



Survey of Waterfowl Hunters – 2023 Season

05/09/2024

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Purpose

The Minnesota Department of Natural Resources (MNDNR) periodically conducts surveys of hunters to understand their preferences for management, and participation and harvest in hunting seasons. This report details the results of one such survey of Minnesota waterfowl stamp holders in 2023.

Of particular interest to this study was waterfowl stamp holders' participation in the experimental early teal hunting season, and preferences for continuation of the season following the close of the three-year experimental period beginning in 2020. Topics included in this investigation include:

- 1) Participation in waterfowl hunting in 2023.
- 2) Participation and harvest during in the experimental early teal hunting season in 2023.
- 3) Satisfaction with the experimental early teal hunting season in 2023.
- 4) Observance of shooting of non-target species, and shooting before legal hours during the experimental early teal hunting season.
- 5) Change in waterfowl hunting effort since the experimental early teal hunting season began.
- 6) Days spent hunting and harvest of ducks and geese during the regular waterfowl and goose hunting seasons in 2023.
- 7) Satisfaction with duck and goose hunting in 2023.
- 8) Beliefs about duck and goose bag limits in 2023.
- 9) Support for extending legal shooting hours to sunset for the entire waterfowl hunting season.
- 10) Preferences for season dates.
- 11) Support for continuation of the experimental early teal hunting season.
- 12) Membership in a waterfowl conservation organization.
- 13) Waterfowl hunting activity outside of Minnesota.

Methods

Sampling

We sampled 4,000 Minnesota waterfowl stamp holders (aged 18-65) to assess their participation and harvest in the 2023 waterfowl hunting seasons, and preferences for future waterfowl hunting season dates and regulations: especially the continuation of the experimental early teal hunting season.

We used two temporal (2,000 stamp holders at close of the teal season, and 2,000 stamp holders at close of the waterfowl hunting season) and four geographic (central, metro, north, and south) sampling strata to ensure selection of teal season participants and hunters from around the state. 500 hunters in each geographic strata were selected at each time point.

Data collection

We used a mixed-mode collection procedure. All participants received a letter in the mail inviting them to visit a website and complete a questionnaire. Non-respondents who had an email on file received 2 follow-ups roughly two weeks after they received the first letter. Finally, non-respondents to the letter or email requests received a paper copy of the questionnaire in the mail, along with a letter with directions to complete online and a postage paid business reply envelope.

Response rate

Of the 4,000 letters sent, 100 were returned as undeliverable. The majority of completed questionnaires were done online (n=970), compared to paper (n=287), for a total of 1,257. After excluding undeliverable letters, this represents an effective response rate of 31%. (Table 1).

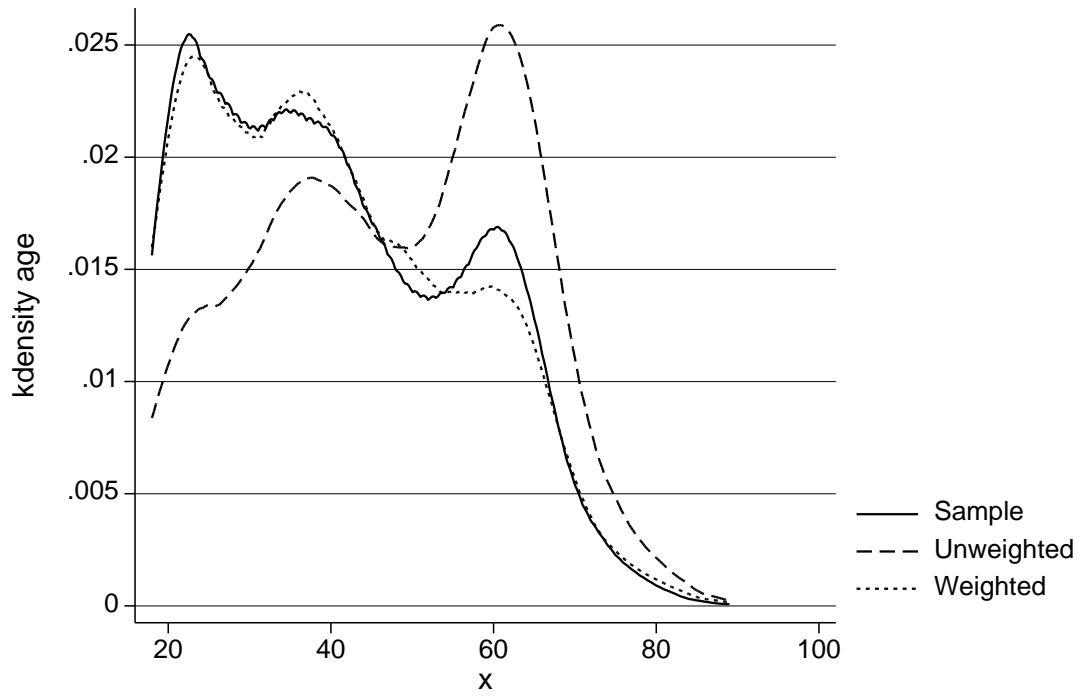
Table 1. Numbers of responses by mode and response rate

Initial sample	Undeliverable	Total responses	Adjusted response rate
4000	100	1257	31

Weighting

We weighted responses to account for the sampling design (temporal and geographic strata) and to adjust for non-response bias by age. Figure 1 contains a kernel density plot of the sample and respondent age. A greater proportion of responses came from older aged individuals than is found in the population (as approximated by the random sample in the figure). The opposite was true for younger aged individuals, where the population contains a larger proportion of younger individuals than the respondents. The weighting scheme attends to these concerns, and the age distribution is a match to the shape of the curve with weights applied (Figure 1).

Figure 1. Kernal density plot of sample, unweighted respondent, and weighted respondent age.



Estimates and limitations

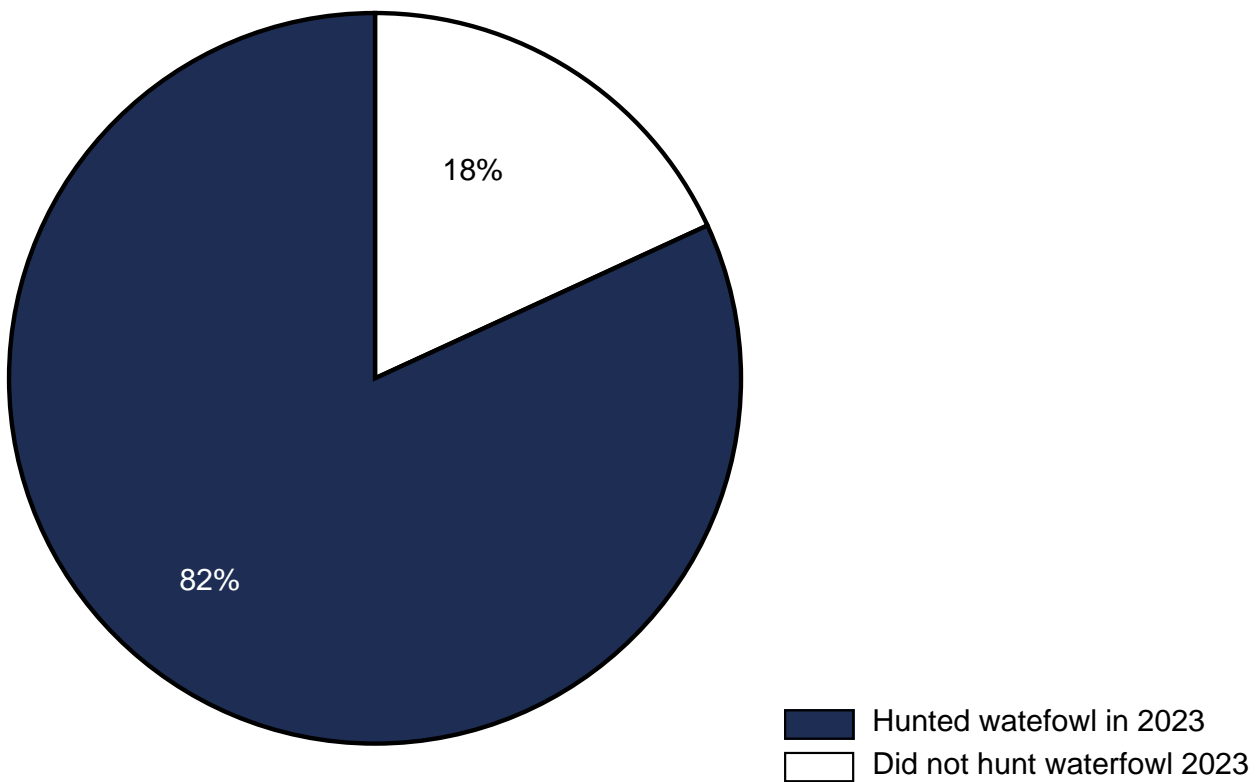
Reported estimates to follow represent the average value for the population of Minnesota waterfowl stamp holders at the close of the 2023 waterfowl hunting season, or at the close of the experimental early teal season respectively. In Minnesota, only those aged 18 to 65 must purchase a waterfowl stamp to participate. Therefore, the population of interest for the study does not contain all possible hunters. We estimate that the number of waterfowl stamp holders over age 65 is small.

