very satisfied
169	33	30	13	18	6
184	19	30	18	24	9
197	28	32	11	21	7
210	6	35	14	32	13
298	25	31	11	22	10
<b>Block average</b>	<b>23</b>	<b>35</b>	<b>13</b>	<b>23</b>	<b>9</b>

values are the percent of respondents reporting each category

Table 12. Percent of deer hunters that would shoot an antlerless deer, by DPA

<b>DPA</b>	<b>Yes</b>	<b>No</b>
169	85	15
184	82	18
197	87	13
210	81	19
298	77	23
<b>Block average</b>	<b>83</b>	<b>17</b>

values are the percent of respondents reporting each category

*Table 13. Deer hunters' mean stated importance for factors to consider in making deer population goals, by DPA*

<b>Item</b>	<b>169</b>	<b>184</b>	<b>197</b>	<b>210</b>	<b>298</b>	<b>Avg.</b>
Amount of deer mortality during an average winter	3.6	3.5	3.8	3.6	3.6	3.6
Amount of deer mortality during a severe winter	4.1	3.9	4.1	4.0	4.0	4.0
Potential health risks to the deer herd	3.8	3.9	4.0	3.9	3.9	3.9
Public health (human-deer diseases)	3.3	3.6	3.4	3.4	3.3	3.4
Amount of crop damage from deer	2.2	2.5	2.3	2.6	2.4	2.4
Number of deer vehicle collisions	2.9	3.2	3.2	3.3	3.0	3.1
Deer over-browsing of forests	2.4	2.8	2.9	2.7	2.6	2.7
Impacts of deer on other wildlife species	2.5	2.8	2.9	2.7	2.6	2.7
Deer hunting heritage and tradition	4.0	4.1	4.1	4.0	4.1	4.1
Hunter satisfaction with deer numbers	3.6	3.5	3.7	3.6	3.8	3.6
Public satisfaction with deer numbers	3.0	2.9	3.0	3.1	3.0	3.0
Impact of deer hunting on the local economy	3.6	3.5	3.5	3.7	3.5	3.6
Quality of bucks (antler size)	3.2	3.3	3.2	3.5	3.5	3.3
Damage to gardens and landscaping	2.0	2.4	2.2	2.3	2.0	2.2
The ratio of bucks to does	3.6	3.5	3.6	3.4	3.4	3.5

responses measured on a unipolar scale, where 1 = not at all important, and 5 = very important



Table 14. Deer hunters' perception of the deer population in the DPA where they hunt, by DPA

DPA	Much too low	Too low	About right	Too high	Much too high
169	22	43	28	7	0
184	11	43	38	6	2
197	24	41	33	2	1
210	3	34	60	3	0
298	20	42	34	3	0
<b>Block average</b>	<b>17</b>	<b>41</b>	<b>38</b>	<b>4</b>	<b>1</b>

values are the percent of respondents reporting each category

Table 15. Deer hunters' preference for future deer populations, by DPA

DPA	Decrease	Stay the Same	Increase
169	6	17	78
184	5	28	67
197	3	25	72
210	2	44	54
298	2	23	74
<b>Block average</b>	<b>5</b>	<b>27</b>	<b>69</b>

values are the percent of respondents reporting each category

Table 16. Deer hunters' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
169	29.0	25	-50	100
184	22.3	20	-50	100
197	29.0	25	-30	100
210	14.7	10	-30	100
298	26.0	25	-100	100
<b>Block average</b>	<b>24.6</b>	<b>25</b>	<b>-100</b>	<b>100</b>

*Table 17. Deer hunters' support for regulations to increase proportion of antlered bucks in the area they hunt, by DPA*

<b>DPA</b>	<b>Strongly oppose</b>	<b>Slightly oppose</b>	<b>Neither</b>	<b>Slightly support</b>	<b>Strongly support</b>
169	7	7	24	33	29
184	8	9	30	30	24
197	4	10	22	29	35
210	4	9	24	36	28
298	7	8	21	37	27
<b>Block average</b>	<b>6</b>	<b>8</b>	<b>24</b>	<b>33</b>	<b>29</b>

values are the percent of respondents reporting each category

*Table 18. Mean number of years that deer hunters have been hunting deer in Minnesota, by DPA*

