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Hunter Views on Pheasant Hunting and Management in New York

PREPARED BY:

William F. Siemer, T. Bruce Lauber, and Richard C.
Stedman



Center for Conservation Social Sciences
Department of Natural Resources and the Environment
Cornell University



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EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (DEC) needed information on pheasant hunting and hunters to set program goals and objectives. We addressed DEC information needs through a 2021 survey of all licensed hunters and a 2022 survey of active pheasant hunters. Here we synthesize findings from the 2021 and 2022 hunter surveys. The goals of this research activity were to improve understanding of hunter awareness of and expectations for wild pheasant management and pheasant propagation in New York.

We implemented this study in two phases. In Phase 1, we used a mixed-mode implementation process to survey a sample of 2,000 hunters, drawn by DEC staff from the 2021 database of all NYS hunting license holders. We implemented the license holder survey in fall, 2021. In Phase 2, we used a large hunter screening process to identify a sample of 556 license holders who said they had hunted pheasant in the past 5 years and would be willing to participate in a pheasant hunting survey. We completed the active pheasant hunter survey in winter, 2022.

Key Findings and Conclusions

For purposes of comparison, we placed respondents into three groups: active pheasant hunters, lapsed pheasant hunters, and activity nonparticipants [i.e., hunting license holders who had never hunted pheasants in New York State).

Hunter Retention and Reactivation About 41% of the hunter sample from the general license holder survey had hunted pheasant in New York, but not within the past 5 years (i.e., were lapsed pheasant hunters). Perceptions of poor hunting quality (i.e., low probability of seeing pheasants, poor quality of pheasants and pheasant habitat) were moderately or very important reasons why a majority of lapsed hunters in the 2021 survey had stopped hunting pheasants. The management actions most likely to encourage lapsed participants to consider pheasant hunting on publicly-accessible lands again in the future were: increasing the number of birds released, increasing number of release sites, releasing birds closer to where the respondent lives, and releasing some birds later in the season.

Influences on Hunter Satisfaction At least half of all 2022 survey respondents rated being able to hunt pheasants on large land parcels, being able to hunt on parcels with good cover, and having a place to hunt within a 1-hour drive of home as very important to their satisfaction with pheasant hunting.

We asked hunters to rank 6 conditions in order, from most important to least important, with respect to their satisfaction with hunting pheasants on publicly-accessible lands in New York State. Hearing/seeing pheasants was ranked as most important. Nearly half of respondents to

the 2022 active pheasant hunter survey rated their chances of hearing or seeing pheasants on a given hunting trip as poor or very poor. These results suggest that about half of active participants were not experiencing the outcome that contributes most to their satisfaction with pheasant hunting trips on publicly-accessible lands.

Expectations for Wild Pheasant Restoration A majority of active pheasant hunters agreed that pheasant habitat has declined greatly in the region where they hunt pheasants most often. However, a third or more of active pheasant hunters also believed that there is still enough pheasant habitat in the region they hunt most often to support a self-sustaining pheasant population and that more pheasant stocking could restore a self-sustaining wild pheasant population. About half of respondents to the 2022 active pheasant hunter survey, and a third of active pheasant hunters in the 2021 survey, thought it was realistic to expect DEC to maintain a wild pheasant population.

Hunter Perceptions of the Pheasant Propagation Program Majorities of active and lapsed pheasant hunters agreed that the pheasant propagation program is important to them, is worth the investment by DEC, and contributes to hunter recruitment and retention. Nonparticipants were less likely than active or lapsed pheasant hunters to hold those beliefs, or to agree that pheasant propagation should be a higher priority than restoring wild pheasant.

Views on Funding for Pheasant Propagation A majority of hunters—including hunters who had never hunted pheasants in New York—agreed that it is appropriate to continue to pay for the pheasant propagation program from the Conservation Fund.

In both surveys, we asked hunters whether they supported or opposed 4 mechanisms to fund the pheasant propagation program. Hunters expressed the greatest level of support for continuing to use the Conservation Fund to pay for pheasant propagation. Hunters were least supportive of raising the hunting license fee as a means to pay for pheasant propagation. Majorities of active pheasant hunters opposed the idea of funding pheasant propagation with revenues from sales of an annual permit to hunt pheasants on publicly-accessible lands or an annual permit to hunt pheasants anywhere in New York State.

Conclusions Results suggest that the wild pheasant program is important to a majority of active and lapsed pheasant hunters and that some may hold unrealistically high expectations about the extent to which self-sustaining pheasant populations can be restored across New York State. And while hunter satisfaction would go up if DEC stocked more pheasants, a majority of hunters are unwilling to pay additional permit or license fees to fund increases in pheasant propagation. Creating hunter expectations based on understanding of ecological conditions and funding constraints poses a challenge for DEC managers.

