

Canada Goose Hunter Survey Report



by
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Lincoln, Nebraska
September 2013

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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 duck hunting. However, the setting of waterfowl hunting season dates to occur during peak migration or hunting opportunities is a key factor in attempting to meet expectations with reality that is in control of management agencies.

Canada geese are an important resource for both consumptive and non-consumptive users. Population levels of Canada geese in Nebraska and the Central Flyway has exceeded population objectives and have caused significant depredation problems in some areas (Central Flyway Council 2013). Hunting is the primary source of mortality for Canada geese and setting appropriate hunting season dates thereby also has implications for population management.

Thus, the Nebraska Game and Parks Commission (NGPC) conducted a mail survey of Nebraska goose hunters with the objectives of: 1) identifying season date preferences among Nebraska goose hunters for goose seasons in each unit; and 2) obtain additional information on other goose hunting season preferences which may be used to assist in making management decisions.

METHODS

We mailed out a three paged survey with a map and calendar on the forth page (Appendix A) to individuals that met the criteria from the Harvest Information Program (HIP) data base. The HIP databases was provided by Cyberdata (Hicksville, New York) using both internet and telephone (via recorded message) support for the HIP registration of Nebraska's migratory bird hunters. The criteria included individuals that claimed that they hunted geese in Nebraska during the 2012-2013 waterfowl season. We then edited our list to remove duplicate addresses and limiting it one survey per household. Included in the mailing were residents of Nebraska and non-residents from Colorado, Wyoming, South Dakota, Iowa, and Kansas. We then marked all non-residents surveys in order to distinguish between resident and non-resident groups. One week later, a reminder postcard was sent to survey recipients. We then did a second mailing to individuals that registered for HIP in October and December of 2012 that were not included in the first mailing. We chose not to select non-resident hunters for this mailing due to limited supplies. We again edited the list to remove duplicate addresses. These surveys also were marked so that we could distinguish between the first and second mailings. No reminder postcard was sent for this group.

Data was entered into an Access database then exported to an Excel spreadsheet for analysis. We first categorized received surveys by resident, non-resident, and late mailing resident groups. For Questions 1 and 2, we calculated the percentage of hunters that participated in each group. Question 3 had hunters indicate which county and town/city they hunted in or near most frequently and allowed analysis of hunter preferences in specific areas of each unit. For Question 4, we calculated the percentage of hunters that supported each bag limit category. Question 5 had five separate questions in which the respondents selected their level of agreement for each, including a “not sure” category, and based agreement on a 1-5 scale, with 1 being “strongly disagree” and 5 being “strongly agree”. We then averaged the scores to determine overall support for each question. The “not sure” category was not included in the average scoring of each question. Questions 6-11 were questions pertaining to unit and statewide season date preferences. The same 1-5 scale used in Question 5 also was used to measure participant support for each season date option. There also was a suggestion line at the bottom of each unit group; this allowed participants to express other season date preferences that were not included on the list of options. We followed the same procedure as in question five for obtaining the overall season date preferences for each unit and statewide section.

RESULTS

Nine thousand five hundred thirty eight goose hunters met the qualifying criteria and were mailed surveys. Thirty one surveys were returned for bad addresses, thus, there was an effective mailing of 9,507 surveys and 3,789 (39.9%) surveys were returned.

Hunter Level of Interest/Participation for Hunting Canada Geese

Among the respondents, 24% of residents and 27% of non-residents primarily hunt Canada Geese, 54% of residents and 47% non-residents hunt Canada geese and other waterfowl equally, 2% of residents and non-residents hunt Canada geese while other waterfowl seasons are closed, 13% of residents and 15% of non-residents primarily hunt ducks and only harvest Canada geese when the opportunity arises, and 6% of residents and 9% of non-residents claimed that they don't hunt Canada Geese (Fig 1).

Hunter Participation for Each Unit

In Nebraska, 40% of resident and 22% on non-resident participants indicated that they primarily hunted the Platte River Unit, 26% of residents and 7% of non-residents primarily hunted the East Unit, 17% of residents and 51% on non-residents primarily hunted the Panhandle Unit, 11% of residents and 17% of non-residents hunted the North-Central Unit, 2% for both resident and non-resident participants hunted the Niobrara Unit (Fig. 2). Four percent of residents and 1% of non-residents claimed that they primarily hunted 2 units equally, and < 0.5% of residents and non-residents indicated they primarily hunted ≥ 3 equally (Fig. 2).

Figure 1. Participant level of interest/participation for hunting Canada geese in Nebraska, data derived from mail survey, 2013.

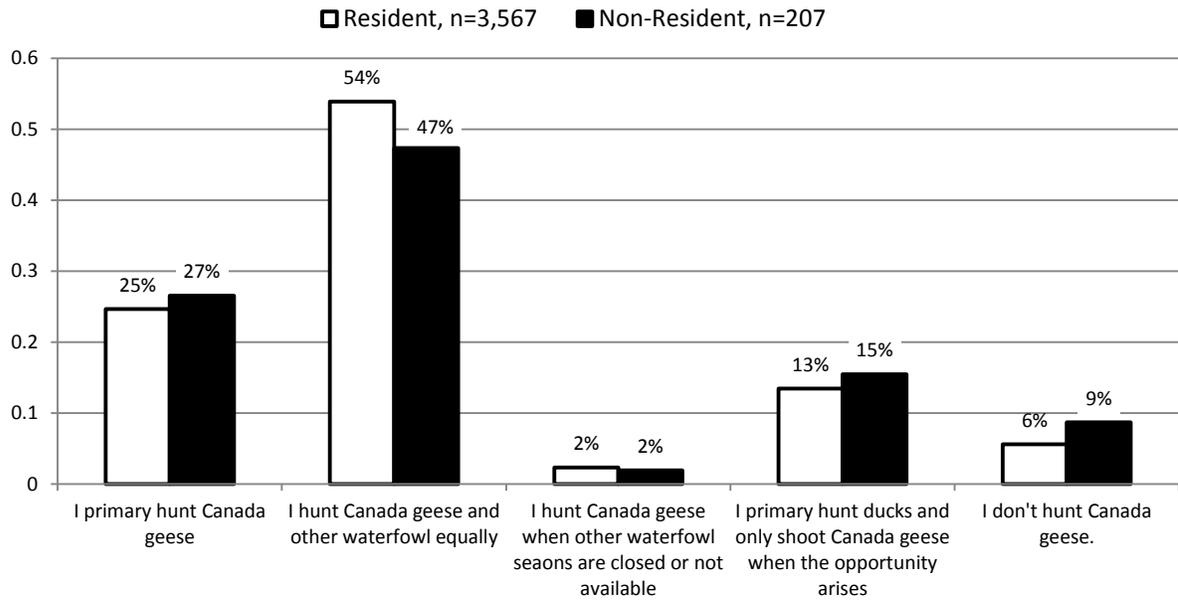
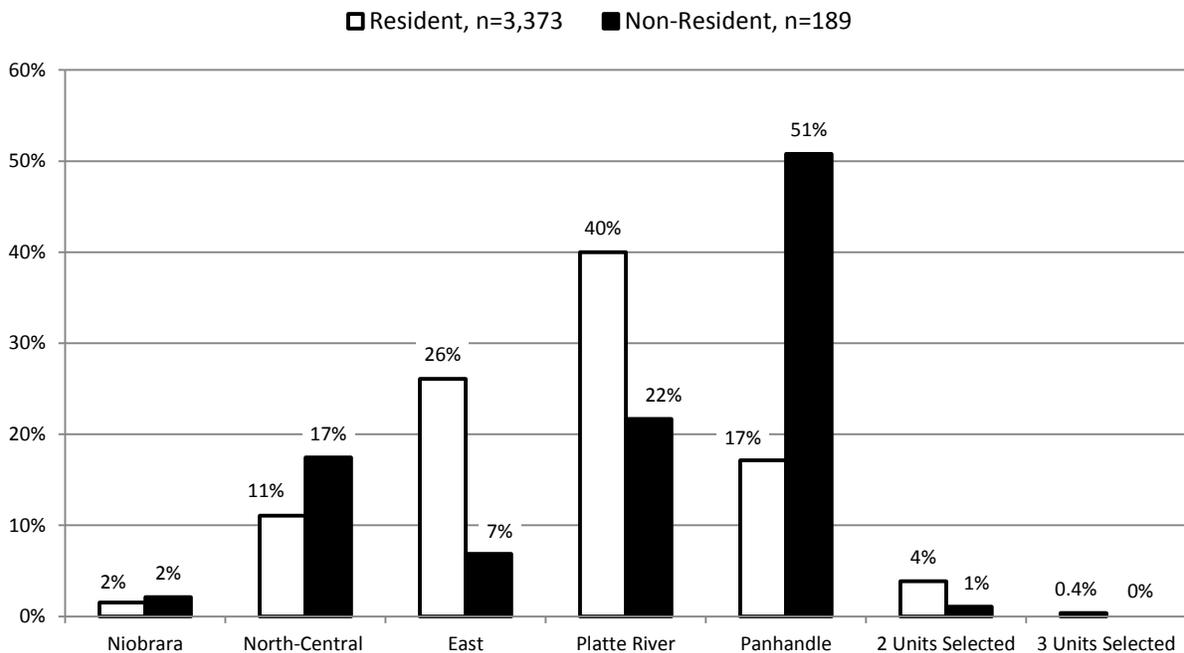


