

PROJECT STATEMENT

STATE: DELAWARE

GRANT: W36R-10

GRANT TITLE: WILDIFE INVESTIGATIONS – SURVEYS

JOB SCHEDULE: OCTOBER 1, 2009 – SEPTEMBER 30, 2010



STATE: Delaware

GRANT NUMBER AND TITLE:

W 36R - Wildlife Investigation - Surveys

OBJECTIVE:

To provide population status and harvest information on several wildlife species in order to effectively manage their populations.

JOB NUMBER AND TITLE:

Job 1. Hunter Success Evaluation Survey

JOB OBJECTIVE:

To determine hunter activities and hunter take of game species in Delaware.

ACTIVITY:

A sample of hunter licenses on file from previous seasons (2006-07 for paper licenses and 2007-08 for internet licenses) was used to generate a hunter survey mailing list. A total of 4,359 survey forms, representing approximately 25% of Delaware's licensed hunters, were mailed in May 2009 to resident and non-resident hunters. No second mailing was sent to those not responding to the first mailing.

A total of 1,062 survey returns were received for a response rate of 24.4% percent. Results from the survey forms will be extrapolated based on the total resident and non-resident license sales for the 2008/09 season. Survey data were analyzed to calculate hunter effort, hunter success by species, and hunting area utilization.

TARGET DATE:

September 30, 2010

STATUS:

On schedule – per approved extension

REMARKS:

A total of 1,062 survey forms were returned by the 4,359 sportsmen sent surveys in April 2009 for a return rate of 24.4% percent. This return rate was down considerably from the 2006/07 survey which was 34.6%. Additionally, because our distribution list was generated

from hunting licenses sold in previous years (2006-07 and 2007-08), 177 respondents indicated they did not hunt during the 2008/09 season; therefore, the usable number of returned surveys was 885. One possible explanation for the lower return rate could be related to the fact that the survey was lengthened, with numerous additional questions, so perhaps hunters were less willing to complete the longer survey. We plan to evaluate whether longer surveys reduce our reporting rate during the next hunter survey. Although the distribution list was generated from 2006/2007 (paper license) and 2007/08 (internet) licenses, all data analysis and extrapolation were based on the number of hunting licenses sold during the 2008/09 hunting season (Table 1).

Before hunters were asked to describe their hunting effort and success, they were asked several demographic questions. The minimum, maximum, and median age of hunters surveyed was 14, 78, and 49, respectively. Meanwhile the minimum, maximum, and median number of years hunted were 0, 68, and 33, respectively. Additionally, because the Division is currently exploring the possibility of completing surveys via the internet, respondents were asked if they would be able to complete this survey if it were available online. A total of 68.3% of the respondents indicated they would complete the survey via the internet, whereas, 31.7% said they would not. The use of online surveys will be further evaluated in subsequent surveys.

The minimum, maximum, and median number of days hunted per hunter during the entire 2008/09 season for all species combined were 1, 135, and 17, respectively. Aside from deer, Canada geese and dabbling ducks received the highest levels of hunter activity (Table 2). Hunter activity was measured as the number of total number of days spent afield pursuing a particular species. Regarding total harvest, dabbling ducks, mourning doves, snow geese, and Canada geese were the four most harvested species (Table 2). The two most common upland game mammal species hunted and harvested were rabbits, and squirrels (Table 2). Hunter success is evaluated as the number of species killed per day. Pen-raised quail and mourning doves were the two most abundant species in a hunter's daily bag (Table 2). Interestingly, no respondents indicated they hunted for opossums, coyotes, or rails (Table 2).

Along with asking hunters which species they hunted, hunters were also asked if they hunted on publicly owned lands and how many days they spent hunting in each county. Furthermore, if they hunted on public land they were asked to indicate how many days they hunted on each public area found in Delaware (Table 3). Most hunters (98.6%) hunted on privately owned land exclusively or at least at some point during the entire season, whereas 48.6% of hunters hunted on publicly owned lands at some point during the season and only 1.4% of the hunters hunted exclusively on public land. The two areas that received the most hunters days were the C&D Canal Wildlife Area (9,744 hunter days) and Redden State Forest (8,854 hunter days)(Table 3). Sussex County, followed by Kent and New Castle Counties received the most number of days hunted by hunters (Table 4).

Questions were added to the survey questionnaire to determine how many hunters leased property for hunting opportunities in Delaware. Less than a third (30.7%) of the respondents indicated they paid a lease fee during the 2008/09 season. If a hunter indicated they paid a lease fee, they were asked to select which species they paid for the opportunity to hunt (deer, waterfowl, turkey, and/or small game). Hunters could select more than one option. Of those that indicated they paid a lease, deer hunting (75%) was the most common reason for paying a lease, followed by waterfowl (45.3%), small game (19.9%), and turkey (17.4%).

RECOMMENDATIONS:

This job should be continued as it provides important information used in evaluating hunting regulations and game management programs. Currently, the majority of Delaware's hunting licenses are sold as paper copies and are not in an electronic format. Therefore extensive time is annually spent entering the contact information from these licenses. In January 2010, all hunting licenses sold in Delaware will be in an electronic format so this hardship should be eliminated. Additionally the option of conducting an internet based survey will be explored. This internet option coupled with the electronic license availability should help the Division increase its survey sample size.

PREPARED BY:

Joseph E. Rogerson,
Game Mammal Biologist

REVIEWED BY:

Rob Hossler
Program Manager – Game Species

Table 1. Number of resident and nonresident hunting licenses and state waterfowl stamps sold in Delaware from 1995 through 2008.

Hunting Licenses - Historical Summary (Issued on a Fiscal Year - July 1 thru June 30)				
License Year	Unique Number of Resident Hunting Licenses	Unique Number of Non-Resident Hunting Licenses	Unique Number of Resident Waterfowl Stamps	Unique Number of Non-Resident Waterfowl Stamps
1995	19,518	1,945	11,514	750
1996	19,914	1,693	9,355	399
1997	20,257	1,731	8,863	436
1998	19,886	1,993	8,290	1,150
1999	19,422	2,295	9,020	1,252
2000	19,468	1,915	8,851	1,323
2001	18,921	1,997	8,272	1,236
2002	19,299	2,189	9,360	1,039
2003	18,088	2,017	9,427	754
2004	16,663	1,847	8,397	1,145
2005	16,957	2,599	9,057	1,006
2006	16,970	2,711	9,459	1,168
2007	17,013	2,877	8,161	1,936
2008	16,114	2,632	7,978	1,634

Table 2. Number of hunters, number of days hunted, total harvest, and harvest per day for all game species hunted in Delaware during the 2008/09 season.

Game Mammals

Category	Squirrel	Rabbit	Raccoon	Opossum	Red Fox	Gray Fox	Coyote	Deer				
								Shotgun	Muzzleloader	Handgun	Compound/Longbow	Crossbow
Number of Hunters	3114	3114	127	0	275	85	0	14319	9638	2669	6376	805
Number of Days Hunted	16840	19381	2563	0	1673	339	0	110294	54798	12624	99470	9892
Total Number Harvested	20059	24698	530	0	741	42	0	13366	5084	508	3050	254
Harvest per Hunter per Day	1.19	1.27	0.21	0	0.44	0.13	0	0.12	0.09	0.04	0.03	0.03

Game Birds

Category	Mourning Dove	Woodcock	Bobwhite Quail		Ring-necked Pheasant		Wild Turkey	Canada Goose	Snow Goose	Brant	Dabbling & Diving Ducks	Seaducks, Scoters, Eiders, etc...	Rails
			Wild Birds	Pen Raised Released Birds*	Wild Birds	Pen Raised Released Birds*							
Number of Hunters	4109	318	191	318	106	402	2139	5677	2648	254	4130	212	0
Number of Days Hunted	16522	1356	2118	890	275	1525	8049	51853	18195	381	42237	635	0
Total Number Harvested	77314	847	593	4681	21	3707	551	44609	58822	530	97289	1080	0
Harvest per Hunter per Day	4.68	0.63	0.28	5.26	0.08	2.43	0.07	0.86	3.23	1.39	2.30	1.70	0

Number of Hunters = The total number of hunters that pursued a particular species during the season.

Number of Days Hunted = The total number of days that hunters pursued a particular species during the season

Total Number Harvested = The total number of a particular species harvested throughout the entire season

Harvest per Hunter per Day = The total number harvested divided by the total number of days spent hunting that species.

Table 3. The number of hunters, number of days hunted, and average number of days hunted per hunter on all public hunting areas in Delaware during the 2008/09 season.

Wildlife Areas

	Assawoman	Augustine	Blackbird Reserve	Blackiston	C&D Canal	Cedar Swamp	Fortney & Urban	Little Creek	Marshy Hope	McGinnis Pond	Midlands	Milford Neck	Nanticoke	Norman G. Wilder	Old Furnace
Number of Hunters	614	868	233	572	932	911	42	868	127	169	424	678	318	635	360
Number of Days Hunted	4554	7287	974	4109	9744	4321	233	5931	508	911	5571	5338	3198	6376	2732
Avg. # of Days Hunted per Hunter	7.4	8.4	4.2	7.2	10.5	4.7	5.5	6.8	4.0	5.4	13.2	7.9	10.1	10.0	7.6

Wildlife Areas (continued) and State Parks

	Prime Hook (State WA)	Ted Harvey WA	Woodland Beach WA	Brandywine Creek SP	Cape Henlopen SP	Delaware Seashore SP	Fort DuPont SP	Holts Landing SP	Killens Pond SP	Lums Pond SP	Trap Pond SP	White Clay Creek SP
Number of Hunters	402	424	699	21	339	233	21	21	0	275	106	254
Number of Days Hunted	2372	5380	4618	21	2944	1144	21	21	0	1970	784	1822
Avg. # of Days Hunted per Hunter	5.9	12.7	6.6	1.0	8.7	4.9	1.0	1.0	0	7.2	7.4	7.2

State and Industrial Forest Lands and National Wildlife Refuges

	Blackbird SF	Redden SF	Taber SF	Industrial Forest Lands	Bombay Hook NWR	Prime Hook NWR
Number of Hunters	763	1165	254	318	445	614
Number of Days Hunted	5740	8854	2521	3156	1631	3220
Avg. # of Days Hunted per Hunter	7.5	7.6	9.9	9.9	3.7	5.2

Number of Hunters = The number of licensed hunters that hunted on a particular public hunting area during the 2008/09 season.

Number of Days Hunted = The total number of days hunted by licensed hunters on a particular public hunting area during the 2008/09 season.

Avg. # of Days Hunted per Hunter = The average number of days hunted per licensed hunter on a particular public hunting area during the 2008/09 season.

Table 4. The number of hunters, total number of days hunted, and the average number of days hunted per hunter in each of Delaware's three counties during the 2008/09 season.

Category	New Castle County	Kent County	Sussex County
Number of Hunters	5507	8536	8515
Total Number of Man Days Hunted	88117	151874	178479
Average # of Days Hunted per Hunter	16.0	17.8	21.0

STATE: Delaware

GRANT NUMBER AND TITLE:

W-36-R - Wildlife Investigations – Surveys

OBJECTIVE:

To provide population status and harvest information on several wildlife species in order to effectively manage their populations.

JOB NUMBER AND TITLE:

Job 2. Trapper Success Evaluation Survey

JOB OBJECTIVE:

To determine furbearer harvest and trapper activities in order to more effectively manage this valuable resource.

ACTIVITY:

A trapper survey was mailed in April 2009 to all trappers licensed during the 2007/08 season. A second mailing was sent to those not responding to the first mailing. A total of 85 survey forms were mailed and a total of 53 responses were received for a response rate of 62%. However, 26 of the 53 respondents indicated that they did not trap during the 2008/09 season creating a pool of only 27 usable surveys for our analysis. The number of trapping licenses sold in 2007/08 was down dramatically (52%) when compared to 2006/07, 85 and 177, respectively.

TARGET DATE:

September 30, 2010

STATUS:

On schedule – per approved extension

REMARKS:

The 2008/09 Delaware trapping survey was mailed in April 2009 to 85 licensed Delaware trappers. This constituted a 100% sample of the licensed trappers in Delaware during the 2007/08 season. The survey was mailed and included a cover letter explaining the purpose of the survey and how important it is to the Division's furbearer management efforts. Individuals not responding after one month were sent a second survey. The total response rate of 62% (53 responses) was up considerable when compared to the 2006 survey response rate (28%). Of the

53 responses, only 51% (27 individuals) indicated they were active trappers during the 2008/09 season. The reason individuals did not trap varied, but 12 individuals (46%) indicated a lack of time. Other reasons included lack of muskrats, lost access to property and injuries. Due to this small sample size, it was determined that this survey would probably not yield much more useful direct management information to the Division. Therefore, no further data analysis was conducted on this survey.

RECOMMENDATIONS:

This job should not be continued unless a way to increase response rate and the number of actual trappers surveyed is developed. Currently, trappers over the age of 65 and those individuals who own 20 or more acres and trap on their own lands do not need to purchase a trapping license in Delaware. Without a license, the Division has no way of knowing how many of these individuals there are and subsequently has no way to send them a survey. There is currently a regulation being proposed to require all licensed-exempt sportsmen to obtain a free hunting and/or trapping license. If this proposed regulation passes it will allow the Division to obtain contact information for these individuals, thereby increasing the number of trappers surveyed.

PREPARED BY:

Joseph E. Rogerson,
Game Mammal Biologist

REVIEWED BY:

Rob Hossler
Program Manager – Game Species

STATE: Delaware

GRANT NUMBER AND TITLE:

W 36R - Wildlife Investigations: Surveys

OBJECTIVE:

To provide population status and harvest information on several wildlife species in order to effectively manage their populations.

JOB NUMBER AND TITLE:

Job 3. Bobwhite Quail Population Survey

JOB OBJECTIVE:

To develop an index to bobwhite quail numbers through the use of a whistling male call count and a rural mail carrier survey.

ACTIVITY:

No activity

TARGET DATE:

September 30, 2010

STATUS:

This project was discontinued.

REMARKS:

N/A

RECOMMENDATIONS:

N/A

PREPARED BY:

Matthew T. DiBona, Game Bird Biologist

STATE: Delaware

GRANT NUMBER AND TITLE:

W 36R - Wildlife Investigations: Surveys

OBJECTIVE:

To provide population status and harvest information on several wildlife species in order to effectively manage their populations.

JOB NUMBER AND TITLE:

Job 4. Snow Goose Conservation Order Reporting Survey

JOB OBJECTIVE:

To satisfy the U.S. Fish and Wildlife Service's reporting requirements for state participation in a Snow Goose Conservation Order (CO).

ACTIVITY:

The Delaware Division of Fish and Wildlife developed an online registration system to collect and report participation and success during the spring 2009 Snow Goose Conservation Order.

TARGET DATE:

September 30, 2010

STATUS:

On schedule – per approved extension

REMARKS:

In anticipation of the Spring 2009 implementation of the Snow Goose Conservation Order (CO) that requires State wildlife agencies to record and report statistics associated with participation in the CO, a consultant was hired to develop an online registration and reporting system. Registration was required for a free permit for any hunter interested in participating in the CO. Registrants were advised to record their daily activity and success while participating in the CO and were provided with a permit number they must carry on their person as they would their hunting license. At the end of the conservation order, registrants were asked to revisit the website and report their success/activity information. The types of information collected included the number of days each individual participated in the CO, the number of individuals

utilizing expanded take options, and the number of snow geese killed or crippled by each participant using expanded take options (Attachment 1).

In Delaware, the Conservation Order ran from 10 March to 18 April 2010. A total of 262 permits were issued. However, only 166 registrants, a 63% response rate, provided activity/success information, despite two reminder notices that were mailed out to all participants. Of the 166 hunters that submitted data to the registration system, only 100 individuals actually hunted during the CO. An estimated 4917 snow geese were harvested during an estimated 822 hunter days. Expanding harvest methods were met with differing utilization rates. Sixty percent of hunters reported using unplugged guns and harvested an estimated 445 geese with the extra shells afforded by this measure. Electronic calls were used by 55% of hunters during the CO and assisted with the harvest of an estimated 1,515 geese. An estimated 357 snow geese were harvested during the extended shooting period from sunset and ½ hour after sunset; however, only 44% of hunters reported hunting during this time period. The 2010 Snow Goose Conservation Order will run from 1 February to 17 April 2010.

RECOMMENDATIONS:

This job should be continued but efforts should be made to increase response rate.

PREPARED BY:

Matthew T. DiBona
Game Bird Biologist

REVIEWED BY:

Rob Hossler
Program Manager – Game Species

STATE: Delaware

GRANT NUMBER AND TITLE:

W 36R - Wildlife Investigations: Surveys

OBJECTIVE:

To provide population status and harvest information on several wildlife species in order to effectively manage their populations.