<b>DPA</b>	<b>Mean</b>
169	31.6
184	30.0
197	32.9
210	30.2
298	28.6
<b>Block average</b>	<b>30.6</b>

Table 19. Percent of deer hunters that set out food for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
169	10	90	0
184	6	92	2
197	6	88	6
210	7	93	0
298	7	92	1
<b>Block average</b>	<b>7</b>	<b>91</b>	<b>2</b>

values are the percent of respondents reporting each category

Table 20. Percent of deer hunters that set out minerals for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
169	35	65	0
184	21	76	2
197	20	74	6
210	27	73	0
298	34	65	1
<b>Block average</b>	<b>27</b>	<b>71</b>	<b>2</b>

values are the percent of respondents reporting each category

Table 21. Percent of deer hunters that belong to a deer hunting organization, by DPA

DPA	Yes	No
169	9	91
184	8	92
197	7	93
210	6	94
298	12	88
<b>Block average</b>	<b>8</b>	<b>92</b>

values are the percent of respondents reporting each category



*Table 22. Deer hunters' mean level of agreement with statements about the MNDNR, by DPA*

	<b>169</b>	<b>184</b>	<b>197</b>	<b>210</b>	<b>298</b>	<b>Avg.</b>
The MNDNR does a good job managing deer in MN	3.1	3.3	3.2	3.6	3.3	3.3
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	3.2	3.5	3.5	3.6	3.4	3.4
The MNDNR can be trusted to make decisions about deer management that are good for the resource	3.3	3.4	3.4	3.6	3.4	3.4
The MNDNR will make decisions about deer management in a way that is fair	3.3	3.5	3.4	3.6	3.3	3.4
The MNDNR has deer managers and biologists who are well-trained for their jobs	3.5	3.6	3.7	3.7	3.6	3.6
The MNDNR listens to the concerns of deer hunters	3.1	3.2	3.3	3.5	3.2	3.2

responses measured on a bipolar scale, where 1 = strongly disagree, 3=neither, and 5 = strongly agree

## Landowners

Landowners reported the number of acres that they own or lease within a DPA. On average, Block 2 landowners reported owning 100 acres. Too few individuals in Block 2 DPAs reported leasing property to make estimates for the average acres leased (Table 23). Around 38% of landowners reported having agricultural land use on their property. Of these landowners, only 11% reported experiencing damage from deer. Too few landowners reported experiencing damage to agriculture to estimate severity (Table 24). Most landowners (71%) reported owning land in forest. Of these individuals, 7% reported having experienced damage from deer. Too few landowners experienced damage to forest land use to estimate severity (Table 25). Around 71% of landowners reported having residential land use on their property, and 18% experienced damage from deer. Too few landowners experienced damage to residential land use to estimate severity (Table 26).

Landowners assessed the damage they have experienced from deer compared to five years ago, and the change they have observed in the deer population on their property. Of landowners that have owned their property for five years or longer, the majority (61%) indicated that the amount of damage they have experienced from deer has remained about the same (Table 27). A plurality of landowners (42%) reported seeing either “many fewer” or “slightly fewer” deer on their property compared to five years ago, while 35% reported seeing about the same number, and 24% reported seeing more (Table 28).

Only 26% of landowners reported feeling satisfied or very satisfied with the deer population on their land, while 36% were neutral, and 38% either dissatisfied or very dissatisfied (Table 29). Hunting landowners reported higher levels dissatisfaction (46%) than non-hunting landowners (21%), while non-hunters were more likely to report neutrality regarding their satisfaction with the deer population on their land (Table 30). Almost half of landowners (48%) indicated that the population of deer on their land was “about right,” compared to too low (39%) or too high (13%) (Table 31). Non-hunting landowners (66%) were more likely to hold a belief that the current population on their property was “about right” than hunting landowners. Similarly, a higher percentage of hunting landowners (47%) than non-hunting landowners (19%) expressed a belief that the current deer population on their property was too low (Table 32).