Participation in waterfowl hunting in Minnesota in 2023

We asked respondents if they participated in any waterfowl hunting seasons in Minnesota in 2023. Most waterfowl stamp holders (82%) reported that they had, while 18% of waterfowl stamp holders reported that they did not (Figure 2).

At the close of the waterfowl hunting seasons in Minnesota, 70,751 waterfowl stamps were held. Of these individuals, we estimate that 58,015 participated in waterfowl hunting in 2023. This estimate is likely a lower bounds of actual participation as it excludes youth (under 18) and individuals over the age of 65.

Figure 2. Percent of waterfowl stamp holders that participated in waterfowl hunting in Minnesota in 2023



Participation and harvest in the experimental early teal hunting season in Minnesota in 2023

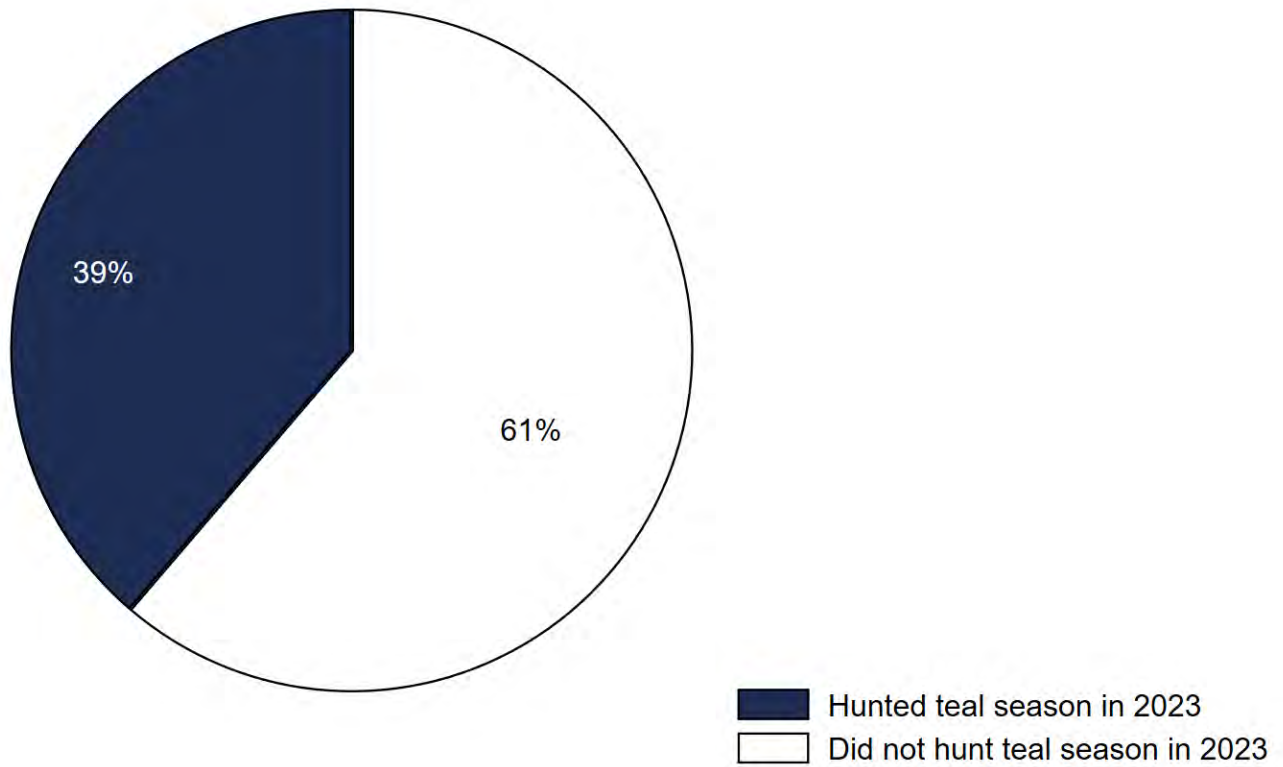
We asked respondents if they participated in the 5-day experimental early teal hunting season in Minnesota in 2023. Of those that reported any waterfowl hunting activity in the state, 39% reported participating in the experimental early teal hunting season (Figure 3).

At the close of the experimental early teal hunting season, 34,340 waterfowl hunting stamps were held. Of these individuals, we estimate that 13,392 participated.

Participation in the experimental early teal hunting season declined sharply over the 5-day season. We estimated that 84% of those that participated in the experimental early teal season hunted on opening day (September 2nd), while only 21% hunted on the last day of the season (September 6th). Table 2 reports the estimated percent and number of teal hunters hunting on each day of the experimental early teal season in Minnesota in 2023.

Participants hunted an average of 2.18 days (Table 3) during the experimental early teal hunting season, and harvested an average of 5.70 birds during the season, or 2.43 birds per person per day (Table 5). Extrapolating from the number of participants, we estimated that waterfowl stamp holders hunted a total of 29,194 days and harvested around 71,000 blue-winged and green-winged teal. Most of the teal harvest was comprised of blue-winged teal (65,394) as compared to green-winged teal (11,385). These values do not total to 71,000 as they are estimates made for each independently (Table 5).

Figure 3. Percent of waterfowl stamp holders that did any waterfowl hunting in Minnesota in 2023, that participated in the experimental early teal hunting season



*Estimated from post teal season strata (n=2,000) only

Table 2. Estimated percent and total number of waterfowl stamp holders hunting on each day during the experimental early teal season in Minnesota in 2023.

Day	Percent hunted	Estimated hunters
Saturday, September 2 nd	84	11,249
Sunday, September 3 rd	73	9,776
Monday, September 4 th	33	4,419
Tuesday, September 5 th	20	2,678
Wednesday, September 6 th	21	2,812

- Percent hunted is among those that reported hunting during the experimental early teal season in Minnesota in 2023
- Estimated hunters = (total stamp holders at season close (34,340) * percent hunted teal in 2023 (.39)) * percent hunted that day
- Estimates are likely a lower bounds as they do not include youth, and individuals aged 65+ do not require a state waterfowl stamp.