JOB NUMBER AND TITLE:

Job 5. Species Specific Harvest Surveys

JOB OBJECTIVE:

To collect population and harvest information related to specific game species (deer, turkey, waterfowl, migratory gamebirds, upland game and furbearers) and information on hunter attitudes related to game species management.

ACTIVITY:

The Division included two, one-page species-specific surveys with the general Hunter Success Evaluation Survey (Job 1) mailed in May 2009. A sample of hunter licenses on file from previous seasons (2006-07 for paper licenses and 2007-08 for internet licenses) was used to generate a hunter survey mailing list. One survey consisted of questions specific to wild turkeys and the other, white-tailed deer (Attachment 2). A total of 4,359 survey forms, representing approximately 25% of Delaware's licensed hunters, were mailed in May 2009 to resident and non-resident hunters. All of those surveyed received the general Hunter Success Evaluation Survey, while half received the turkey survey (N = 2,179) and the other half received the deer survey (N = 2,180). No second mailing was sent to those not responding to the first mailing.

A total of 511 usable returns for the turkey survey and 551 useable returns for the deer survey were received for a response rate of 23.5% and 25.3%, respectively. Results from the survey forms will be extrapolated based on the total resident and non-resident license sales for the 2008/09 season.

The Division also conducted a migratory gamebird hunting survey designed to collect data on hunter participation, effort, habits and preferences related to migratory gamebird hunting, season dates, harvest packages, and the Division's administration of hunting on State Wildlife Areas. The 2008-2009 Delaware Harvest Information Program database was used as the sampling frame for this survey. Fifty percent of registered HIP hunters were randomly chosen to receive the survey (n=4212). A total of 1,311 usable responses were received, a response rate of 31%, thereby effectively sampling the opinions of 16% of the migratory bird hunters in Delaware.

TARGET DATE:

September 30, 2010

STATUS:

On schedule – per approved extension

REMARKS:**Deer Survey**

Of the 2,180 hunters that received a comprehensive deer hunting opinion survey, 551 responded and returned their survey; however because the Division was preparing for possible regulation changes to the deer hunting season structure and framework, the responses of those 424 hunters that hunted deer during the 2008/09 season were only used for analysis. Of those that were active deer hunters, the minimum, maximum, and median number of years respondents had been deer hunting were 1, 59, and 27 years.

In an effort to curb an overabundant deer population, the Division has established several short (8 days or less) shotgun or muzzleloader seasons throughout the five month archery season. In order to determine how many hunters are participating in each of these seasons, hunters were asked to indicate which deer seasons they hunted during 2008/09. The November Shotgun season had the highest hunter participation (90.1%), whereas the recently established January Handgun season had the lowest level of participation, 17.5% (Figure 1). These results were not surprising, as the November Shotgun season annually yields the highest deer harvest and handgun hunting is a specialized sport and is going to take time before it is adopted by many of the hunters.

Hunters were asked several questions relative to hunting methods and their attitudes towards buck harvest. Currently, hunters are allowed to bait for deer on private land but not public lands. During the 2008/09 season, 31.5% of the respondents said they baited for deer; however, 85.2% said baiting for deer should remain legal. Clearly, baiting is a highly supported activity amongst hunters and if this practice were to be altered or disallowed over concerns about disease transmission, ethics or habitat destruction these changes might be faced with significant pushback by some hunters requiring a strong educational campaign by the Division.

Another controversial issue amongst many hunters is the use of crossbows. Currently, crossbows may be used during most of the deer shotgun season or by individuals that receive a physical disability permit through the Division. The number of such permits being issued has been on the rise and with an overabundant deer population the Division is exploring new ways to harvest additional deer. Hunters were asked if they supported expanding the use of crossbows and then also asked to select from a list of six options which expansion they preferred the most. Results of this question were summarized by all of the respondents combined, and separated by those that said crossbow use should and should not be expanded (Tables 1 a-c). Overall, 60.9% of the respondents indicated that the use of crossbows should be expanded and the overall number one selected crossbow expansion option was to allow everyone to use them throughout

the archery season on both public and private land.

In recent years there seems to be a growing number of hunters that are interested in harvesting older aged, larger antlered bucks. Hunters were asked to answer the following question; “The Division of Fish and Wildlife has observed an increase in the number of hunters that are interested in harvesting more older aged bucks and we would like to solicit additional feedback from hunters. To manage for quality deer, the harvest of yearling bucks may need to be reduced to allow them the opportunity to reach older age classes. Are you in favor of such a change?” At greater than two to one, 68.3% of respondents answered yes to this statement. Respondents were then asked to select the management option they preferred from the list below that would achieve this goal.

Management Options:

1. Eliminate the hunters choice tag and make both tags quality buck tags
2. Reduce annual buck limit to 1 per hunter and the buck could have antlers of any size
3. Reduce annual buck limit to 1 per hunter and the buck must have a minimum antler spread
4. Eliminate all buck harvest

Currently, hunters receive two tags that can be used to harvest a buck (Hunter’s Choice Tag and Quality Buck Tag). The Hunter’s Choice Tag can be used on a buck with antlers of any size; however the quality buck tag may only be used on a buck with an outside antler spread of at least 15 inches, which in Delaware is defined as a Quality Buck. Essentially, this tag eliminates the likelihood of a hunter harvesting two yearling bucks in one season as very few yearling males have antlers that are 15 inches wide or greater. The number one management option selected was to eliminate the Hunter’s Choice Tag and provide hunters with two Quality Buck Tags. This option was supported among all survey respondents (41.1%) as well as those supporting older age class deer management (50.6%)(Table 2a and b). When the responses of those hunters that did not support want older age class deer management were analyzed, the number one choice selected was to reduce the buck limit to one but to eliminate antler restrictions (66.3%) (Table 2c). It was not surprising that hunters not supporting older age class deer management would select this option because it was the only option that allows the harvest of a buck of any age and any antler size. The Division plans to collect additional opinions from hunters on this management issue as well as collect additional biological data (age and antler characteristics) during future hunting seasons.

Turkey Survey

The Division developed and issued a turkey hunter survey to collect information on hunter experience, effort, and satisfaction (Attachment 2). Of the 2179 surveys sent out to hunters, a total of 511 usable survey responses were received. Hunters were asked several questions concerning their participation and success during the Spring 2009 gobbler season. Fifty-two of the 511 survey respondents reported hunting turkey during the spring 2009 season, suggesting 10% of our hunting population are turkey hunters. Only responses from these 52 active turkey hunters (hunters who participated in the spring 2009 season) were included in the subsequent analysis and summary.

Delaware turkey hunters reported hunting turkeys an average of 4.7 years in Delaware (median = 3.5 years; min 1, max 17) and harvesting 1.3 birds (min 0, max 5) during this time. Twenty-four percent of survey respondents (n=10) reported successfully harvesting a turkey during the spring 2009 season. Hunters were also asked a series of questions about where they turkey hunted and their associated hunting effort. The majority of respondents reported hunting in Kent County (n=26) followed by Sussex County (n=21) and New Castle County (n=4). The most popular turkey management zones for hunting were zones 6 (15% of respondents), 4 (12%) and 7 (12%) (Table3). Thirteen respondents reported hunting an average of 3 days on public property while 43 respondents reported hunting an average of 4.9 days on private property. Hunters were asked when most of their hunting occurred (Saturday vs. weekdays) and 34% replied that the majority of their hunting occurred on Saturday compared to 66% who said most of their hunting occurred on weekdays. When asked when most of their hunting effort occurred during Delaware's 3-week season, most replied hunting either during the first (n=30) or second (n=31) weeks, while only 12 hunters reported hunting most intensively during the third season week. Nine out of 35 hunters (26%) reported encountering interference from other hunters that they felt negatively affected their turkey hunting success.

Finally, hunters were asked to provide information on their turkey hunting habits and opinions regarding the overall turkey hunting season. When hunters were asked whether they immediately shot the first gobbler they had the opportunity to harvest or whether they choose to exclusively harvest mature gobblers instead of jakes, 38% responded that they "choose not to shoot jakes and only shoot toms." Twenty-five percent said they "shoot the first gobbler they have the opportunity to harvest" and 37% indicated they prefer to "hold out for a tom, but as the season nears its end, [they] will shoot any bearded bird." Hunters were asked to provide their opinion on the current length of the 18-day Delaware spring turkey season; 57% felt the season length was appropriate, 43% felt is too short, and no respondents indicated the season was too long. Hunters were also asked to rate their satisfaction with the spring 2009 turkey season. Most hunters were satisfied (an excellent to good rating) with the season (71%; Figure 2). Survey data will be used by the Division to inform harvest management decisions and incorporate human dimensions considerations associated with sport-hunting of wild turkeys in Delaware.

Migratory Gamebird Survey

The Division conducted a migratory gamebird hunting survey designed to collect data on hunter participation, effort, habits and preferences related to migratory gamebird hunting, season dates, harvest packages, and the Division's administration of hunting on State Wildlife Areas. The 2008-2009 Delaware Harvest Information Program database was used as the sampling frame for this survey. Fifty percent of registered HIP hunters were randomly chosen to receive the survey (n=4212). A total of 1,311 usable responses were received, a response rate of 31%, thereby effectively sampling the opinions of 16% of the migratory bird hunters in Delaware.

The complete report of survey questions and results is provided in Attachment 3. Survey results will be incorporated into the state-level season setting process to maximize hunter satisfaction and to provide input to the Atlantic Flyway Council and U.S. Fish and Wildlife Service related to migratory gamebird season and harvest packages. In addition, data collected relative to hunter preferences for hunting rules on State Wildlife Areas will be considered into decision making for future hunting season, where possible.

RECOMMENDATIONS:

This job should be continued as it provides important information used in evaluating hunting regulations and game management programs. Currently, the majority of Delaware's hunting licenses are sold as paper copies and are not in an electronic format. Therefore extensive time is annually spent entering the contact information from these licenses. In January 2010, all hunting licenses sold in Delaware will be in an electronic format so this hardship should be eliminated. Additionally the option of conducting an internet based survey will be explored. This internet option coupled with the electronic license availability should help the Division increase its survey sample size.

PREPARED BY:

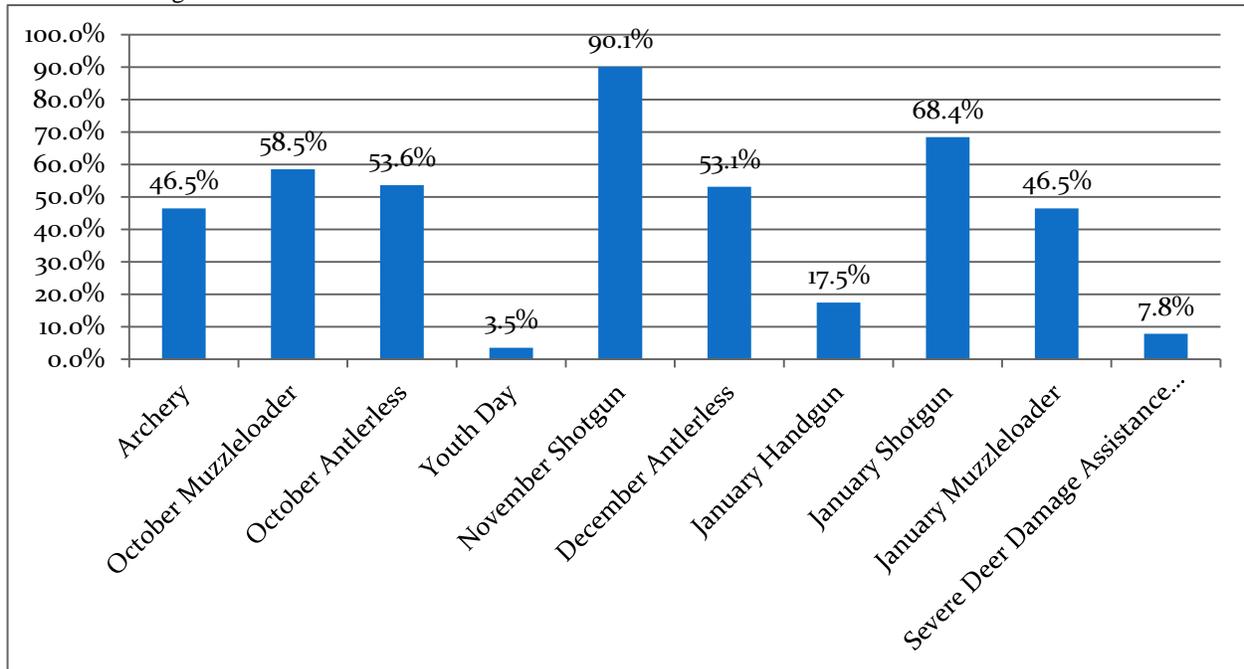
Joseph E. Rogerson
Game Mammal Biologist

Matthew T. DiBona
Game Bird Biologist

REVIEWED BY:

Rob Hossler
Program Manager – Game Species

Figure 1. Percent of Hunters that Participated in Each of Delaware's Individual Deer Hunting Seasons during the 2008/09 Hunting Season.



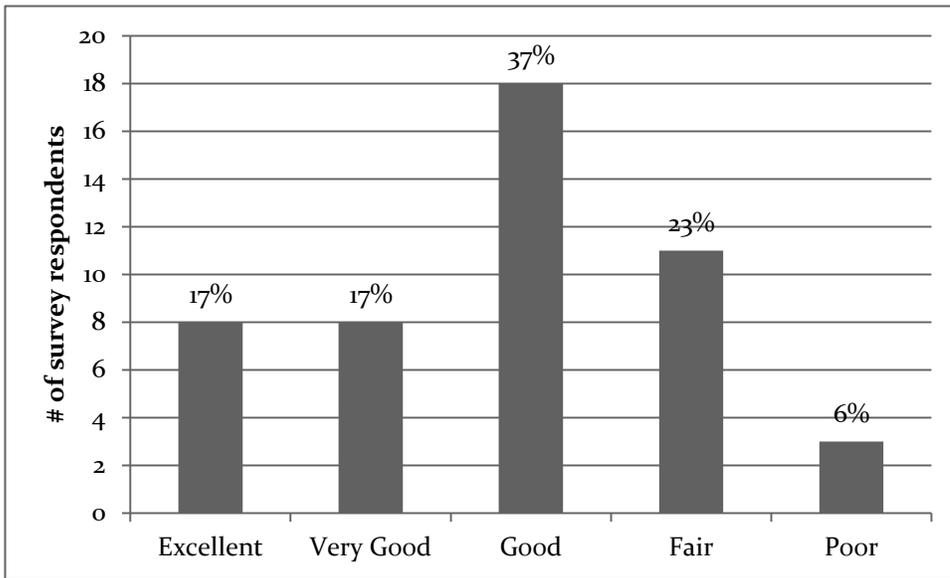


Figure 2. Hunter satisfaction with the Spring 2009 turkey season

Table 1. Crossbow expansion options selected by respondents to the 2008/09 Delaware Hunter Mail Deer Survey.

Table 1a. Responses from all respondents combined

All Responses		
Which option would you support the most if crossbows were expanded?	Responses	Percent
Allowed during a segment of the archery	73	19.80%
Allowed entire season on private land ONLY	44	12.00%
Allowed entire season on public and private land	148	40.20%
Allowed for senior citizens AND youth	15	4.10%
Allowed for senior citizens ONLY	65	17.70%
Allowed only in urban areas	23	6.30%

Table 1b. Responses from respondents that said crossbow use should be expanded.

Answered Yes to Crossbow Expansion		
Which option would you support the most if crossbows were expanded?	Responses	Percent
Allowed during a segment of the archery	37	15.90%
Allowed entire season on private land ONLY	34	14.70%
Allowed entire season on public and private land	135	58.20%
Allowed for senior citizens AND youth	7	3.00%
Allowed for senior citizens ONLY	13	5.60%
Allowed only in urban areas	6	2.60%

Table 1c. Responses from respondents that said crossbow use should not be expanded.

Answered No to Crossbow Expansion		
Which option would you support the most if crossbows were expanded?	Responses	Percent
Allowed during a segment of the archery	34	28.10%
Allowed entire season on private land ONLY	8	6.60%
Allowed entire season on public and private land	5	4.10%
Allowed for senior citizens AND youth	8	6.60%
Allowed for senior citizens ONLY	51	42.10%
Allowed only in urban areas	15	12.40%

Table 2. Deer harvest management options selected by respondents to the 2008/09 Delaware Hunter Mail Deer Survey regarding the establishment of an older aged buck population structure.

