

2016 Waterfowl Season Date Preference Survey Final Report



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2016 - 2017 Waterfowl Season Date Preference Survey

Introduction

Matching expectations with reality appears to be an important aspect of waterfowl hunting satisfaction (Brunke and Hunt 2007). Numerous factors, such as weather and habitat conditions, are beyond the control of management agencies in trying to match expectations and reality related to waterfowl hunting. However, the setting of waterfowl hunting season dates to occur during peak duck migration or hunting opportunities is a key factor in attempting to meet expectations with reality that is in control of management agencies. Although overall season length is important in providing the appropriate array of hunting season dates, two management strategies that have been used to assist with responding to season dates are split seasons and zoning (Baldassarre and Bolen 2006). Splits and zones (or units) allow for some manipulation of duck and goose season dates to more closely match dates with waterfowl migration or hunting opportunities (Baldassarre and Bolen 2006).

Nebraska was one of the first states to employ zoning as a means to satisfy preferences for duck hunting season dates and had maintained a two-zone, two split-format, with the High Plains portion of Nebraska being a separate zone, since 1991. Starting in the 2012/13 hunting season, the duck zone format was changed to 4-zones with no splits (Fig 1). Additionally, the High Plains portion of Nebraska was zoned for the first time. Zone configurations are based on differing habitat types found within Nebraska that generally consist of relatively shallow habitats that offer hunting opportunity earlier in the fall prior to freeze-up, and rivers, larger lakes and reservoirs and habitats that remain open after most other areas have frozen up. The differences in habitats then provide general differences in ducks harvested, with species like blue- and green-winged teal, gadwall, American wigeon, northern pintail, wood ducks using shallower habitats, and the later freezing habitats providing more hunting opportunity for mallards.

Split seasons were used first for managing goose seasons, including Canada geese, with the first split season occurring in 1967. Use of zones or units for geese came in 1970, when a large portion of the Sandhills was zoned and closed to increase resident populations. In 1975, additional zones were added, again to increase or establish resident populations. The use of units for Canada geese began in 1981 and since then, the number of units has expanded and boundaries and names changed over the years. The current unit boundaries have been in place with minor changes since 2003 (Fig 2.)

Although use of splits, zones and units probably has increased the probability of matching expectations and reality of duck and goose season dates with the appropriate habitat areas, there remains some contentiousness among duck and goose hunters within zones about specific season dates and hunting opportunity. Additionally, previous survey information acquired in 2008 indicated that hunters wanted later duck and goose hunting season dates (Nebraska Game and Parks Commission [NGPC], unpublished data). Including waterfowl hunter preference information is an important consideration in attempting to meet or satisfy hunter demands.

The U.S. Fish and Wildlife Service allows changes to duck zones every five years, and the Canada goose management plan called for similar timelines for unit boundary changes (NGPC 2005). Because some changes were made to duck zone boundaries (none made to goose units), and to obtain current hunter preferences on season dates, the NGPC conducted a survey of Nebraska waterfowl hunters with the objectives of identifying season date preferences among Nebraska duck and goose hunters for duck and goose seasons in each of the four duck zones and five goose units. Additionally, the survey was used to obtain additional information on season date preference regarding teal season dates, white-fronted goose daily bag and season dates, Canada goose daily bag limit, and their perspectives on reducing the number of Canada goose units.

Figure 1. Nebraska duck zones for the 2016/17 hunting season.

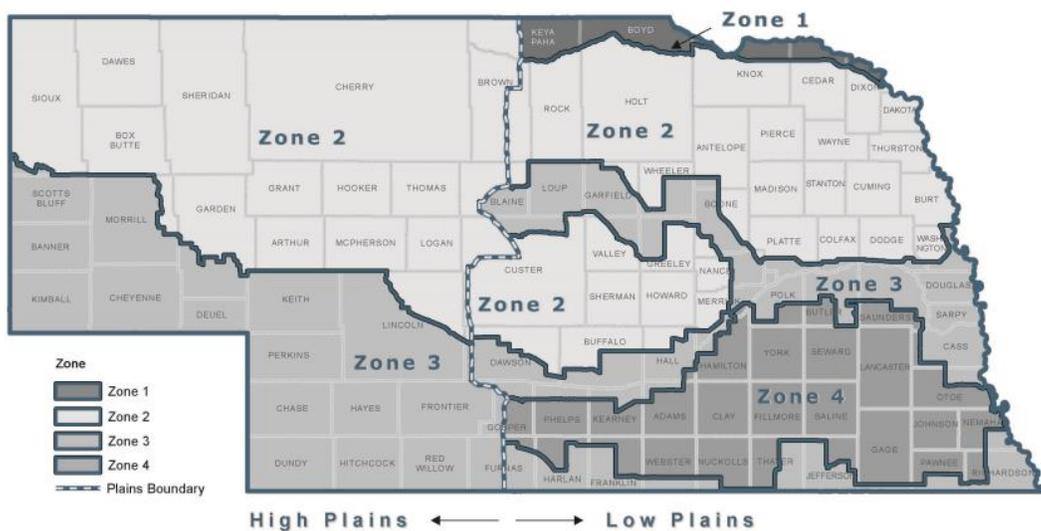
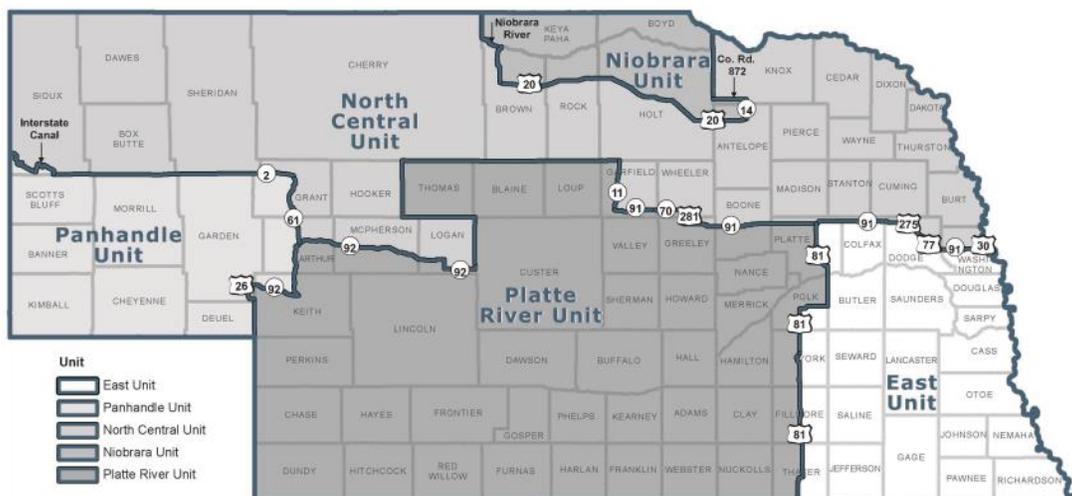


Figure 2. Nebraska Dark (Canada) goose units for the 2016/17 hunting season.