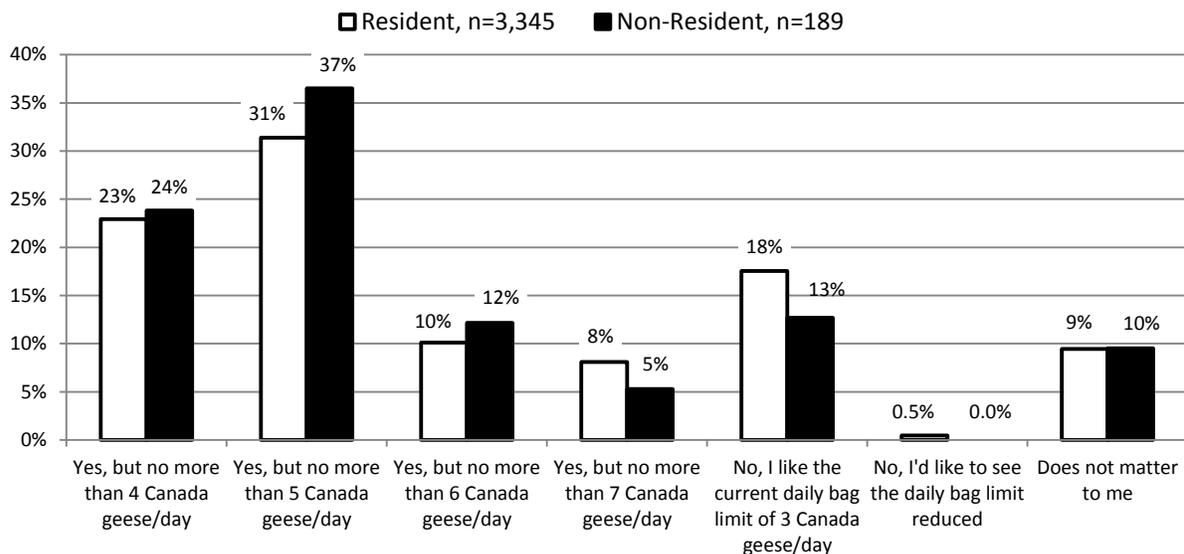
Figure 2. Units hunted most often for Canada goose by resident and non-resident hunters in Nebraska. Data derived from mail survey, 2013.



Hunter Preferences for Daily Bag Limit Changes

Overall, 72% of resident and 78% of non-residents indicated that they would like to see the daily bag limit increased for Canada Geese (Fig. 3). Among respondents, 23% of residents and 24% of non-residents indicated that the daily bag limit be raised to no more than 4 geese per day, 31% of residents and 37% of non-residents preferred that the daily bag limit be no more than 5 geese per day, 10% of residents and 12% of non-residents indicated that the daily bag limit should be no more than 6 geese per day, and 8% of residents and 5% of non-residents indicated that the daily bag limit be no more than 7 geese per day (Fig. 3). Among the remaining respondents, 18% of residents and 13% of non-residents indicated that they preferred the daily bag limit to remain at 3 geese per day; < 1% in both groups indicated that they would like the bag limit to be reduced, and 9% of residents and 10% of non-residents indicated that it does not matter to them what the daily bag limit was set (Fig. 3).

Figure 3. Preferences for different daily bag limits for Canada geese from mail survey of Nebraska goose hunters, 2013.



Canada Goose Units/Seasons in Nebraska

Respondents supported having a straight season with no splits, with a mean score of 3.34 for residents and 3.28 for non-residents (5 = "strongly agree"; 1 = "strongly disagree"). On average, 46% of responding hunters strongly agreed or agreed, 26% were neutral, 25% disagreed or strongly disagreed, and 3% were not sure (Fig. 4).

In regards to a statewide season, respondents preferred a tendency toward disagreement margin with a mean score of 2.81 for residents and 2.59 for non-

residents. On average, 25% of respondents strongly agreed or agreed, 33% were neutral, 38% disagreed or strongly disagreed, and 3% were not sure (Fig. 5).

Respondents indicated that they would prefer that the Canada goose season overlap as much as possible with duck season dates, with a mean score of 3.40 for residents and 3.59 for non-residents. On average, 47% of respondents indicated that they strongly agreed or agreed, 32% were neutral, 18% disagreed or strongly disagreed, and 3% were not sure (Fig. 6).

Participants strongly supported that hunting season dates should be open when Canada geese are most often in their area, with a mean score of 3.89 for residents and 3.84 for non-residents. On average, 68% strongly agreed or agreed, 20% were neutral, 10% disagreed or strongly disagreed, and 2% were not sure (Fig. 7).

Participants also indicated that they would prefer to have the season as late as possible, with a mean score of 3.39 for residents and 3.25 for non-residents. On average, 50% strongly agreed or agreed, 20% were neutral, 29% disagreed or strongly disagreed, and 2% were not sure (Fig. 8).

Figure 4. Preferences by Nebraska Canada goose hunters for a straight season with no splits or closed periods. Data derived from mail survey, 2013.