Table 2a. Responses from all respondents combined

All Responses		
Which deer management option do you prefer?		
	Responses	Percent
Eliminate all buck harvest	2	0.50%
Make both buck tags Quality Buck Tags	153	41.10%
Reduce buck limit to one (any size antlers)	132	35.50%
Reduce buck limit to one (quality buck only)	85	22.80%

Table 2b. Responses from respondents that said Division should be managing for older aged bucks.

Answered Yes to Implement QDM		
Which deer management option do you prefer?		
	Responses	Percent
Eliminate all buck harvest	2	0.80%
Make both buck tags Quality Buck Tags	126	50.60%
Reduce buck limit to one (any size antlers)	53	21.30%
Reduce buck limit to one (quality buck only)	68	27.30%

Table 2c. Responses from respondents that said the Division should not be managing for older aged bucks.

Answered No to Implement QDM		
Which deer management option do you prefer?		
	Responses	Percent
Eliminate all buck harvest	0	0.00%
Make both buck tags Quality Buck Tags	24	23.80%
Reduce buck limit to one (any size antlers)	67	66.30%
Reduce buck limit to one (quality buck only)	10	9.90%

Table 3. Summary of turkey hunting effort by Turkey Management Zone (TMZ).

TMZ	# of hunters
1	2
2	3
3	1
4	4
5	2
6	5
7	4
8	0
9	2
10	0
11	2
12	2
13	3
14	1
15	0
16	1
17	1
Total	33 ^a

^a Only 33 (63%) of the 52 respondents answered this question.

Attachment 1 -- 2009 Snow Goose Conservation Order Reporting Form

Please use this form to keep a daily record of your hunting activity under the Conservation Order. For each day you hunt geese please record the date, the county where you were hunting, and the number of geese you harvested (*even if you harvested zero geese!*). When reporting harvested geese please separate your harvest into the total number of geese you shot and retrieved and as well as any geese you shot but were unable to retrieve. In addition to the total harvest, please indicate if any of the geese you killed were harvested using 1) the extra shells allowed in unplugged shotguns, 2) electronic calls, and/or 3) during the extended shooting hours from sunset to 1/2 hour after sunset. At the bottom of the form, please tally your harvest activities for each column. Please visit the Conservation Order website www.dehip.com and submit your results by May 31, 2009 (Note: additional sheets are available by visiting the website). *Even if you did not harvest any geese you must report this on the website. Failure to report your information may make you ineligible to participate in the 2010 spring season!*

Date	County	# of Geese Shot and Retrieved				# of Geese Downed and NOT Retrieved			
		Total	Using 4 th , 5 th , or 6 th Shell	Using an Electronic Call	After Sunset	Total	Using 4 th , 5 th , or 6 th Shell	Using an Electronic Call	After Sunset
Total # of days Hunted:		Total Harvest:				Total Harvest:			

POST-SEASON SUMMARY

Please tell us the total # of days you hunted and the total # of geese shot and retrieved in each county:

New Castle: __ days / __ killed Kent: __ days / __ killed Sussex: __ days / __ killed

Please describe you weekly hunting activity and success during the Conservation Order:

ATTACHMENT 2 Delaware Hunter Mail Survey – 2008/09 Hunting Season

PLEASE FILL OUT AND RETURN THIS REPORT WITHIN ONE WEEK OR ASAP EVEN IF YOU DID NOT HUNT

Do not remove any portion of this form. When you have completed the questionnaire, please place it in the self addressed, prepaid envelope and mail to the Division of Fish & Wildlife as soon as possible. No postage required.

INSTRUCTIONS:

Please answer all questions. For Question 5: Below each animal listed write the total number of days *you* hunted each animal and the number *you* harvested during the entire season. If you hunted an animal but did not kill any, please put a zero (0) in the harvest box under that animal. If you did not hunt a particular species please leave the column blank. If you hunted more than one game species on a particular day, count it as 1 day for each species hunted. Report only game taken *yourself* and do not include game taken by other members of your party. Please only include game harvested in Delaware.

1. How old are you? _____ How many years have you been hunting? _____
2. Would you be able to complete this survey if it were available online? YES NO
3. Did you purchase a hunting license for the 2008/09 hunting season? YES NO
4. Did you hunt in Delaware during the 2008/09 hunting season? YES NO If you did not hunt during the 2008/09 season, you are finished with the survey. However, please return the entire survey as your information will still be included in our analyses. Thank you for your time.
5. Please indicate the number of days you hunted in Delaware and the total number harvested for each species. Please do not include in your harvest totals any animals that were trapped, we have a separate survey for trapping.

Game Mammals

Category	Squirrel	Rabbit	Raccoon	Opossum	Red Fox	Gray Fox	Coyote	Deer					
								Shotgun	Muzzleloader	Handgun	Compound/Longbow	Crossbow	
Number of Days Hunted													
Total Number Harvested													

Game Birds

Category	Mourning Dove	Woodcock	Bobwhite Quail		Ring-necked Pheasant		Wild Turkey	Canada Goose	Snow Goose	Brant	Dabbling & Diving Ducks	Seaducks, Scoters, Eiders, etc...	Rails
			Wild Birds	Pen Raised Released Birds*	Wild Birds	Pen Raised Released Birds*							
Number of Days Hunted													
Total Number Harvested													

**If you are unsure whether the birds that you harvested were pen raised released birds please indicate them as wild birds.*

6. Please indicate the total number of days you hunted in each county during the 2008/09 hunting season:
 New Castle: _____ Kent: _____ Sussex: _____
7. Did you pay a lease to hunt on private property during the 2008/09 season? YES NO If yes, for which species did you pay to hunt? (check all that apply) Deer Waterfowl Turkey Small Game/Other

8. Please indicate which land types you hunted during the 2008/09 hunting season. (check all that apply)
 Private Land Public Land If you hunted on public land, please indicate the number of days that you
 hunted on each area below.

Wildlife Areas

	Assawoman	Augustine	Blackbird Reserve	Blackiston	C&D Canal	Cedar Swamp	Fortney & Urban	Little Creek	Marshy Hope	McGinnis Pond	Midlands	Milford Neck	Nanticoke	Norman G. Wilder	Old Furnace
Number of Days															

Wildlife Areas (continued) and State Parks

	Prime Hook (State WA)	Ted Harvey WA	Woodland Beach WA	Brandywine Creek SP	Cape Henlopen SP	Delaware Seashore SP	Fort DuPont SP	Holts Landing SP	Killens Pond SP	Lums Pond SP	Trap Pond SP	White Clay Creek SP
Number of Days												

State and Industrial Forest Lands and National Wildlife Refuges

	Blackbird SF	Redden SF	Taber SF	Industrial Forest Lands	Bombay Hook NWR	Prime Hook NWR
Number of Days						

Additional Information – Wild Turkey Survey

1. Did you hunt wild turkeys during the Spring 2009 Season? YES NO *If you did not hunt turkeys during the spring 2009 season, you are finished with the survey. However, please return the entire survey as your information will still be included in our analyses. Thank you for your time.*
2. How many years, including 2009, have you hunted turkeys in Delaware? _____
3. How many turkeys have you harvested in Delaware during those years? _____
4. Did you kill a turkey during the Spring 2009 season in Delaware? YES NO
5. Did you shoot and wound a turkey that you were unable to retrieve during the Spring 2009 season? _____
6. In which Delaware county or counties did you hunt turkeys during the Spring 2009 season? (*check **all** that apply*)

New Castle Kent Sussex
7. In which turkey management zone(s) (see included map) did you hunt during the Spring 2009 season? _____
8. Approximately how many days did you hunt on public or private lands during the Spring 2009 season?

of days hunted on public land _____ Which area? _____ Season A B C

of days hunted on private land _____
9. On which days did you do **most** of your turkey hunting (*check only one*) Saturdays Weekdays
10. When did you do most of your turkey hunting during the 3-week spring season (*check **all** that apply*)

First Week Second Week Third Week
11. Did you encounter interference from other hunters that you feel negatively affected your turkey hunting success?

YES NO
12. Do you feel that the length of the current regular hunting season (3 weeks) is (*check one*):

Too Short About Right Too Long
13. Please check the statement that best describes your turkey hunting habits.

_____ I shoot the first gobbler (jake or tom) that gives me the opportunity.

_____ I choose not to shoot jakes (juvenile males) and only shoot toms (adult males).

_____ I will hold out for a tom but as the season nears its end, I will shoot any bearded bird.
14. If you saw turkeys while hunting during the Spring 2009 season, what is the greatest number of hens and gobblers you saw in one day?

of hens _____ # of gobblers _____

15. How would you rate your Spring 2009 turkey hunting experience?

Excellent Very Good Good Fair Poor

Comments: _____

Additional Survey Information

White-tailed Deer Survey

1. Did you hunt deer during the 2008/09 season? YES NO If you did not hunt deer during the 2008/09 season, you are finished with the survey. However, please return the entire survey as your information will still be included in our analyses. Thank you for your time.
2. How many years have you deer hunted? _____
3. Please indicate the following deer seasons in which you hunted during the 2008/09 season. (check all that apply)
- | | | |
|--|---|---|
| <input type="checkbox"/> Archery | <input type="checkbox"/> October Muzzleloader | <input type="checkbox"/> October Antlerless |
| <input type="checkbox"/> Youth Day | <input type="checkbox"/> November Shotgun | <input type="checkbox"/> December Antlerless |
| <input type="checkbox"/> January Handgun | <input type="checkbox"/> January Shotgun | <input type="checkbox"/> January Muzzleloader |
- Hunted on a farm enrolled in the Severe Deer Damage Assistance Program (SDDAP - red deer harvest tags)
4. Did you use bait to hunt deer during the 2008/09 hunting season? YES NO
5. Should baiting for deer continue to be allowed? YES NO
6. Would you be in favor of expanding the use of crossbows during the archery season? YES NO
7. If the use of crossbows were to be expanded, please select the option that you *support the most*. You may only select *one* option. Carefully read all of the options before choosing.
- _____ Allowed statewide throughout the archery season (Sep. 1 – Jan. 31) on public and private lands
 - _____ Allowed statewide throughout the archery season (Sep. 1 – Jan. 31) on private land only
 - _____ Allowed statewide during a segment of the current archery season only (i.e. 2 weeks only)
 - _____ Allowed statewide only for senior citizens 65 years old or older
 - _____ Allowed statewide only for senior citizens 65 years old or older and youth under 16
 - _____ Allowed only in designated urban areas
8. The intent of the quality buck tag is to minimize the additional harvest of yearling bucks. Please select the statement that best represents your opinion on the current minimum outside antler spread requirement of 15 inches.
- Make it smaller (i.e. less than 15 inches) Keep it the same (15 inches) Make it larger (i.e. greater than 15 inches)
9. The Division of Fish and Wildlife has observed an increase in the number of hunters that are interested in harvesting more older aged bucks and we would like to solicit additional feedback from hunters. To manage for quality deer, the harvest of yearling bucks may need to be reduced to allow them the opportunity to reach older age classes. Are you in favor of such a change? YES NO
10. If the buck harvest needed to be reduced in order to increase the age structure of the herd, please select the option that you *support the most*. You may only select *one* option. Carefully read all of the options before choosing.
- _____ Eliminate the hunters choice tag and make both tags quality buck tags
 - _____ Reduce annual buck limit to 1 per hunter and the buck could have antlers of any size
 - _____ Reduce annual buck limit to 1 per hunter and the buck must have a minimum antler spread
 - _____ Eliminate all buck harvest
11. Additional Comments: _____

ATTACHMENT 3 Results of 2008-2009 Waterfowl and Migratory Game Bird Hunter Survey

Thank you for taking time to complete this survey. Your input is greatly appreciated and the information generated from this survey will be used to help the Delaware Division of Fish and Wildlife better manage waterfowl, mourning dove, and other migratory game bird populations in Delaware and better incorporate hunter attitudes in these management decisions.

INSTRUCTIONS: Please fill out and return this survey as soon as possible *even if you did not hunt*. Your responses should only pertain to your waterfowl and migratory game bird hunting in Delaware. Do not remove any portion of this form. When you have completed the questionnaire, please place it in the self addressed, prepaid envelope and mail to the Division of Fish & Wildlife as soon as possible. No postage required.

1. How old are you? _____ How many years have you been hunting? _____

Mean = 46 years old
Median = 47 years old

Mean = 31 years hunting
Median = 32 years hunting

2. Would you be able to complete this survey if it were available online? YES NO

of respondents that answered YES: 929
of respondents that answered NO: 354
Did Not Answer = 35

3. **Did you hunt waterfowl** during the 2008-2009 season? (Check only **ONE**)

Yes No

of respondents that answered YES: 970
of respondents that answered NO: 327
Did Not Answer = 25

If you answered "no" please go to the Mourning Dove Section (question #36)

General Waterfowl Hunting Information

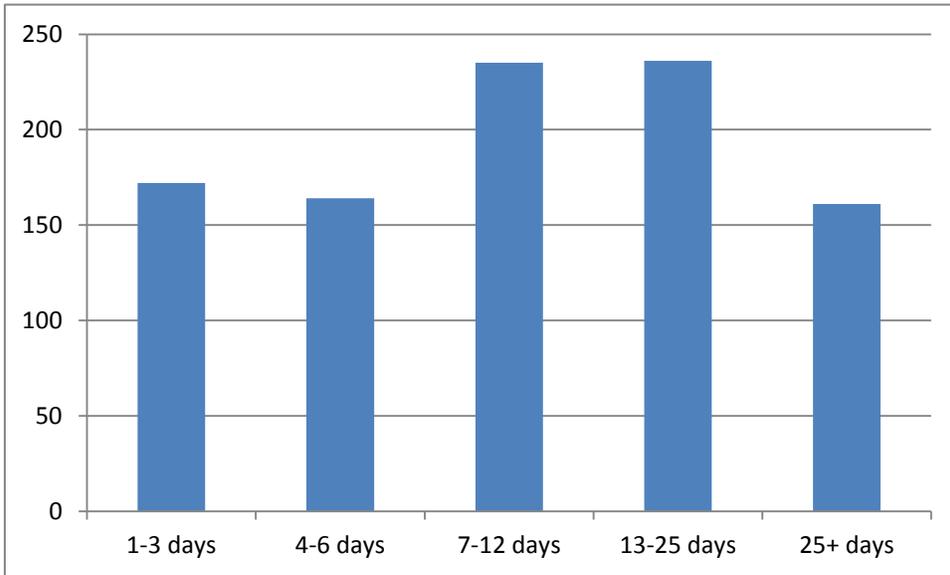
4. How many years have you hunted waterfowl? _____ years

Mean = 24 years
Median = 23 years
Did Not Answer = 30

5. Approximately, **how many days** did you hunt waterfowl during the 2008-2009 season? (Check only **ONE**)

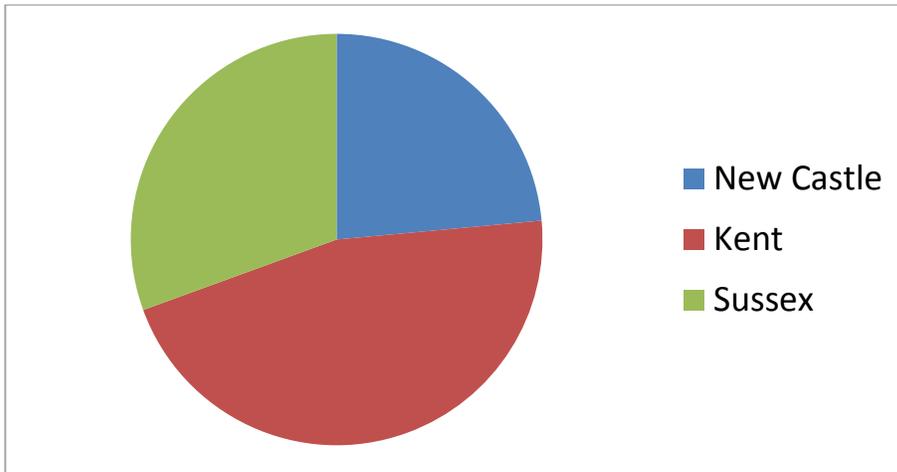
- A. 1-3 days N=172
 B. 4-6 days N=164
 C. 7-12 days N=235
 D. 13-25 days N=236
 E. 25+ days N=161