Methods

Potential waterfowl hunters to be surveyed via electronic and a mail survey were obtained from the Harvest Information Program (HIP) database. Data for the previous three years (2012-2014) was examined and duplicate names were removed. Waterfowl hunters were identified via their response to the question regarding their harvest of either ducks or geese in the HIP survey. Three methods of survey were used to attempt to ensure as many waterfowl hunters received a survey as possible given the availability of email addresses and current addresses. All surveys included a series of dates for respondents to indicate their preference from choices ranging from strongly support to strongly oppose.

Email Survey.—There were 24,135 hunters invited to participate in the survey via email, 968 were invalid email addresses, and 4,290 completed the survey (a response rate of 18.5%). Invitations were sent to all individuals who submitted an email when acquiring a HIP number. Therefore, a portion of those receiving invitations may have been strictly dove hunters and did not participate in waterfowl hunting. Although a reminder was sent with an invalid link to the survey, any respondents who contacted NGPC with issues accessing the survey were provided a link to an online version of the survey. These individuals were allowed access to the survey through 7 February 2016.

Postcard Survey.—There were 6,944 invited to participate in the survey via a postcard sent in the mail with instructions to take the survey online, 145 were invalid addresses that were returned to sender, and 222 completed the survey (a response rate of 3.3%).

Paper Survey.—There were 1,000 randomly selected people who did not provide an email address in the HIP registration. to take the paper version of the survey. Of the 1,000 surveys sent, 1 was an invalid address that were returned to sender, and 201 completed the survey (a response rate of 20.1%).

Results

Survey Summary

Results presented herein depict the combined responses from the email, postcard, and paper versions of the 2016–2017 Waterfowl Season Preference Survey. The majority (>70%) of respondents had hunted ducks or geese in the past three years (Tables 1 and 3). Duck Zone 3 had the greatest number of respondents among duck zones, followed by Zone 2 and Zone 4 (Table 2). Most respondents among goose hunters were in the Platte River Unit followed by the East Unit (Table 4).

Table 1. The number and percent of responses to the question: Did you hunt DUCKS in the last three years?

Response	Responses (N)	Responses (%)
No	1202	25.5
Yes	3410	72.4
No response	101	2.1

Table 2. The number and percent of responses to the question: For the most recent season you HUNTED ducks, which duck zone(s) DID you hunt (select all that apply)?

Response	Responses (N)	Responses (%)
Zone 1	240	5.1
Zone 2	1052	22.3
Zone 3	2030	43.1
Zone 4	781	16.6
No Response	1383	29.3

Table 3. The number and percent of responses to the question: Did you hunt GEESE in the last three years?

Response	Responses (N)	Responses (%)
No	1344	25.5
Yes	3282	72.4
No response	87	2.1

Table 4. The number and percent of responses to the question: For the most recent season you HUNTED geese, which goose unit(s) DID you hunt (select all that apply)?

Response	Responses (N)	Responses (%)
Niobrara	118	2.5
North-Central	602	12.8
East	922	19.6
Platte	1266	26.9
Panhandle	601	12.8
No Response	1631	34.6

September Teal Season Date Preference.—Among respondents, most did not indicate any preference. For those responding to more specific dates, the most preferred season dates for September teal season was the first weekend after Labor Day (28%, Table 5). The dates of September 1-16 received the second most preference, followed by Labor Day weekend (Table 5).

Table 5. The number and percent of responses to the question: Indicate your preference for the opening day of September teal season.

Response	Responses (N)	Responses (%)
Labor Day weekend	250	13.4
First weekend after Labor Day weekend	525	28.2
September 1 - 16	455	24.4
Other	97	5.2
I do not have a preference.	531	28.5
No response	7	0.4

Preference for Opening Day of Duck Season.—Slightly more respondents indicated they'd prefer duck season to open on a Thursday than a Saturday (Table 6). About equal numbers of respondents indicated they prefer the same date each year as they had no preference what day duck season opened (Table 6).

Table 6. The number and percent of responses to the question: Which of the following scenarios would you prefer for a 74-day duck season with no splits (closed periods)?

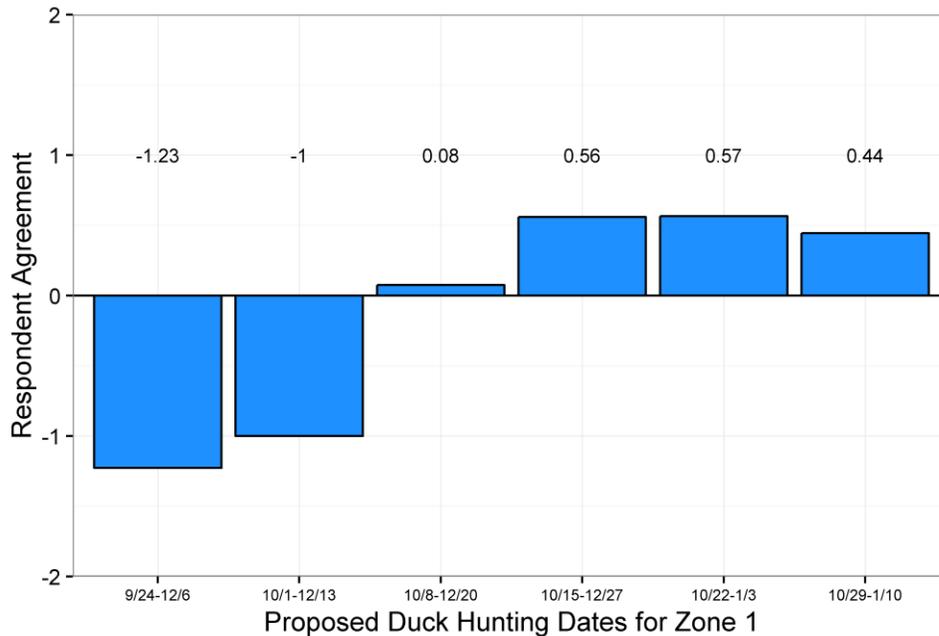
Response	Responses (N)	Responses (%)
I would prefer duck season to start on a Saturday and end on a Tuesday.	508	27.2
I would prefer duck season to start on a Thursday and end on a Sunday.	642	34.4
Start the duck season on the same date each year, regardless of what weekday it is.	340	18.2
I do not have a preference.	366	19.6
No response	9	0.5