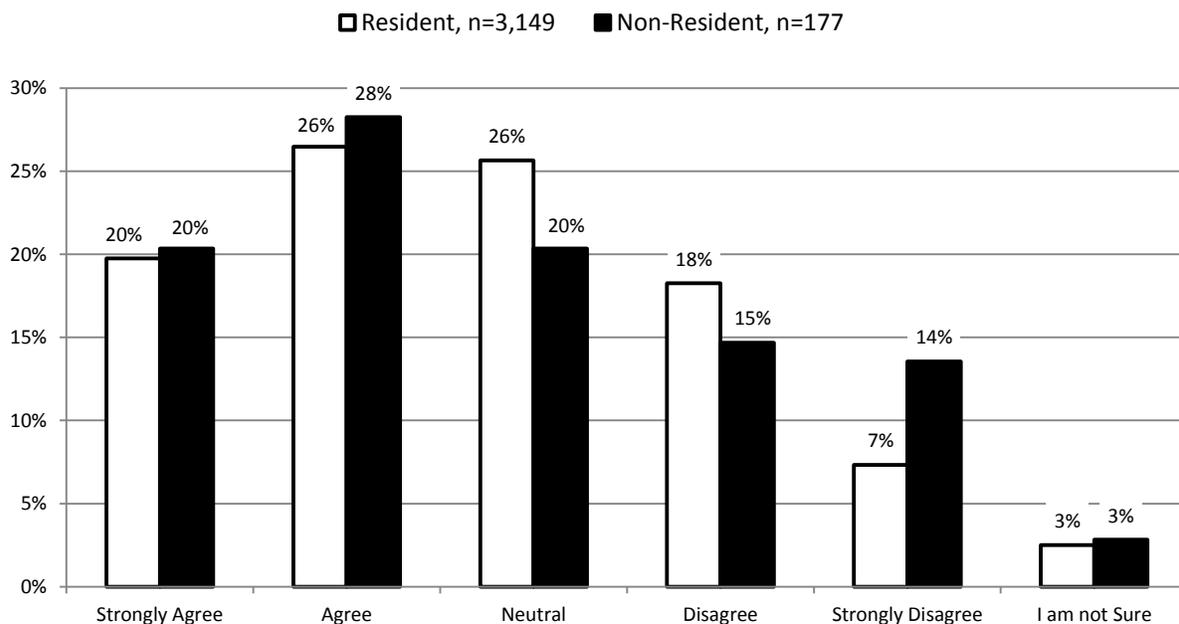


Figure 5. Indicated preference for a statewide Canada goose season by Nebraska Canada goose hunters. Data derived from mail survey, 2013.

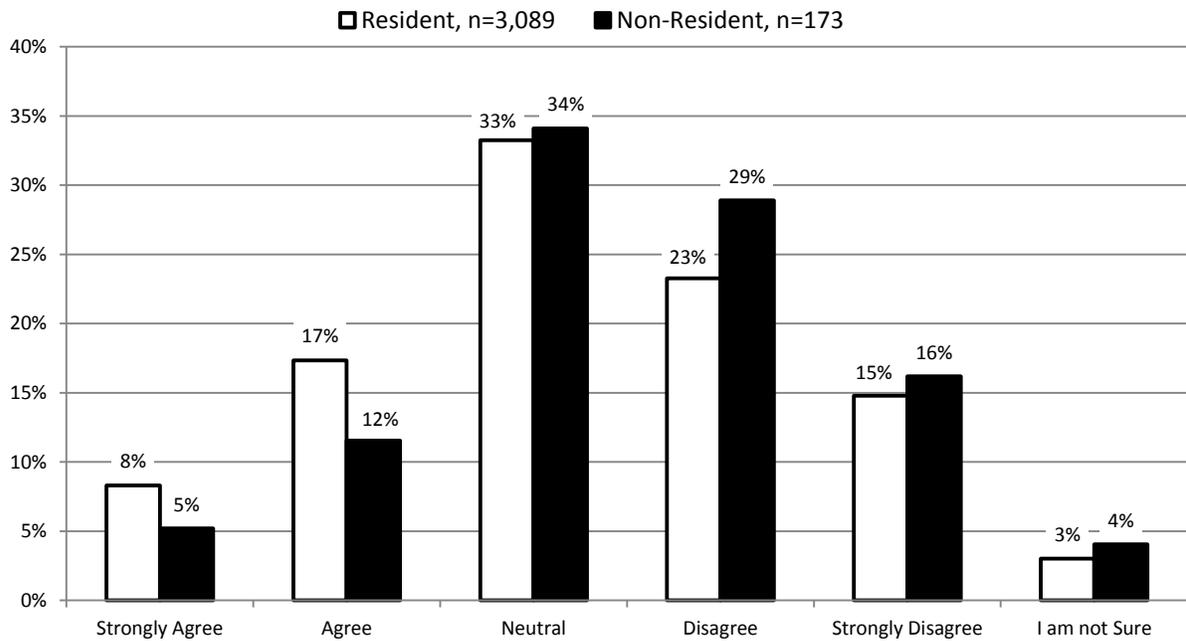


Figure 6. Preference for Canada goose unit-specific seasons that overlap with duck season dates as much as possible for Nebraska. Data derived from mail survey, 2013.

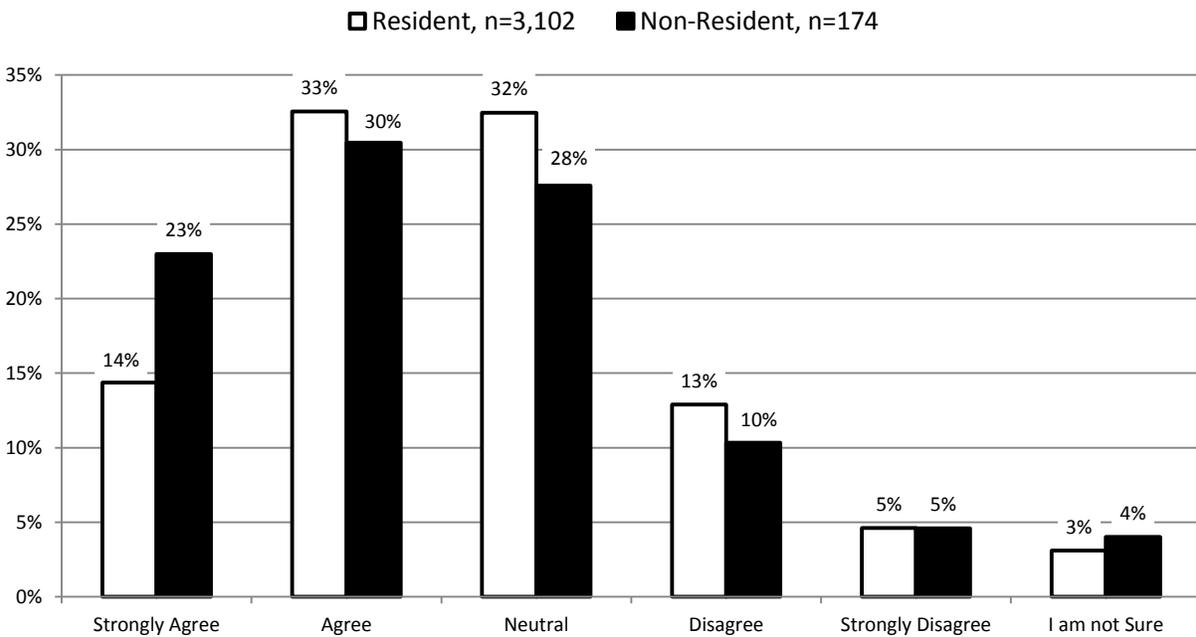


Figure 7. Indicated preference for Canada goose season dates that are open when geese are most often in my area for Nebraska. Data derived from mail survey, 2013.