Did Not Respond = 2



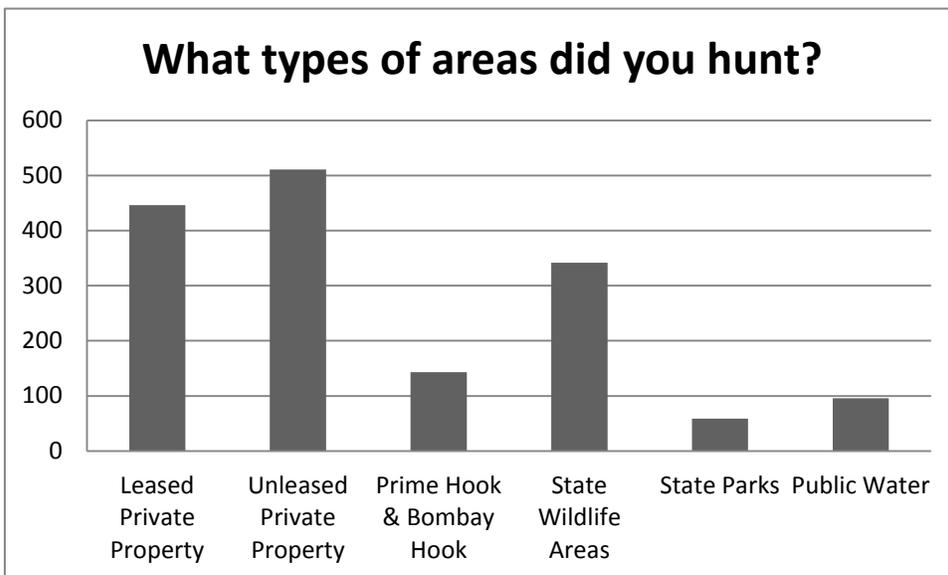
6. In which county did the majority of your waterfowl hunting occur? (Check only **ONE**)

- New Castle N=221
- Kent N=431
- Sussex N=287
- Did Not Respond = 31



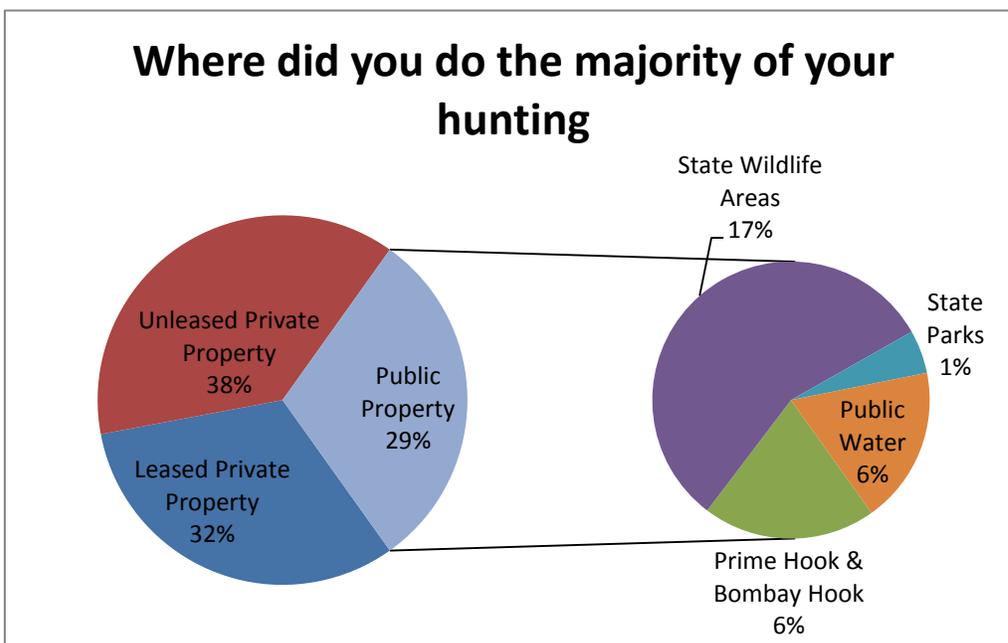
7. What types of areas did you hunt during the 2008-2009 waterfowl season in Delaware? (Check **ALL** that apply)

- Private property (Leased) N=446
- State Wildlife Area N=342
- Private property (Unleased) N=551
- State parks N=59
- Prime Hook/Bombay Hook NWRs N=143
- Other N=96



8. Where did you do the majority of your hunting? (Check only ONE)

- Private property (Leased) N=334
- Private property (Unleased) N=396
- Prime Hook/Bombay Hook NWRs N=64
- State Wildlife Area N=179
- State Parks N=16
- Public water N=58



9. Of the following types of habitats, **where did you hunt** waterfowl during the 2008-2009 season in Delaware? (**Check ALL that apply**)

Inland Rivers and streams (non tidal)

N=144

Inland, non-tidal wetlands (pot holes, small ponds)

N=196

Managed impoundments

N=223

Inland Bays

N=104

Agricultural fields

N=596

Tidal marshes NOT on Delaware River or Bay coast

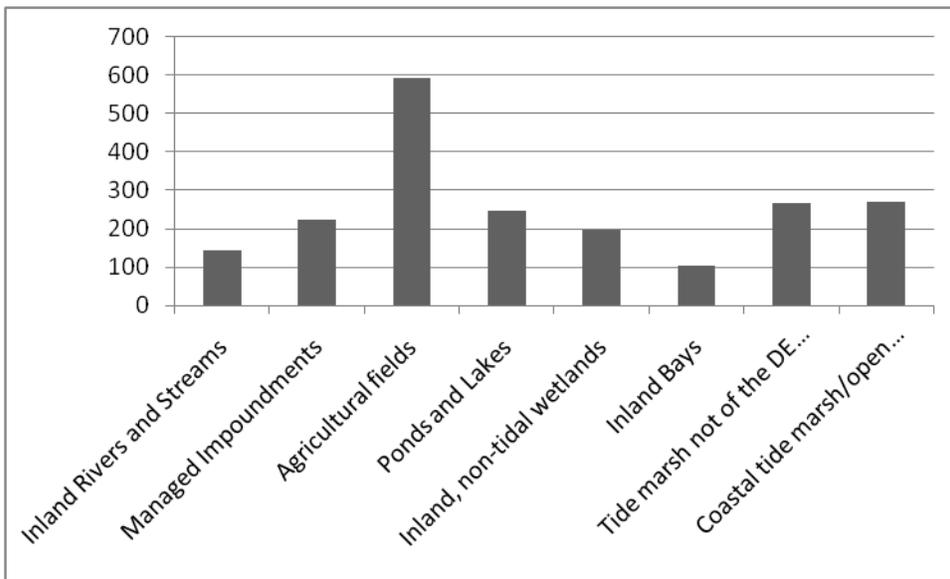
N=267

Ponds and Lakes

N=247

Coastal tide marsh & open waters of the Delaware River and Bay

N=271



10. Which of the following **waterfowl hunting methods** did you use in 2008-2009 in Delaware? (**Check ALL that apply**)

Hunting over decoys N=928

Pass shooting (no decoys) N=145

Stationary blinds N=669

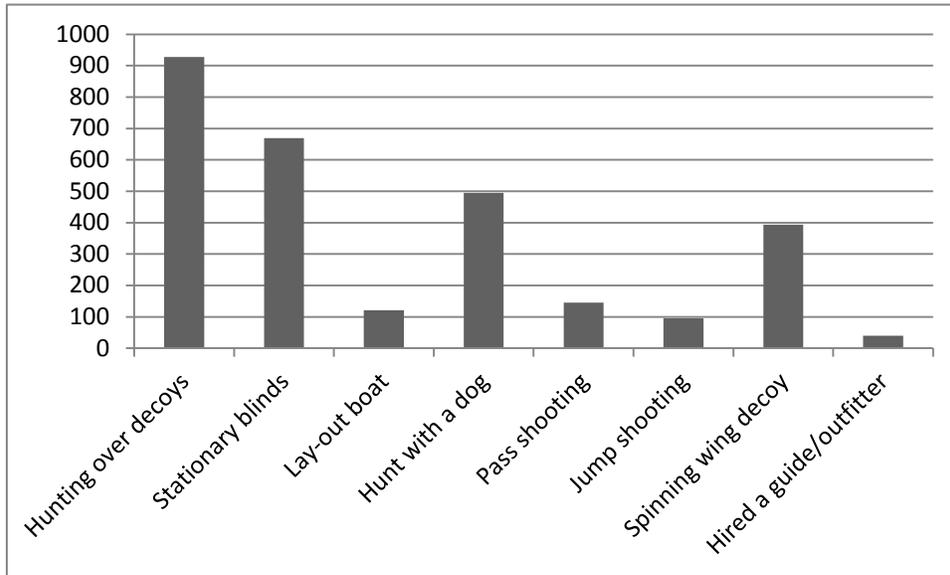
Jump shooting N=96

Lay-out Boat N=121

Used a spinning wing decoy N=394

Hunt with a dog N=495

Hired a guide/outfitter N=40



Early Season Questions

11. Did you hunt Canada geese during the September Resident Canada Goose Season?

Yes N=266 No N=685 DID NOT ANSWER N=19

12. In 2008-09 the September Resident Canada Goose Season was extended an extra ten days and ran from Sept. 1st – 25th. **Did you hunt Canada Geese during these extra ten days (Sept.16th - 25th)?**

Yes N=195 No N=749 DID NOT ANSWER N=26

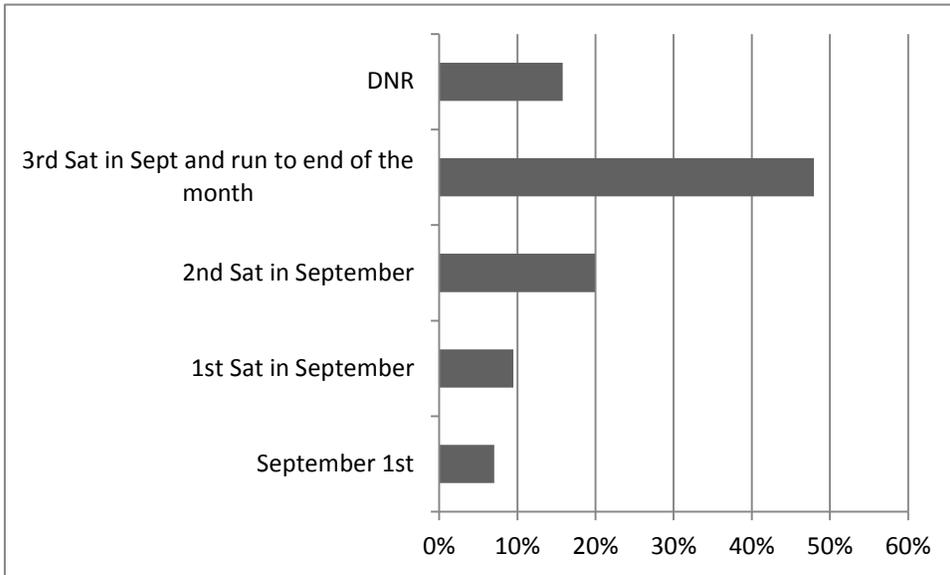
13. Did you hunt teal during the 2008 September Teal Season?

Yes N=215 No N=735 DID NOT ANSWER N=20

14. The 9-day September Teal Season must occur on consecutive days between September 1st and September 30th. **When in September should the 9-day early teal season open? (Check only ONE)**

A. September 1st N=68 C. Second Saturday in September N=193
 B. First Saturday in September N=92 D. Third Saturday in September and run to the end of the Month N=464

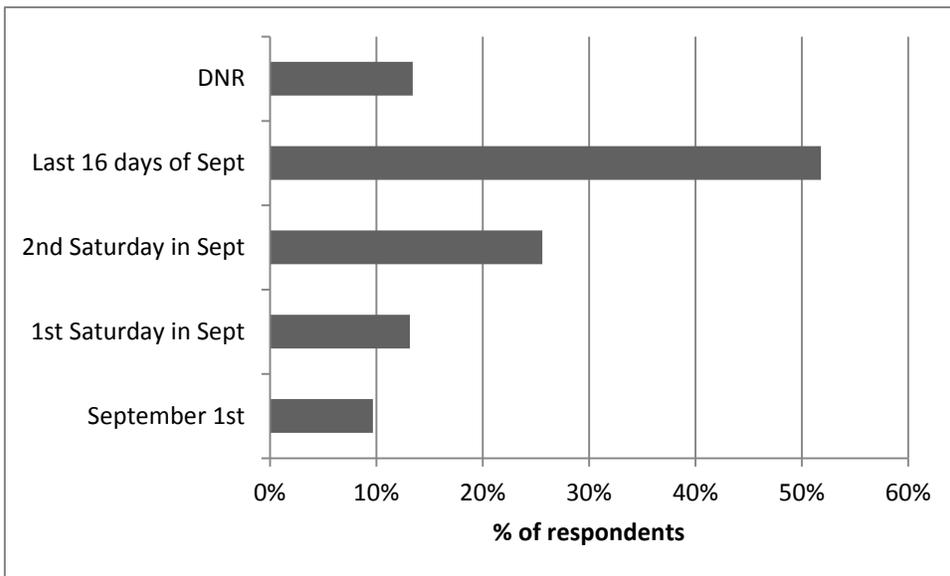
DID NOT ANSWER = 153



15. If the September Teal Season was **extended to a 16-day consecutive season**, when in September should the season open? (Check only **ONE**)

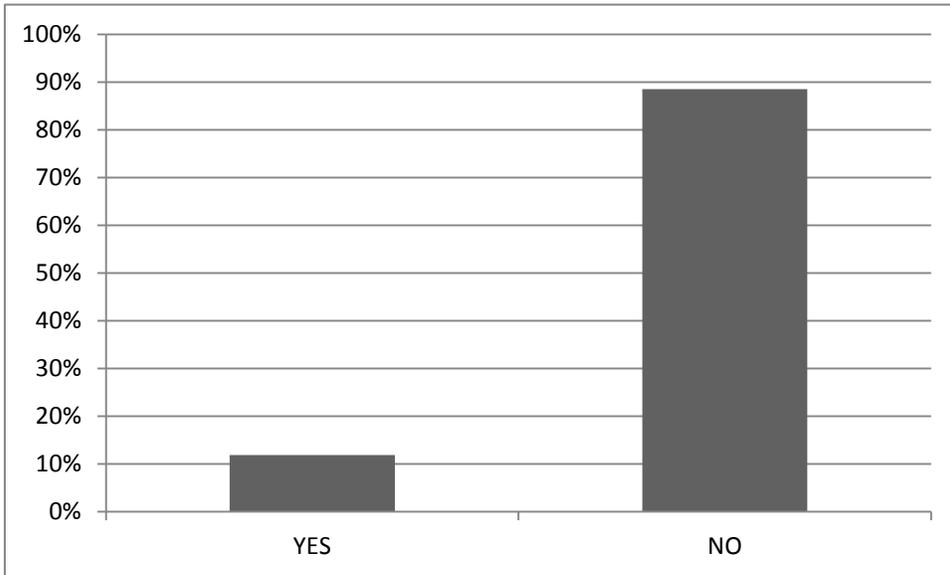
- A. September 1st N=81
- B. First Saturday in September N=110
- C. Second Saturday in September N=214
- D. Open season to coincide with the last 16 days of September N=433

DID NOT ANSWER = 130



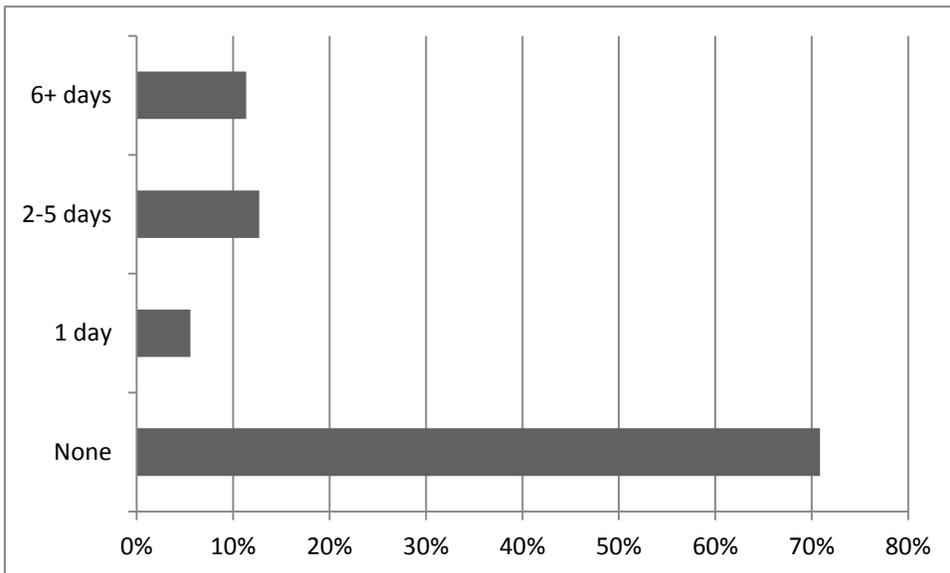
16. Did you take a youth hunting on Youth Waterfowl Day (October 4th) during the 2008-2009 season?