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We are grateful to the hunters of New York State who participated in hunter surveys. Several staff members within the New York State Department of Environmental Conservation (DEC) Bureau of Wildlife contributed to various phases of this research. For their assistance, we thank Thomas Cunningham, Jeff Eller, Frederick (Chip) Hamilton, Mike Schiavone, Scott Smith, Josh Stiller, and Evan Wills. Alexandra Sholk (CCSS) and Kate Riley assisted with survey implementation, nonrespondent interviews, and data coding. Our survey instrument and request to conduct survey research was reviewed and granted approval by the Cornell University Office of Research Integrity and Assurance (Institutional Review Board for Human Participants Protocol ID# 1101001927). We extend our appreciation to property owners of New York State for their participation in this study. This work was supported by New York Federal Aid in Wildlife Restoration Grant WE-173-G.

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INTRODUCTION

The New York State Department of Environmental Conservation (DEC) pheasant management program is comprised of two primary components. The first component involves efforts to sustain wild, self-sustaining pheasants. Wild pheasant management occurs in the Lake Plains of western New York, including a focus area in the Genesee Valley. In the Lake Plains, DEC protects hen pheasants through hunting regulations and provides input to federal agricultural policies that may affect pheasants. Within the focus area, DEC works with organizations and agencies to promote habitat improvements that benefit pheasants and has provided assistance to private landowners to establish grasslands for nesting and winter cover. The context for pheasant management in New York State is one of long-term decline in pheasant habitat and numbers of wild pheasants. Long-term persistence of wild pheasants in New York is unlikely without radical landscape-scale habitat change and population restoration efforts.

The second component of the pheasant management program is pheasant propagation. Each year, DEC staff at the Reynolds Game Farm raise and release over 30,000 adult pheasants. Prior to and during the pheasant hunting season, DEC distributes the birds across more than 100 release sites open to public hunting. At least 10% of adult pheasants are released at youth pheasant hunts and special sponsored hunts for groups such as women hunters or hunters with disabilities. The program also provides thousands of day-old chicks to individuals and organizations, who care for, raise, and release birds on publicly accessible lands. The annual operating budget for the pheasant propagation program (including pheasant rearing, pheasant distribution, program administration, and facility maintenance) is approximately \$1 million. Pheasant propagation efforts are supported by the state's Conservation Fund, which is derived from hunting, trapping, and fishing license revenues.

As pheasant habitat and numbers of wild pheasant declined in New York State over decades, wildlife managers witnessed a precipitous decline in the number of pheasant hunters. The DEC estimated that approximately 12,000 hunting license holders hunted pheasant on publicly-accessible land in 2020 (M. Schiavone, personal communication). Declining rates of participation in pheasant hunting have raised questions about actions managers could take to influence hunter satisfactions and recruit, retain or reactivate pheasant hunting participants.

Program administrators in DEC develop long-term plans to guide management of wild pheasant, management of artificially propagated pheasant, information and education about pheasant, and program monitoring and evaluation. Agency staff are currently developing the next long-term pheasant management plan, and they need representative information on pheasant hunting and hunter views on pheasant management to set program goals and objectives. We addressed DEC information needs through a linked pair of hunter surveys in

2021 and 2022. This report provides a synthesis of findings from the 2021 and 2022 hunter surveys.

The primary objectives of this research activity were to improve understanding of the value that the pheasant propagation program provides to NYS hunters and hunter recruitment and understand hunter awareness of and expectations for wild pheasant management in NYS. With that understanding, DEC staff can craft strategies in the next pheasant management plan that maintain or increase positive impacts of the pheasant management program.

Study Objectives

- Characterize NYS hunters according to stage of involvement in pheasant hunting.
- Assess hunter perceptions of the degree to which past pheasant hunting experiences contributed to their development as a hunter.
- Identify opportunities for and barriers to recruitment of new, and reactivation of inactive, pheasant hunters.
- Improve understanding of factors that contribute to hunter satisfaction with pheasant hunting on publicly-accessible lands.
- Assess NYS hunting license holders' awareness and beliefs about the wild pheasant management and pheasant propagation programs.
- Assess hunter support for existing and potential sources of dedicated financial support for the pheasant propagation program.

METHODS

We implemented this study in two phases. Phase 1 involved a survey representing all New York State hunting license holders. Phase 2 involved a survey representing the subset of hunting license holders who are active pheasant hunters. The Cornell University Office of Research Integrity and Assurance (Institutional Review Board for Human Participants, Protocol ID# 1101001927) approved the questionnaires, sampling protocols, and data collection protocols for both phases of the study.