Table 3. Mean days hunted per hunter during the experimental early teal season in Minnesota in 2023

	Mean
Mean days hunted per hunter	2.18 [2.05, 2.33]

- $n = 179$

[95% Confidence interval]

Table 4. Mean total teal harvested per hunter during the experimental early teal season in Minnesota in 2023

	Mean
Mean teal harvested per hunter	2.43 [2.14, 2.72]

- $n = 179$

[95% Confidence interval]

Table 5. Estimated participation and harvest during the experimental early teal season in Minnesota in 2023

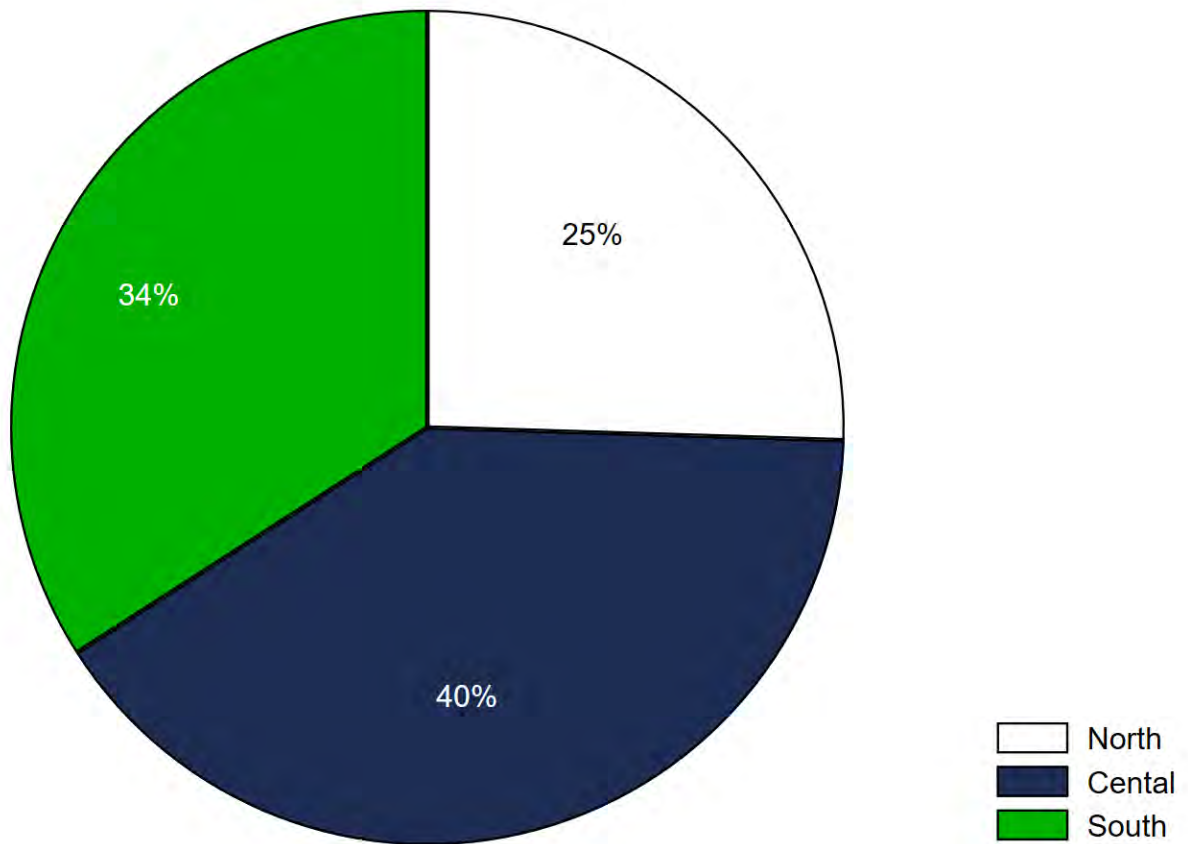
	Mean days per hunter	Mean harvest per hunter	Mean harvest per hunter per day	Total participants	Total days hunted	Total teal harvest
Total teal harvest	2.18	5.70	2.43	13,392	29,194	70,941
Blue-winged teal harvest	2.18	4.89	2.24	13,392	29,194	65,394
Green-winged teal harvest	2.18	0.84	0.39	13,392	29,194	11,385

Values are an extrapolation of the mean value of the total number of days hunted, the total teal harvested, and proportion of waterfowl stamp holders participating in the teal season.

Primary hunt location during experimental early teal season in Minnesota in 2023

We asked participants to report the waterfowl hunting zone where they spent the most time hunting during the experimental early teal hunting season in Minnesota in 2023. More respondents reported hunting the central zone (40%) than in the north (25%) or south (34%) (Figure 4).

Figure 4. Percent of waterfowl stamp holders selecting the north, central, and south zones as the zone where they did the most hunting during the experimental early teal season in Minnesota in 2023.



Satisfaction with the experimental early teal season in Minnesota in 2023

We asked participants in the experimental early teal hunting season report their overall satisfaction with their experience, and their satisfaction with several elements of the season including harvest, numbers of teal seen, numbers of other hunter encountered, regulations, timing of the season, season length, numbers of non-hunters encountered, and access. Respondents recorded their satisfaction on a scale where 1 = very dissatisfied, 4 – neither, and 7 = very satisfied.

Overall, participants reported very high levels of satisfaction, with greater 64% reporting feeling either slightly, moderately, or very satisfied. More than a third of hunters (34%) reported feeling very satisfied with their overall teal season hunting experience. Slightly less than a quarter (24%) of hunters reported feeling either slightly, moderately, or very dissatisfied with their overall teal hunting experience (Figure 5).

Figure 5. Teal hunters’ overall satisfaction or dissatisfaction with their experience during the experimental teal season in Minnesota in 2023

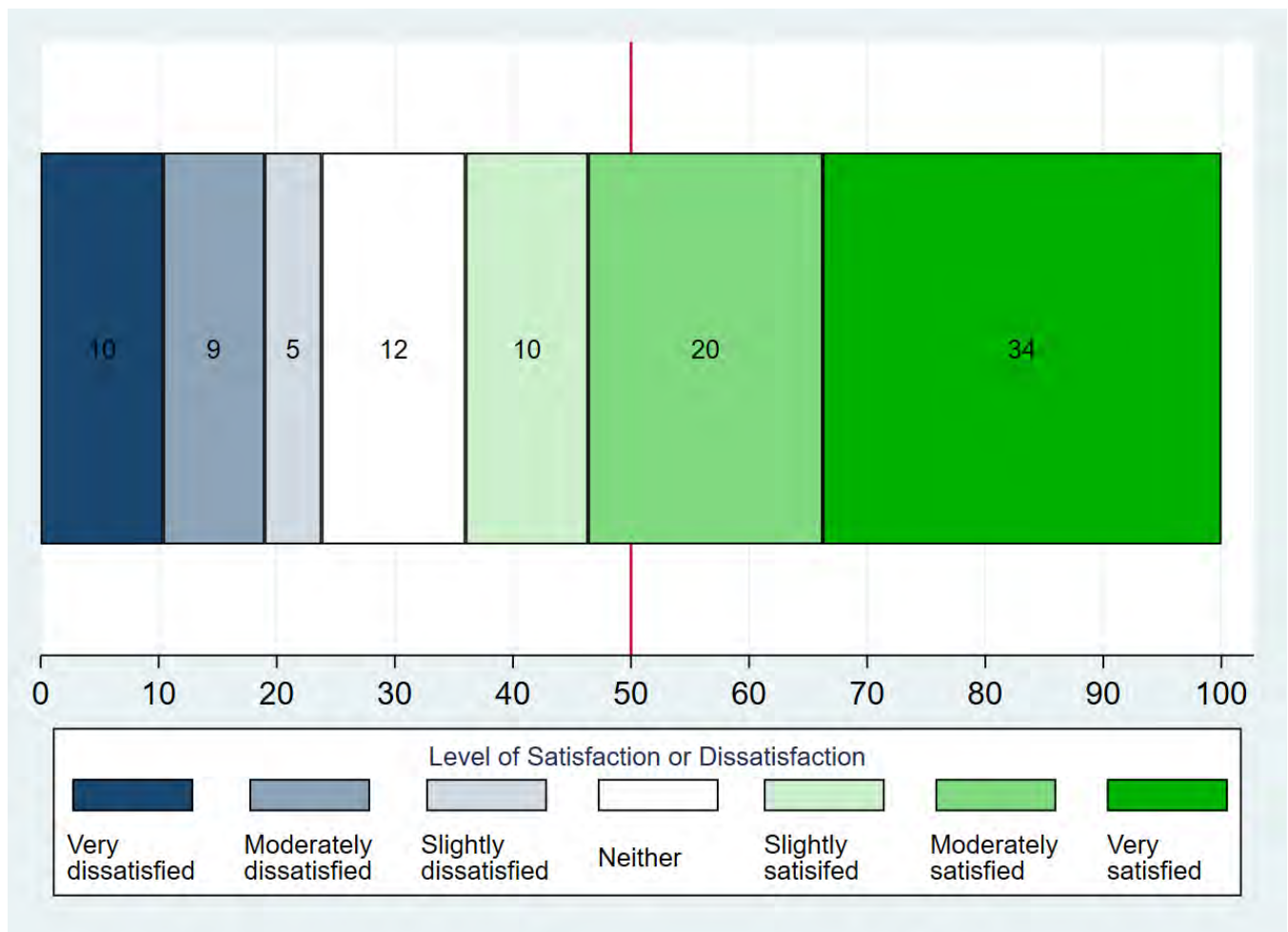


Table 6. Teal hunters' satisfaction or dissatisfaction with elements of the experimental teal season in Minnesota in 2023