- Yes N=111
- No N=825 DID NOT ANSWER = 34



17. How many days did you take a youth (15 or younger) waterfowl hunting during the 2008-2009 season? (Check **ONE**)

- A. None N=625
 B. 1 day N=49
 C. 2-5 days N=112
 D More than 5 days N=100
 DID NOT ANSWER = 84



Regular Duck Season

18. Did you **duck hunt** during the 2008-2009 regular duck season?

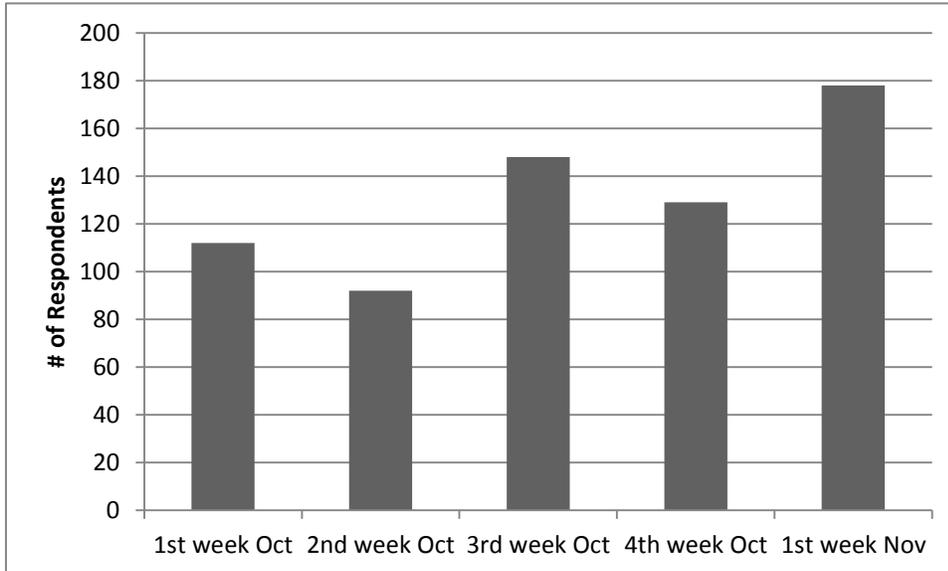
- Yes N=788
 No N=144
 DID NOT ANSWER = 38

If you answered “no” please go to the Canada Goose Season Section (question #30)

19. Assuming a 60-day season, **when would you like to start each split?**

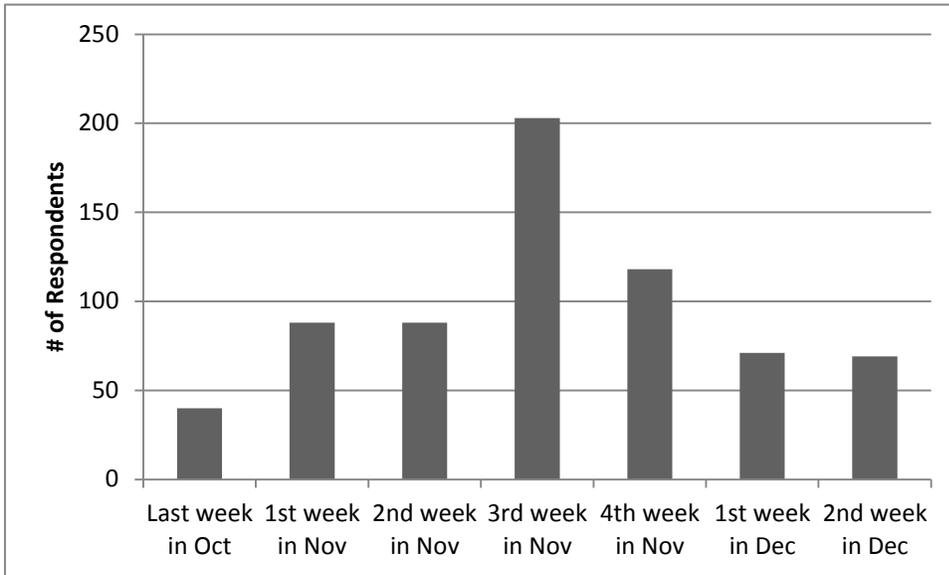
First Split

- A. 1st week in October N=112
 - B. 2nd week in October N=92
 - C. 3rd week in October N=148
 - D. 4th week in October N=129
 - E. 1st week in November N=178
- DID NOT ANSWER = 130



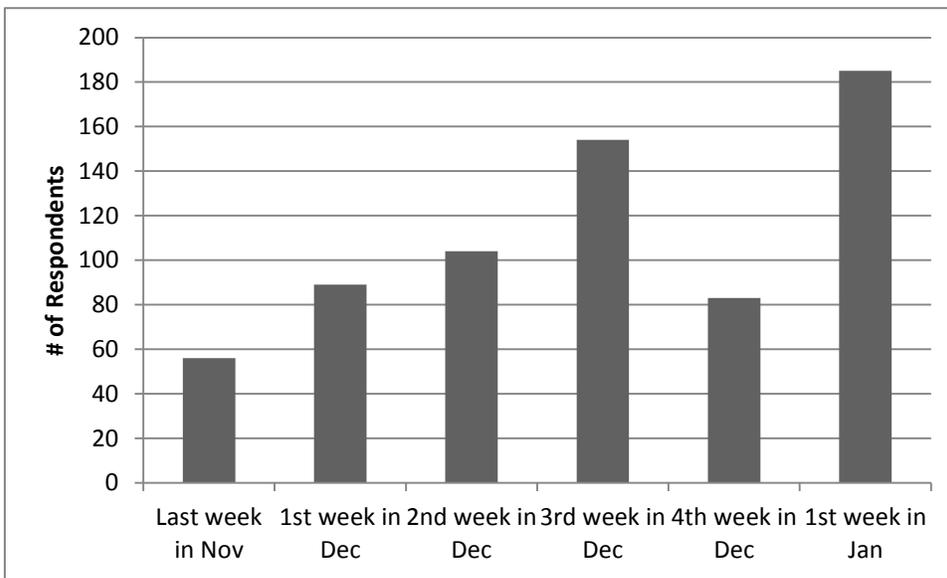
Second Split

- A. Last week in October N=40
 - B. 1st week in November N=88
 - C. 2nd week in November N=88
 - D. 3rd week in November N=203
 - E. 4th week in November N=118
 - F. 1st week in December N=71
 - G. 2nd week in December N=69
- DID NOT ANSWER = 112



Third Split

- A. Last week in November N=56
 - B. 1st week in December N=89
 - C. 2nd week in December N=104
 - D. 3rd week in December N=154
 - E. 4th week in December N=83
 - F. 1st week in January N=185
- DID NOT ANSWER = 118



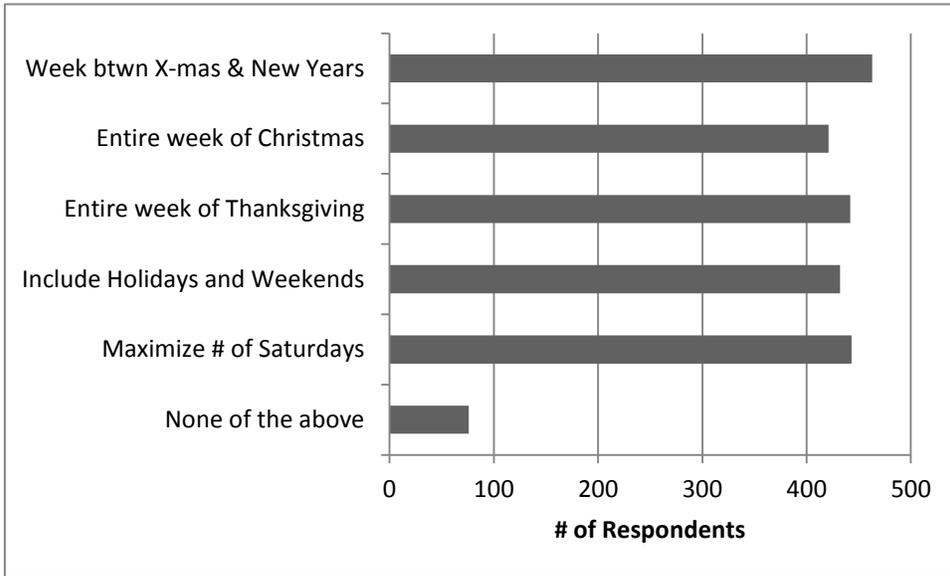
20. How many hunting days would you like in each split? The federal framework allows a total of three splits.

+ + = 60 days

MEAN	14	18	28
MODE	20	20	20
MEDIAN	14	20	30

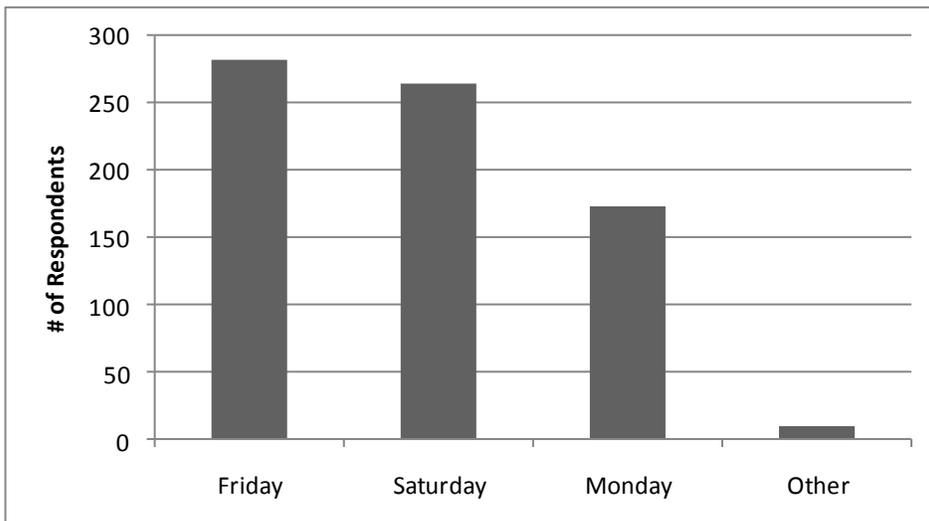
21. When setting dates for season splits, the Division should make every effort to: (**Check ALL that apply**)

- A. maximize the number of Saturdays N=443
- B. include holidays and long weekends N=432
- C. include the entire week of Thanksgiving N=442
- D. include the entire week of Christmas N=421
- E. include the week between Christmas and New Years Day N=463
- F. None of the Above/Other: _____ N=76



22. In general, season splits should open on a: (**Check only ONE**)

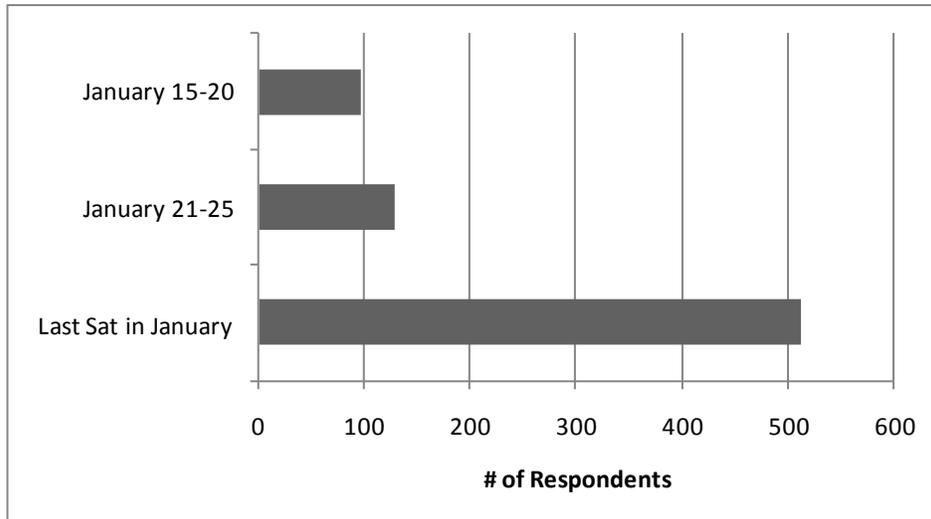
- A. Friday N=283
- B. Saturday N=265
- C. Monday N=173
- D. Other (specify) _____ N=11



23. Under the Federal Framework the latest the regular duck season may end is on the last Saturday in January. **When would you prefer the duck season to close? (Check only ONE)**

- A. Close on the last Saturday in January N=514
- B. Close sometime between January 21-25th N=129
- C. Close sometime between January 15-20th N=96

DID NOT ANSWER = 48



24. Did you hunt scaup during the 2008-2009 season?

- Yes N=43 No N=721 DID NOT ANSWER = 25

25. The 2008-2009 scaup season was a hybrid season with a 40-day, 1-scaup daily bag limit and a 20-day, 2-scaup daily bag limit. **When did you do most of your scaup hunting? (Check only ONE)**

- A. During the 40-day, 1-scaup daily bag limit period (Oct 24 - Nov 11, Nov 24 - Dec 6, Dec 19 - Jan 1) N=12
- B. During the 20-day, 2-scaup daily bag limit period (Jan 2 - Jan 24) N=31

26. Please indicate your preference for **future scaup seasons (Check only ONE)**

- A. I prefer a simple 60-day season with 1-scaup daily bag limit N=86
- B. I prefer a 60-day hybrid season that includes a 2-scaup daily bag limit N=140 for at least some portion of the season
- DID NOT ANSWER = 564

27. For species of concern (e.g. pintails, canvasback, black ducks etc.) whose populations/numbers may not support a full 60-day season, please indicate your opinion for the following **(Check only ONE)**:

- A. A season for species of concern should either be open for the entire 60 days of the regular duck season or closed all season. I do not support the idea of a special season-within-a-season. N=245

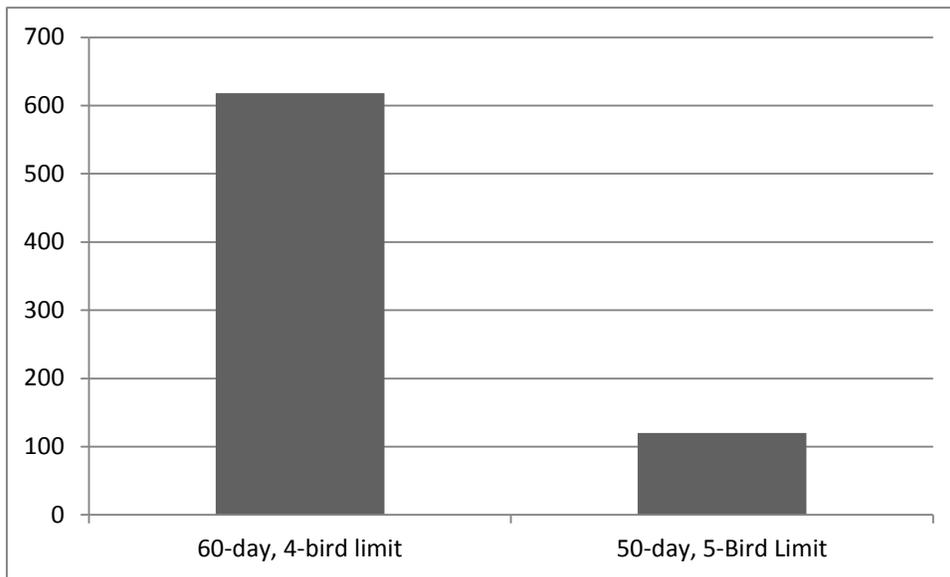
- B. I support a shorter season for these species within the longer, regular duck season. N=478

DID NOT ANSWER = 66

28. The current liberal duck season package is a 60-day season with a 6-bird daily bag limit. To conserve waterfowl populations and our hunting tradition it may become necessary to implement more conservative regulatory packages at some future point in time. **Please select your package preference from the two scenarios offered below:**

- A. A 60-day season with a 4-bird daily bag limit N=618
- B. A 50-day season with a 5-bird daily bag limit N=120

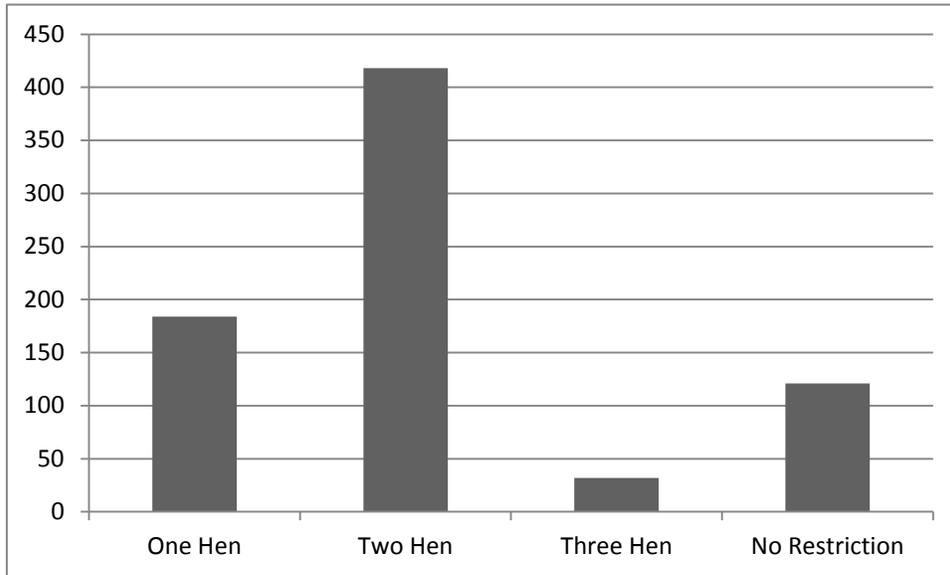
DID NOT ANSWER = 51



29. The current daily bag limit for mallards is 4-birds, **including no more than 2 hens**. What is your preference for the bag limit for hen mallards?

