

2010 VIRGINIA WATERFOWL HUNTER SURVEY

by

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Abstract: A survey was conducted in the winter of 2010 to determine the preferences of Virginia waterfowl hunters on regulatory options and waterfowl hunting issues. A random sample of 3,000 names and addresses was selected from people who indicated they hunted either ducks or geese for the 2008-2009 Virginia Harvest Information Program (HIP) registration. Completed surveys were returned from 1,738 respondents for an adjusted response rate of 61.1%. Among the HIP registrants who completed the survey, 79.1% said they hunted waterfowl in Virginia in the 2009-2010 season and 70% of those that hunted identified themselves as established "waterfowl hunters". The three attributes that Virginia waterfowl hunters strongly agreed made for an enjoyable waterfowl hunting experience were being in the field and enjoying the outdoors (89%); seeing waterfowl (87%); and being able to hunt with friends/family (85%). In contrast, only 24% of these waterfowl hunters strongly agreed that killing a limit made for an enjoyable waterfowl hunting experience. Waterfowl hunters identified limited places to hunt and limited time available to hunt as the biggest constraints to their participation in waterfowl hunting. Survey participants were questioned about several aspects of waterfowl hunting including issues such as resident Canada geese, duck bag limits, youth hunting and hunter input into the regulations process. In regard to resident Canada geese, respondents were fairly evenly split on whether they thought regulations should be set to reduce resident goose populations or to manage them at their current population level. Despite the fact that the resident Canada goose population has been reduced over the past 10 year, 48.6% of respondents believed the resident Canada goose population had increased and only 13.9% thought it had decreased. The majority of hunters thought that areas to hunt resident geese had remained the same (48%) or had decreased (42%). These responses could be a function of changing goose distributions that have made Canada geese more visible to the public and led to human-goose interactions in urban areas. Nearly 60% of VA waterfowl hunters expressed support for a six or five duck daily bag limit; but only 25% supported a four duck daily bag limit and only 15% supported a three duck daily bag limit. Less than 9% accompanied a youth on the designated youth waterfowl hunting

day and nearly 70% did not take a youth waterfowl hunting at all in the 2009-2010 season. Over 70% of the respondents agreed that they would like to provide more input into setting regulations and 87% agreed that it was a hunter's responsibility to provide input on waterfowl regulations. The method that was most preferred for providing input about waterfowl regulations was emailing comments to DGIF (51%), followed by an internet message board on the DGIF homepage (36.5%).

INTRODUCTION

The primary goal of waterfowl management in the United States, including Virginia, is to maintain populations that are compatible with ecological and human interests, including recreational and other uses. Regular surveys of waterfowl hunters are an integral part of managing waterfowl at the state, flyway, and national level to evaluate hunter satisfaction and hunter preferences. The process of setting harvest regulations annually in response to waterfowl population fluctuations (Nichols et al. 1995) has led to a rather complex system of waterfowl hunting regulations. A challenge for waterfowl managers is to take hunter desires into consideration when setting regulations and try to simplify regulations so they can be easily understood. Often, there is more than one biologically acceptable regulatory option and it is important to know which of these options is most appealing to hunters. Even "moderate changes" in seasons or bag limits have been shown to significantly affect waterfowl hunter satisfaction and retention (WMI 2004, p.5).

Waterfowl managers strive to develop regulations that are "acceptable to diverse hunter interests" that will "sustain participation of waterfowl hunters over both the short-and long-term" (WMI 2004, p.8). Input from waterfowl hunters is critical for creating regulations that are compatible with their desires. This feedback can also provide insight into constraints for participation in waterfowl hunting and options for improving hunter satisfaction.

To assist in developing regulations, VDGIF solicits public input through a series of

public meetings, informal communications such as emails and phone calls, and through the use of hunter surveys. Well designed hunter surveys generally provide the best evaluation of hunter opinions because they sample the entire spectrum of waterfowl hunters. VDGIF has conducted two surveys of Virginia waterfowl hunters (2000, 2004), which have been very beneficial in the regulatory process. The current survey serves as an update to the 2000 and 2004 surveys to assess current opinions on waterfowl hunting issues.

METHODS

A survey was conducted in the spring of 2010 to determine the preferences of Virginia waterfowl hunters on various regulatory options and hunting issues. The Harvest Information Program (HIP) registration was used as the sampling frame for this survey to insure a valid cross section of Virginia waterfowl hunters. A HIP permit is required each year, in addition to a hunting license, to hunt migratory game birds. In Virginia, the permit is free and can be obtained by calling a toll-free phone number or via the internet. Surveys were sent to a random sample of 3,000 HIP registrants that indicated they had hunted ducks or geese during the 2008-09 hunting season.