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied
Teal harvest	13	7	10	15	10	21	24
Number of teal seen while hunting	12	7	11	7	19	17	27
Number of other hunters encountered	5	4	16	31	15	12	16
Teal hunting regulations	5	6	4	16	15	29	25
Timing of the teal hunting season	10	7	10	9	12	21	32
Length of the teal season	8	7	12	23	11	19	21
Number of non-hunters (e.g., wild rice harvesters, kayakers) encountered while hunting	4	2	5	47	4	5	32
Access to places to hunt teal	6	4	7	22	12	20	30

Observance of shooting outside legal hours and non-target species

Blue-winged and green-winged teal are the only species hunters are permitted to take during the experimental early teal season. Flocks of ducks may contain other species at this time of the year, and concerns exist about the accidental harvest of non-teal ducks during this season. Legal shooting begins at sunrise rather than one half-hour before sunrise like during the regular waterfowl hunting season to allay concerns about the take of non-target species. We asked participants in the experimental early teal season if they witnessed other hunters shooting before sunrise, or at non-target species. Minorities of teal season participants reported witnessing other waterfowl hunters shoot a non-teal duck (13%) or shoot at teal before sunrise (17%) (Table 7).

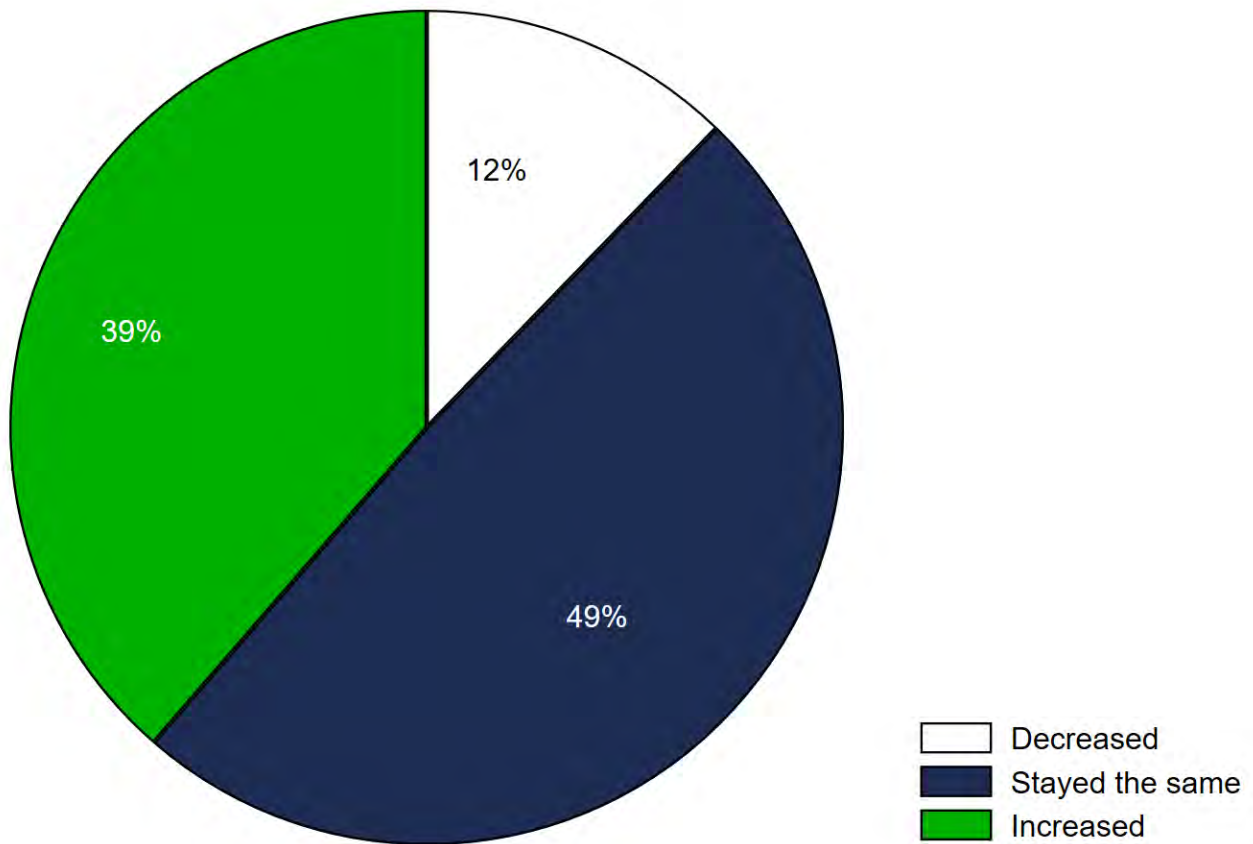
Table 7. Percent of participants in the experimental early teal season witnessing other hunters shooting before sunrise or at non-teal ducks.

	Yes	No
Did you personally observe any waterfowl hunters shoot a non-teal duck during the experimental early teal hunting season in Minnesota in 2023?	13	87
Did you personally observe any waterfowl hunters shooting teal before sunrise during the experimental early teal hunting season in Minnesota in 2023?	17	83

Change in waterfowl hunting effort since implementing experimental early teal hunting season

The experimental early teal season was implemented, in part, to expand waterfowl hunting opportunity. We asked participants if their total number of days they have spent hunting waterfowl in Minnesota has decreased, stayed the same, or increased (Figure 6).

Figure 6. Percent of waterfowl stamp holder reporting change in their effort following the creation of the early teal season.



Mean days spent hunting waterfowl in Minnesota in 2023 by zone, and participation in the regular season opening weekend

We asked respondents how many days they hunted in the North, Central, and South waterfowl hunting zones in Minnesota in 2023 (excluding the early teal and goose seasons). We summed days reported for each zone to create a total days hunted variable. We also report means for by zone for those hunters that hunted at least one day in that zone in 2023. Hunters reported hunting and average of 4.1, 5.7, and 4.7 days in the north, central, and south waterfowl hunting zones respectively. Excluding those that did not hunt in a given zone, average numbers of days hunted rise to 8.8, 8.3, and 10.8 for the north, central, and south zones respectively. Waterfowl stamp holders hunted an average of 8.6 days in Minnesota in 2023, and 10.8 when considering those that hunted at least one day. The data are over-dispersed for most estimates, meaning that the variance estimate (in parentheses) is larger than the mean. This suggests that there is a wide range in participation (Table 8).

We asked participants if they hunted during the regular waterfowl season opening weekend. Most hunters (70%) reported that they went hunting during the opening weekend.

Table 8. Mean days spent hunting waterfowl in Minnesota in 2023 by zone

	Mean	Mean if hunted at least one day in zone	Min	Max
North	4.1 (7.3)	8.8 (8.5)	0	65
Central	5.7 (7.6)	8.3 (8.0)	0	70
South	4.7 (8.5)	10.8 (10.1)	0	52
Total	8.6 (9.7)	10.8 (9.7)	0	70

Regular season duck and goose harvest

Respondents reported the number of ducks and geese they harvested during the regular waterfowl hunting season (excluding early goose and early teal). On average, hunters bagged 11.5 ducks and 4.4 geese during the regular waterfowl hunting season in Minnesota in 2023 (Table 9).

Table 9. Average duck and goose harvest during regular waterfowl hunting season in Minnesota in 2023

	Mean	Mean if harvested at least one duck or goose	Min	Max
Ducks	11.5 (15.4)	13.7 (15.9)	0	124
Geese	4.4 (11.3)	8.3 (14.5)	0	150

Satisfaction with elements of waterfowl hunting in Minnesota in 2023

Respondents reported their satisfaction with their overall waterfowl hunting experience, and with elements of duck and goose hunting in Minnesota during the 2023 season. Most respondents (59%) reported feeling either slightly, moderately, or very satisfied with their general waterfowl hunting experience in Minnesota in 2023. A further 10% were neither satisfied nor dissatisfied, and 32% reported feeling either slightly, moderately, or very dissatisfied with their general waterfowl hunting experience in Minnesota in 2023 (Table 10).