- A. One N=184
- B. Two N=418
- C. Three N=32
- D. No restrictions (hen mallard bag = total mallard bag) N=121

DID NOT ANSWER = 34



Canada Goose Season

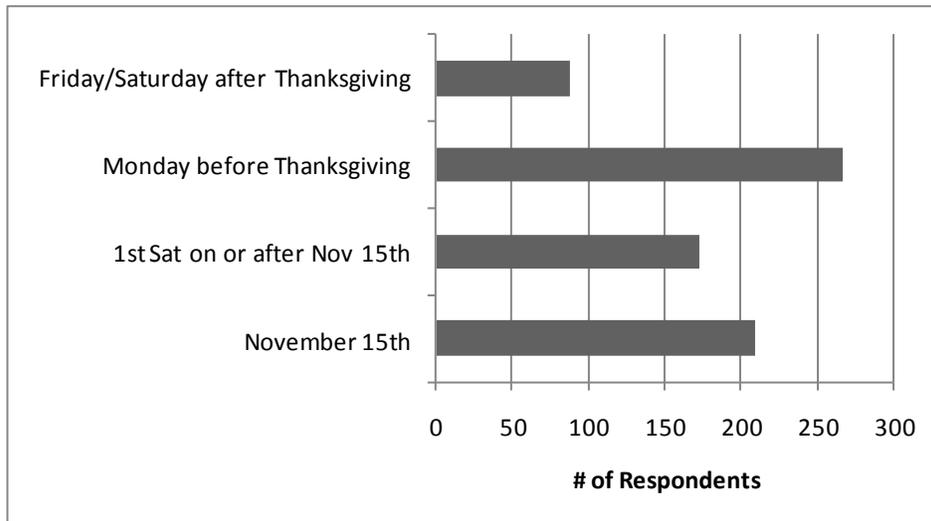
30. Did you **hunt Canada geese** during the 2008-2009 season?

Yes N=776 No N=180 DID NOT ANSWER = 12

If you answered “no” please go to the Mourning Dove Section (question #36)

31. The framework for 45-day migratory Canada goose season runs from November 15 to the end of January, and allows two segments. Please indicate your preference for **when the goose season should open: (Check only ONE)**

A. November 15th N=210 C. the Monday before Thanksgiving N=267
 B. 1st Saturday on/after November 15th N=173 D. the Friday/Saturday after Thanksgiving N=88
DID NOT ANSWER = 38

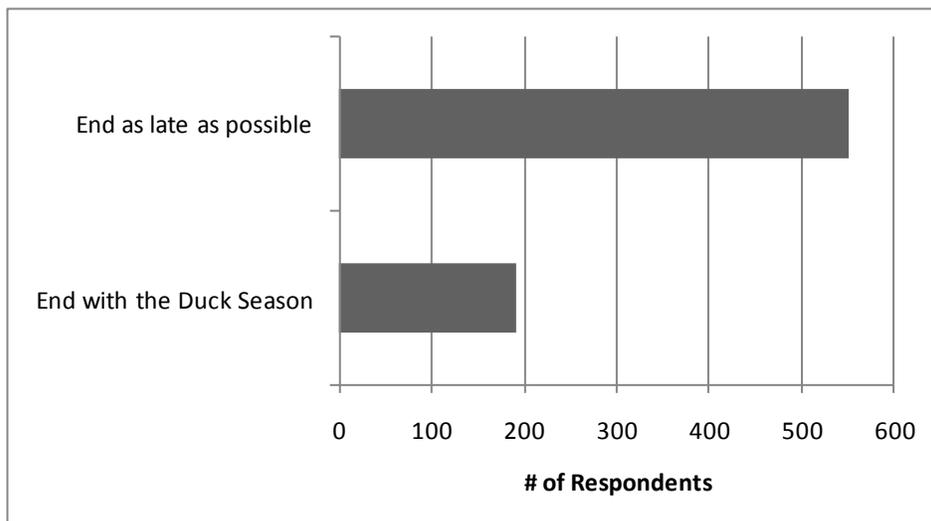


32. **When** should the migratory Canada goose season **end**? (Check only ONE)

A. The season should always **end with the duck season**. N=193

B. The season should **end as late as possible**, even if it extends past the closure of duck season. N=553

DID NOT ANSWER = 30



33. **When** should the **second segment** of the migratory Canada goose season **begin**? (Check only ONE)

A. 2nd week in December N=207

D. 1st week in January N=110

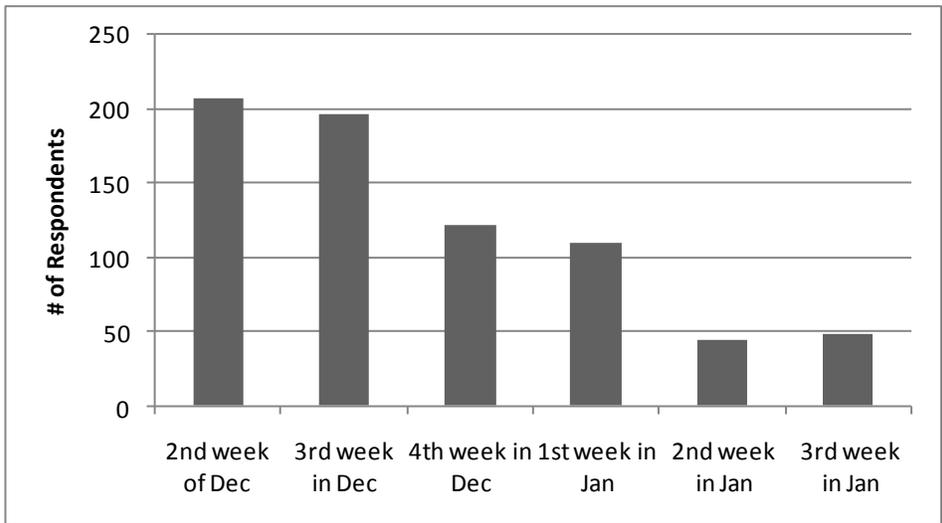
B. 3rd week in December N=196

E. 2nd week in January N=44

C. 4th week in December N=121

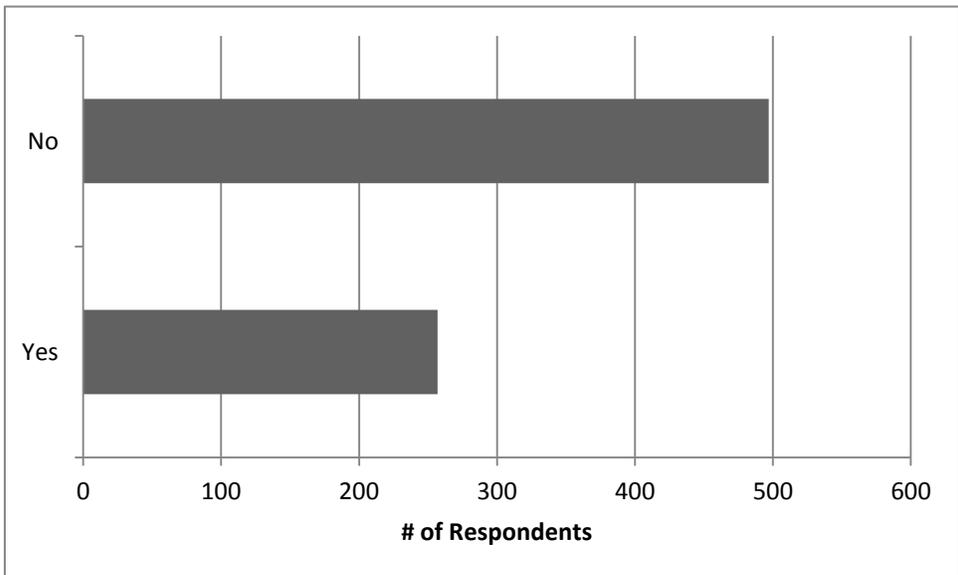
F. 3rd week in January N=48

DID NOT ANSWER = 50



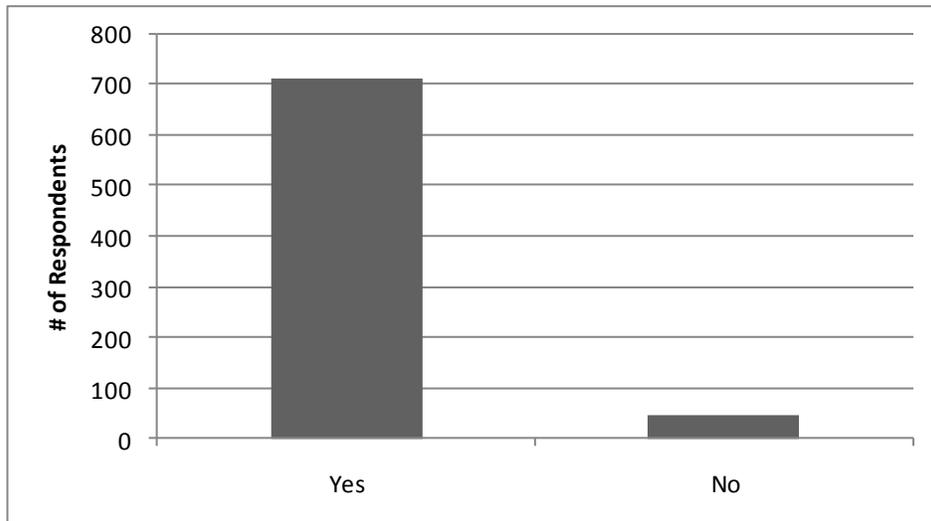
34. Should the goose season be open during the **November shotgun deer season**?

Yes N=257 No N=497 DID NOT ANSWER = 22



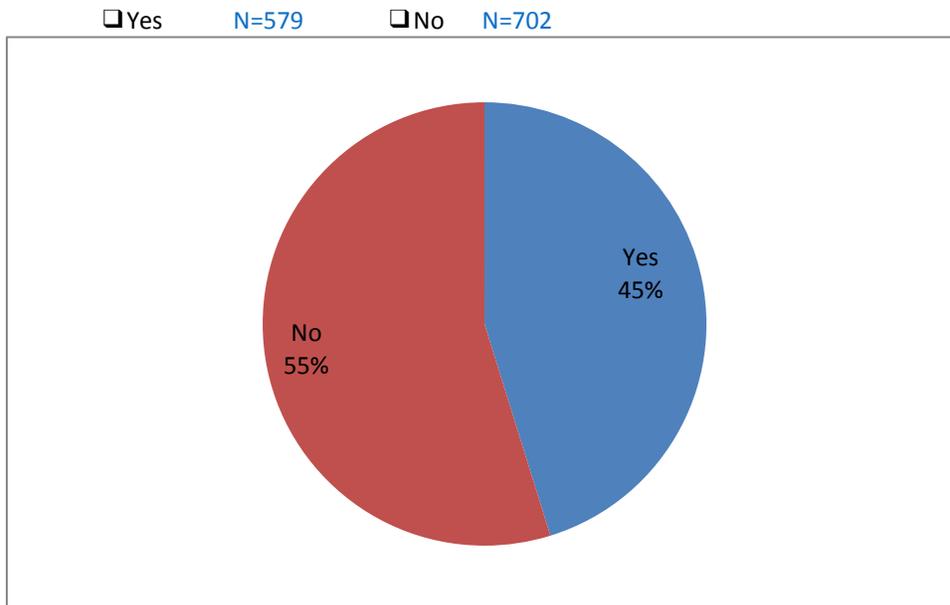
35. Should the duck and migratory Canada goose seasons be **run at the same time**, whenever possible?

Yes N=712 No N=48 DID NOT ANSWER = 16



Mourning Doves

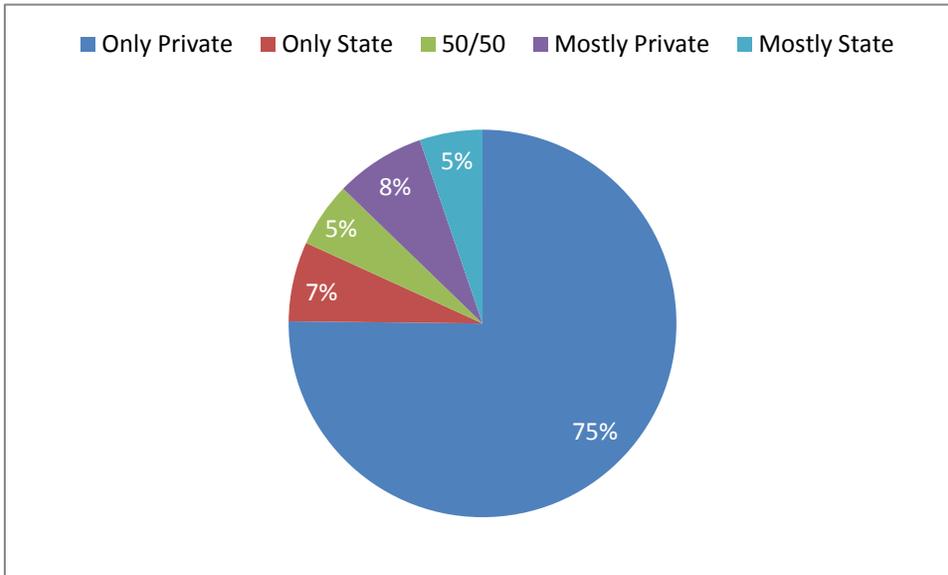
36. Did you hunt mourning doves during the 2008-2009 season?