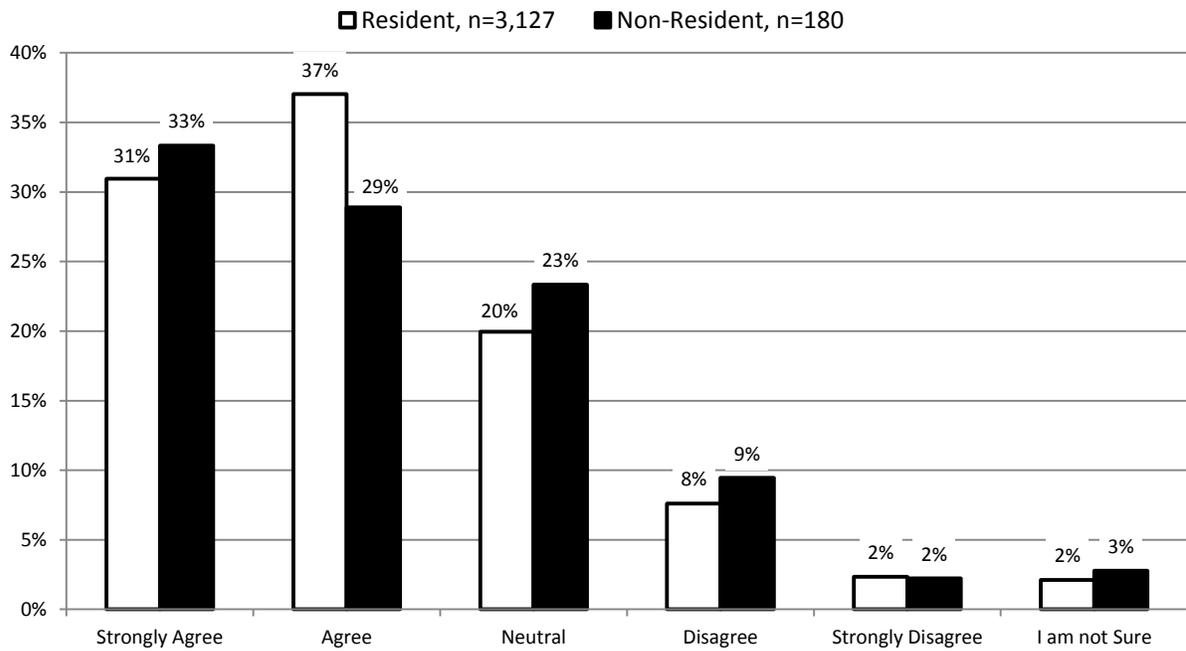
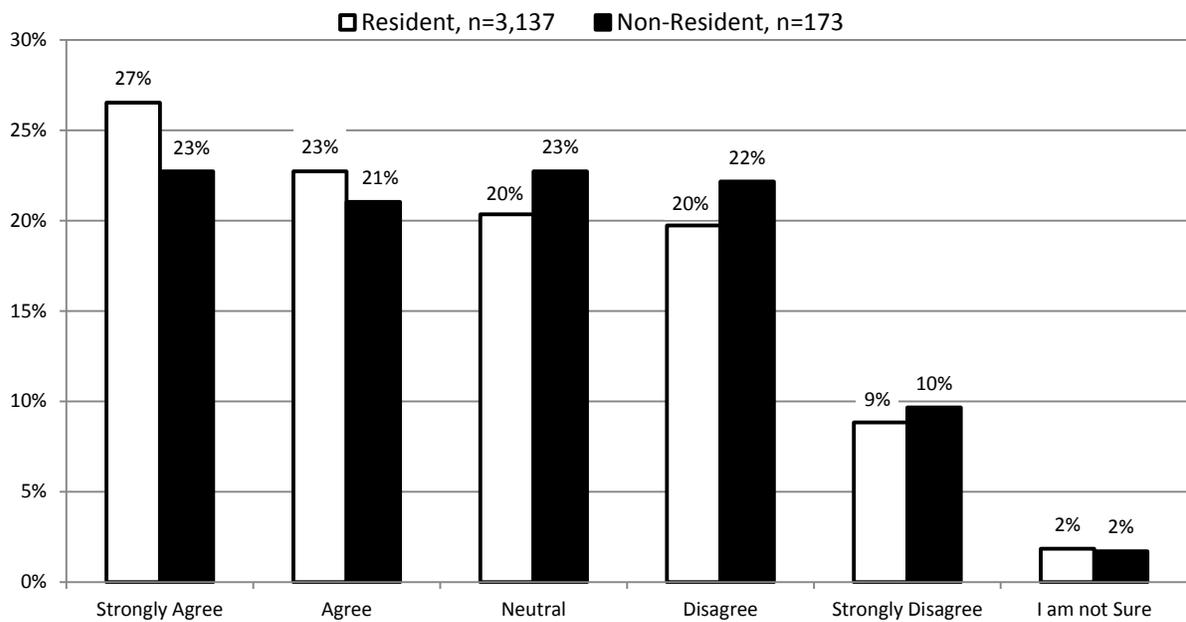


Figure 8. Preferences for Canada goose seasons to be as late as possible by Nebraska Canada goose hunters. Data derived from mail survey, 2013.



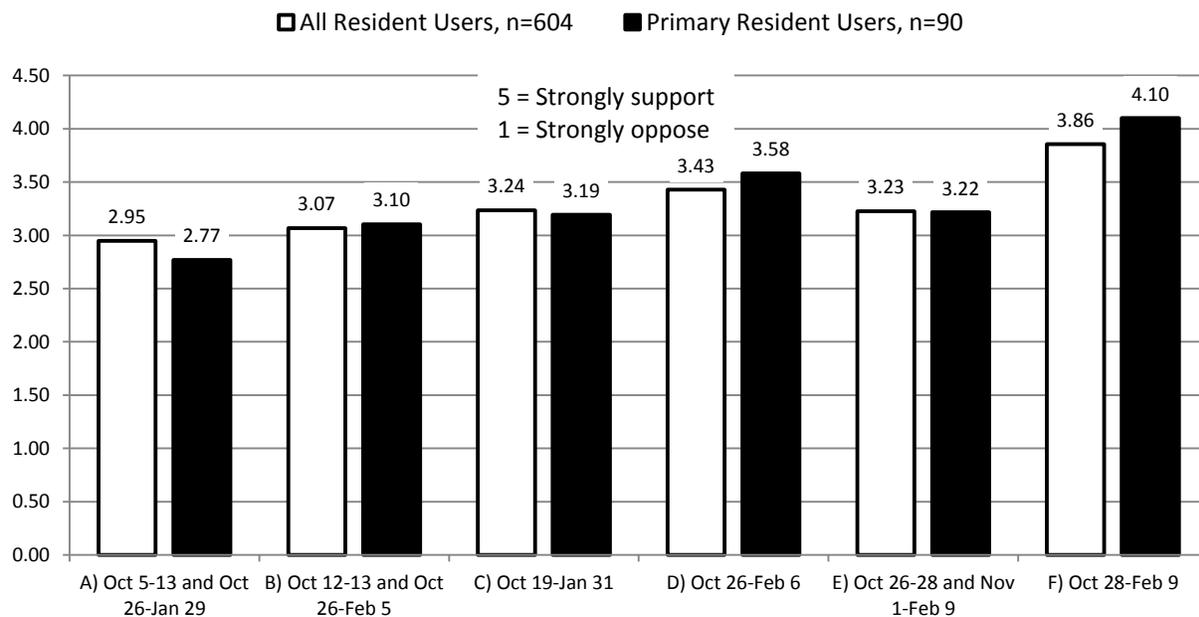
Season Date Preferences

Niobrara Unit – Preferences among resident in the Niobrara Unit favored opening dates that started later into October (Fig. 9). The respondents’ highest preference was for a 28 October opening date with a 9 February end with no split (Fig. 9). The second highest preference was for 28 October opening date with a 6 February end with no split (Fig. 9). Season dates of October 5-13 with a 2 week split and reopening of October 26 through January 29th was the least favored among respondents (Fig. 9).

North Central Unit – The highest and second-highest preferences for season dates in the North Central Unit were for dates of 5 October – 17 January and dates of 28 October – 9 February, respectively (Fig. 10). Dates of 5-13 October and 19 October – 22 January was the least favored by residents in the North-Central Unit (Fig. 10).

Due to the size of the unit and differences in habitats, we split the North Central Unit into Sandhills and East sub-units to examine season date preferences on a more regional basis. For the Sandhills Subunit, season date preferences were highest for the dates of 5 October – 17 January (Fig 11.). The dates of 5-13 October and 19 October – 22 January was the least favored by residents in the Sandhills Subunit (Fig. 11). For the East Sub-unit, the preferred season dates was the same as the Sandhills region (Fig. 11). Season preferences were similar to the Sandhills region with the exception of the 4th and 5th choices for season dates (Fig. 11).