Ducks

We asked respondents to report their satisfaction with their general duck hunting experience, their duck harvest, duck hunting regulations, and the number of ducks seen. The proportions of respondents feeling either slightly, moderately, or very satisfied with these elements of the season were 59%, 43%, 55%, and 38% respectively. An error occurred where the item measuring satisfaction duck hunting harvest was omitted from the only questionnaire, and reported results are for the paper respondents only and should be interpreted with caution as this was a small proportion of the total respondents.

Geese

We asked respondents to report their satisfaction with their general goose hunting experience, their goose harvest, goose hunting regulations, and the number of geese seen. The proportions of respondents feeling either slightly, moderately, or very satisfied with these elements of the season were respectively.

Table 10. Waterfowl stamp holders' satisfaction with their general waterfowl hunting experience, and elements of duck and goose hunting in Minnesota in 2023

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	NA
General waterfowl hunting experience	8	9	15	10	16	28	15	-
<u>Duck</u>								
hunting experience	9	10	13	8	17	25	17	5
hunting harvest*	14	16	16	11	18	16	9	9
hunting regulations	6	7	9	23	13	25	17	5
number of birds seen	20	19	16	7	16	13	9	5
<u>Goose</u>								
hunting experience	11	11	14	18	20	15	11	22
hunting harvest	18	13	15	22	14	11	7	22
hunting regulations	6	4	5	32	12	25	16	20
number of birds seen	14	12	15	13	18	17	13	18

- NA is the percent reporting that they did not hunt, values to the left are the percent among those that did hunt
- *This item was accidentally omitted from the online instrument, response are for paper respondents only

Beliefs about goose and duck bag limits

We asked respondents to share their beliefs about the duck (6 – bird) and goose (5- bird) daily bag limits in Minnesota in 2023. Respondents reported if they felt the daily bag was “too low,” “about right,” “too high,” or “no opinion.” In the case of both the duck and goose, majorities of stamp holders believed that the daily bag limit was about right. More stamp holders (16%) believe the that limit was too low, than in the case of duck (5%) (Table 11).

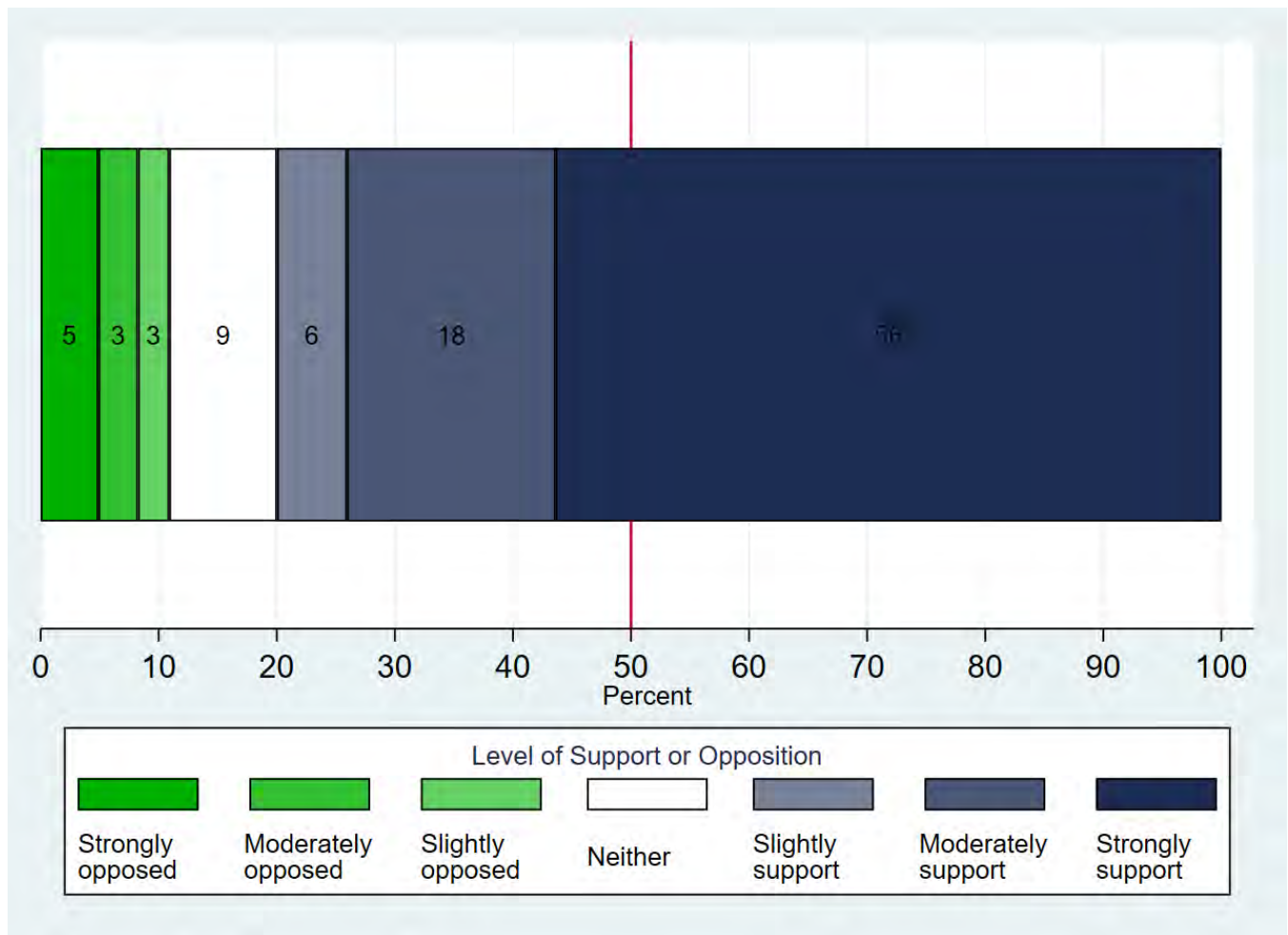
Table 11. Waterfowl stamp holders’ beliefs about the duck and goose daily bag limits in Minnesota in 2023.

	Too low	About right	Too high	No opinion
6 – duck daily bag	5	73	10	11
5 – goose daily bag	16	62	7	14

Attitude toward eliminating the 4pm legal shooting closure

Prior to 2021, legal shooting hours for waterfowl ended at 4pm during part of the regular waterfowl hunting season. That regulation was changed so that hunters could hunt until sunset during the entire season. We asked respondents about their support or opposition to retaining this regulation change moving forward. More than half (56%) strongly supported allowing legal shooting until sunset. A full 80% of waterfowl stamp holders either slightly, moderately, or strongly supported retaining the new regulation eliminating the 4pm closure (Figure 7).

Figure 7. Waterfowl stamp holders' support or opposition to retaining regulation change allowing waterfowl hunting until sunset throughout the regular waterfowl hunting season in Minnesota.



Preference for opening date of regular waterfowl hunting season

We asked respondents if they preferred two different opening dates for the regular waterfowl hunting season, a) the Saturday nearest September 24th, and b) the Saturday nearest October 1st. Respondents also had the option to select “no preference.” A plurality of stamp holders (46%) preferred the status quo of the Saturday nearest September 24th, while 37% reported a preference for delaying the opener to the Saturday nearest October 1st. The remaining 17% did not have a preference for the date of the season opener (Table 12).

Table 12. Waterfowl stamp holders’ preference for the regular waterfowl season date by zone

	All	North	Central	South	No preference
Saturday nearest September 24 th	46	55	49	41	17
Saturday nearest October 1 st	37	35	37	46	21
No preference	17	10	14	13	61

- Zone determined by response to question asking, “In which area of the state is the timing of open waterfowl hunting and season dates most important to you?”