If you answered “no” please go to the Other Species Section (question #46)

37. Where do you dove hunt? (Check only ONE)

- | | |
|--|---|
| <input type="checkbox"/> A. Only on Private property N=430 | <input type="checkbox"/> D. Mostly Private property, occasionally State property N=43 |
| <input type="checkbox"/> B. Only on State property N=38 | <input type="checkbox"/> E. Mostly State property, occasionally Private property N=30 |
| <input type="checkbox"/> C. 50% Private property / 50% State property N=31 | DID NOT ANSWER = 7 |



38. If you hunted on private property was a portion of it managed specifically for dove hunting?

Yes N=331 No N=203 DID NOT ANSWER =45

39. Approximately **how many days** do you hunt doves during each season segment?

September: # of days _____ MEAN = 4 DAYS/MEDIAN = 4 DAYS, N=546

October: # of days _____ MEAN = 3 DAYS/MEDIAN = 2 DAYS, N=393

December/January: # of days _____ MEAN = 3 DAYS/MEDIAN = 1 DAYS, N=372

40. During the September dove season **when do you do most of your hunting?** (Check only ONE)

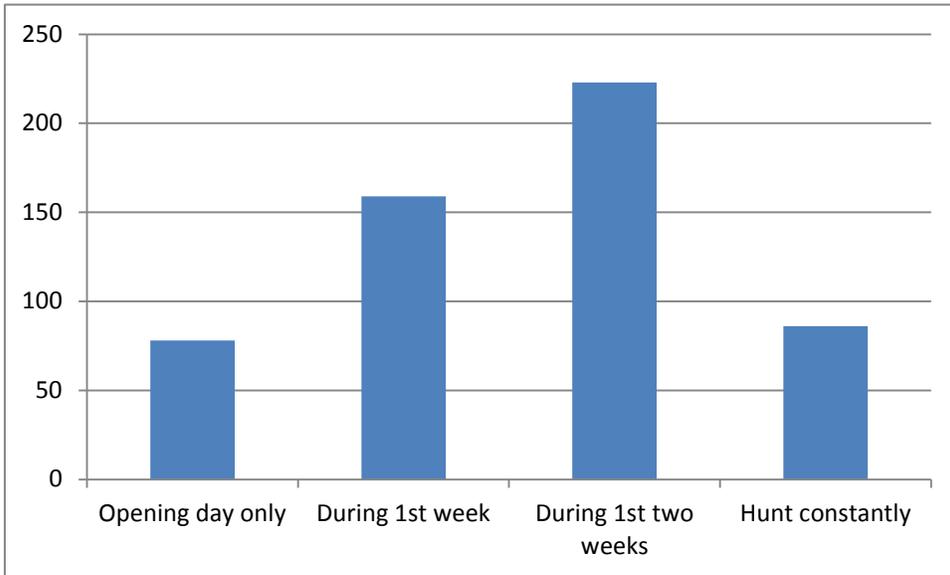
A. Opening Day only N=78

C. During 1st two weeks N=223

B. During 1st week N=159

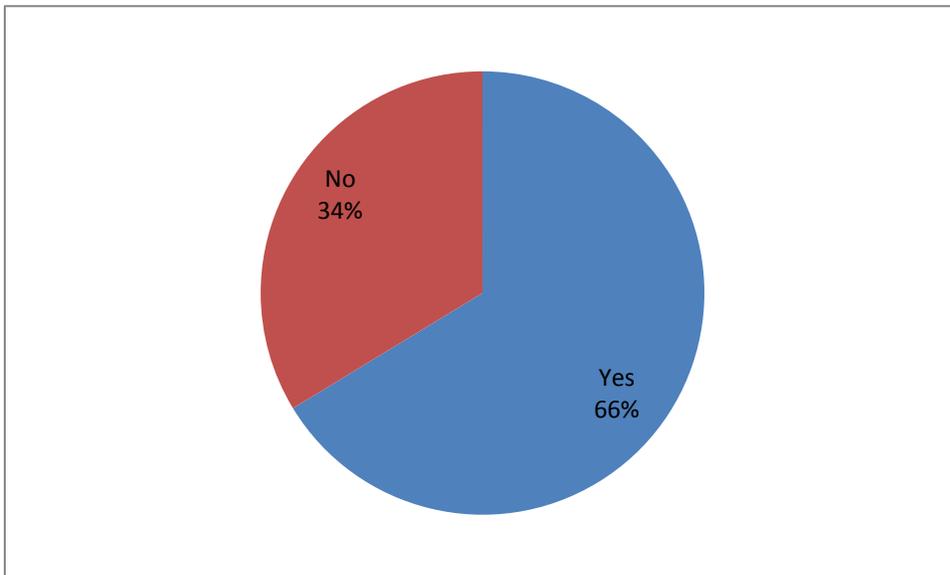
D. I hunt constantly during the entire September season N=86

DID NOT ANSWER = 33



41. Do you usually hunt the opening day of the September dove season if it is **NOT** on a Saturday or the Labor Day holiday?

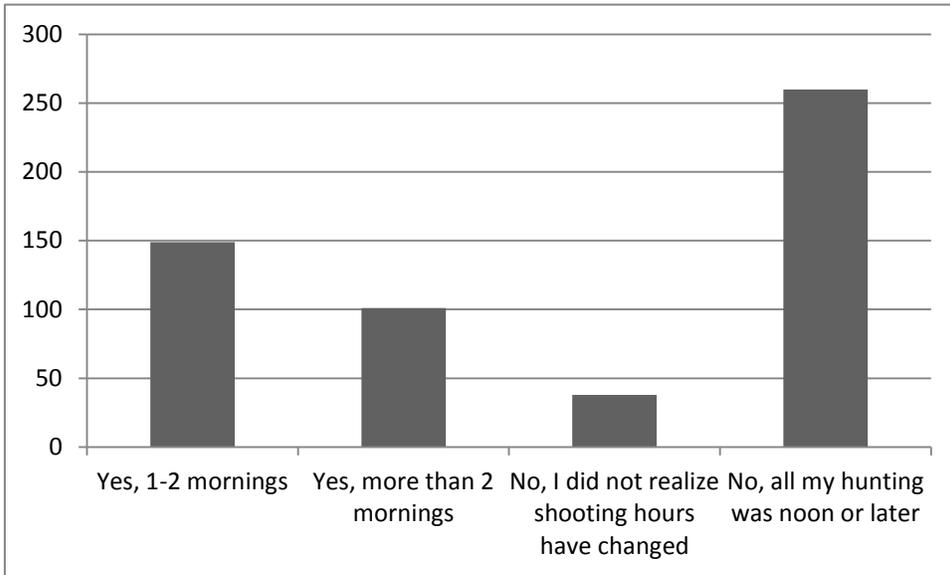
Yes N=366 No N=186 DID NOT ANSWER = 27



42. For the 2007 and 2008 dove seasons, the start time for shooting hours during the September dove season changed from Noon to ½ hour before sunrise. **Did you hunt doves in the morning during the September season? (Check only ONE)**

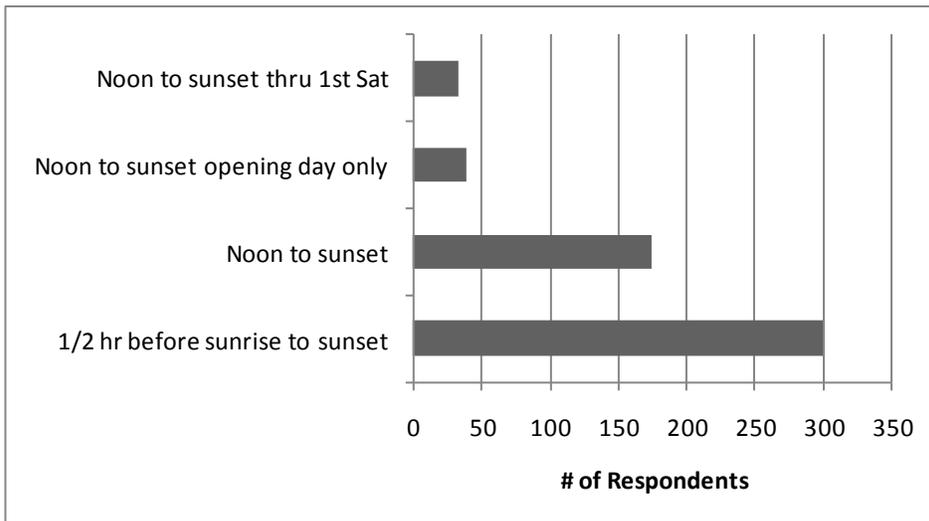
- A. Yes, 1-2 mornings N=149
- B. Yes, more than 2 mornings N=101
- C. No, I did not realize shooting hours had changed N=38
- D. No, I knew about the new shooting hours, but ALL my dove hunting began at noon or later N=260

DID NOT ANSWER = 31



43. What do you want **legal shooting hours** to be for the 1st season segment (September Dove Season)? (Check only **ONE**)

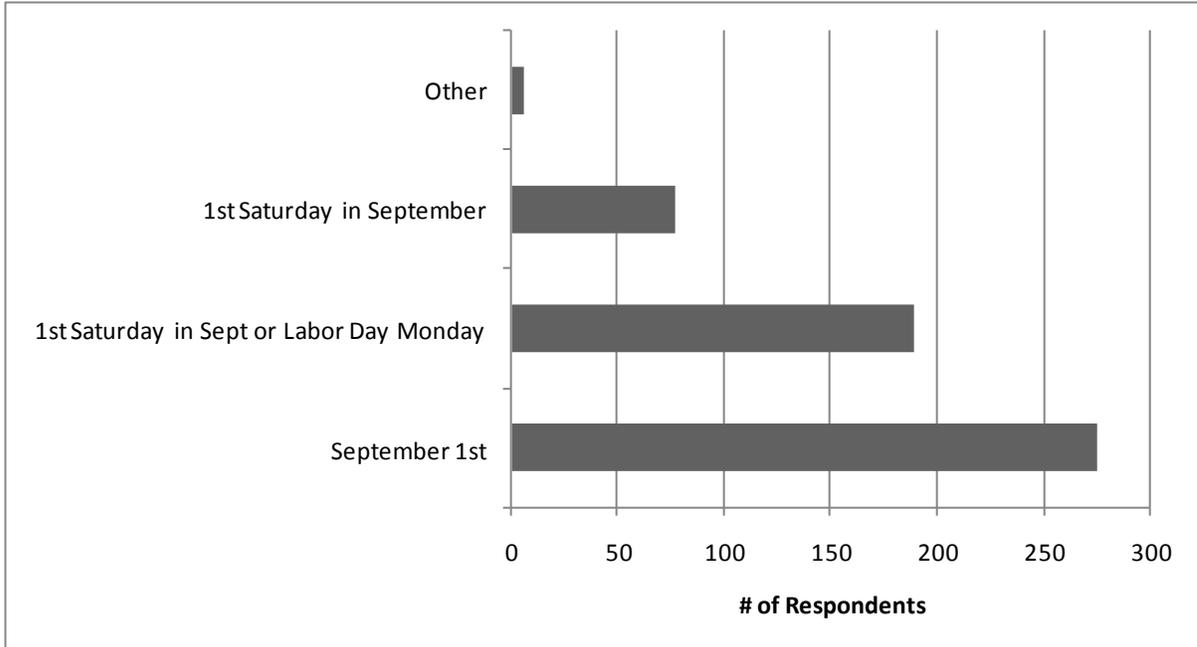
- A. ½ hour before sunrise to sunset (current shooting hours) N=300
 - B. Noon to sunset (traditional shooting hours) N=175
 - C. Noon to sunset OPENING DAY ONLY; ½ hour before sunrise to sunset, thereafter N=39
 - D. Noon to sunset OPENING DAY THRU 1ST SATURDAY; ½ hour before sunrise to sunset thereafter N=34
- DID NOT ANSWER 548



44. When should the **dove season open**? (Check only **ONE**)

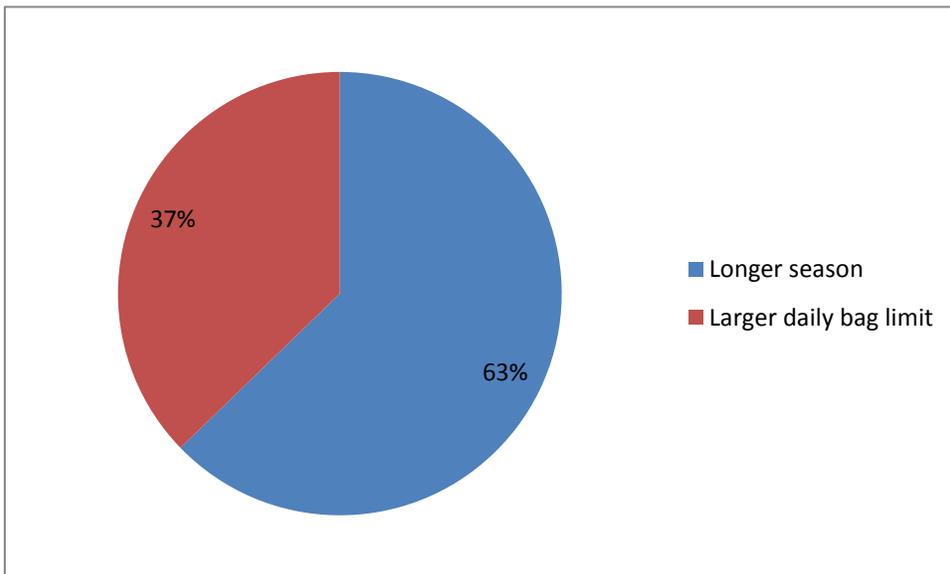
- A. September 1st N=276
- B. First Saturday in September or Labor Day Holiday (Monday), whichever comes first N=189

- C. First Saturday in September N=77
 - D. Other: _____ N=6
- DID NOT ANSWER = 31



45. The current dove harvest package is a 70-day season with a 15-bird daily bag limit. **If harvest regulations were further liberalized** what would be most important to you as a dove hunter (**Check only ONE**)

- A. I would rather have a longer season N=337
 - B. I would rather have a larger daily bag limit N=200
- DID NOT ANSWER = 42



Other Species

46. Did you hunt **woodcock** during the 2008-2009 season? Yes N=41 No N=1229 DID NOT ANSWER = 52

If yes, how many did you harvest in total? _____ MEAN = 4.1, N=29 RESPONDENTS, DID NOT ANSWER = 12

If yes, were you **hunting specifically** for woodcock or were they **harvested opportunistically** while small game hunting?

- A. I was hunting specifically for woodcock N=6
 - B. I was not specifically hunting for woodcock but had the opportunity take a bird(s). N=13
- DID NOT ANSWER = 22

47. Did you hunt **snipe** during the 2008-2009 season? Yes N=2 No N=1234 DID NOT ANSWER = 86

If yes, how many did you harvest in total? _____ MEAN=2, N=1RESPONDENT, DID NOT ANSWER = 1

If yes, were you **hunting specifically** for snipe or were they **harvested opportunistically** while small game hunting?

- A. I was hunting specifically for snipe N=0
 - B. I was not specifically hunting for snipe but had the opportunity take a bird(s). N=1
- DID NOT ANSWER = 1

48. Did you hunt **rails** during the 2008-2009 season? Yes N=2 No N=1223 DID NOT ANSWER = 97

If yes, how many did you harvest in total? _____ MEAN =5, N=1 RESPONDENT, DID NOT ANSWER = 1

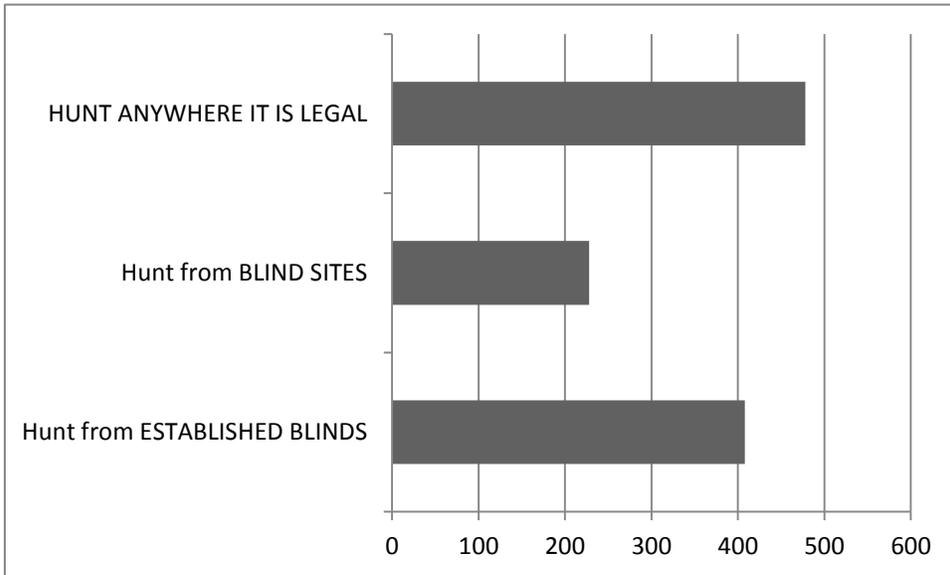
If yes, were you **hunting specifically** for rails or were they **harvested opportunistically** while waterfowl hunting?