Survey of Licensed Hunters

Survey Instrument We collaborated with a DEC Contact Team to develop a self-administered questionnaire to address research objectives related to the general hunter population (Appendix A). The questionnaire characterized: stage of involvement in pheasant hunting, past hunting experiences, influences on pheasant hunter recruitment and retention, conditions that would reactivate lapsed pheasant hunters, beliefs about wild pheasant management and the pheasant propagation program, and views on funding for pheasant management in New York.

Data Collection Staff in DEC drew a simple random sample of 2,000 hunters from their database of 2021 New York State hunting license holders. All 2021 hunting license holders had an equal probability of being drawn in the sample. This sample size was expected to yield at least 400 completed questionnaires. We used a mixed-mode process to implement the survey. Thirty-eight percent of hunters provided an email address on their 2021 hunting license, so we surveyed 38% of the sample via email with invitations to complete an online version of the survey instrument. We provided members of the email sample with unique links to a secure website where they could complete a questionnaire. Nonrespondents received up to three reminder emails. We made all email contacts during the month of September, 2021. We surveyed the remaining 62% of the sample by mail. All members of the mail sample received a cover letter and questionnaire. Nonrespondents received up to three reminder mailings. We completed all mailings between Sept 8 and October 6, 2021. In November, 2021, staff in CCSS completed 75 follow-up interviews with survey nonrespondents.

Analysis We used IBM SPSS Statistics 24.0 software (IBM Corp. 2016) to calculate frequencies and measures of central tendency (e.g., mean, standard deviation). We used the chi-square statistic and t-tests to test for significant differences between respondents and nonrespondents at the $P < 0.05$ level. For purposes of comparison, we placed respondents into three groups: active pheasant hunters, lapsed pheasant hunters, and nonparticipants (i.e., hunting license holders who had never hunted pheasants in New York State).

Survey of Active Pheasant Hunters

Hunter Screening Process The New York State hunting license database in 2021 contained no information by which to identify pheasant hunters, so we worked with DEC staff to execute a pheasant hunter screening process. The purpose of the January, 2022 screening process was to identify active pheasant hunters who would be willing to participate in the pheasant hunting survey that we planned to administer in February, 2022. We set a sample size of 20,000 for the screening process, based on an assumption that screening 20,000 license holders would identify 600-700 active pheasant hunters who would be willing to participate in the 2022 active pheasant hunter survey.

For the screening process, DEC staff provided a sample of 21,000 NYS hunting license holders age 18 and above. This sample included in-state and out-of-state hunters. The screening process sample contained 8,982 records that included an email address. Staff in CCSS removed 30 records for hunters who provided an email address that was invalid, and we removed 26 records for hunters who provided an incomplete mailing address or were drawn as part of the sample for the 2021 survey of licensed hunters. In total, we removed 56 records, leaving 20,944 usable records from which to draw samples.

We found that 42.7% of hunters had provided what appeared to be a valid email address and 57.3% provided only a mailing address. We implemented a mixed mode (mail and online) screening survey. We set the sample size for the mail portion of the screening survey at 11,460 (i.e., 57.3% of 20,000) and at 8,540 (i.e., 42.7% of 20,000) for the online portion of the screening survey. We randomly selected 8,540 cases with email addresses from the pool of records with email addresses. We randomly selected 11,460 cases without email addresses from the pool of records available with no email address.

Staff in DEC implemented the online portion of the screening process surveys in January, 2022. Only 8,470 emails could be delivered (so the adjusted sample size for the online survey was $n=8,470$). Nonrespondents were contacted with up to two reminder emails. Response to the online version of the screening survey was 10.3% ($n=869$ responses; deliverable number of email addresses 8,470). The online screening process identified 257 active pheasant hunters who indicated that they were willing to be surveyed later.

Staff in CCSS implemented the mail portion of the screening process in January, 2022. Each member of the mail survey sample received a screening survey postcard and one week later all members of the sample were sent a reminder to complete the 2-question survey. Response to the mail version of the screening process was 20.1% ($n=2,184$ responses; deliverable number of questionnaires 10,862). Through the mail portion of the screening process, we identified 299 pheasant hunters who were willing to be surveyed later (162 said they would prefer to complete the later survey by mail; 137 said they would prefer to complete the later survey online). In combination, the screening processes conducted online or by mail identified a total sample of 556 hunters for the 2022 active pheasant hunter survey.

Survey Instrument We collaborated with a DEC Contact Team to develop a self-administered questionnaire to address research objectives related to the active pheasant hunter population (Appendix B). We designed the survey instrument to include multiple sections from the 2021 survey of licensed hunters, in order to address research objectives shared in Phase 1 and Phase 2 of the study. Multiple items were included to improve understanding of factors that add to or detract from satisfaction with pheasant hunting on publicly-accessible land in New York. We asked hunters to rate hunting conditions on publicly-accessible lands and to rate and rank the importance of potential influences on their pheasant hunting satisfaction. We also asked respondents to identify their preferences related to distribution of propagated pheasants, their willingness to travel to hunt stocked pheasants, and their beliefs about pheasant hunting conditions in the region they hunted most often.