Preference for season dates and split

Federal regulations limit the number of waterfowl hunting zones a state may implement, and the dates of the open waterfowl hunting season by zone. Collectively the MNDNR refers to the number of zones, season dates, and potential splits within the season (period when hunting is closed) as the season structure. We asked respondents their preference for 3 alternative waterfowl season structures, a) Saturday Sept. 25 to Tuesday Nov. 23 (*same season as used last year in North Duck Zone*), b) Saturday Sept. 25 to Sunday October 3, close 5 days, reopen Saturday Oct. 9 to Sunday Nov. 28 (*same season as used last year in Central Duck Zone*), c) Saturday Sept. 25 to Sunday October 3, close 12 days, reopen Saturday Oct. 16 to Sunday, Dec. 5 (used from 2012-2020 in the South Duck Zone only), and d) No preference (Table 13).

Table 13. Waterfowl stamp holders' preference for waterfowl season structure by zone

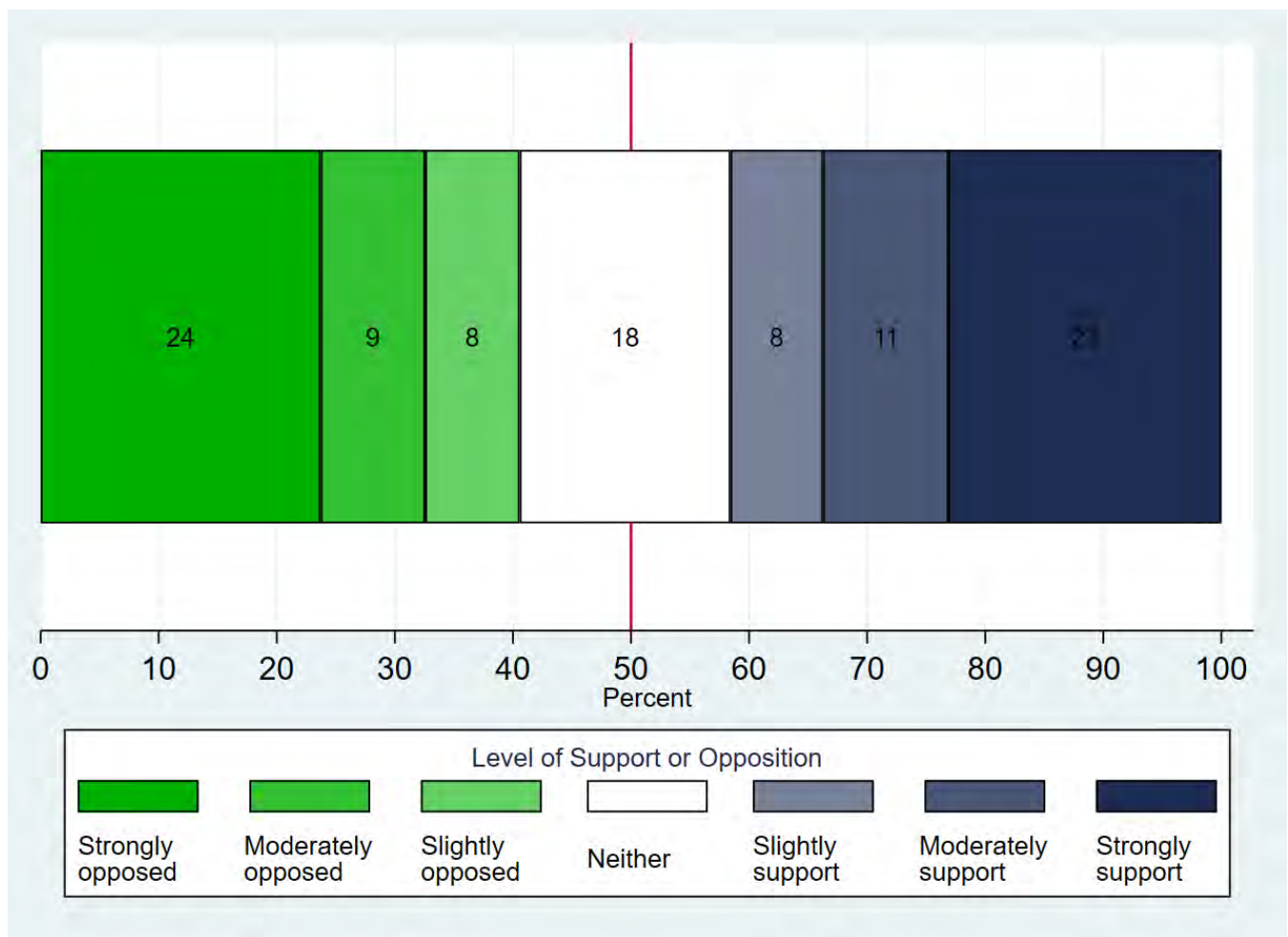
	All	North	Central	South	No preference
Saturday Sept. 25 to Tuesday Nov. 23 (<i>same season as used last year in <u>North Duck Zone</u></i>)	35	71	28	19	5
Saturday Sept. 25 to Sunday October 3, close 5 days, reopen Saturday Oct. 9 to Sunday Nov. 28 (<i>same season as used last year in <u>Central Duck Zone</u></i>)	26	10	44	18	5
Saturday Sept. 25 to Sunday October 3, close 12 days, reopen Saturday Oct. 16 to Sunday, Dec. 5 (used from 2012-2020 in the <u>South Duck Zone</u> only)	24	11	18	55	10
No preference	15	8	10	8	80

Support for continuation of the experimental early teal hunting season

The Minnesota DNR decided to implement an experiment early teal hunting season in 2021. The experimental period lasted for 3 – years, at which point a decision must be made to continue the season, if additional criteria set out by the U.S. Fish and Wildlife Service are met. We asked waterfowl stamp holders about their support or opposition to the continuation of this season. Participants recorded their response on scale where 1 = strongly oppose, 2 = moderately oppose, 3 = slightly oppose, 4 = neither, 5 = slightly support, 6 = moderately support, and 7 = strongly support.

Respondents were split in their support (42%) or opposition (41%) to the continuation of the experimental early teal hunting season in Minnesota. An additional 18% reported having neither support nor opposition (Figure 8).

Figure 8. Waterfowl stamp holders’ support or opposition to the continuation of the experimental early teal hunting season in Minnesota.



Beliefs about the impacts of the experimental early teal hunting season

We asked respondents to report their agreement with two statements about the potential negative impacts of the experimental early teal hunting season on the regular waterfowl hunting season opening weekend including a) the number of ducks present, and b) harvest. Majorities (51%) either slightly, moderately, or strongly agreed with both statements, while 26% disagreed that the teal season impacts the number of ducks present, and 24% disagreed that the teal season impacted harvest on opening weekend. Roughly a quarter neither agreed nor disagreed with both statements (Table 14).

Table 14. Waterfowl stamp holders' agreement with statements about the negative impacts of the experimental early teal hunting season on the elements of the regular waterfowl season opening weekend.

The experimental early teal season negatively impacts...	Strongly disagree	Moderately disagree	Slightly disagree	Neither	Slightly agree	Moderately agree	Strongly agree
...the number of ducks present in Minnesota on opening weekend	10	9	7	22	17	13	21
...waterfowl harvest over opening weekend	10	8	6	25	17	14	20

Membership in a waterfowl conservation organizations

We asked respondents if they were a member of any waterfowl conservation organizations. We calculated the percent membership by dividing the count of respondents by indicating they are a member of that group by the total respondents. Roughly 1/3 of respondents reported membership in Ducks Unlimited (31%). Membership in Delta Waterfowl (6%), Local sporting clubs (16%), and other waterfowl conservation organizations (10%) was relatively low (Table 15).