The initial mailing of the survey questionnaire (Appendix A) was sent to selected hunters in March 2004. The first page of the survey booklet included a cover letter (Appendix B) explaining the purpose and importance of the study. Each survey included a stamped, self-addressed, return envelope. Two weeks after the initial

mailing, a reminder postcard (Appendix C) was sent to all waterfowl hunters who had not yet returned the questionnaire. Finally, a second copy of the survey was sent in April 2010 to all hunters who had not responded to the survey.

RESULTS AND DISCUSSION

Response Rate

Of the 3,000 surveys sent to HIP registrants, only 2,859 had valid addresses. Of these, 1,738 useable were received for an effective response rate of 61.1%. All of these responses (n=1,738) were used in the analysis of the survey results.

Waterfowl Hunter Characteristics and Participation

Survey respondents ranged in age from 12 to 91 years old, with the average age of 47 years (median age=48 years and mode=48 years, Question 35). Respondents had been hunting waterfowl for an average of 22.8 years and specifically hunting waterfowl in Virginia for 19.2 years (Questions 29 and 30). Waterfowling in Virginia appears to be predominantly a male activity, as only 1.9% of the respondents were female. Waterfowl hunter demographics appear to have changed very little since the 2000 and 2004 waterfowl hunter surveys. In the 2000 survey, hunters averaged 44 years old, and had been hunting for 22 years. In 2004 the average age was 45 with 21.5 years of waterfowl hunting experience. Similar to the current survey, only 1% and 1.5% respectively, of the respondents were female in the 2000 and 2004 surveys

Seventy-nine percent of the respondents indicated that they hunted waterfowl in Virginia during the

2009-2010 season (Question 1, Appendix A). Hunter participation increased slightly from 2000, when only 75% of the respondents hunted, but decreased from 2004 when 85% of the respondents said they hunted waterfowl in Virginia.

Habitats and Hunting Methods Used

Virginia offers diverse waterfowl hunting opportunities, and there are also a variety of waterfowl hunting methods or techniques used. To gain information on commonly practiced techniques, hunters were asked which waterfowl hunting methods they used in the 2009-2010 season (Question 2). Of the respondents that hunted waterfowl in Virginia in 2009-10, 63% said they hunted east of Interstate 95 compared with only 40% who hunted west of Interstate 95. Nearly 60% hunted from a stationary blind but only 21% licensed a stationary blind. Twenty-seven percent hunted from a floating blind while only 12% licensed a floating blind. Almost 8% of respondents hired a guide and 37% hunted using a spinning wing decoy.

Youth Waterfowl Hunting

In the late 1990's, the USFWS added youth waterfowl days to the federal frameworks to provide a special opportunity for young hunters. States are allowed to select two consecutive hunting days, designated as "Youth Waterfowl Hunting Days," in addition to their regular duck seasons. The days must be held outside any regular duck season on a weekend, holidays, or other non-school days when youth hunters would have the maximum opportunity to participate. The days may be held up to 14 days before or after any regular duck-season frameworks or within any split of a regular duck season. In 1996, VDGIF initiated its first youth waterfowl day as a means to introduce youngsters to waterfowl hunting. Since Sunday hunting is not allowed in

Virginia, only one youth waterfowl day is generally offered.

For the designated youth waterfowl hunting day in 2009-2010 (October 24, 2009), 9% of the respondents took a youth hunting (Question 3). For the entire 2009-2010 waterfowl hunting season, 70% of the respondents said they never took a youth waterfowl hunting, 6% took a youth hunting one day, 16% took a youth hunting 2-5 days, and 8% took a youth waterfowl hunting six or more days. These results are very similar to those from the 2000 and 2004 surveys. In 2000, 10% of waterfowl hunters indicated that they took a youth hunting on the designated youth waterfowl hunting day, and for the entire 1999-2000 waterfowl season, 72% never took a youth hunting, 8% took a youth hunting one day, 15% took a youth hunting 2-5 days, and 5% took a youth hunting five or more days. In 2004, 7% of the respondents took a youth on the youth waterfowl hunting day, and for the entire 2003-2004 waterfowl hunting season, 74% of the respondents said they never took a youth waterfowl hunting, 5% took a youth hunting one day, 14% took a youth hunting 2-5 days, and 7% took a youth waterfowl hunting more than five days.

Since its inception, youth day has been held around the third Saturday in October. To explore changes that might increase youth participation, hunters were asked their preferences for the youth waterfowl hunting day. "Prior to the 4 day October segment" was chosen by 32% of hunters, "After the 4 day October segment" was preferred by 36% of the respondents, and 33% chose "At the end of the regular season (first Saturday in February)."

Waterfowl Dates and Bag Limits

Duck Season Dates and Bag Limits – The October segment of the duck season is generally held during the first or second

week of October. This 4-day segment had historically been held from Wednesday through Saturday. Beginning in the 2004-2005 season, the October segment was shifted a day later and was held from Thursday through Monday to take advantage of a Monday Holiday (Columbus Day). To get some feedback on this October segment, respondents were asked their preference for this season (Question 6). Thirty-nine percent supported the Wednesday through Saturday option while 35% supported the Thursday through Monday (Columbus Holiday) option, and 25% supported a Saturday through Wednesday option that also include the Columbus Day Holiday. Respondents supported this season being held during the third (36%) or second (29%) week of October, versus the first week (25%).