Data Collection We used a mixed-mode implementation process to survey the 556 active pheasant hunters who self-identified in the screening process. We surveyed 162 hunters by

mail and 394 using email contacts. Both modes of data collection were completed between February 16 and March 16, 2022.

All members of the mail sample received a cover letter and questionnaire. Nonrespondents received up to three reminder mailings. Members of the online sample were sent email invitations to complete an online version of the survey instrument. Email contacts included a unique link to a secure website where the respondent could complete a questionnaire. Nonrespondents received up to three reminder emails.

Analysis We used IBM SPSS Statistics 25.0 software (IBM Corp. 2016) to calculate frequencies and measures of central tendency (e.g., mean, standard deviation). We used the chi-square statistic and t-tests to test for significant differences between respondents and nonrespondents at the $P < 0.05$ level. Although every member of the sample had previously indicated that they were active pheasant hunters, a few respondents indicated on their questionnaire that they had not hunted pheasants in New York in the past 5 years. We excluded those respondents from the analysis.

We asked hunters to rank the importance of 6 conditions that could influence their satisfaction with pheasant hunting experiences on publicly-accessible lands. Respondents were instructed to rank the conditions 1 through 6, using each ranking number only once. Some mail survey respondents ($n=57$) used the same ranking number more than once (the online survey instrument was structured such that respondents could not use any ranking more than once). For example, a respondent may have assigned a number 1 ranking to “hearing/seeing pheasants” and “harvest success during pheasant season.” To retain these respondents in our analysis, we assigned an average score to conditions with the same ranking. The average score assigned depended on the number of duplicate rankings and their place value. For example, if a hunter gave two conditions a rank of 1, both conditions were assigned a rank of 1.5. If a hunter gave two conditions a rank of 6, both conditions were assigned a rank of 5.5. For comparison, we created a table that shows ranking results for all respondents and also shows ranking results when we exclude respondents who used the same ranking number more than once.

RESULTS

2021 Hunting license holder survey We received 494 completed questionnaires from a deliverable sample of 1,882 questionnaires in the 2021 survey of hunting license holders (response rate 26%). Response rates were similar for both survey modes (Table 1).

We compared respondents to a sample of 74 nonrespondents. Respondents were similar to nonrespondents on several traits, including gender (88% respondents and nonrespondents were male), rates of participation in big game hunting, awareness of pheasant habitat

conditions, and awareness of pheasant stocking in New York. The percentage of active pheasant hunters was not statistically different for respondents and nonrespondents (respondents 23% vs. nonrespondents 14%; $\chi^2 = 2.36$, $df = 1$, $p = 0.12$).

Respondents were more likely than nonrespondents to have hunted turkey and ruffed grouse in the past 5 years. Nonrespondents were more likely than respondents to have never hunted pheasants in New York hunter (58% vs. 38%; $\chi^2 = 11.17$, $df = 1$, $p < 0.001$) (see Appendix C for all respondent-nonrespondent comparison tables). Nonrespondents were younger than respondents (mean age 46.3 years for nonrespondents vs. 56.6 years for respondents; $t = -4.64$, $df = 563$, $p < 0.001$). Although some differences between respondents and nonrespondents were detected, we did not weight the data.

Table 1. Response rates, 2021 survey of New York State hunting license holders and 2022 survey of active New York State pheasant hunters.

	2021 survey of hunting license holders			2022 survey of active pheasant hunters		
	Survey mode			Survey mode		
	Mail	Online	Total	Mail	Online	Total
Sample size	1,240	760	2,000	162	394	556
Undeliverable questionnaires	80	38	118	2	0	2
Adjusted sample size	1,160	722	1,882	159	394	554
Completed questionnaires	313	181	494	140	266 ^a	406
Adjusted response rate	27.0%	25.1%	26.2%	88.0%	67.5%	73.2%

^a An additional 7 hunters started but did not submit an online questionnaire.

2022 Active pheasant hunter survey We received 405 responses from a deliverable sample of 554 in the 2022 active pheasant hunter survey (overall response rate 73%). Response was relatively high for both the mail and online modes of survey implementation (Table 1). We made a decision not to conduct nonrespondent follow-up interviews for this survey, because the nonrespondent pool was small (i.e., < 150 hunters) and would have yielded too few completed interviews to provide reliable information about all nonrespondents.