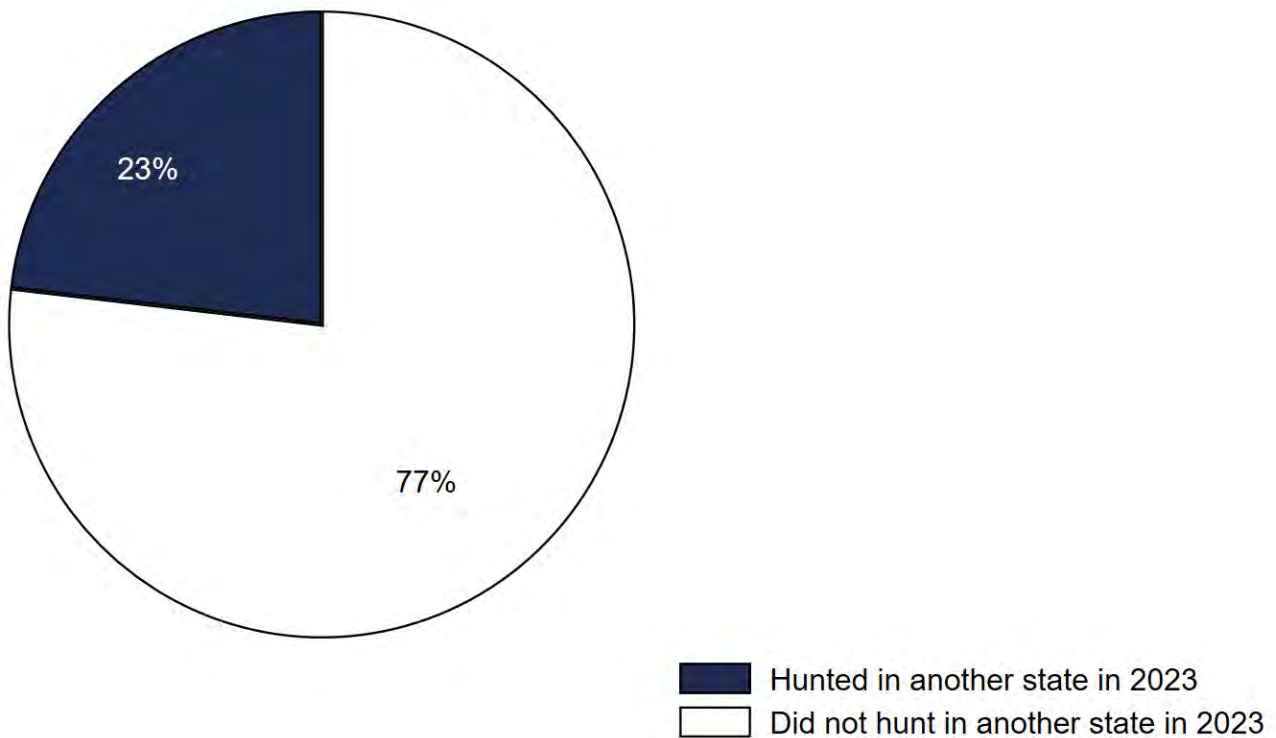
Table 15. Count and calculated percent of respondents that reported that they are a member of waterfowl conservation organizations.

	N	Total participants	Percent
Ducks unlimited	487	1251	39
Delta waterfowl	87	1251	7
Local sporting club	248	1251	20
Other	147	1251	12

Out of state waterfowl hunting activity

We asked participants if they hunted waterfowl in a state other than Minnesota in 2023. Around a quarter (23%) of respondents reported that they did, for an average of 8.7 days (Figure 9).

Figure 9. Percent of waterfowl stamp holders reporting hunting waterfowl outside of Minnesota in 2023.



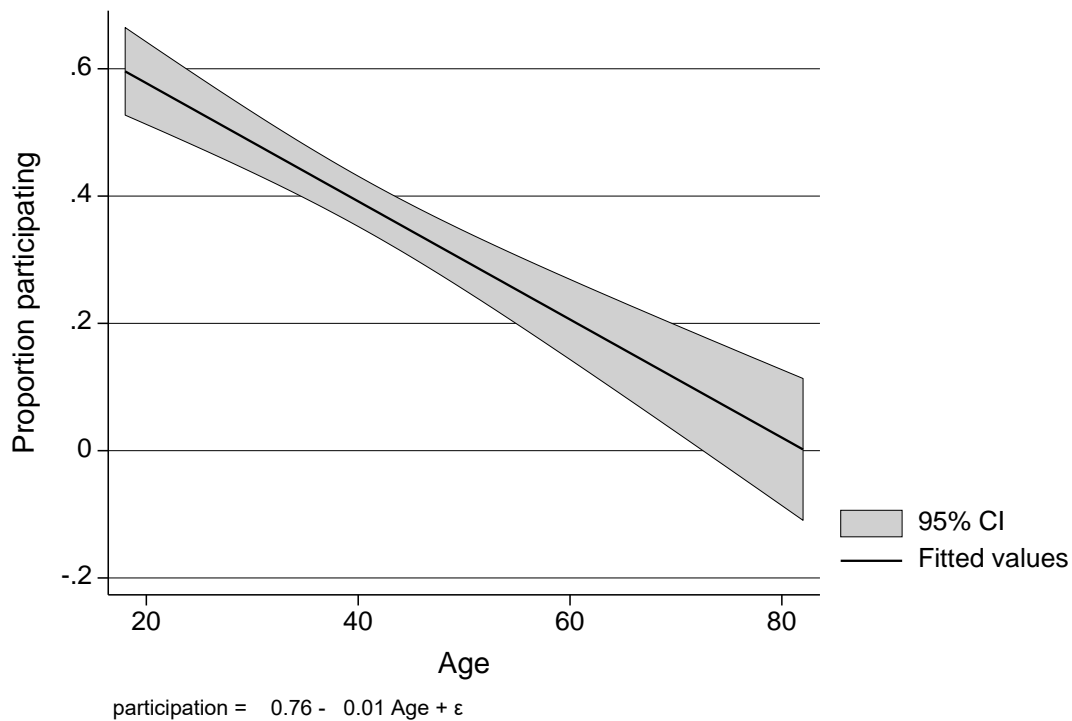
Appendix A. Supplemental analysis

Participation in the experimental early teal hunting season by age and location

We conducted supplemental analysis of participation in the experimental early teal hunting season by age of survey respondents. We first compared the mean of age of those that reported participating the season, and those that did not using an independent samples t-test (unweighted), and also fit a linear model to estimate participation in the season across the age distribution (weighted).

Participants in the experimental early teal hunting season ($M = 40.1$, $SD = 16.1$) were significantly younger than non-participants ($M = 48.3$, $SD = 15.0$) (t -value = 7.54, $p < 0.001$). For every year respondents increased in age, there was an estimated 1% decline in participation in the experimental early teal hunting season (Figure A1.)

Figure A1. Linear fit and 95% confidence interval of participation in the experimental early teal season by respondent age, among those that hunted waterfowl in Minnesota in 2023.



We also estimated participation by geographic zone used for sampling, by county of residence. Participation in the north, central, and metro areas ranged from 34 to 36 percent. A greater proportion of waterfowl stamp holders in the south (51%) reported participating the experimental early teal season (Table A1.)

Table A1. Percent of Minnesota waterfowl stamp holders participating in the experimental early teal season in Minnesota in 2023.

		Percent participating in teal season
Minnesota waterfowl stamp holders		39
Zone by sampling strata		
	North	34
	Central	36
	Metro	36
	South	51

Support for continuing the experimental teal season by participation

We compared support for continuation of the experimental early teal season by respondents' reported participation in the season in 2023 (unweighted). Table A2 contains percents of respondents selecting each category of support or opposition by participation. The distributions of support were statistically significantly different as revealed by a Chi-squared test ($\chi^2 = 211.24$, $p < 0.001$, Cramer's $V = .47$). Participants in the teal season were far more likely to strongly support continuation (51%) than non-participants (11%). The opposite held for strong opposition with a greater proportion of non-participants reporting strong opposition. A non-trivial proportion (23%) of hunters reported opposition to continuing the experimental early teal hunting season despite reporting that they participated in the season in 2023.

Table A2. Support or opposition to continuing the experimental early teal season by participation

	Did not hunt teal season in 2023	Hunted in teal season in 2023
Strongly oppose	36	12
Moderately oppose	11	5
Slightly oppose	9	6
Neither	18	6
Slightly support	7	8
Moderately support	9	11
Strongly support	11	51

Appendix B. Questionnaire

THE 2023 WATERFOWL HUNTING SEASON IN MINNESOTA

A study of hunters' opinions and activities



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!

m DEPARTMENT OF
NATURAL RESOURCES

Minnesota Department of Natural Resources
Fish and Wildlife Division
500 Lafayette Rd.
St. Paul, Minnesota 55155
WaterfowlHunterSurvey.DNR@state.mn.us

{1001}

Part 1. Waterfowl hunting participation

Q1. Did you hunt waterfowl in Minnesota during the 2023 season? *(Please check one)*

- No *(Skip to Part 4)*
 Yes *(Please continue to Part 2)*

Part 2. Participation in the experimental early teal hunting season

Q2. Did you participate in the experimental early teal hunting season in Minnesota in 2023, September 2nd to 6th?