The federal framework has allowed a daily bag limit of six ducks since the late 1990's. Virginia has selected a daily bag limit of five ducks since that time because of concern for certain species and input from hunters that a smaller bag limit was sufficient. To assess hunter opinion, respondents were asked to choose what daily bag limit they most favored, ranging from three to six ducks (Question 7). Opinions were almost evenly split between a 6-duck bag (59.7%) and a 5-duck bag (58.3%), while there was less support for a 4-duck bag (24.7%) and a 3-duck bag (15.3%).

Currently, the total daily bag limit for mallards is set at 4 per day and only two of those can be hens. However, information on Eastern Mallard populations indicates that there is no biological need to be more restrictive on hen mallards than on drake mallards. Hunters were asked their preferences for the bag limit for hen mallards (Question 8). Thirty-seven percent indicated they wanted no restrictions on hen mallards, followed by 34% who said they wanted the hen mallard limit to remain 2 per

day. Twelve percent wanted a 3 per day bag limit, 11% had no opinion, and 6% wanted the hen mallard daily bag limit reduced to 1.

Hunters were asked about a potential new harvest strategy for pintails. It involves some tradeoffs, which include keeping the seasons open in as many years as possible (allow partial seasons), only open the seasons if it can remain open for the full 60 day season, and having a higher bag limit. Given three different options, 58% of responding hunters chose, “offer hunting as often as possible, even if it is only a partial season (bag of 1 per day),” 28% chose, “only hold a season if it can be open for the full 60 days (bag of 1 per day), and 13% chose “permit higher bag limits (2 or 3) even though this may result in more closed or partial seasons in subsequent years.”

Canada Geese

Virginia has several Canada goose hunting zones/seasons that are based on goose population affiliations and goose distribution across the state. In recent years there have been several liberalizations in Canada goose hunting seasons. This includes dividing the state into 3 Canada goose Hunt Zones: A Resident Population Zone (RP), a Southern James Bay Zone Population (SJBZ), and an Atlantic Population Zone (AP). Waterfowl hunters were asked which Canada goose seasons they participated in 2009-2010 in Virginia (Question 10). The most popular season was the Atlantic Population Hunt Zone with 44% of respondents hunting during that season. Thirty-five percent of hunters participated in the statewide September Canada Goose season, and 19% indicated they hunted a half-hour after sunset during the September Canada goose season. Twenty-three percent of the respondents hunted in the SJBZ Zone and 20% hunted in the RP Zone. Nineteen percent of respondents hunted during the

month of February in either the SJBZ or RP zones.

Resident Canada Geese

The resident Canada goose population increased significantly during the 1980's and early 1990's, peaking at over 250,000 in the mid-1990's. Special hunting seasons were established in September (in 1993) and in late January-February (1995) to help manage resident goose populations. These seasons have been effective in reducing resident goose numbers in areas where geese are accessible to hunters. Monitoring programs show that the resident Canada goose population has been reduced from over 250,000 in the late 1990's to currently below 150,000. Respondents were given information about the reduction in Virginia's resident Canada goose population and asked their opinions about resident geese, specifically whether they agreed or disagreed with three statements about resident Canada geese regulations (Question 11). Respondents were fairly evenly split on whether resident goose regulations should be changed: 54.2% percent agreed with the statement that “regulations should be liberalized to further reduce populations”, while 51.9% agreed that “regulations should be set to manage at current population levels”. Only 18% supported the statement that “regulations should be restricted to increase populations.”

Hunters were also asked about their perceptions of resident Canada geese (Question 12). Forty-three percent indicated some level of agreement that resident geese provided aesthetic benefits to them, and 86% agreed that resident Canada geese provided recreational hunting for them. These results indicate the value the resident Canada goose resource is providing both in terms of hunting opportunities and aesthetic benefits.

Although the statewide numbers of resident Canada geese have been decreasing in recent years, responses to the second part of Question 12 generally indicated that many respondents (49%) thought Canada goose numbers were increasing. Only 14% thought the resident Canada goose population had decreased and 37% thought the population had not changed. The majority of hunters thought that areas to hunt resident geese had remained the same (48%) or had decreased (42%). These responses could be a function of changing goose distributions that have made Canada geese more visible to the public and led to human-goose interactions in urban areas.