When asked what they would like to see happen with future deer populations on their land, a plurality (45%) of Block 2 landowners preferred to see the deer population stay the same, compared to 42% that would like to see the deer population increase, and 13% decrease (Table 33). A higher proportion of non-hunting landowners preferred stability in the deer population (64%) than hunting landowners (37%). Conversely, more hunting landowners indicated a preference for increase (53%) than non-hunting landowners (19%) (Table 34). Landowners mean preferred change in the deer population was a 12% increase (Table 35).

We asked landowners if they were aware that MNDNR offers technical assistance for deer damage issues, if they allow hunting on their property, if they lease any of their property for deer hunting, and if they impose any deer harvest restrictions on their property. Regardless of the number of acres a landowner owned, around a quarter (26%) were aware that MNDNR offers technical assistance for deer depredation issues (Table 36). The proportion of landowners allowing hunting on their property increased with the amount of land they owned, where roughly 40% of landowners with 2-19 acres allowed hunting on their property. This is compared

to 90% of those who own 320 acres or more (Table 37). Very few (>1%) of landowners lease their land for deer hunting (Table 38), and this did not vary by DPA. The majority of landowners (71%) did not impose any restrictions on the deer that hunters could take on their property (Table 39).

We asked landowners several questions about their deer hunting activity. A little over half of Block 2 landowners reported hunting deer in each of 2018, 2019, and 2020 respectively. Roughly, 9% indicated that they hunt deer but did not hunt during one of those three years, and 29% indicated that they do not hunt deer at all (Table 40). Among deer hunting landowners, 46% reported doing all of their hunting on private land that they own, while 5%, 10% and 7% of landowners reported doing all of their hunting on land that they lease, private land that they do not own, and public land, respectively (Table 41). Around 77% of landowners indicated that they would shoot an antlerless deer given the opportunity (Table 42), and landowners have been hunting deer in Minnesota for an average of 40 years (Table 43).

Landowners rated their agreement with five statements about their trust in the MNDNR on scale from 1 = strongly disagree, to 5 = strongly agree, and a mid-point of neither. Landowners, on average, were neutral regarding their trust in the MNDNR. Mean values ranged from 3.3 to 3.7 for trust items (Table 44).

Respondents were asked to rate the importance of several priorities MNDNR could consider when setting deer population goals. Responses were recorded on a scale where 1 = not at all important, and 5 = very important. Among the items evaluated, landowners placed the highest importance on the “amount of deer mortality during a severe winter” (M = 4.1), and “potential health risks to the deer herd” (M = 4.0), as issues to consider when setting deer population goals (Table 45).

We asked landowners if they place food or minerals out for deer to consume. A small number of landowners (10%) reported feeding deer (Table 46). Around a quarter of landowners reported placing minerals out for deer to consume (27%) (Table 47).

Table 23. Mean acres owned and leased by landowners, by DPA

Acres Owned				Acres Leased*		
DPA	Mean	Min	Max	Mean	Min	Max
169	42.3	2	396			
184	135.7	2	1720			
197	47.8	2	360			
210	188.1	2	2500			
298	122.2	3	3640			
<b>Block average</b>	<b>100.3</b>	<b>2</b>	<b>3640</b>			

\*too few individuals reported leasing land to estimate

Table 24. Percent of landowners with agriculture on their land, percent experiencing damage from deer, and severity of damage, by DPA

Agriculture	Own or lease		Experience damage		Severity of Damage*		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/Very Severe
169	26	74	10	90			
184	42	58	12	88			
197	22	78	6	94			
210	60	40	21	79			
298	44	56	7	93			
<b>Block average</b>	<b>38</b>	<b>62</b>	<b>11</b>	<b>89</b>			

values are the percent of respondents reporting each category

\*too few respondents reported experiencing damage, and prevented analysis of this question

Table 25. Percent of landowners with forest on their land, percent experiencing damage from deer, and severity of damage, by DPA

Forest  DPA	Own or lease		Experience damage		Severity of Damage*		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/ Very Severe
169	67	33	8	92			
184	70	30	7	93			
197	69	31	2	98			
210	74	26	10	90			
298	75	25	8	92			
<b>Block average</b>	<b>71</b>	<b>29</b>	<b>7</b>	<b>93</b>			

values are the percent of respondents reporting each category

\*too few respondents reported experiencing damage, and prevented analysis of this question