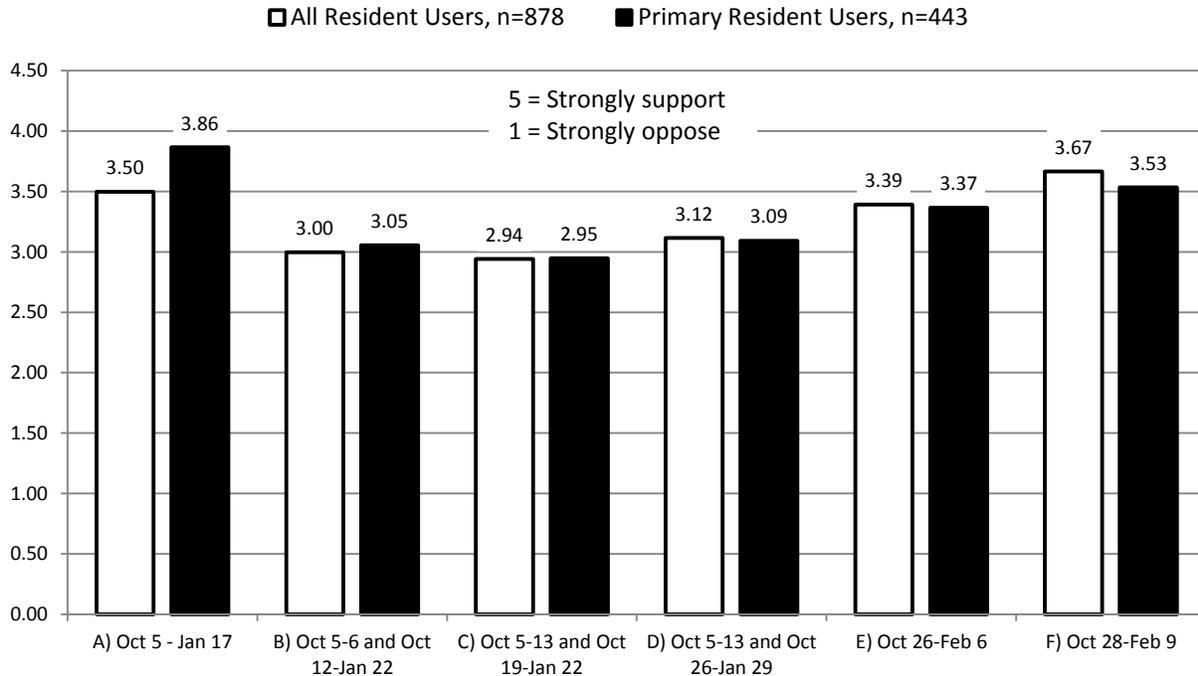
Figure 9. Mean scores for “primary”¹ and “all”² resident hunters of preferences for Canada goose season dates in the Niobrara Unit of Nebraska.



¹“Primary” resident users are respondents that indicated that they primarily hunt this unit.

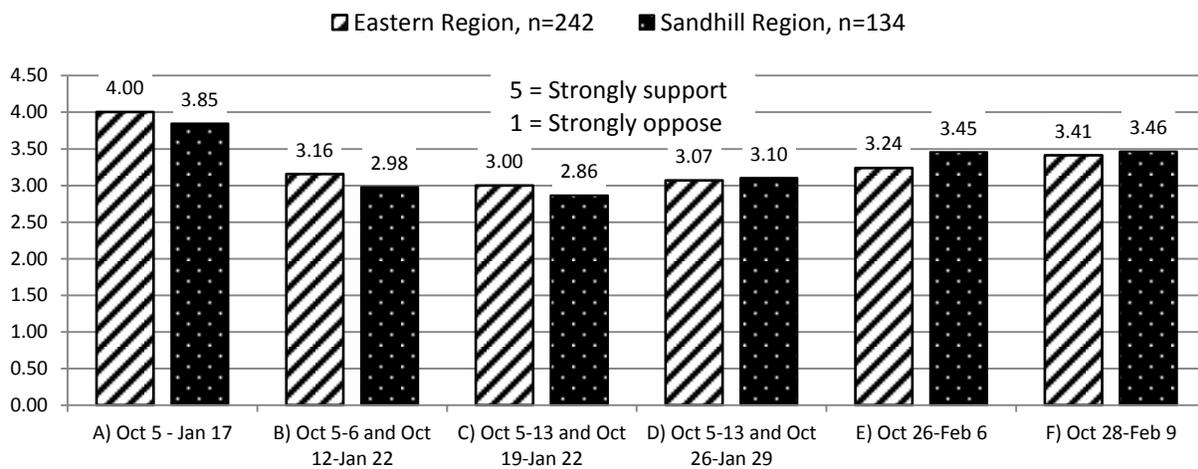
²“All” resident users are all respondents that indicated season date preferences for this unit.

Figure 10. Mean scores for “primary”¹ and “all”² resident hunter preferences for Canada goose season dates in the North-Central Unit of Nebraska.



¹“Primary” resident users are respondents that indicated that they primarily hunt this unit.
²“All” resident users are all respondents that indicated season date preferences for this unit.

Figure 11. Mean scores for resident hunter preferences for Canada goose season dates in the Eastern¹ and Sandhill² subunits of the North-Central Unit of Nebraska.



¹Included resident participants that primarily hunted in the following counties of the North-Central Unit: Knox, Antelope, Boone, Pierce, Madison, Platte, Cedar, Wayne, Stanton, Colfax, Dodge, Cuming, Dixon, Thurston, Burt, and Washington.
²Included resident participants that primarily hunted in the following counties of the North-Central Unit: Sioux, Dawes, Box Butte, Sheridan, Cherry, Grant, Hooker, Arthur, McPherson, Logan, Brown, Rock, Holt, Garfield, Wheeler.

East Unit – Primary users of the East Unit with a 65% support rate preferred season dates of 28 October – 9 February (Fig. 12). They least favored season dates of 5-13 October and 2 November – 29 January (Fig. 12).

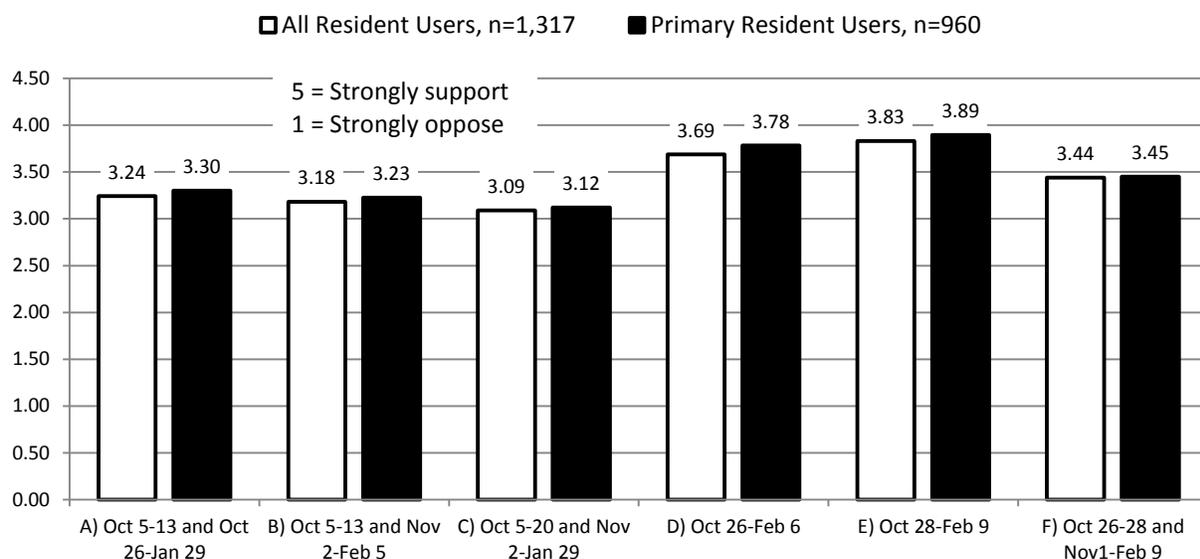
Platte River Unit – Sixty three percent of the primary users that responded in the Platte River Unit strongly supported season dates for 28 October – 9 February (Fig. 13). They least favored season dates for 5-13 October and 2 November – 5 February (Fig. 13).