Duck Zone Season Date Preference Questions

Zone 1.—Respondents indicating a preference for Zone 1 (see Fig. 1) season dates were almost equal for the dates of Oct. 15-Dec 27 and for Oct. 22-Jan. 3 (Fig. 3). Respondents showed a clear opposition to season dates of Sept. 24-Dec. 6 and Oct. 1-Dec. 13) (Fig. 3).

Figure 3. Agreement among respondents for various 2016/2017 season date options for Duck Zone 1, Nebraska. Season dates were based on a 74-day duck season.

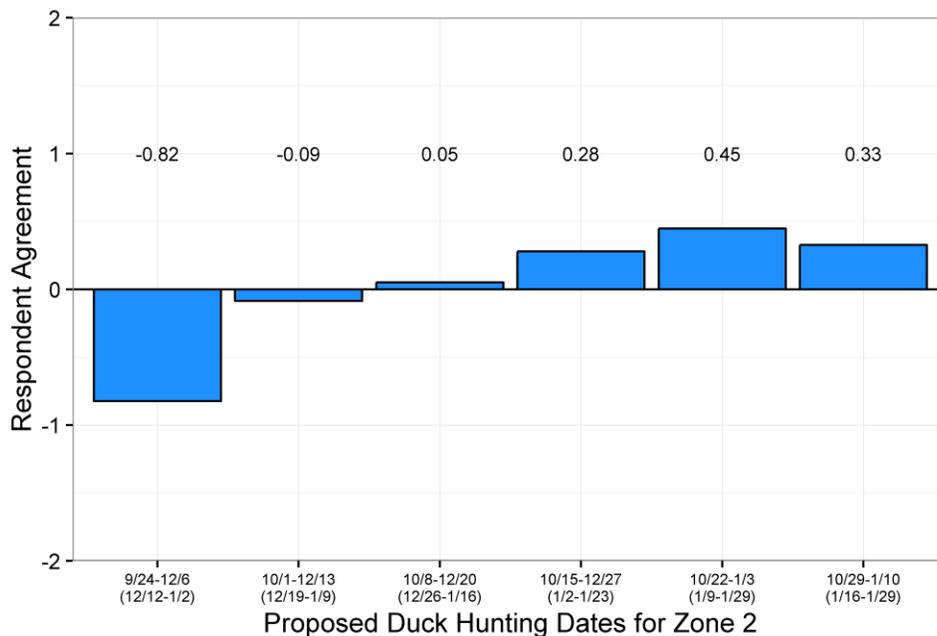
Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



Zone 2.—Season dates of Oct. 22-Jan. 3 were the most preferred among respondents indicating a preference for Zone 2 (Fig. 1, Fig. 4). Positive preference, in order of preference, was also indicated for season dates of Oct. 29-Jan. 10, Oct. 15-Dec 27, and Oct. 8-Dec. 20) (Fig. 4). Respondents showed a clear opposition to season dates of Sept. 24-Dec. 6 (Fig. 4).

Figure 4. Agreement among respondents for various 2016/2017 season date options for Duck Zone 2, Nebraska. Season dates were based on a 74-day duck season, with dates in parentheses representing additional days open to duck hunting in the High Plains.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



Zone 3.—Season dates of Oct. 27-Jan. 8 were the most preferred among respondents indicating a preference for Zone 3 (Fig. 1, Fig. 5). Positive preference, in order of preference, was also indicated for season dates of Nov. 3-Jan. 15, Oct. 20-Jan. 1, and Nov 10-Jan. 22 (Fig. 5). Respondents showed a clear opposition to season dates of Oct. 6-Dec. 18 and Oct. 13-Dec. 25 (Fig. 5).

Zone 4.—Respondents indicating a preference for Zone 4 (see Fig. 1) season dates were similar for the dates of Oct. 15-Dec 27, Oct. 29-Jan. 10, and Oct. 22-Jan. 3 (Fig. 6). There was slight positive reaction to Oct. 8-Dec. 20, but clear opposition to season dates of Sept. 24-Dec. 6 (Fig. 6).

Figure 5. Agreement among respondents for various 2016/2017 season date options for Duck Zone 3, Nebraska. Season dates were based on a 74-day duck season, with dates in parentheses representing additional days open to duck hunting in the High Plains.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