- A. I was hunting specifically for rails N=0
 - B. I was not specifically hunting for rails but had the opportunity take a bird(s) N=0
- DID NOT ANSWER = 2

Management Issues

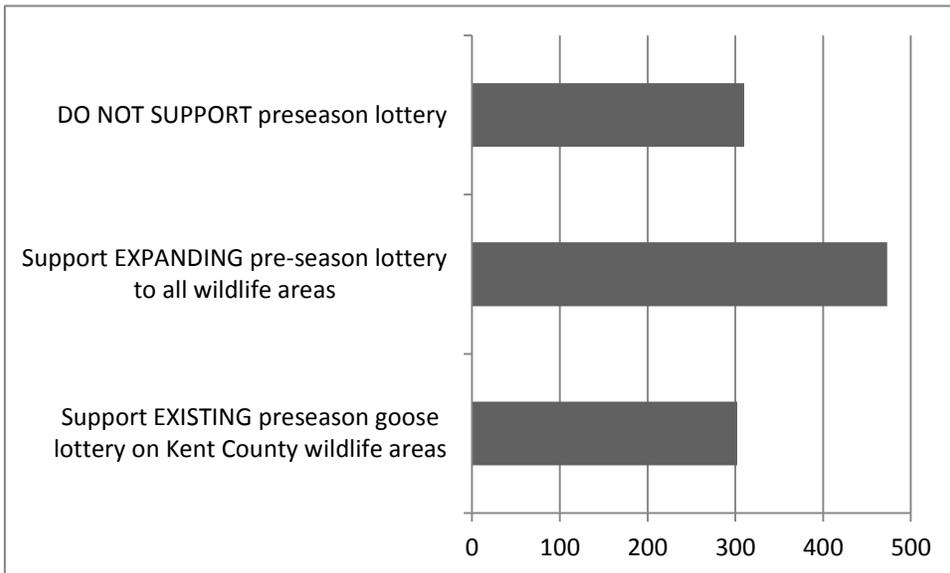
49. Please indicate your preference for waterfowl hunting on State Wildlife Areas

- A. I prefer to hunt from ESTABLISHED BLINDS that are maintained by the State N=408
 - B. I prefer to hunt from established BLIND SITES, where there is only a marked location that I must hunt in the general vicinity of N=228
 - C. I prefer to hunt wildlife areas without being assigned to any specified location or blind (i.e. HUNT ANYWHERE IT IS LEGAL) N=478
- DID NOT ANSWER = 208



50. The Division offers a pre-season lottery for Canada goose hunting on Woodland Beach and Little Creek/Ted Harvey State Wildlife Areas. **Please indicate your opinion regarding the pre-season lottery for Canada goose hunting (Check only ONE)**

- A. I support the use of a pre-season lottery for Canada goose hunting on Woodland Beach and Little Creek/Ted Harvey State Wildlife Areas. N=302
 - B. I support EXPANDING the use of a pre-season lottery for Canada goose hunting to include all State Wildlife Areas with established pits N=473
 - C. I DO NOT support the use of a pre-season lottery for Canada goose hunting on State Wildlife Areas N=310
- DID NOT ANSWER = 237



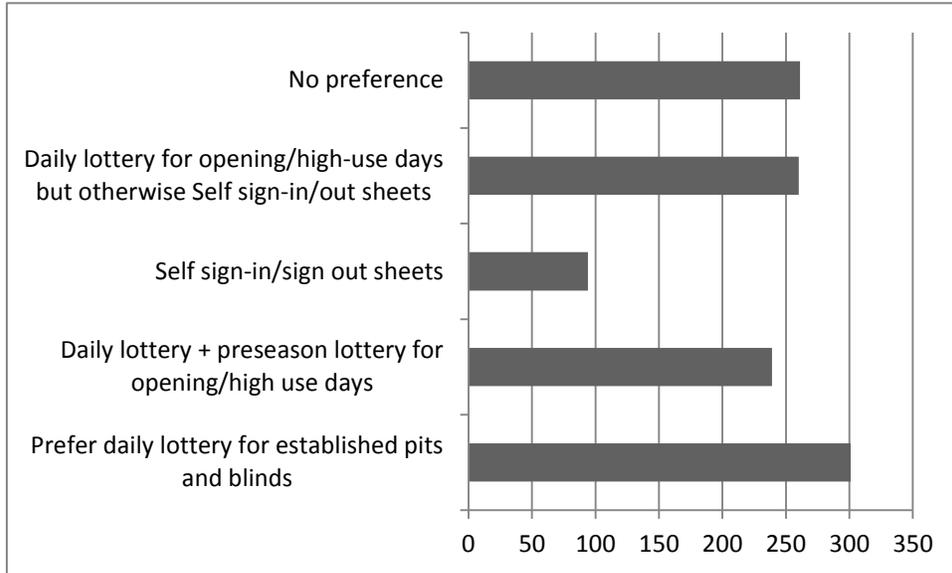
51. At State Wildlife Areas with established blinds and pits for waterfowl hunting, a daily lottery is used to assign hunting parties to an established blind/pit. **Please indicate your opinion regarding waterfowl hunting on public areas (Check ONE).**

- A. I prefer the use of a daily lottery at Wildlife Areas where there are established blinds and pits N=301
- B. I prefer the use of a daily lottery at Wildlife Areas where there are established blinds and pits **and**

would like to see a pre-season lottery put in place for opening days and other high use days (First Saturday or Holidays). N=239

- C. I would prefer to use a **self-sign-in/sign-out** sheet at Wildlife Areas where there are established blinds and pits. N=94
- E. I would prefer the use of a **daily lottery on opening days and other high use days** but otherwise I support a **self-sign-in/sign-out** sheet system at Wildlife Areas with established blinds and pits. N=260
- F. I have no preference N=261

DID NOT ANSWER = 146



52. Would you hunt Wildlife Area impoundments for September Teal Season even though established blinds would not be grassed and water levels might be insufficient for motorized boats?

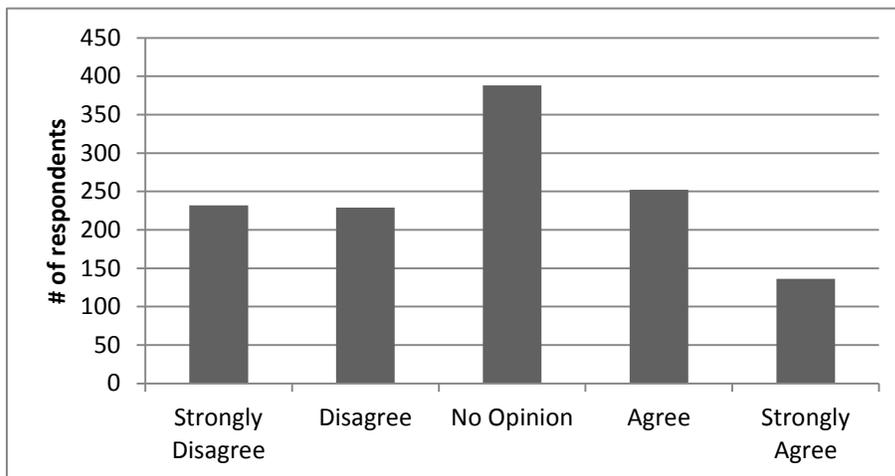
- Yes N=504
- No N=644
- DID NOT ANSWER = 174

53. In 1991 a nationwide ban on lead shot was put in place for waterfowl hunting.

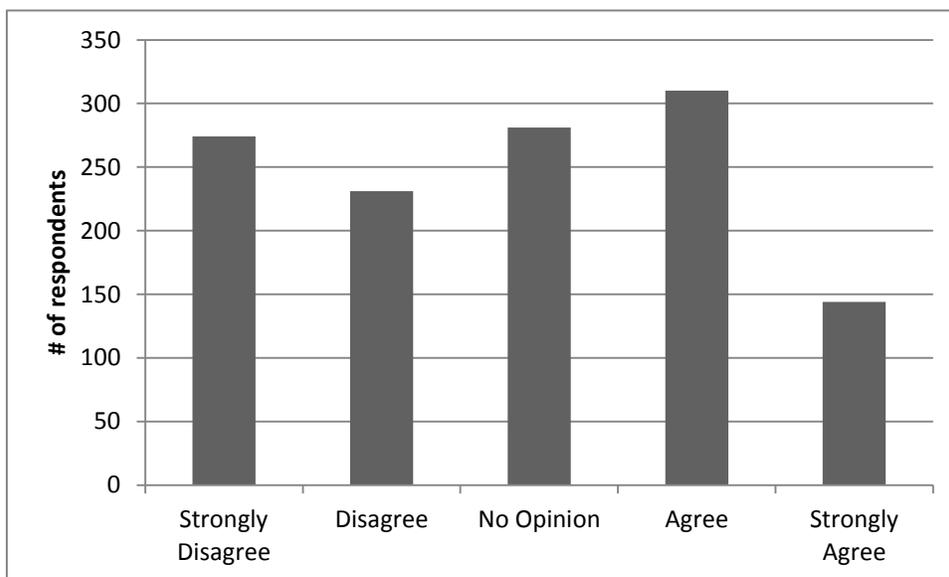
There is now a growing body of scientific evidence that lead shot is having a negative impact on doves. Similar to waterfowl, doves have been shown to consume spent lead shot pellets which can kill or weaken them, making them more susceptible to predation.

Given this information, please provide your opinion relative to the following statements. (Circle the number that most closely reflects your opinion; 1 = Strongly Disagree, 5= Strongly Agree)

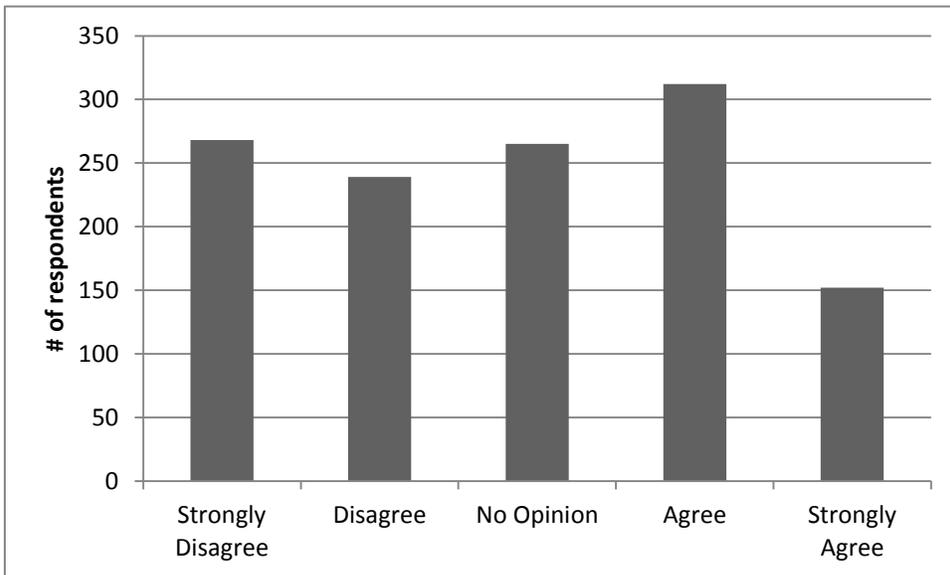
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Doves are negatively impacted by the consumption of spent lead shot associated with dove hunting.	1	2	3	4	5



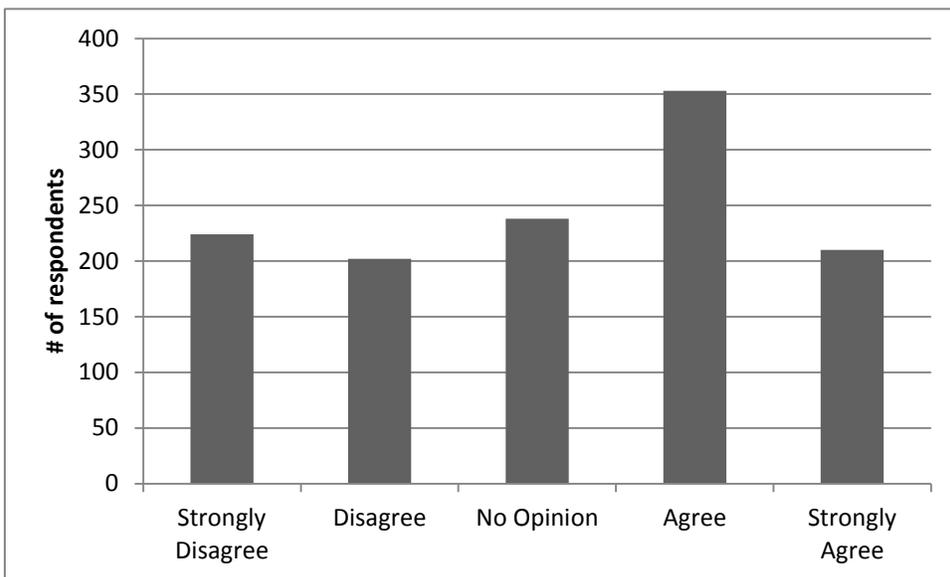
A gradual transition to non-toxic shot is necessary to protect the mourning dove resource.	1	2	3	4	5
--	---	---	---	---	---



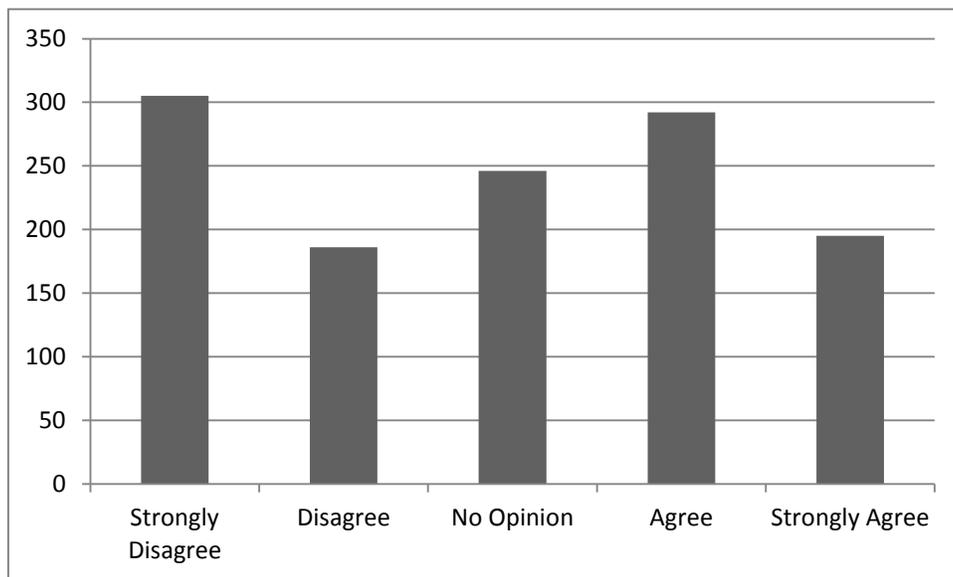
	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
A gradual transition to non-toxic shot is necessary to preserve our dove hunting heritage.	1	2	3	4	5



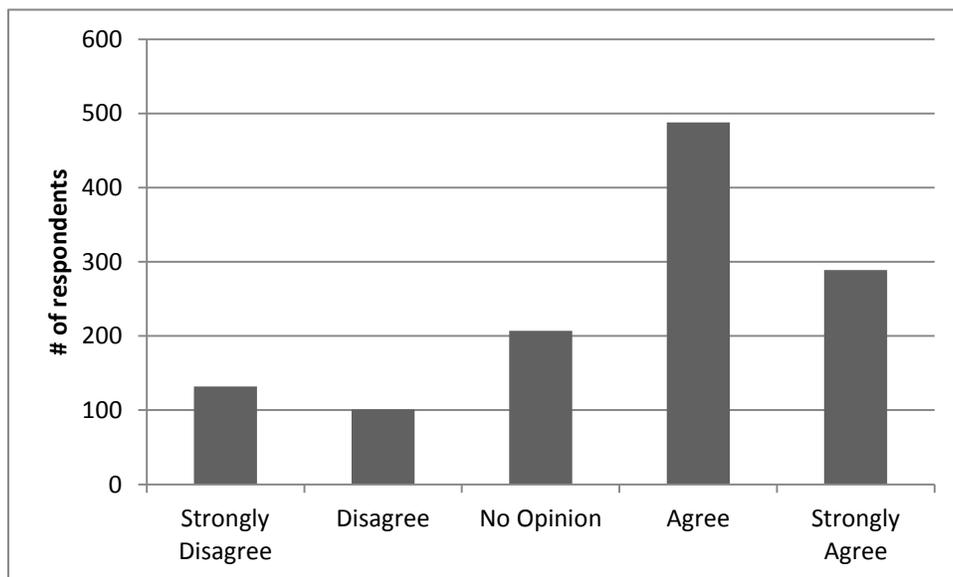
	1	2	3	4	5
Using non-toxic shot would <u>NOT</u> negatively affect my dove hunting experience	1	2	3	4	5



	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
I am in favor of going to non-toxic shot for dove hunting	1	2	3	4	5



I would <u>NOT</u> stop dove hunting if I had to use non-toxic shot	1	2	3	4	5
---	---	---	---	---	---



	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
The lead shot ban for waterfowl hunting was the right thing to do	1	2	3	4	5