Panhandle Unit – Eighty two percent of the primary users that responded in the Panhandle Unit strongly supported or supported season dates for 28 October – 9 February (Fig. 14). They least favored season dates for 19-20 October and 25 October – 4 February (Fig. 14).

Statewide – If a statewide season was to be created, respondents preferred that the season dates would be set for 28 October – 9 February (Fig. 15). Only 9% of the respondents opposed these season dates. Respondents least favored season dates for 5-6 October and 12-21 October and 26 October – 27 January (Fig. 15).

Non-resident season date preferences – Non-resident respondents shared the same season date preferences as resident respondents. For Niobrara, East, Platte River, and Panhandle Units, non-resident hunters favored season dates to be 28 October – 9 February and for the North Central Unit for season dates to be 5 October – 17 January. Non-resident respondents also favored season dates to be set for 28 October – 9 February if a statewide season was to be implemented (Fig. 16).

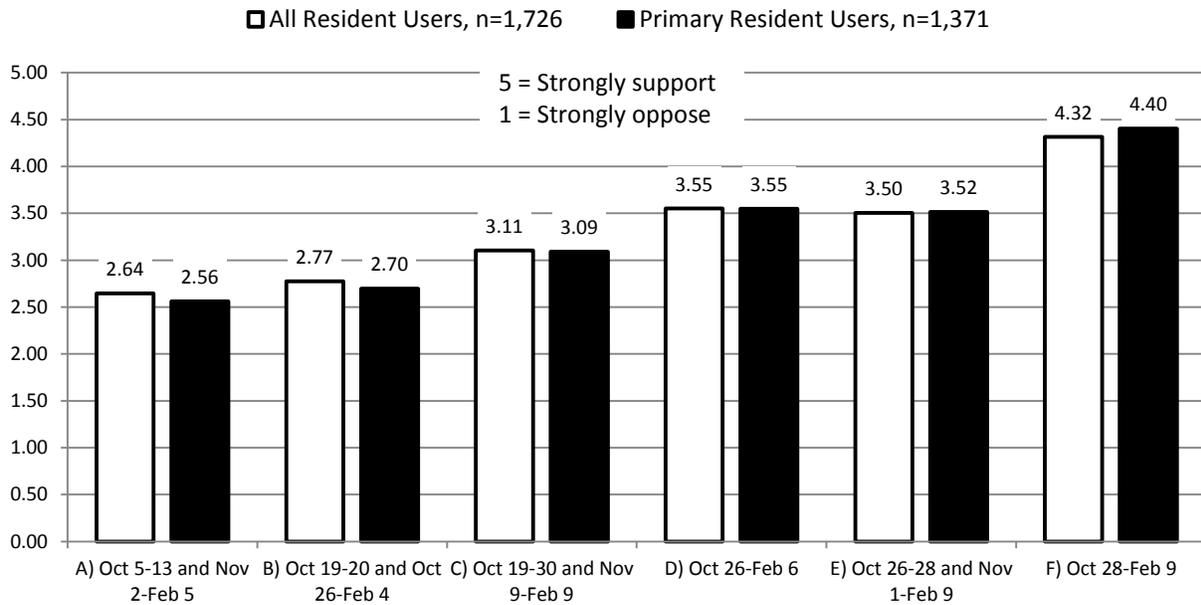
Figure 12. Mean scores for “primary”¹ and “all”² resident hunter preferences for Canada goose season dates in the East Unit of Nebraska.



¹“Primary” resident users are respondents that indicated that they primarily hunt this unit.

²“All” resident users are all respondents that indicated season date preferences for this unit.

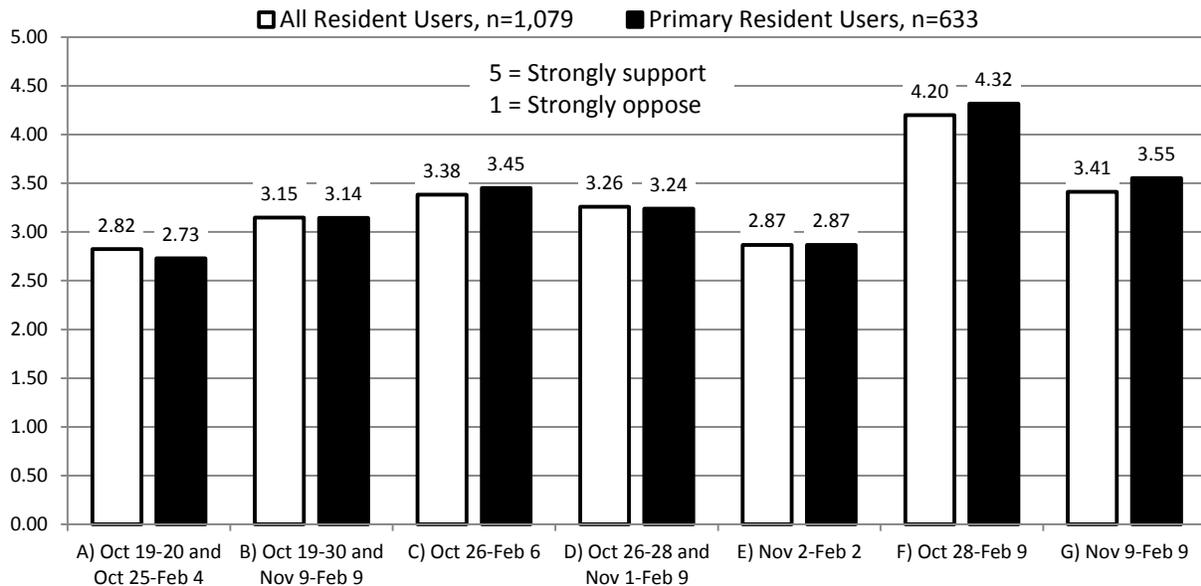
Figure 13. Mean scores for “primary”¹ and “all”² resident hunter preferences for Canada goose season dates in the Platte River Unit of Nebraska.



¹“Primary” resident users are respondents that indicated that they primarily hunt this unit.

²“All” resident users are all respondents that indicated season date preferences for this unit.

Figure 14. Mean scores for “primary”¹ and “all”² resident hunter preferences for Canada goose season dates in the Panhandle Unit of Nebraska.



¹“Primary” resident users are respondents that indicated that they primarily hunt this unit.

²“All” resident users are all respondents that indicated season date preferences for this unit.

Figure 15. Mean scores for resident hunter preferences for a statewide Canada goose season in Nebraska if implemented.