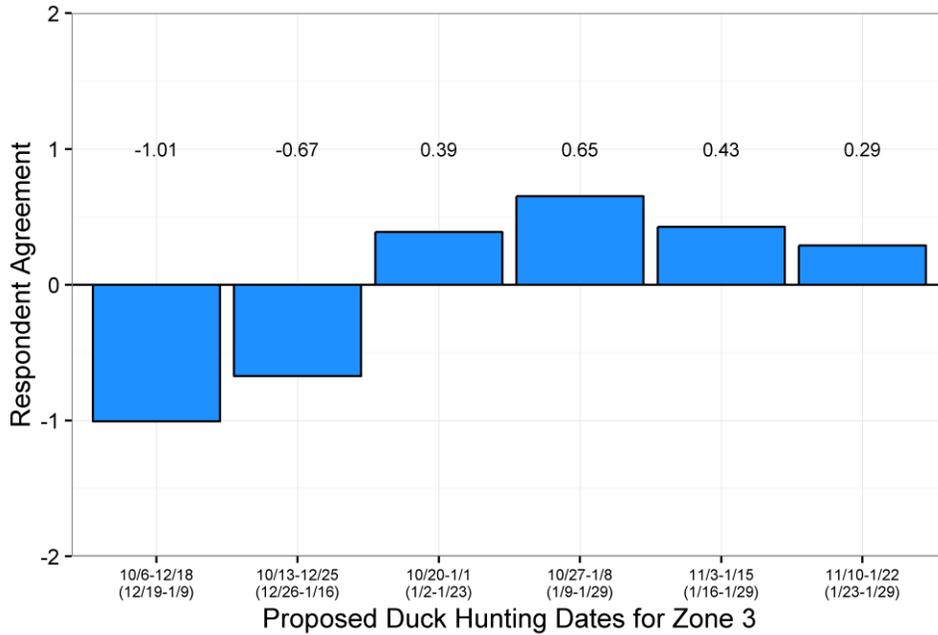
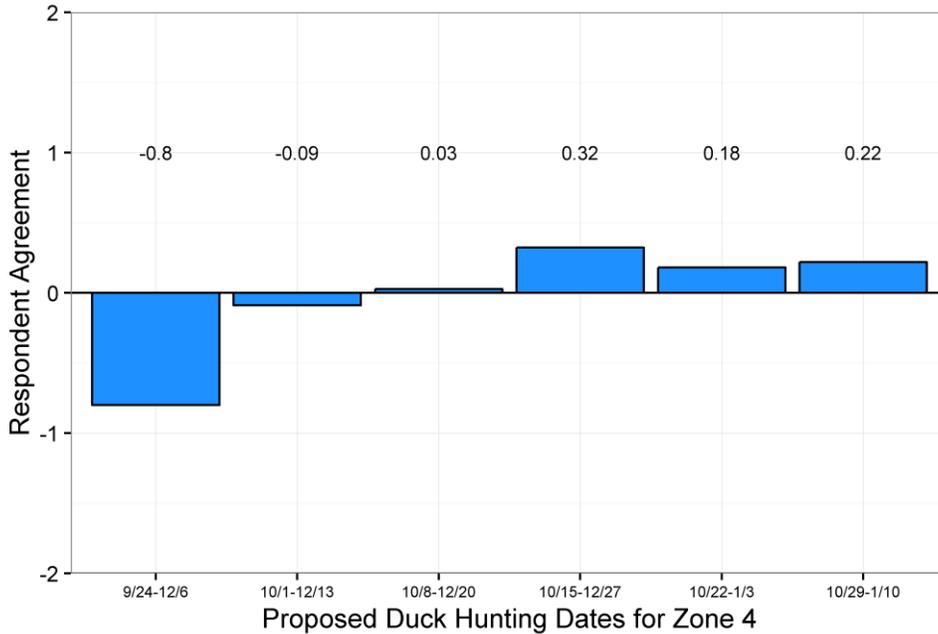


Figure 6. Agreement among respondents for various 2016/2017 season date options for Duck Zone 3, Nebraska. Season dates were based on a 74-day duck season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

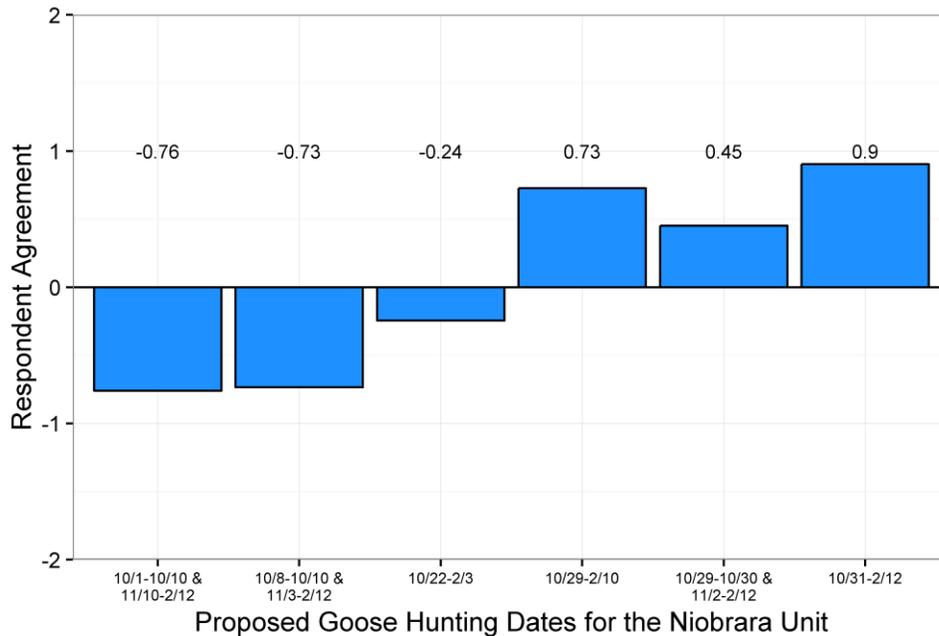


Dark (Canada) Goose Unit Season Date Preference Questions

Niobrara Unit.—The season dates of Oct. 31-Feb. 12 were the most preferred among respondents for the Niobrara Unit (Fig. 2, Fig. 7). Positive preference was also indicated for season dates of Oct. 29-Feb. 10, and less so for Oct. 29-30 and Nov. 2-Feb. 12 (Fig. 7). Respondents showed a clear opposition to season dates starting earlier in October and containing a split (Fig. 7).

Figure 7. Agreement among respondents for various 2016/2017 season date options for the Niobrara Dark (Canada) Goose Unit, Nebraska. Season dates are based on a 105-day goose season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



North-Central Unit.—The most preferred season dates among respondents for the North-Central Unit (see Fig. 2) was that of Oct. 1-Jan 13 (Fig. 8). There was some positive support for season dates of Oct. 29-Feb. 10 and Oct. 31-Feb. 12 (Fig. 8). Other choices for season dates had slight negative support (Fig. 8).