Although every hunter selected from the screening process had identified themselves as an active pheasant hunter, 32 survey respondents indicated that they were lapsed pheasant hunters (i.e., they had not hunted pheasants in the past 5 years). We removed lapsed hunters, non-pheasant hunters (n=8), and incomplete returns from the dataset, leaving 363 useable cases available for analysis.

Nearly all respondents (94.5%) were male (percentage of male respondents was identical in the online and mail versions of the survey). Mean age of respondents was 55.6 years old. Hunters who responded online were younger ($\bar{x} = 52.4$ years old, $SD = 16.64$) than those who responded by mail ($\bar{x} = 61.5$ years old, $SD = 14.99$); $t_{(361)} = -5.19$, $p < 0.001$).

Activity Involvement

One of our study objectives was to characterize New York State hunters with respect to stages of involvement in pheasant hunting (Figure 1). Involvement in hunting has been characterized as a social-psychological process that begins with awareness, followed by interest in trying the activity, apprenticeship experiences, and socialization into the activity. Rewarding experiences and social support lead to activity continuation. Social, resource, and personal constraints, negative experiences, lack of social support, and other factors contribute to sporadic and lapsed activity involvement. At some point, all participants drop out of the activity. Change in circumstances or interventions (e.g., incentive programs by wildlife agencies) may reactivate lapsed participants (Larson et al. 2013).

In this study, we were interested on comparing and contrasting the views of hunters in three categories of activity involvement. We placed respondents into three groups: active, lapsed, and nonparticipant. Respondents who had hunted pheasants in New York within the past 5 years were placed in the active hunter group. We did not include questions to determine whether active hunters were in the apprentice, recruited, or retained stages of involvement. Respondents who had hunted pheasants in New York more than 5 years ago were placed in the lapsed pheasant hunter group. We labeled respondents who had never hunted pheasants in New York as activity nonparticipants.

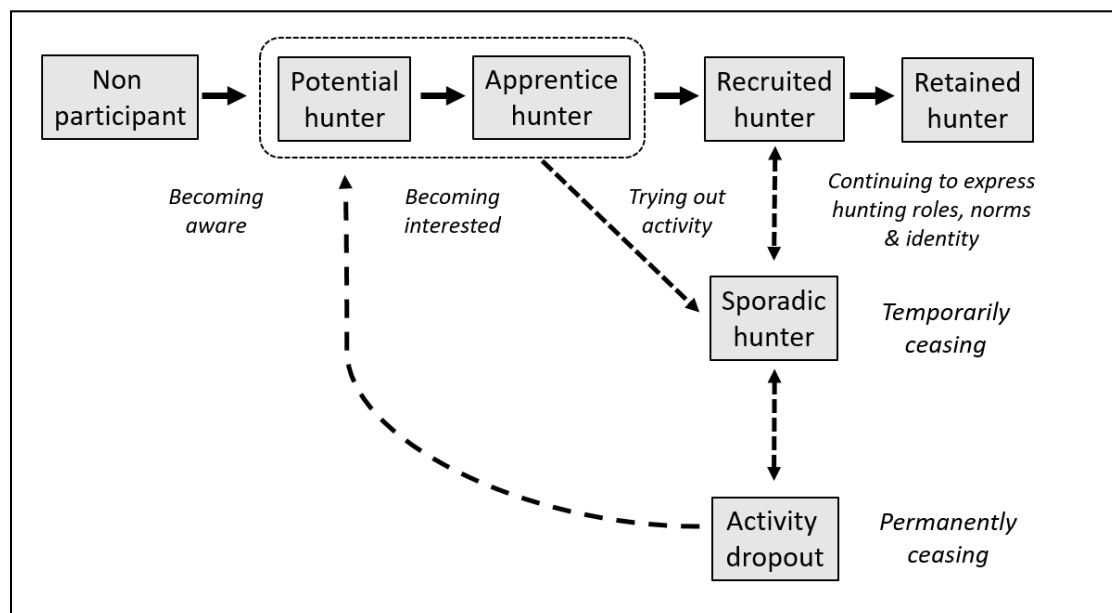


Figure 1. Stages of involvement in hunting (adapted from Purdy and Decker 1985).

General license holder survey (2021) Approximately 21% of respondents could be described as active pheasant hunters, 41% as lapsed/dropout pheasant hunters, and 38% as nonparticipants in pheasant hunting in New York.

Active pheasant hunter survey (2022) By design, all respondents in this survey were active pheasant hunters (i.e., had hunted pheasants in NYS in the past 5 years). Forty-one percent of respondents had hunted pheasant during all of the past 5 years (i.e., were continuous pheasant hunters and thus likely to be activity participants the following year). The other 59% of active pheasant hunters had not hunted every year (i.e., they could be classified as sporadic pheasant hunters). The high proportion of sporadic participants is noteworthy because sporadic participants are typically more likely to drop out of an activity than continuous participants (Enck et al. 1993).