Table 26. Percent of landowners with residential land use on their land, percent experiencing damage from deer, and severity of damage, by DPA

Residential DPA	Own or lease		Experience damage		Severity of Damage*		
	Yes	No	Yes	No	Minor/ Negligible	Moderate	Severe/ Very Severe
169	67	33	19	81			
184	73	27	29	71			
197	71	29	15	85			
210	71	29	16	84			
298	73	27	6	94			
<b>Block average</b>	<b>71</b>	<b>29</b>	<b>18</b>	<b>82</b>			

values are the percent of respondents reporting each category

\*too few respondents reported experiencing damage, and prevented analysis of this question

Table 27. Landowners' perceived trend in damage from deer over 5 years, by DPA

DPA	Much less damage	Slightly less damage	About the same damage	Slightly more damage	Much more damage
169	26	8	59	6	2
184	17	8	64	8	2
197	16	12	67	4	1
210	18	14	56	7	5
298	33	8	56	4	0
<b>Block average</b>	<b>21</b>	<b>10</b>	<b>61</b>	<b>6</b>	<b>2</b>

values are the percent of respondents reporting each category



Table 28. Landowners' perceived trend in the deer population over the last 5 years, by DPA

DPA	Many fewer deer	Slightly fewer deer	About the same number of deer	Slightly more deer	Many more deer
169	24	18	38	15	6
184	16	27	30	20	7
197	18	20	41	15	5
210	14	22	33	21	11
298	28	21	31	14	6
<b>Block average</b>	<b>20</b>	<b>22</b>	<b>35</b>	<b>17</b>	<b>7</b>

values are the percent of respondents reporting each category

Table 29. Landowners' satisfaction with the current deer population in the area of their property, by DPA

DPA	Very dissatisfied	Slightly dissatisfied	Neutral	Slightly satisfied	Very satisfied
169	16	31	37	9	7
184	14	22	38	13	12
197	16	21	36	10	17
210	4	26	34	16	20
298	19	21	36	8	16
<b>Block average</b>	<b>14</b>	<b>24</b>	<b>36</b>	<b>11</b>	<b>15</b>

values are the percent of respondents reporting each category

Table 30. Landowners' satisfaction with the deer population on their land, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Dissatisfied	Neutral	Satisfied	Dissatisfied	Neutral	Satisfied
169	14	60	26	59	28	12
184	22	51	21	43	29	28
197	19	47	34	48	29	23
210	18	40	42	34	32	34
298	29	48	23	45	30	25
<b>Block average</b>	<b>21</b>	<b>51</b>	<b>29</b>	<b>46</b>	<b>30</b>	<b>24</b>

values are the percent of respondents reporting each category

Table 31. Landowners' perception of the deer population on their land, by DPA

DPA	Much too low	Too low	About right	Too high	Much too high
169	15	31	42	11	1
184	5	26	52	16	1
197	10	31	49	10	0
210	3	24	55	15	3
298	15	33	43	10	0
<b>Block average</b>	<b>10</b>	<b>29</b>	<b>48</b>	<b>12</b>	<b>1</b>

values are the percent of respondents reporting each category

Table 32. Landowners' perception of the deer population on their land, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Too low/much too low	About right	Too high/much too high	Too low/much too low	About right	Too high/much too high
169	23	68	9	54	32	13
184	6	69	24	44	43	13
197	22	65	13	52	39	9
210	12	69	19	31	52	17
298	31	59	10	55	35	9
<b>Block average</b>	<b>19</b>	<b>66</b>	<b>15</b>	<b>47</b>	<b>40</b>	<b>12</b>

values are the percent of respondents reporting each category

*Table 33. Landowners' preference for future deer populations, by DPA*

<b>DPA</b>	<b>Decrease</b>	<b>Stay the Same</b>	<b>Increase</b>
169	13	33	55
184	18	48	34
197	8	49	43
210	14	54	31
298	10	40	50
<b>Block average</b>	<b>13</b>	<b>45</b>	<b>42</b>

values are the percent of respondents reporting each category

Table 34. Landowners' preference for future deer populations, by DPA and hunting status