East Unit.—The season dates of Oct. 29-Feb. 10 had slightly more preference than that of Oct. 31 - Feb 12 among respondents for the East Unit (Fig. 2, Fig. 9). Positive preference was also indicated for season dates of Oct. 29-Feb. 10, and less so for Oct. 29-30 and Nov. 2-Feb. 12 (Fig. 9). Respondents showed a clear opposition to season dates starting earlier in October and containing a split (Fig. 9).

Figure 8. Agreement among respondents for various 2016/2017 season date options for the North-Central Dark (Canada) Goose Unit, Nebraska. Season dates are based on a 105-day goose season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

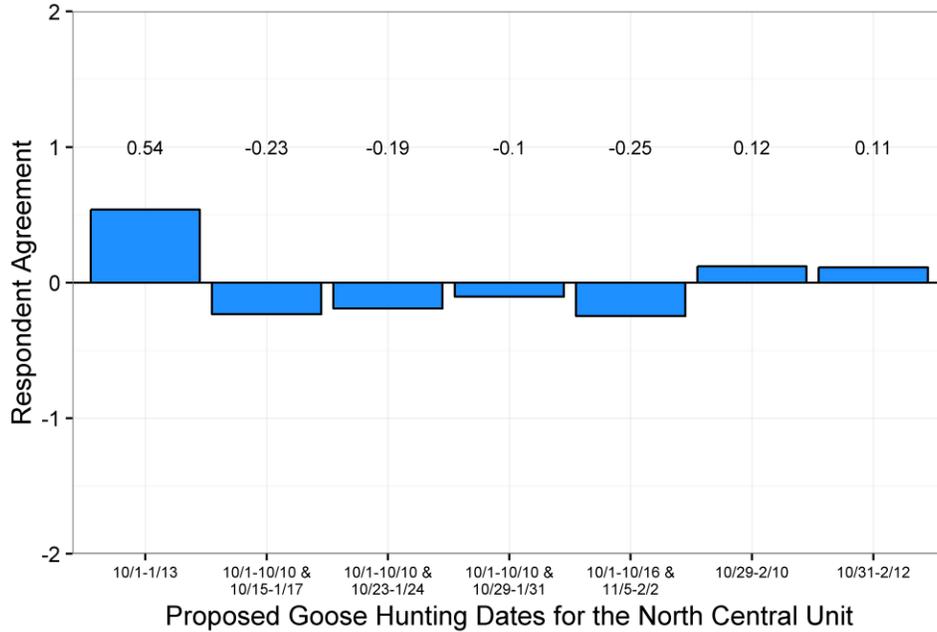
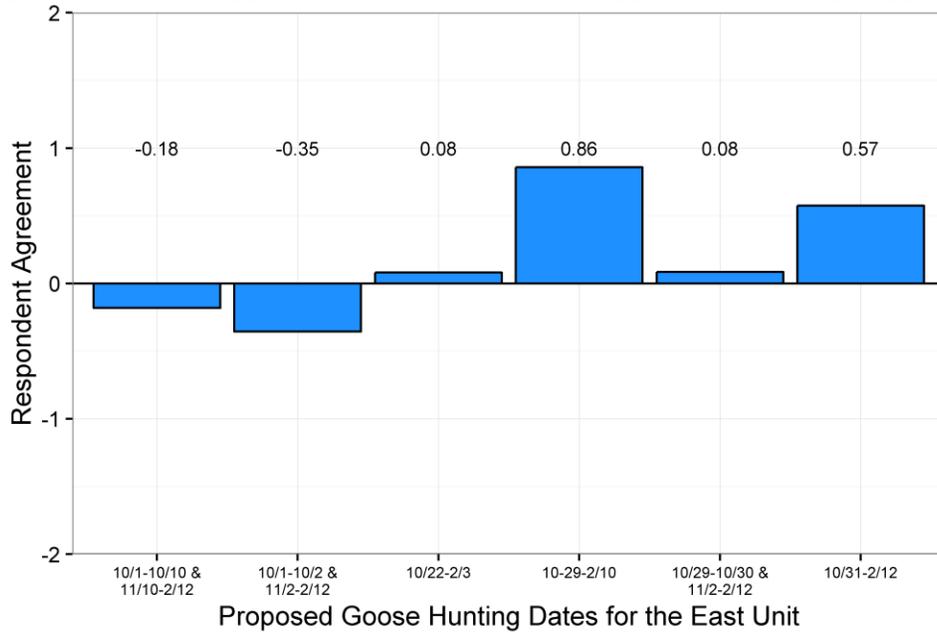


Figure 9. Agreement among respondents for various 2016/2017 season date options for the East Dark (Canada) Goose Unit, Nebraska. Season dates are based on a 105-day goose season.

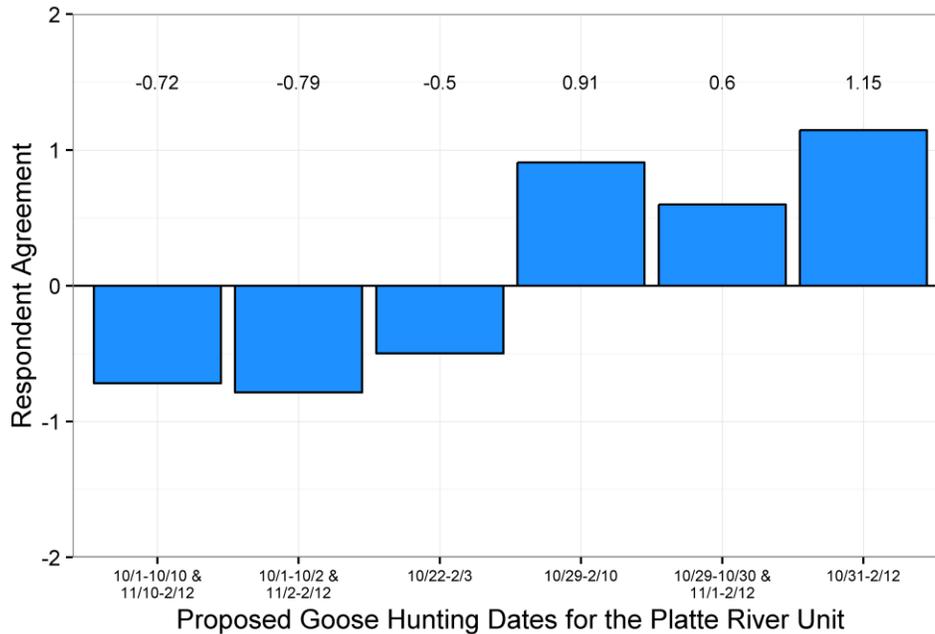
Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