In Question 13, waterfowl hunters were asked about special hunting measures that have become available for use during the September resident Canada goose seasons. The most preferred special measure was extended hunting hours (hunting until ½ hour after sunset) (74% in agreement), with other options less favored: use of unplugged shotguns (43% in favor), hunting in August (41% in favor), increasing the bag limit from 10 to 15 (35% in favor, 32% opposed), use of electronic call (28% in favor, 37% opposed). Fifty-four percent of respondents indicated support for extending the late resident goose season into March.

September Seasons

Teal Season -September teal seasons and/or bonus teal bags were initiated in the late 1960's to provide harvest opportunities on green-winged and blue-winged teal. Blue-winged teal are a lightly harvested species that is generally unavailable during the regular duck season. They are one of the earliest migrants, and many pass through Virginia in August and September, prior to the opening of the regular duck season. Green-winged teal generally arrive a bit

later, in September and October, and may remain in the state throughout the winter. Special teal seasons were discontinued in the 1980's due to a drought on the prairies and a decline in teal numbers. Habitat conditions and teal populations improved in the late 1990's and special teal seasons were reinstated in 1998. Virginia has held a special teal season since 1999 to take advantage of early migrating teal. Federal regulations allow a 9-day September teal season if teal populations are above 3.3 million and a 16-day season if teal populations are above 4.7 million. The season is only permitted east of I-95 where there are greater numbers of teal and a reduced potential to take non-target species. Participation in these teal seasons is thought to be low and the survey results confirmed this. Only 10% of respondents indicated they participated in the 2009 September season (Question 14). This is exactly the same percentage of respondents who indicated they hunted teal on both of our past two survey, in 2004 and 2000, indicating that interest in this season is still relatively small and has changed little over the past 10 years.

There are some trade-offs in offering or extending a September teal season. The use of special measures for hunting resident geese (extended shooting hours, unplugged shotguns and electronic calls) cannot be offered when the teal season is open. In questions 15 and 16 we tried to evaluate hunter opinions of these tradeoffs. However, the responses to these questions indicate there was no consensus on when or how long to offer a teal season. However, responses to earlier questions indicate strong support for special measures (extended shooting hours) for Canada goose hunting, and limited participation in September teal seasons.

Waterfowl Hunting and Regulations

Research into hunter satisfaction has revealed that a variety of factors contribute to a satisfying hunting experience, not only harvesting an animal. Hunters were given a list of attributes and were asked if they agreed or disagreed if these contributed to a satisfying hunting experience. The attributes that received the highest percentages under “Strongly agree” were: Being in the field and enjoying the outdoors (89%), seeing waterfowl (87%), being able to hunt with friends/family (85%), and sharing stories of duck hunting experiences (72%). The only category that received less than 50% under “Strongly agree” was killing a limit (24%). The results from this question are consistent with other hunter satisfaction research that indicates that harvesting an animal is the only characteristic of a satisfying hunting experience.

Next, waterfowl hunters were asked about the establishment of waterfowl regulations in Virginia (Question 18). Seventy-two percent agreed that they would like to provide more input into setting regulations, and 87% said that it was a hunter’s responsibility to provide this input. When asked their preferred method for providing input for setting waterfowl regulations (Question 19), the most popular method was emailing their comments to VDGIF. Fifty-one percent chose this method compared to the 2004 survey where only 28% preferred to email their comments to VDGIF. Thirty-seven percent of responding waterfowl hunters wanted to use an internet message board on the VDGIF homepage, 35% wished to participate in a focus group or advisory panel comprised of waterfowl hunters, and 33% wished to attend a public

meeting. It is important to note that of the four most popular choices for providing input on waterfowl regulations the only one that is currently not an option is a focus group or advisory panel of waterfowl hunters. Nevertheless, in Question 18, 63% said that other options for providing input needed to be pursued or developed.

In Question 20, hunters were asked what they felt were constraints to their participation in waterfowl hunting in Virginia. Respondents most frequently agreed that limited places to hunt (75%) and limited time available to hunt (68%) were constraints to their participation. Similarly, in the 2004 and 2000 surveys, these two constraints were the most frequently cited by hunters. Of all the other constraints listed, only about 20-40% of respondents listed any of them as a constraint to their participation in waterfowl hunting.

Waterfowl hunters appear to gather information about waterfowl from a variety of sources (Question 21). The most popular source of information was the VDGIF website (58%), followed by friends (56%), conservation or hunting organizations (47%), and VDGIF brochures or regulation pamphlets (45%).

Hunter Identity

In recent years the numbers of waterfowl hunters has declined. In order to address the reduced numbers of hunters, the National Flyway Council has created a Waterfowl Hunter Recruitment and Retention working group to provide information about these declining trends and how to prevent future losses. Hunter identity is at the core of the waterfowl hunter recruitment and retention effort and Questions 22 through 26 were designed to get information about waterfowl hunter identity in Virginia. Other states throughout the country are also participating

in this waterfowl hunter identity research; however, results from these other states were not available at the time of publication.