DPA	Non-hunting Landowners			Hunting Landowners		
	Decrease	Stay the same	Increase	Decrease	Stay the same	Increase
169	12	64	25	13	22	65
184	28	65	8	14	40	47
197	13	63	24	5	39	56
210	21	70	8	12	50	38
298	12	59	29	10	31	59
<b>Block average</b>	<b>17</b>	<b>64</b>	<b>19</b>	<b>11</b>	<b>37</b>	<b>53</b>

values are the percent of respondents reporting each category

Table 35. Landowners' mean preferred percent change in the deer population, by DPA

DPA	Mean percent change	Median percent change	Minimum	Maximum
169	14.5	0	-100	100
184	8.8	0	-75	100
197	13.2	0	-50	100
210	7.0	0	-50	100
298	17.8	0	-50	100
<b>Block average</b>	<b>11.9</b>	<b>0</b>	<b>-100</b>	<b>100</b>



Table 36. Percent of landowners aware that MNDNR offers technical and financial assistance for deer depredation problems, by DPA, and acres owned

<b>DPA</b>	<b>2-19 acres</b>	<b>20-79 acres</b>	<b>80-319 acres</b>	<b>320+ acres*</b>	<b>Average</b>
169	24	33	21	33	26
184	24	28	30	31	27
197	22	23	20	50	22
210	33	31	45	27	34
298	23	30	33	73	26
<b>Block average</b>	<b>26</b>	<b>28</b>	<b>29</b>	<b>29</b>	<b>26</b>

values are the percent of respondents reporting each category

\*too few respondents in the 320+ strata to calculate

Table 37. Percent of landowners that allow hunting on their property, by DPA, and acres owned

DPA	2-19 acres	20-79 acres	80-319 acres	320+ acres	Average
169	41	69	77	100	57
184	27	78	86	94	55
197	40	70	77	50	52
210	45	73	88	94	66
298	49	70	78	81	60
<b>Block average</b>	<b>40</b>	<b>72</b>	<b>81</b>	<b>90</b>	<b>57</b>

values are the percent of respondents reporting each category

\*too few respondents in the 320+ strata to calculate

Table 38. Percent of landowners that leased their property for deer hunting, by DPA.

<b>DPA</b>	<b>Yes</b>	<b>No</b>
169	2	99
184	1	99
197	0	100
210	5	96
298	6	94
<b>Block average</b>	<b>2</b>	<b>98</b>

values are the percent of respondents reporting each category

Table 39. Percent of landowners imposing different harvest restrictions on their property, by DPA

DPA	Antlerless harvest is restricted, but hunters can take any legal buck	Buck harvest is restricted to large antlered bucks, but hunters can take any antlerless deer	Buck harvest is restricted to large antlered bucks, and antlerless harvest is also restricted	No restrictions on the type of deer that can be harvested	Other
169	10	4	8	67	11
184	4	12	8	70	7
197	11	5	5	70	8
210	4	12	7	70	6
298	5	7	7	78	3
<b>Block average</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>71</b>	<b>7</b>

values are the percent of respondents reporting each category

Table 40. Percent of landowners reporting hunting deer during the last three years, and those that do not hunt, by DPA

DPA	2018	2019	2020	Did not hunt these years	Do not hunt
169	64	63	61	7	25
184	54	54	52	9	32
197	50	51	50	6	36
210	68	67	63	9	21
298	50	49	51	15	29
<b>Block average</b>	<b>56</b>	<b>56</b>	<b>54</b>	<b>9</b>	<b>29</b>

values are the percent of respondents reporting each category

Table 41. Landowners' time spent hunting on different land ownership types, by DPA