- No *(Skip to Part 3)*
 Yes *(Please continue)*

Q3. For each of the 5 days of the experimental early teal hunting season, please report if you hunted that day, and the number of blue-winged and green-winged teal you killed. If you are unsure, please estimate as best you can.

Day	Did you hunt this day?	How many blue-winged teal did <u>YOU KILL PERSONALLY</u> on this day?	How many green-winged teal did <u>YOU KILL PERSONALLY</u> on this day?
Saturday, September 2nd, 2023	<input type="checkbox"/> No <input type="checkbox"/> Yes		
Sunday, September 3rd, 2023	<input type="checkbox"/> No <input type="checkbox"/> Yes		
Monday, September 4th, 2023	<input type="checkbox"/> No <input type="checkbox"/> Yes		
Tuesday, September 5th, 2023	<input type="checkbox"/> No <input type="checkbox"/> Yes		
Wednesday, September 6th, 2023	<input type="checkbox"/> No <input type="checkbox"/> Yes		

Q4. Which waterfowl hunting zone did you primarily hunt during the 2023 experimental teal hunting season in Minnesota? *(Please check one)*

- North
 Central
 South

Q5. Overall, how satisfied were you with your experience during the experimental early teal hunting season? *(Please circle one)*

Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied
1	2	3	4	5	6	7

Q6. How satisfied or dissatisfied were you with the following elements of the experimental early teal season in Minnesota in 2023? (Please circle one for each)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied
Teal harvest	1	2	3	4	5	6	7
Number of teal seen while hunting	1	2	3	4	5	6	7
Number of other hunters encountered	1	2	3	4	5	6	7
Teal hunting regulations	1	2	3	4	5	6	7
Timing of the teal hunting season	1	2	3	4	5	6	7
Length of the teal season	1	2	3	4	5	6	7
Number of non-hunters (e.g., wild rice harvesters, kayakers) encountered while hunting	1	2	3	4	5	6	7
Access to places to hunt teal	1	2	3	4	5	6	7

Q7. Did you personally observe any waterfowl hunters shoot a non-teal duck during the experimental early teal hunting season in Minnesota in 2023?

- No
- Yes

Q8. Did you personally observe any waterfowl hunter shooting teal before sunrise during the experimental early teal hunting season in Minnesota in 2023?

- No
- Yes

Q9. Compared to before the experimental teal hunting season began, has the total number of days you spent hunting waterfowl in Minnesota: (Please check one)

- Decreased
- Stayed the same
- Increased

Part 3. Waterfowl hunting participation and satisfaction

Q10. During the 2023 Minnesota waterfowl season, how many days did you hunt in each zone? (See map.) Exclude days hunted during the September goose seasons, and the experimental early teal season.



North Zone: _____ days
 Central Zone: _____ days
 South Zone: _____ days

Q11. Did you hunt during the regular waterfowl opening weekend in Minnesota in 2023 (September 23rd and 24th)?

___ No ___ Yes

Q12. How many ducks and geese did you shoot personally during the 2023 waterfowl hunting seasons, excluding the September goose seasons and experimental early teal season?

Ducks _____ Geese _____

Q13. During the 2023 Minnesota waterfowl hunting season, how satisfied or dissatisfied were you with the following? (Please circle one response for each. If you did not hunt ducks or geese please check the box in the far right column.)

	Very dissatisfied	Moderately dissatisfied	Slightly dissatisfied	Neither	Slightly satisfied	Moderately satisfied	Very satisfied	Did not hunt
General waterfowl hunting experience	1	2	3	4	5	6	7	<input type="checkbox"/>
DUCKS:								
hunting experience	1	2	3	4	5	6	7	<input type="checkbox"/>
hunting harvest	1	2	3	4	5	6	7	<input type="checkbox"/>
hunting regulations	1	2	3	4	5	6	7	<input type="checkbox"/>
number of birds seen	1	2	3	4	5	6	7	<input type="checkbox"/>
GEESE:								
hunting experience	1	2	3	4	5	6	7	<input type="checkbox"/>
hunting harvest	1	2	3	4	5	6	7	<input type="checkbox"/>
hunting regulations	1	2	3	4	5	6	7	<input type="checkbox"/>
number of birds seen	1	2	3	4	5	6	7	<input type="checkbox"/>

Part 4. Waterfowl management and regulations

Respond to the remaining questions even if you did not hunt waterfowl in Minnesota in 2023.

Q14. The U.S. Fish and Wildlife Service allowed states to have a 6 duck daily bag limit in 2023. Which one statement best describes how you feel about the total daily duck bag limit in Minnesota (6 ducks)? (Please check one)

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

Q15. The U.S. Fish and Wildlife Service allowed states to have a 5 Canada goose daily bag limit in 2023. Which one statement best describes how you feel about the total daily Canada goose bag limit in Minnesota (5 geese)? (Please check one)

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

Q16. In 2021, Minnesota eliminated the 4 pm shooting hours restriction and has allowed waterfowl hunting until sunset each year. How much do you support or oppose continuing to allow hunting until sunset the entire waterfowl season (Please circle one)

Strongly oppose	Moderately oppose	Slightly oppose	Neither	Slightly support	Moderately support	Strongly support
1	2	3	4	5	6	7

Part 5. Waterfowl hunting season dates and regulations

Q17. Which opening date do you prefer? (Please check one)

- Saturday nearest Sept. 24 (dates vary from Sept. 21 to Sept. 27)
- Saturday nearest Oct. 1 (dates vary from Sept. 28 to Oct. 4)
- No preference

Minnesota waterfowl zones

Three waterfowl zones (North, Central and South) were used in Minnesota during the 2023 season. Waterfowl zones allow states to set different season dates in different regions of the state to match waterfowl migration patterns, freeze-up dates, and hunter preferences.



Q18. In which area of the state is the timing of open waterfowl hunting and season dates most important to you? (See Map. Please check one)

- North
- Central
- South
- No preference

Q19. For the area you selected above, what is your preference for season dates in 2024? (Please check one.)

- Saturday Sept. 25 to Tuesday Nov. 23 (same season as used last year in North Duck Zone)
- Saturday Sept. 25 to Sunday October 3, close 5 days, reopen Saturday Oct. 9 to Sunday Nov. 28 (same season as used last year in Central Duck Zone)
- Saturday Sept. 25 to Sunday October 3, close 12 days, reopen Saturday Oct. 16 to Sunday, Dec. 5 (used from 2012-2020 in the South Duck Zone only)
- No preference

Part 6. Support for teal hunting season

Q20. How much do you support or oppose Minnesota DNR offering an early teal hunting season in 2024? (Please circle one)

Strongly oppose	Moderately oppose	Slightly oppose	Neither	Slightly support	Moderately support	Strongly support
1	2	3	4	5	6	7

Q21. The experimental early teal season concludes 3 weekends prior to the opening day of the regular waterfowl hunting season. How much do you agree or disagree with the following statements about the impact of the experimental early teal season on the regular waterfowl hunting season opener? (Please circle one for each)

The experimental early teal season negatively impacts...	Strongly disagree	Moderately disagree	Slightly disagree	Neither	Slightly agree	Moderately agree	Strongly agree
...the number of ducks present in Minnesota on opening weekend	1	2	3	4	5	6	7
...waterfowl harvest over opening weekend	1	2	3	4	5	6	7

Part 7. About you

Q22. Are you currently a member of: (Check all that apply)

- Ducks Unlimited
- Delta Waterfowl
- Local sporting club
- Other national/statewide conservation/hunting organization(s) Please specify: _____

Q23. Did you hunt for waterfowl in a state or province other than Minnesota in 2023?

- No
- Yes: If yes, how many days did you hunt for waterfowl outside Minnesota? _____

Is there anything else you would like to share about waterfowl hunting in Minnesota?

THANK YOU FOR YOUR HELP!

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