Platte River Unit.—The most preferred season dates among respondents for the Platte River Unit (see Fig. 2) was that of Oct. 1-Jan 13 (Fig. 8). There was some positive support for season dates of Oct. 29-Feb. 10 and Oct. 31-Feb. 12 (Fig. 8). Other choices for season dates had slight negative support (Fig. 8).

Figure 10. Agreement among respondents for various 2016/2017 season date options for the Platte River Dark (Canada) Goose Unit, Nebraska. Season dates are based on a 105-day goose season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



Panhandle Unit.—The season dates of Oct. 31-Feb. 12 were the most preferred among respondents for the Panhandle Unit (Fig. 2, Fig. 11). Positive preference was also indicated for season dates of Oct. 29-Feb. 10, and less so for Oct. 29-30 and Nov. 2-Feb. 12 (Fig. 11). Respondents showed a clear opposition to season dates starting earlier in October and containing a split (Fig. 11).

Reduction in the Number of Goose Units.—When asked about reducing the number of goose units in Nebraska, 50% of respondents indicated they did not have a preference (Table 7). Thirty-two percent were in favor of a reduction in goose units, while only 13% were against it (Table 7). Season date preferences were similar to most of the other goose units with preferences for later dates (Fig. 12).

Figure 11. Agreement among respondents for various 2016/2017 season date options for the Panhandle Dark (Canada) Goose Unit, Nebraska. Season dates are based on a 105-day goose season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

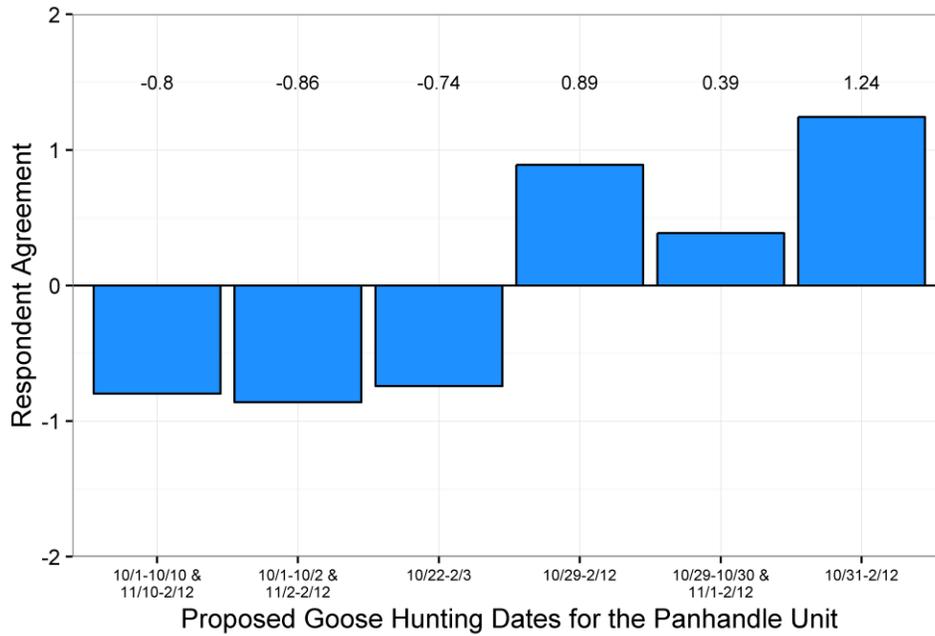


Figure 12. Agreement among respondents for various 2016/2017 season date options *if Nebraska had a statewide (no units)* for the dark (Canada) Goose season. Season dates are based on a 105-day goose season.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

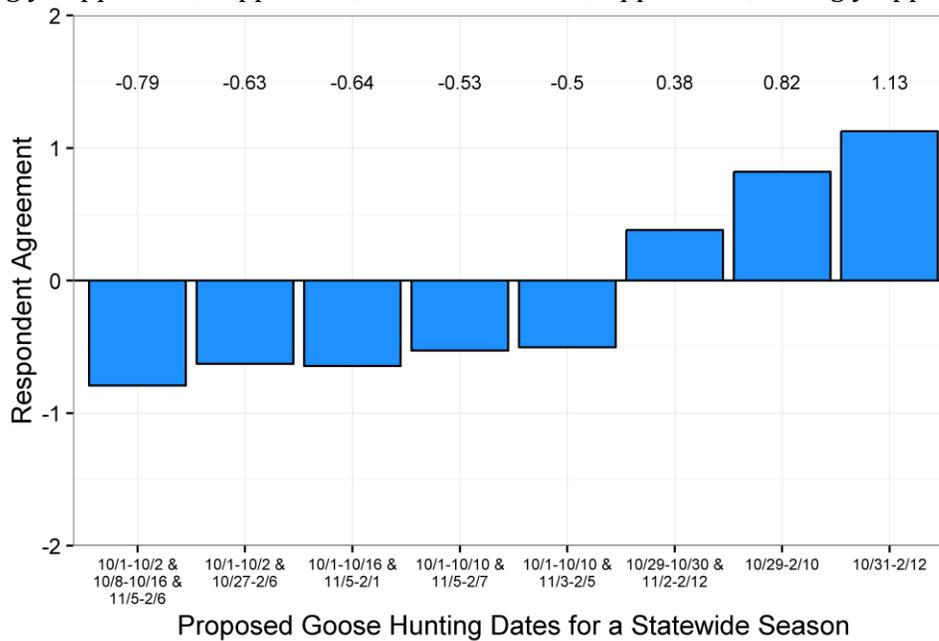


Table 7. The number and percent of responses and respondents to the question: I would prefer to see a reduction in the number of goose units in Nebraska (currently, 4 of 5 goose units have identical season dates).