	Response	169	184	197	210	298	Avg.
Private land that I own	None	10	8	20	7	9	11
	Some	28	18	15	15	18	19
	Most	30	22	26	0	19	24
	All	32	52	39	57	55	46
Private land that I lease for hunting	None	89	86	97	91	86	91
	Some	9	2	1	1	1	3
	Most	2	4	1	1	0	2
	All	0	7	0	7	12	5
Private land that I do not own or lease	None	66	59	58	52	69	60
	Some	24	18	16	24	20	20
	Most	8	8	12	14	6	10
	All	2	16	14	10	6	10
Public land	None	24	45	28	49	48	37
	Some	42	39	37	41	29	38
	Most	25	14	20	5	22	18
	All	9	3	15	5	2	7

values are the percent of respondents reporting each category

Table 42. Percent of hunting landowners that would shoot an antlerless deer, by DPA

<b>DPA</b>	<b>Yes</b>	<b>No</b>
169	74	26
184	79	21
197	86	14
210	72	28
298	74	26
<b>Block average</b>	<b>77</b>	<b>23</b>

values are the percent of respondents reporting each category

Table 43. Mean number of years that hunting landowners have been hunting deer in Minnesota, by DPA

DPA	Mean
169	36.0
184	39.5
197	47.1
210	34.6
298	38.2
<b>Block average</b>	<b>39.6</b>



Table 44. Landowners' mean level of agreement with statements about the MNDNR, by DPA

	169	184	197	210	298	Avg.
The MNDNR does a good job managing deer in MN	3.3	3.5	3.5	3.5	3.2	3.3
When deciding about deer management in MN, the MNDNR will be open and honest in the things they say and do	3.4	3.7	3.3	3.4	3.4	3.4
The MNDNR can be trusted to make decisions about deer management that are good for the resource	3.4	3.6	3.4	3.5	3.4	3.4
The MNDNR will make decisions about deer management in a way that is fair	3.4	3.6	3.5	3.6	3.4	3.5
The MNDNR has deer managers and biologists who are well-trained for their jobs	3.6	3.8	3.7	3.7	3.6	3.7
The MNDNR listens to the concerns of landowners	3.3	3.5	3.3	3.3	3.2	3.3

responses measured on a bipolar scale, where 1 = strongly disagree, 3=neither, and 5 = strongly agree

Table 45. Landowners' mean stated importance for factors to consider in making deer population goals, by DPA

	169	184	197	210	298	Avg.
Amount of deer mortality during an average winter	3.6	3.7	3.7	3.8	3.7	3.7
Amount of deer mortality during a severe winter	4.0	4.0	4.1	4.2	4.0	4.1
Potential health risks to the deer herd	4.0	4.1	4.0	4.0	4.0	4.0
Public health (human-deer diseases)	3.6	3.9	3.8	3.8	3.7	3.7
Amount of crop damage from deer	2.8	3.3	3.0	3.3	3.1	3.1
Number of deer vehicle collisions	3.3	3.6	3.7	3.6	3.5	3.6
Deer over-browsing of forests	2.8	3.3	3.2	3.1	3.2	3.1
Impacts of deer on other wildlife species	2.7	3.2	3.0	2.9	3.1	3.0
Deer hunting heritage and tradition	3.7	3.7	3.7	3.8	3.7	3.7
Hunter satisfaction with deer numbers	3.5	3.4	3.4	3.6	3.5	3.5
Public satisfaction with deer numbers	3.0	3.0	3.1	3.3	3.1	3.1
Impact of deer hunting on the local economy	3.6	3.5	3.5	3.5	3.6	3.5
Quality of bucks (antler size)	3.0	3.1	3.0	3.3	3.1	3.1
Damage to gardens and landscaping	2.5	2.9	2.7	3.0	2.7	1.7
The ratio of bucks to does	3.3	3.4	3.4	3.5	3.4	3.4

responses measured on a unipolar scale, where 1 = not at all important, and 5 = very important

Table 46. Percent of landowners that set out food for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
169	13	87	0
184	9	87	3
197	12	85	3
210	8	92	0
298	10	90	0
<b>Block average</b>	<b>10</b>	<b>88</b>	<b>2</b>

values are the percent of respondents reporting each category

Table 47. Percent of landowners that set out minerals for deer to consume, by DPA

DPA	Yes	No	Live in CWD management or control zone
169	29	71	0
184	24	72	4
197	25	73	2
210	28	72	0
298	30	70	0
<b>Block average</b>	<b>27</b>	<b>72</b>	<b>1</b>

values are the percent of respondents reporting each category