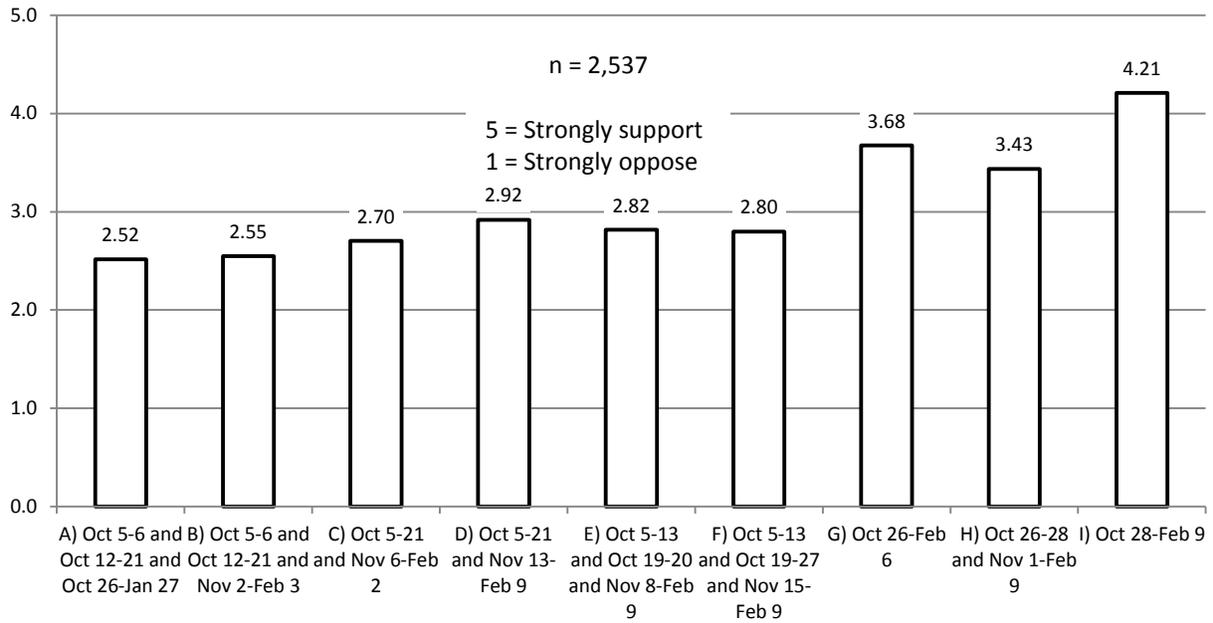
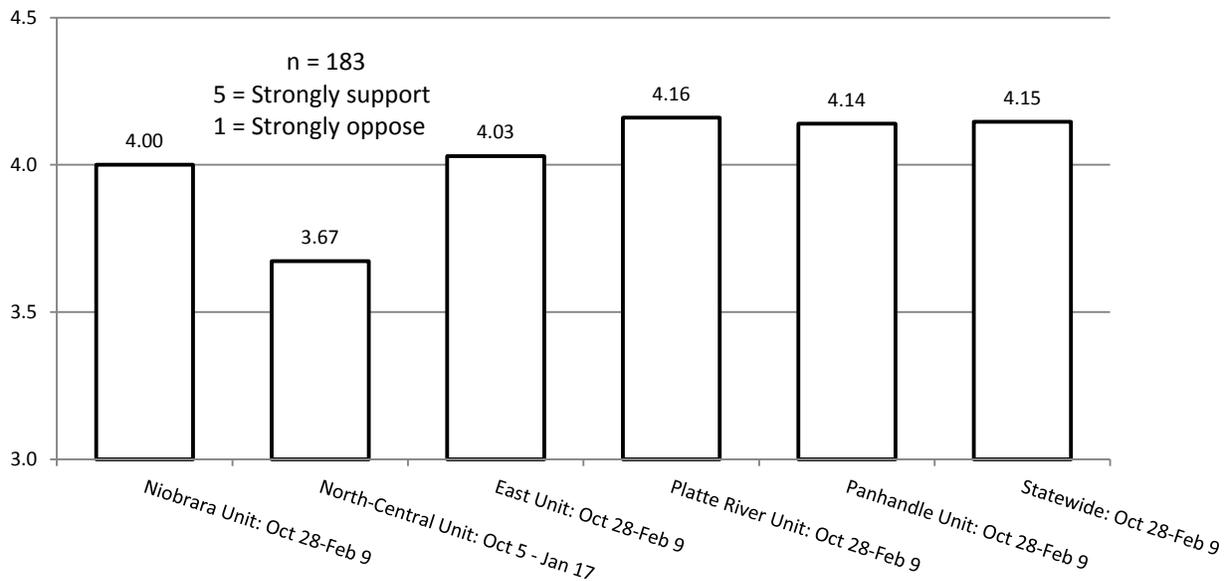


Figure 16. Non-resident preferences for Canada goose season dates for individual and statewide unit(s) in Nebraska.



DISCUSSION AND MANAGEMENT IMPLICATIONS

This was the first time a survey has been conducted by NGPC to obtain preference information for Canada goose hunting season dates. Thus, comparisons or changes in preferences with previous surveys were not possible. Nonetheless, most input received by staff indicated preferences for later dates in most units and this was substantiated with survey results. Harvest information indicates that harvest of Canada geese begins in late November and peaks in December and may continue through January (Vrtiska and Modrow 2013). Season dates that encompass these days would appear to be more preferred. Also, real and perceived “reverse” migrations of Canada geese in late winter probably cause preferences for later dates.

Respondents indicated they did not prefer splits or closed periods within hunting seasons. This was evident in both the direct question regarding splits in the season as well as responses in individual unit season date preferences. Proposed season dates that had similar opening and ending dates, but did include a split always ranked lower in preference than seasons with no closed period.

Increases in daily bag limit of Canada geese appeared to reach a peak at 5 geese/day and rapidly decline in preference. Canada goose daily bag limits have been at 3 geese/day for a relatively long period in Nebraska, and hunters may not be used to higher limits. Changes were made to daily bag limits in 2013 for Canada geese, and additional surveys in the future may indicate more of an acceptance for higher limits.

Late Canada goose seasons appear to be the preference of most goose hunters in Nebraska. Combining harvest and preference data provides a foundation to base Canada goose season dates. Additional surveys to monitor changes in harvest and preferences are recommended to continue adjusting season dates as objectives warrant. With continued monitoring, use of adaptive management may be possible.

ACKNOWLEDGEMENTS

We thank T. Rohrs for assistance with design, distribution and implementation of the survey. A. Hain and P. Barnes assisted with distribution of the survey. L. George assisted with collection of surveys. Finally, we thank the goose hunters that responded to the survey and their continued support of the waterfowl resource in Nebraska.

LITERATURE CITED

Brunke, K. D. and K. M. Hunt. 2007. Comparison of two approaches for the measurement of waterfowl hunter satisfaction. *Human Dimensions in Wildlife* 6:443-457.

Central Flyway Council. 2013. Management guidelines for Central Flyway Arctic nesting Canada geese. Central Flyway Council, Denver, Colorado, USA.

Vrtiska, M., and H. Modrow. 2013. Nebraska Canada goose harvest report. Nebraska Game and Parks Commission, Lincoln, Nebraska, USA.

Appendix A



Nebraska Game and Parks Commission
2200 North 33rd Street / PO Box 30370 / Lincoln, NE 68503-0370
402-471-0641 / Fax: 402-471-4992
33-582/04-2013

Dear Nebraska Goose Hunter:

To better understand Canada goose season date and other preferences, please take a few minutes to respond to this questionnaire. Your information is important to us and will be kept confidential. Information regarding Canada goose harvest is available at: <http://www.outdoornebraska.ne.gov/hunting/guides/waterfowl/waterfowl.asp>. Thank you in advance for your participation.

1. Indicate your level of interest/participation for hunting Canada geese (*Check one box*):

- I primary hunt Canada geese.
- I hunt Canada geese and other waterfowl equally.
- I hunt Canada geese when other waterfowl seasons are closed or not available.
- I primary hunt ducks and only shoot Canada geese when the opportunity arises.
- I don't hunt Canada geese (if you don't hunt Canada geese, please stop here and return your survey).