In Question 22 and 23, waterfowl hunters were asked to describe their waterfowl hunting participation. Ninety-three percent of the respondents said they hunted waterfowl during the 2009-10 season, but only 70% thought of themselves as waterfowl hunters. Twelve percent said they were learning how to become a waterfowl hunter and 10% said they do not think of themselves as waterfowl hunters even though they occasionally go waterfowl hunting.

Question 24 asked how likely they were to waterfowl hunt in the future. Eighty-nine percent said that they were very likely, 9% said somewhat likely and only 2% were unlikely to go waterfowl hunting in the future. Despite the high percentages of those who identify themselves as waterfowl hunters who plan to continue hunting in the future, only 47% of respondents said they were currently serving as a mentor or helping another individual become a waterfowl hunter (Question 25). However, 60% of waterfowl hunters had either served as a mentor or helped another person become a waterfowl hunter in the past (Question 26). The results from this series of questions provide encouraging results for the future of waterfowl hunter recruitment and retention. Nearly 83% identified themselves as either waterfowl hunters or on the path to becoming one. Ninety-eight percent of the responding hunters said they were likely to hunt waterfowl in the future. Even though less than half of the hunters are currently mentoring someone, the fact that at some point 60% of these hunters have served as a mentor is encouraging.

SUMMARY

The results from this survey will provide important information for making regulatory decisions about waterfowl bag limits, seasons, and hunting zones in Virginia. Information obtained from other forms of input such as public meetings, telephone calls and email comments are also helpful. However, these forms of input lack scientifically sound sampling methods that are necessary when drawing conclusions about the desires of the total waterfowl hunter population. This survey included a broader group of waterfowl hunters than the other forms of input because hunters were randomly selected from of the entire population of Virginia goose and duck hunters.

Statewide surveys like this are also important in the national scheme of waterfowl management. Since 1995, the USFWS and the Flyway Councils have used the concept of Adaptive Harvest Management (AHM) when setting duck regulations in the United States. A great benefit of AHM is that objective decisions can be made even when there is disagreement among waterfowl professionals about the effects that hunting and other factors have on waterfowl populations (AHM Task Force 2004). Waterfowl hunter questionnaires are included as part of the AHM process to assess hunter opinions and satisfaction. Regular surveys of the consumptive users of the waterfowl resource provide insight into the range of regulatory options that might be available to harvest managers. The information gathered in this survey will be beneficial to both the regulatory process and the waterfowling public in Virginia.

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Appendix A. Waterfowl Survey Questionnaire with responses

You have been selected for this survey based on your 2009-2010 Harvest Information Program (HIP) registration. Please answer each of the following questions completely. Results from this study will be reported only in an aggregate total and no individual responses will be reported.

1. Did you hunt waterfowl in Virginia during the 2009-2010 season?

- Yes **79.1%** No **20.9%**

2. Which of the following waterfowl hunting methods did you use in 2009-2010 in Virginia? (check all that apply)

- | | | | |
|---|--------------|--|--------------|
| <input type="checkbox"/> Licensed a stationary blind | 21.0% | <input type="checkbox"/> Licensed a floating blind | 11.9% |
| <input type="checkbox"/> Hunted from a stationary blind | 59.5% | <input type="checkbox"/> Hunted from a floating blind | 27.3% |
| <input type="checkbox"/> Hunted east of I-95 | 63.0% | <input type="checkbox"/> Hunted west of I-95 | 39.6% |
| <input type="checkbox"/> Hired a guide | 7.7% | <input type="checkbox"/> Hunted with spinning wing decoy | 36.6% |

3. Did you take a youth waterfowl hunting in Virginia on the designated youth waterfowl hunting day (October 24, 2009)?

- Yes **8.7%** No **91.3%**

4. How often did you take a youth waterfowl hunting in Virginia during the 2009-2010 season?

- 0 days **69.8%** 1 day **5.7%** 2-5 days **16.0%** 6 or more days **8.4%**

5. What is your preference for the youth waterfowl hunting day in the 2010-2011 season? (check one)

- Prior to the 4 day October segment **31.6%**
 After the 4 day October segment **35.7%**
 After the end of the regular season (i.e., first Saturday in February) **32.8%**

The following section relates to preferences for season dates and bag limits. Federal regulations permit Virginia to offer up to 60 days of waterfowl hunting, with the option to split the season into three segments, and a bag limit of up to 6 ducks. In recent years, Virginia has selected a 60-day season with three segments, Early (October), Mid (Thanksgiving), and Late (December-January), and a daily duck bag limit of 5.