Active pheasant hunters were very likely to be users of publicly-accessible land: 81% of respondents said they typically hunted pheasants at least one day on publicly-accessible land per year. About 68% of active hunters typically hunted pheasants at least one day per year on private land for free.

Eighty-one percent of 2022 survey respondents reported having a location where pheasants are stocked on publicly-accessible land within a 1-hour drive of their home. Fifty-five percent reported that they would not drive more than 1-hour one way to hunt pheasants on publicly-

accessible land (31% would travel further, 12% said travel distance did not matter, and 2% were unsure about their maximum willingness to travel to hunt pheasants).

Comparing the results from both the 2021 and 2022 surveys suggests that pheasant hunters participate in small game hunting at higher rates than non-pheasant hunters. Respondents to the 2022 active pheasant hunter survey were more likely than respondents to the 2021 hunting license holder survey to have hunted turkey, squirrel, cottontail rabbit, ruffed grouse, waterfowl, and woodcock (Table 2).

Influences on Recruitment and Retention

Our second study objective was to assess contributions of pheasant hunting to hunter development. We addressed this objective by asking respondents to assess the relative contribution of different types of hunting to their overall development as a hunter. Big game hunting experiences were very important in the development of 77% of respondents. Hunting small game other than pheasant was very important for 49% of respondents. Hunting stocked pheasants was very important to hunting development for 26% of respondents. Active pheasant hunters were more likely than lapsed pheasant hunters to say that hunting stocked pheasants was very important to their development as a hunter (56% vs. 26%; $\chi^2 = 24.2$, $df = 1$, $P < 0.001$). Hunting wild pheasants was very important to hunting development for 33% of respondents. Active pheasant hunters were more likely than lapsed pheasant hunters to say that hunting wild pheasants was very important to their development as a hunter (58% vs. 41%; $\chi^2 = 7.62$, $df = 1$, $P = 0.005$) (Table 3).

Our third study objective was to identify opportunities for and barriers to pheasant hunter recruitment and retention. In the 2021 hunting license holder survey, we asked respondents a series of questions to identify the most important reasons why they do not currently participate in pheasant hunting. The most important reasons why lapsed hunters and activity nonparticipants had not hunted pheasants in recent years were perceptions that they were unlikely to see pheasants while hunting, that pheasant habitat in New York is poor, and that the quality of pheasants available in New York is poor. Competition with other hunters and the belief that hunting stocked birds was not “real” hunting were moderate or very important deterrents to more than a third of lapsed hunters (Table 4). Not knowing where to hunt pheasants or having to travel long distances to hunt pheasants were moderate or very important deterrents to more than 40% of lapsed pheasant hunters (Table 5).

Table 2. Types of hunting respondents had participated in within the past 5 years, 2021 survey of New York State hunting license holders and 2022 survey of active New York State pheasant hunters.

	2022 survey ^a	2021 license holder survey ^b			Total (n=477)
	Active pheasant hunters (n=363)	Active pheasant hunters (n=102)	Lapsed pheasant hunters (n=195)	Non- participants (n=181)	
Big game (firearm)	88.7	90.2	91.8	84.4	88.7
Turkey	62.3	75.6	55.4	37.2	52.8
Big game (archery)	54.8	56.9	56.9	37.2	49.5
Squirrel	44.9	52.9	33.8	24.4	34.4
Cottontail rabbit	46.8	52.0	27.2	18.9	29.4
Ruffed grouse	52.6	60.8	22.1	8.9	25.4
Ducks, geese	42.4	45.1	13.8	11.1	19.5
Woodcock	26.4	17.6	4.6	2.8	6.7

^aError margin around percentages (95% conf. level): active hunters \pm 5.1%.

^bError margin around percentages (95% conf. level): active hunters \pm 9.7%, lapsed hunters \pm 7.0%, nonparticipants \pm 7.3%, total \pm 4.5%.

Table 3. Importance of various experiences in the personal hunting development of respondents in three categories of pheasant hunting involvement, 2021 survey of New York State hunting license holders.