2. What Unit do you hunt most often for Canada geese (see map):

- Niobrara Unit
- North-Central Unit
- East Unit
- Platte River Unit
- Panhandle Unit

3. The location where I most frequently hunt Canada geese is in _____ County, and the nearest town is:_____.

4. State and federal wildlife agencies are considering an increase in the daily bag limit on Canada geese. Are you in favor of a daily bag limit increase, and if so, what would you like to see as the daily bag limit? (*Check one box*):

- Yes, but no more than 4 Canada geese/day.
- Yes, but no more than 5 Canada geese /day.
- Yes, but no more than 6 Canada geese /day.
- Yes, but no more than 7 Canada geese /day.
- No, I like the current daily bag limit of 3 Canada geese/day.
- No, I'd like to see the daily bag limit reduced.
- Does not matter to me.

5. Please indicate your level of agreement with each of the following options for Canada goose units/seasons in Nebraska.

I would prefer:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	I am not sure
a straight season (no splits or closed periods), even if it means the season might open later or close sooner than I would like.	<input type="checkbox"/>					
a statewide season (no units) even if it means one or two splits (i.e., closed periods).	<input type="checkbox"/>					
unit-specific seasons that overlap with duck season dates as much as possible even if it means one or two splits (i.e., closed periods).	<input type="checkbox"/>					
seasons that are open when geese are most often in my area, even if it means multiple season dates and units.	<input type="checkbox"/>					
seasons that are as late as possible, even if it means missing opportunity to harvest geese earlier in the fall or while duck hunting.	<input type="checkbox"/>					

PLEASE SEE MAPS AND CALENDAR FOR QUESTIONS 6-11.

6. If you plan to hunt the **Niobrara Unit**, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 105-day goose season. The 2012/13 season dates were: Oct. 27 – Feb. 8

	Strongly Support	Support	Neither	Oppose	Strongly Oppose
Oct. 5-13 and Oct. 26 – Jan. 29	5	4	3	2	1
Oct. 12-13 and Oct. 26 – Feb. 5	5	4	3	2	1
Oct. 19 – Jan. 31	5	4	3	2	1
Oct. 26 – Feb. 6	5	4	3	2	1
Oct. 26-28 and Nov. 1 – Feb. 9	5	4	3	2	1
Oct. 28 – Feb. 9	5	4	3	2	1
Other _____.					

7. If you plan to hunt the **North-Central Unit**, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 105-day goose season. The 2012/13 season dates were: Oct. 6 – Jan. 18.

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Oct. 5 – Jan. 17	5	4	3	2	1
Oct. 5-6 and Oct. 12 – Jan. 22	5	4	3	2	1
Oct. 5-13 and Oct. 19 – Jan. 22	5	4	3	2	1
Oct. 5-13 and Oct. 26 – Jan. 29	5	4	3	2	1
Oct. 26 – Feb. 6	5	4	3	2	1
Oct. 28 – Feb. 9	5	4	3	2	1
Other _____.					

8. If you plan to hunt the **East Unit**, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 105-day goose season. The 2012/13 season dates were: Oct 6-14 and 27 Oct. – Jan. 30.

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Oct. 5-13 and Oct. 26 – Jan. 29	5	4	3	2	1
Oct. 5-13 and Nov. 2 – Feb. 5	5	4	3	2	1
Oct. 5-20 and Nov. 2 – Jan. 29	5	4	3	2	1
Oct. 26 – Feb. 6	5	4	3	2	1
Oct. 28 – Feb. 9	5	4	3	2	1
Oct. 26-28 and Nov. 1 – Feb. 9	5	4	3	2	1
Other _____.					

9. If you plan to hunt the **Platte Unit**, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 105-day goose season. The 2012/13 season dates were: Oct. 27 – Feb. 8.

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Oct. 5-13 and Nov. 2 – Feb. 5	5	4	3	2	1
Oct. 19-20 and Oct. 26 – Feb. 4	5	4	3	2	1
Oct. 19-30 and Nov. 9 – Feb. 9	5	4	3	2	1
Oct. 26 – Feb. 6	5	4	3	2	1
Oct. 26-28 and Nov. 1 – Feb. 9	5	4	3	2	1
Oct. 28 – Feb. 9	5	4	3	2	1
Other _____.					

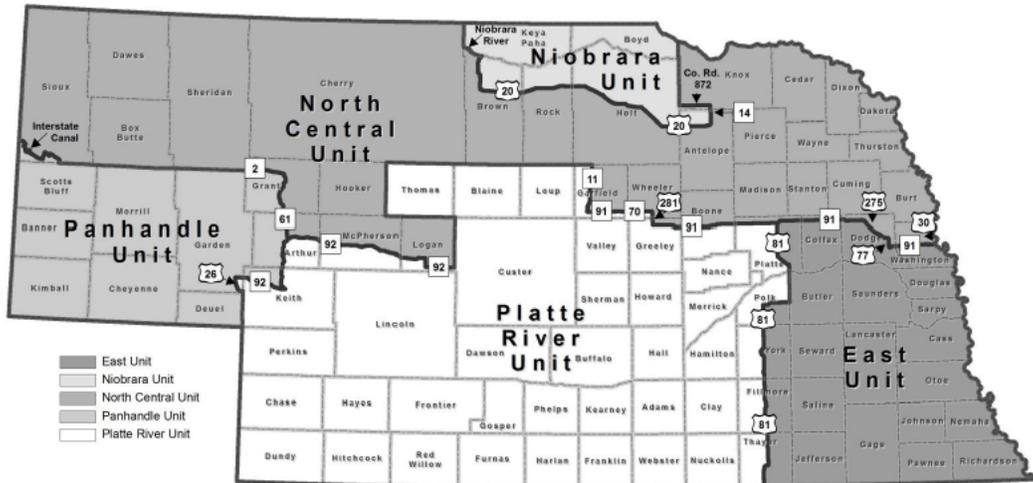
10. If you plan to hunt the **Panhandle Unit**, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 93-day or 105-day goose season. The 2012/13 season dates were: Nov. 10 – Feb. 8 (93 days).

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Oct. 19-20 and Oct. 26 – Feb. 4 (105 days)	5	4	3	2	1
Oct. 19-30 and Nov. 9 – Feb. 9 (105 days)	5	4	3	2	1
Oct. 26 – Feb. 6 (105 days)	5	4	3	2	1
Oct. 26-28 and Nov. 1 – Feb. 9 (105 days)	5	4	3	2	1
Nov. 2 – Feb. 2 (93 days)	5	4	3	2	1
Oct. 28 – Feb. 9 (105 days)	5	4	3	2	1
Nov. 9 – Feb. 9 (93 days)	5	4	3	2	1
Other _____.					

11. If Nebraska had a **Statewide** (no units) season, please rate your support for each of the 2013/2014 season date options below. Season dates are based on a 105-day goose season.

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose
Oct. 5-6 and Oct. 12-21 and Oct. 26 – Jan. 27	5	4	3	2	1
Oct. 5-6 and Oct. 12-21 and Nov. 2 – Feb 3	5	4	3	2	1
Oct. 5-21 and Nov. 6 – Feb. 2	5	4	3	2	1
Oct. 5-21 and Nov. 13 – Feb. 9	5	4	3	2	1
Oct. 5-13 and Oct. 19-20 and Nov. 8 – Feb. 9	5	4	3	2	1
Oct. 5-13 and Oct. 19-27 and Nov. 15 – Feb. 9	5	4	3	2	1
Oct. 26 – Feb. 6	5	4	3	2	1
Oct. 26-28 and Nov. 1 – Feb. 9	5	4	3	2	1
Oct. 28 – Feb. 9	5	4	3	2	1
Other _____.					

Canada (Dark) Goose Units



October						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28