6. Please indicate your level of support for the following October segments...

	Strongly Support		Does Not Matter		Strongly Oppose
Wednesday through Saturday.....	26.7	12.6	48.6	5.2	6.9
Thursday through Monday (Columbus Day)	23.5	11.5	50.4	5.6	9.1
Saturday through Wednesday (Including Columbus Day).....	15.0	10.0	53.8	8.1	13.1
During the first week of October.....	15.9	8.7	54.6	8.7	12.2
During the second week of October.....	14.9	14.5	53.8	6.9	9.9
During the third week of October.....	24.3	11.5	49.9	6.0	8.3

7. Please indicate your level of support for each of the daily bag limits for ducks...

	Strongly Support	Does Not Matter	Strongly Oppose
3 duck daily bag limit.....	9.3	6.0	49.7
4 duck daily bag limit.....	13.4	11.3	34.5
5 duck daily bag limit.....	36.6	21.7	14.8
6 duck daily bag limit.....	47.9	11.8	14.6

8. The bag limit on hen mallards is currently 2 in the Atlantic Flyway. However, information on Eastern Mallard populations indicates that there is no biological need to be more restrictive on hen mallards than on drake mallards. What is your preference for the bag limit for hen mallards (the daily limit on drakes and total mallards is 4 per day)?

- 1 **6.2%**
- 2 **33.9%**
- 3 **12.1%**
- No restrictions **37.0%**
- No opinion **10.8%**

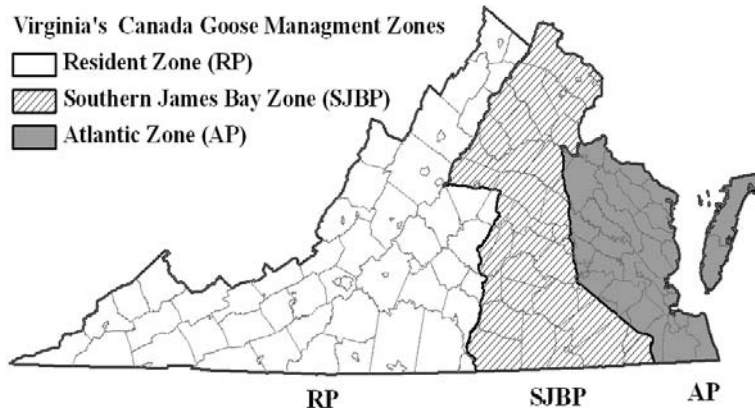
9. A new harvest strategy is being considered for pintails. It involves some tradeoffs among keeping the seasons open in as many years as possible, having a partial season (i.e. open for only 30 days of a 60 day season), or having higher bag limits. Please indicate your preference below. (check only one)

- Offer hunting as often as possible, even if it is only a partial season (bag of 1 per day) **58.3%**
- Only hold a season if it can be open for the full 60 days (bag of 1 per day) **28.4%**
- Permit higher bag limits (2 or 3) even though this may result in more closed or partial seasons in subsequent years **13.3%**

In recent years there have been several liberalizations in Canada goose hunting seasons. This includes dividing the state into 3 Canada goose Hunt Zones (see map below). The next series of questions relates to Canada goose management in Virginia.

10. Did you hunt during any of these Canada goose seasons in 2009-10 in Virginia?

- (check all that apply)
- September Canada goose season (statewide) **35.2%**
 - Half-hour after sunset during the September Canada goose season. **18.6%**
 - Atlantic Population Hunt Zone (Nov 21-Dec 5 & Dec 15-Jan 30) **44.0%**
 - Southern James Bay Population Hunt Zone (Nov 21-Dec 5 & Dec 15-Feb 13) **23.1%**
 - Resident Population Hunt Zone (Nov 21-Dec 5 & Dec 12-Feb 27) **19.9%**
 - February Canada goose season in either the SJB or RP zones **18.8%**



11. Monitoring programs show that the resident Canada goose population has been reduced from over 250,000 in the late 1990's to currently below 150,000. Indicate your level of agreement with the following statements regarding current population levels:

	Strongly Agree	Does Not Matter	Strongly Disagree		
Regulations should be liberalized to further reduce populations.....	40.8	13.4	16.8	11.4	17.6
Regulations should be set to manage at current population levels.....	29.3	22.6	20.8	13.5	13.8
Regulations should be restricted to increase populations.....	9.0	8.5	14.8	17.4	50.4

12. Indicate your level of agreement and/or perceptions about resident **Canada geese**:

	Strongly Agree	Does Not Matter	Strongly Disagree		
They provide aesthetic benefits to me.....	22.5	20.9	32.7	9.2	14.8
They provide recreational hunting for me...	63.5	22.4	10.7	1.5	1.8
		Decreased	Not Changed	Increased	
I feel the population has.....	13.9		37.5		48.6
Places available for me to hunt them have	41.5		47.8		10.8

13. Other hunting methods have become available for use during the resident Canada goose seasons. Please indicate your level of agreement for each of the following:

	Strongly Agree	Does Not Matter	Strongly Disagree			
Open the September Canada goose season earlier to August 15 (Aug. 15-Sept. 25).....		29.7	11.4	29.9	9.2	19.7
Continue to allow hunting 1/2 hour after sunset during the September season.....	56.5	17.4	21.6	1.4	3.1	
Use electronic calls during Sept. season.....	19.6	8.1	35.0	8.8	28.6	
Increase the bag limit during the Sept. season (now 10 a day; could be up to 15 per day)...	23.3	12.1	32.4	11.4	20.7	
Use unplugged shotguns in Sept. season.....	30.4	12.7	26.0	7.2	23.8	
Extend Canada goose season into March in the Resident Pop. Zone (see map on p. 3)....	36.6	17.5	32.5	4.1	9.2	

Virginia has held a special teal season since 1999 to take advantage of early migrating teal. Federal regulations allow a 9-day September teal season if teal populations are above 3.3 million, and a 16-day season if teal populations are above 4.7 million. The season is only permitted east of I-95 where there are greater numbers of teal and a reduced potential to take non-target species (wood ducks).

14. Did you hunt during the 2009 September teal season in Virginia?

Yes **9.8%** No **90.2%**

15. The special measures available for hunting Canada geese in September (1/2 hour after sunset, unplugged shotguns, electronic calls) cannot be offered when other migratory waterfowl seasons (such as the teal season) are open. With this in mind, please indicate your preference below. (check only one)

- Allow the maximum number of days (9 or 16) for the September teal season, even if it requires restricting the number of days for expanded measures for the September Canada goose season **15.6%**
- Hold the September teal season from Sept. 16th to September 30th to allow use of special measures during the first portion of the goose season **16.7%**
- Hold a short September teal season from September 26th to September 30th (after the Sept. Canada goose) to allow special measures for the entire goose season **25.0%**
- Overlap teal season entirely with the September Canada goose (ending Sept. 25th), to provide opportunities for both (special measures for goose hunting would not be allowed when teal is open)**24.5%**
- Discontinue September teal season **18.1%**

16. VDGIF is evaluating the possibility of expanding the September teal season west of I-95. As in Question 15 above, opening a teal season west of I-95 could reduce the number of days available for the use of special measures (1/2 hour after sunset, unplugged shotguns, electronic calls) for Canada goose hunting.

I am in favor of a September teal season west of I-95:

- Yes **51.5%**
- No **48.5%**

If a teal season were offered west of I-95 would you hunt teal there?

- Yes **30.9%**
- No **69.1%**

I am in favor of a September teal season west of I-95 only if it does not affect the September Canada goose season.

- Yes **62.8%**
- No **37.2%**

The following group of questions relates to constraints to waterfowl hunting in Virginia and ways to increase public input into the regulation process.

17. Please indicate to what extent you agree or disagree with each of the following attributes that make for an enjoyable waterfowl hunting experience:

	Strongly Agree	Does Not Matter	Strongly Disagree		
Seeing waterfowl.....	87.1	10.1	2.4	0.1	0.3
Being able to shoot at waterfowl.....	66.2	25.2	8.2	0.1	0.3
Being able to bag some waterfowl.....	63.3	26.9	9.2	0.5	0.2
Killing a limit.....	24.3	13.7	49.2	6.1	6.7
Being able to prepare and eat waterfowl.....	50.9	32.0	14.2	2.3	0.7
Being in the field & enjoying the outdoors...	89.3	8.9	1.6	0.1	0.2
Seeing the dog work.....	66.5	17.1	14.8	0.9	0.6
Calling ducks/geese.....	63.0	26.0	10.0	0.7	0.4
Using my waterfowling equipment.....	47.8	30.4	19.6	1.7	0.5
Being able to hunt with friends/family.....	85.3	12.3	2.2	0.1	0.1
Sharing stories of duck hunting experiences	71.5	19.9	7.7	0.7	0.2

18. Please indicate to what extent you agree or disagree with the establishment of waterfowl regulations in Virginia.

	Strongly Agree	Does Not Matter	Strongly Disagree		
I would like to provide more input into setting regulations	43.8	28.3	26.2	0.9	0.8
Other options for public input need to be pursued or developed.....	32.9	30.1	28.3	4.3	4.4
It is a hunter's responsibility to provide input on waterfowl regulations.....	55.2	31.7	10.6	1.7	0.9

19. What are your preferred methods to provide input for setting waterfowl regulations? (please check all that apply)

- Attend a public meeting **32.5%**
- Email comments to VDGIF **51.2%**
- Internet message board on VDGIF homepage **36.5%**
- Letter to VDGIF **16.7%**
- Phone call to VDGIF **19.6%**
- Focus group or advisory panel comprised of waterfowl hunters **35.4%**
- Other: _____ **5.9%**

If you would like to receive email notifications about waterfowl regulation public meetings, please provide your email address: _____

20. In the section below, please indicate what you feel are constraints to your participation in waterfowl hunting in Virginia:

	Strongly Agree	Does Not Matter	Strongly Disagree		
Limited places to hunt.....	47.4	27.2	14.7	5.4	5.3
Limited time I have available to hunt.....	38.1	29.9	21.0	6.0	5.0
Cost of license.....	13.3	15.2	43.0	10.0	18.5
Waterfowl regulations are too complicated	19.2	22.4	30.8	12.3	15.3
Blind Laws.....	22.5	17.2	39.2	9.3	11.8
Difficulty of duck identification.....	10.3	16.0	33.0	16.2	24.5
Conflicts with my other recreational interests.....	7.7	18.7	40.2	13.4	20.0
Equipment needs too great and/or expensive	5.7	14.0	44.6	16.8	18.9
Not enough waterfowl to make it worthwhile	10.7	22.5	27.9	19.1	19.8
Concerned about violating laws.....	15.6	20.1	25.5	12.8	26.0
Conflicts with other recreational users (e.g. boaters, fishermen).....	7.5	14.1	39.3	18.1	21.0
Concerns about safety and weather.....	7.1	12.2	39.1	16.5	25.2
I do not perceive any constraints to my waterfowl hunting.....	11.2	19.0	28.0	20.7	21.0

21. Where do you get information regarding waterfowl?

- VDGIF website **57.9%**
- VDGIF brochure or regulation pamphlet **45.2%**
- VDGIF presentations **2.0%**
- VDGIF staff **7.4%**
- Internet websites/forums **24.7%**
- Local media/newspapers **9.7%**

- Friends **55.6%** Television **11.5%**
 Conservation/hunting organizations (Ducks Unlimited, Delta Waterfowl) **47.2%**
 Popular magazines **29.9%**
 Other (please specify) **4.3%**

22. Please help us understand how you think about yourself and waterfowl hunting by selecting the one category that best describes you. (check only one)

- I'm learning how to become a waterfowl hunter. **11.9%**
 I think of myself as a waterfowl hunter. **70.6%**
 I used to think of myself as a waterfowl hunter, but no longer think of myself in those terms. **6.5%**
 I don't think of myself as a waterfowl hunter even though I have occasionally gone waterfowl hunting. **10.0%**
 I don't think of myself as a waterfowl hunter and don't see myself becoming one. **1.0%**

23. Do you currently hunt waterfowl?

- Yes **93.2%** No **6.8%**

24. How likely is it that you will waterfowl hunt in the future?

- Very likely **89.0%**
 Somewhat likely **8.8%**
 Somewhat unlikely **1.0%**
 Very unlikely **1.2%**

25. Are you currently serving as a mentor or the primary person helping another individual become a waterfowl hunter?

- Yes **46.6%** No **53.4%**

26. In the past, have you served as a mentor or the primary person helping another individual become a waterfowl hunter?

- Yes **60.2%** No **39.8%**

These last questions will help us understand some basic information about waterfowl hunters in Virginia. Please answer each question.

27. What year were you born? Average=1963 (i.e., 47 years old)

28. How many years have you been hunting waterfowl? Average=22.8 years

29. How many years have you been hunting waterfowl in Virginia? Average=19.2 years

30. What county (or city) do you live in? _____

31. Gender: Male **98.1%** Female **1.9%**

Appendix B. Cover letter for first survey mailing

February 22, 2010

Dear Waterfowl Hunter:

Thank you for participating in Virginia's Harvest Information Program (HIP) last season. Your participation in HIP has provided you with an opportunity to have input into Virginia's 2010 waterfowl season structure. We randomly selected 3000 HIP registered hunters, like you, who indicated they hunted ducks or geese last season and mailed them the enclosed questionnaire. Through this process we are pleased to be able to increase our knowledge and understanding of what waterfowl hunters would like the VDGIF to consider when setting seasons and bag limits in the future.

Please take a few minutes to complete the enclosed questionnaire. Return your questionnaire by placing it in the postage paid return envelope. If you have any questions, please do not hesitate to contact the agency's survey coordinator, Coren Jagnow, at 804-367-0730 or email her at coren.jagnow@dgif.virginia.gov. Thank you for your time and input.

Sincerely,

Robert Ellis
Director, Wildlife Division
Virginia Department of Game and Inland Fisheries

Appendix C. Reminder Postcard

Two weeks ago a questionnaire seeking your opinions about waterfowl hunting in Virginia was mailed to you. Your name was drawn in a random sample of Virginia's waterfowl hunters.

If you have already completed the survey and returned it, please accept our sincere thanks. If not, please do so at your earliest possible convenience. Because it has been sent only to a small, but representative sample of waterfowl hunters in Virginia it is important that yours also be included in the study if the results are to accurately represent waterfowl hunters' opinions.

If you have not received this questionnaire, or it was misplaced, please call Coren Jagnow at (804) 367-0730 and she will mail another questionnaire to you today.

Sincerely,

Robert Ellis
Director, Wildlife Division
Virginia Department of Game and Inland Fisheries