Response	Responses (N)	Responses (%)
Yes	490	32.1
No	194	12.7
I do not have a preference.	767	50.3
No response	75	4.9

Daily bag limit of Canada Geese.—The majority of respondents indicated they were currently satisfied with the daily bag limit for Canada geese (Table 8). Approximately 13% indicated a decrease in bag limits and 25% were for an increase (Table 8).

Table 8. The number and percent of responses and respondents regarding preferences for the daily bag limits of Canada geese.

Response	Responses (N)	Responses (%)
I am currently satisfied with the daily bag limit of 5.	867	56.8
I would like to see a decrease to no more than 3.	107	7.0
I would like to see a decrease to no more than 4.	86	5.6
I would like to see an increase to no more than 6.	131	8.6
I would like to see an increase to no more than 7.	58	3.8
I would like to see an increase to no more than 8.	206	13.5
I do not have a preference.	58	3.8
No response	13	0.9

White-fronted Goose Bag Limit and Season Date Preference Questions

There were three options presented in regards to white-fronted goose season daily bag limit and season lengths. Each option was then give a set of season date preferences. The 3 options were: 1) 74-day and daily bag limit of 3; 2) 88-day season with a daily bag limit of 2; or 3) 105-day season with a daily bag limit of 1. The option for a daily bag limit of 2 with an 88-day season had the highest number of responses (Table 9). This was followed by a daily bag limit of 3 and a 74-day season.

Regardless of preference for daily bag limit, respondents had the strongest support for dates that went into February (Figs 13-15). Dates for season with no splits or days in February were the least preferred in all daily bag limit options (Figs 13-15).

Table 9. The number and percent of responses and respondents to the question: I would prefer for white-fronted geese to have a daily bag limit of:

Response	Responses (N)	Responses (%)
One (105 day season)	390	25.6
Two (88 day season)	583	38.2
Three (74 day season)	492	32.2
No response	61	4.0

Figure 13. Agreement among respondents for various 2016/2017 season date options for white-fronted geese, based on a daily bag limit of one.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

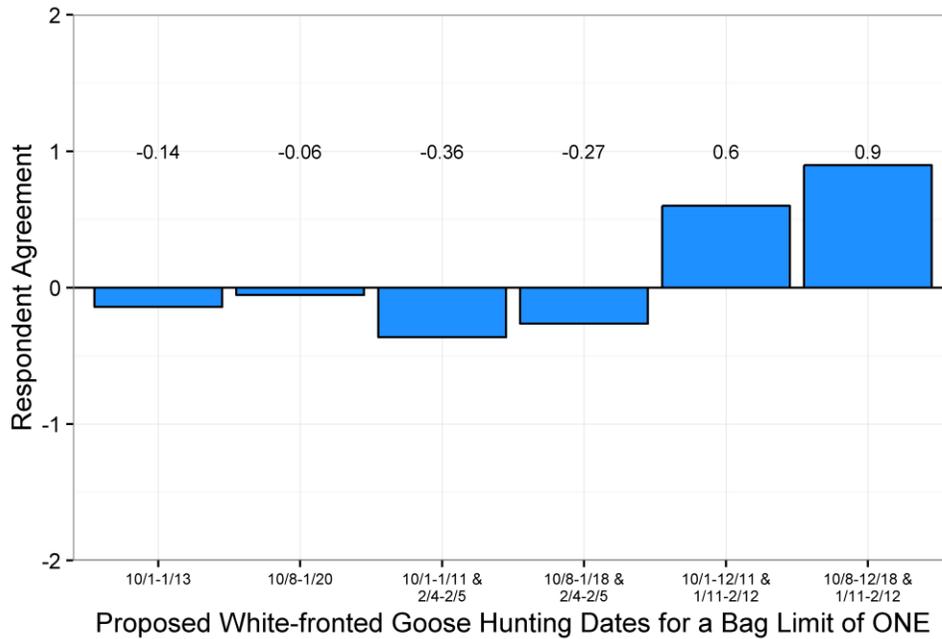


Figure 14. Agreement among respondents for various 2016/2017 season date options for white-fronted geese, based on a daily bag limit of two.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2