		Importance to development as a hunter ^a				
		n	Not %	Slightly %	Moderately %	Very %
Hunting big game (e.g., deer)						
Active hunters	95	2.1	5.3	13.7	79.8	
Lapsed hunters	178	3.9	3.4	11.8	79.3	
Nonparticipants	170	5.3	3.5	18.2	72.8	
Total	443	4.1	3.8	14.7	77.4	
Other small game hunting						
Active hunters	94	1.1	8.5	21.3	69.1	
Lapsed hunters	176	6.8	13.1	30.1	50.0	
Nonparticipants	163	26.4	12.3	25.8	35.6	
Total	433	12.9	11.8	26.6	48.7	
Hunting wild pheasants						
Active hunters	94	6.5	7.5	28.0	58.1	
Lapsed hunters	176	11.6	21.5	26.2	40.7	
Nonparticipants	163	66.0	13.7	11.8	8.5	
Total	418	30.4	15.6	21.3	32.8	
Hunting stocked pheasants						
Active hunters	94	5.3	9.6	28.7	56.4	
Lapsed hunters	170	32.4	18.2	23.5	25.5	
Nonparticipants	154	68.8	13.6	11.0	6.5	
Total	418	39.7	14.6	20.1	25.6	

^aError margin around percentages (95% confidence level): active hunters $\pm 10.1\%$, lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 7.9\%$, total $\pm 4.8\%$.

Table 4. Reasons why respondents had not hunted pheasants in the past 5 years, 2021 survey of New York State hunting license holders.

				Importance as a reason respondent does not hunt pheasants ^b			
		n	Mean ^a	Not at all %	Slight %	Mod. %	Very %
Low chance of seeing pheasants							
Lapsed hunters	175	3.25	10.3	13.1	18.3	58.3	
Nonparticipants	159	2.43	35.2	16.4	18.9	29.6	
Total	334	2.86	22.2	14.7	18.6	44.6	
Poor quality pheasant habitat in NYS							
Lapsed hunters	172	2.80	20.9	18.0	20.9	40.1	
Nonparticipants	154	1.90	53.2	17.5	15.6	13.6	
Total	326	2.37	36.2	17.8	18.4	27.6	
Poor quality of pheasants in NYs							
Lapsed hunters	171	2.81	24.0	14.6	17.5	43.9	
Nonparticipants	157	1.83	58.6	14.0	12.7	14.6	
Total	328	2.34	40.5	14.3	15.2	29.9	
Too many other hunters on public land with stocked birds							
Lapsed hunters	172	2.23	37.8	22.1	19.2	20.9	
Nonparticipants	157	1.89	54.1	17.2	14.0	14.6	
Total	329	2.07	45.6	19.8	16.7	17.9	
Hunting stocked pheasants doesn't feel like real hunting							
Lapsed hunters	174	2.20	46.0	13.8	14.4	25.9	
Nonparticipants	157	1.83	58.0	16.6	10.2	15.3	
Total	331	2.02	51.7	15.1	12.4	20.8	

^a Range 1 to 4; 1=not at all, 2=slightly, 3, moderately, 4=very important.

^bError margin around percentages (95% confidence level): lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 7.9\%$, total $\pm 5.4\%$.

Table 5. Social, physical, and resource constraints as reasons why respondents have not hunted pheasants in the past 5 years, 2021 survey of New York State hunting license holders.

		Importance as a reason respondent does not hunt pheasants ^b				
	n	Mean ^a	Not at all %	Slight %	Mod. %	Very %
More interested in other kinds of hunting						
Lapsed hunters	172	2.52	32.6	15.1	19.8	32.6
Nonparticipants	160	2.73	27.5	10.6	23.8	38.1
Total	332	2.62	30.1	13.0	21.7	35.2
Don't know where to hunt						
Lapsed hunters	171	2.27	39.8	17.0	19.3	24.0
Nonparticipants	160	2.34	37.5	19.4	14.4	28.8
Total	331	2.31	38.7	18.1	16.9	26.3
Have to travel long distance to hunt pheasants						
Lapsed hunters	171	2.29	38.9	18.1	18.7	24.6
Nonparticipants	159	1.89	56.0	15.1	11.3	17.0
Total	330	2.10	47.3	16.7	15.2	20.9
Have no one to hunt with						
Lapsed hunters	170	1.63	63.5	18.2	10.0	8.2
Nonparticipants	156	1.82	60.3	13.5	10.3	16.0
Total	326	1.72	62.0	16.0	10.1	12.0
Don't have a bird dog						
Lapsed hunters	170	1.80	60.6	12.9	12.4	14.1
Nonparticipants	155	1.98	54.2	12.9	13.5	19.4
Total	325	1.89	57.5	12.9	12.9	16.6
Don't know how to hunt						
Lapsed hunters	168	1.37	78.6	11.3	4.8	5.4
Nonparticipants	156	1.95	50.0	22.4	10.3	17.3
Total	324	1.65	64.8	16.7	7.4	11.1

^a Range 1 to 4; 1=not at all important, 2=slightly important, 3, moderately important, 4=very important.

^bError margin around percentages (95% confidence level): lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 7.8\%$, total $\pm 5.4\%$.