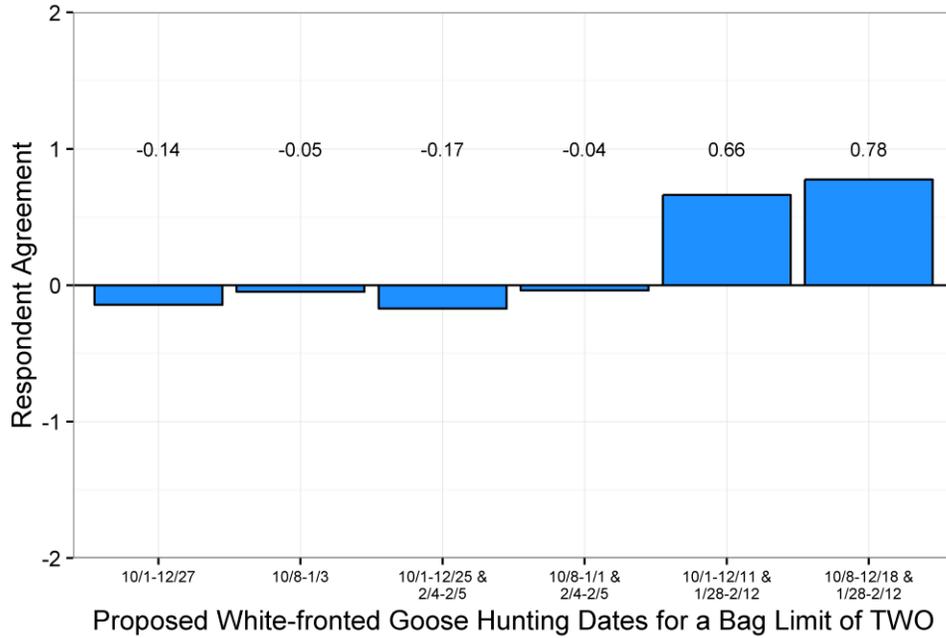
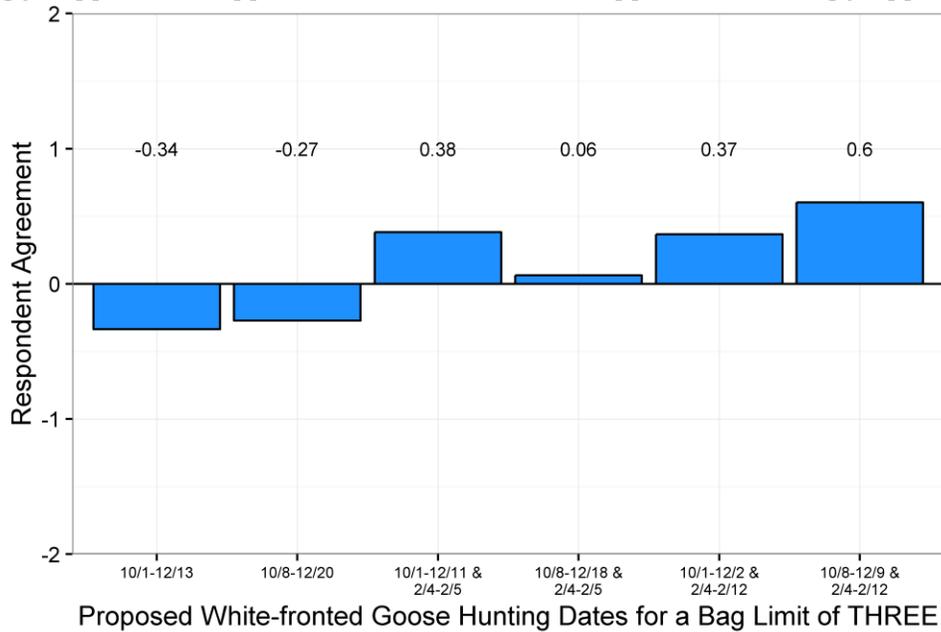


Figure 15. Agreement among respondents for various 2016/2017 season date options for white-fronted geese, based on a daily bag limit of three.

Strongly Support = 2, Support = 1, No Preference = 0, Oppose = -1, Strongly Oppose = -2



DISCUSSION

Preference information for September teal season dates were similar to results obtain in a 2012 survey ((NGPC, unpublished data). Preference for an opening day after Labor Day weekend may be due to other activities individuals may be engaged and prefer a later weekend. Also, there may be a perception of more teal in a slightly later opening weekend. Including a choice for a consistent opener of 1-16 September in the teal question represented a “double-barreled” choice and made it difficult to interpret (Weisberg et al. 1996). Nonetheless, this choice still was second in preference to the weekend after Labor Day weekend.

Preferences for duck season dates were similar to results obtained in 2008 and 2012 (NGPC, unpublished data). Duck hunters generally preferred season dates later than they had experienced. Differences in season date preferences among zones were anticipated given differences in habitats and migration chronology by duck species. However, the trend toward later season dates in some zones was not anticipated and somewhat perplexing given recent history and potential duck harvest based on past U.S. Fish and Wildlife Service Parts Collection Survey harvest information. For example, in the set of season dates options for Zone 2, duck harvest declines rapidly (particularly in the Sandhills portion of Zone 2) as season dates open and close later (NGPC, unpublished data). Unfortunately, our survey did not contain questions regarding the motives behind preferences of some duck season date options over others.

A consistent preference for later season dates among goose units, with the possible exception of the North-Central Unit, was anticipated. Even then, there was some support for later seasons in the North-Central Unit. Also consistent among all goose units was the general lack of support for split seasons. similar to results obtained in 2008 and 2012 (NGPC, unpublished data). The general lack of preference for a reduction in goose units was not anticipated. Perhaps individuals are well aware of where they hunt and reducing the number of zones does not affect them. The preference for no change in daily bag limits for Canada geese appears consistent with previous surveys (NGPC, unpublished data).

The general higher preference for a daily bag limit of two for white-fronted geese also was not anticipated. No previous data are available to draw comparisons or insights to this preference.

MANAGEMENT IMPLICATIONS AND FUTURE INFORMATIONAL NEEDS

Teal seasons should be adjusted to meet hunter preferences. The preference for later duck seasons among Nebraska duck hunters indicate that duck seasons should be adjusted to later opening dates. However, adjustments to season dates need to consider other factors (e.g., duck migration chronology) rather than simply relying on results of this survey alone. Also, similar surveys may be needed if duck season lengths are reduced commensurate with reduced duck populations.

Goose season dates also should be adjusted to meet hunter preferences. The preference for late goose seasons among Nebraska goose hunters indicate that goose seasons should be adjusted to ending as late allowed by frameworks. Although adjustments to season dates

need to consider other factors similar to duck season date preferences, goose migration tends to be more similar across Nebraska for most units. Thus, exploration of possible changes in harvest is not as critical. Split seasons for Canada geese do not appear to generate much support among hunters, and use of a split season should then be based more on biological than sociological reasons.

Continuation of this type of survey (i.e., season date preferences) could lead to implementation of an adaptive management means of setting annual waterfowl season regulations. An annual monitoring survey may already be in place (i.e., Hunter Success Survey) to measure different metrics about waterfowl hunting. However, currently, NGPC does not have an explicitly stated goal about duck or goose harvest opportunity or satisfaction. An explicitly stated goal is an essential first step in the adaptive management process (Walters 1986) and would have major impacts on setting waterfowl season dates. For example, if the goal is to maximize mallard harvest, then season dates in all zones need to coincide with peak mallard migration, which may be considerably different than if the goal is to recruit new participants in duck hunting (NGPC 2008). Therefore, while season date surveys will be extremely informative for setting waterfowl seasons, using that information in an adaptive management process will be limited.

Whether an agreement on a goal for duck and goose hunting opportunity or satisfaction could be reached across the state or within current duck zones or goose units is unknown. However, future survey efforts should focus on addressing this issue if an adaptive management process is desired.

ACKNOWLEDGEMENTS

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