Likelihood of pheasant hunting in the future differed by stage of hunting involvement. Most active pheasant hunters (79%), and about 30% of lapsed pheasant hunters, said they would probably or definitely hunt pheasants on publicly-accessible land in the future. Over half of nonparticipants (57%) said they probably will not hunt pheasants on publicly-accessible land in the future (Table 6).

We asked hunters what changes in hunting conditions would encourage them to consider pheasant hunting on publicly-accessible lands in the future. Eighty percent or more of active pheasant hunters said that increasing the number of birds released, increasing the number of release sites, and releasing birds closer to where they lived would likely or definitely encourage them to hunt pheasant on publically-accessible land in the future; about half as many active hunters indicated that special youth-mentor hunts or premier stocking locations would encourage their participation. Over 60% of lapsed pheasant hunters said that increasing the number of release sites and releasing birds closer to where they lived would likely or definitely encourage them to hunt pheasant on publically-accessible land in the future; only about 40% of lapsed hunters indicated that special youth-mentor hunts or premier stocking locations would encourage their participation. The majority of nonparticipants indicated that the conditions would make no difference to them and would not encourage pheasant hunting participation. Changes in any of the conditions presented would be more likely to encourage reactivation of lapsed hunters than to encourage recruitment of nonparticipants (Table 7).

Table 6. Likelihood of hunting pheasants on publicly-accessible land in the future, among respondents at different levels of pheasant hunting involvement, 2021 survey of New York State hunting license holders.

	Level of involvement in pheasant hunting ^a			Total (n=439) %
	Active Pheasant hunters (n=97) %	Lapsed Pheasant hunters (n=176) %	Non participant (n=166) %	
Definitely will not	1.0	10.8	25.3	14.1
Probably will not	6.2	26.7	31.3	23.9
Not sure	13.4	32.4	27.7	26.4
Probably will	36.1	21.6	9.6	20.3
Definitely will	43.3	8.5	6.0	15.3

^aError margin around percentages (95% confidence level): active hunters $\pm 10.0\%$, lapsed hunters $\pm 7.4\%$, nonparticipants $\pm 7.6\%$, total $\pm 4.7\%$.

Table 7. Degree to which changes in hunting would encourage active, lapsed, or pheasant hunting nonparticipants to consider pheasant hunting on publicly-accessible land in the future, 2021 survey of New York State hunting license holders.

What if DEC...	Hunter group	n	Expected response to change		
			No difference %	Might encourage %	Likely to encourage %
Increased the number of release sites	Active	93	7.5	10.8	81.7
	Lapsed hunters	175	19.4	15.4	65.2
	Nonparticipants	160	36.3	25.6	38.1
	Total	428	23.1	18.2	58.6
Released birds closer to where you live	Active	95	13.7	6.3	80.0
	Lapsed hunters	173	20.2	16.2	63.6
	Nonparticipants	162	35.2	23.5	41.3
	Total	430	24.4	16.7	58.8
Increased number of birds released	Active	94	10.6	2.1	87.2
	Lapsed hunters	174	24.1	18.4	57.5
	Nonparticipants	160	40.6	29.4	30.1
	Total	428	27.3	18.9	53.7
Released pheasants later in the season	Active	92	13.0	16.3	70.7
	Lapsed hunters	174	29.9	23.6	46.5
	Nonparticipants	159	47.2	21.4	31.4
	Total	425	32.7	21.2	46.1
Sponsored special youth-mentor hunts	Active	92	34.8	18.5	46.7
	Lapsed hunters	173	36.4	21.4	42.2
	Nonparticipants	160	55.6	16.3	28.2
	Total	425	43.3	18.8	37.9
Created premier stocking locations	Active	90	27.8	30.0	42.2
	Lapsed hunters	172	36.6	23.8	39.5
	Nonparticipants	160	49.4	28.8	21.8
	Total	422	39.6	27.0	33.4
Offered “how-to” hunting seminars	Active	90	54.4	13.3	32.2
	Lapsed hunters	174	54.6	17.8	27.6
	Nonparticipants	160	47.5	18.8	33.7
	Total	424	51.9	17.2	30.9

^aError margin around percentages (95% confidence level): active hunters $\pm 10.3\%$, lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 7.8\%$, total $\pm 4.8\%$.

Influences on Pheasant Hunting Satisfactions

We used three sets of questions in the 2022 active pheasant hunter survey to clarify which conditions were most important to satisfaction with pheasant hunting experiences on publicly-accessible lands. First, we asked pheasant hunters to rate the current quality of several hunting conditions on publicly-accessible lands in the region of New York State where they hunted pheasant most often (Figure 2). The total number of responses was too low to allow for comparisons among all hunting regions, so we compared respondents who hunted most often in the western region zone to respondents who hunted in all other regions combined (i.e., Northern, Southeastern, Long Island).

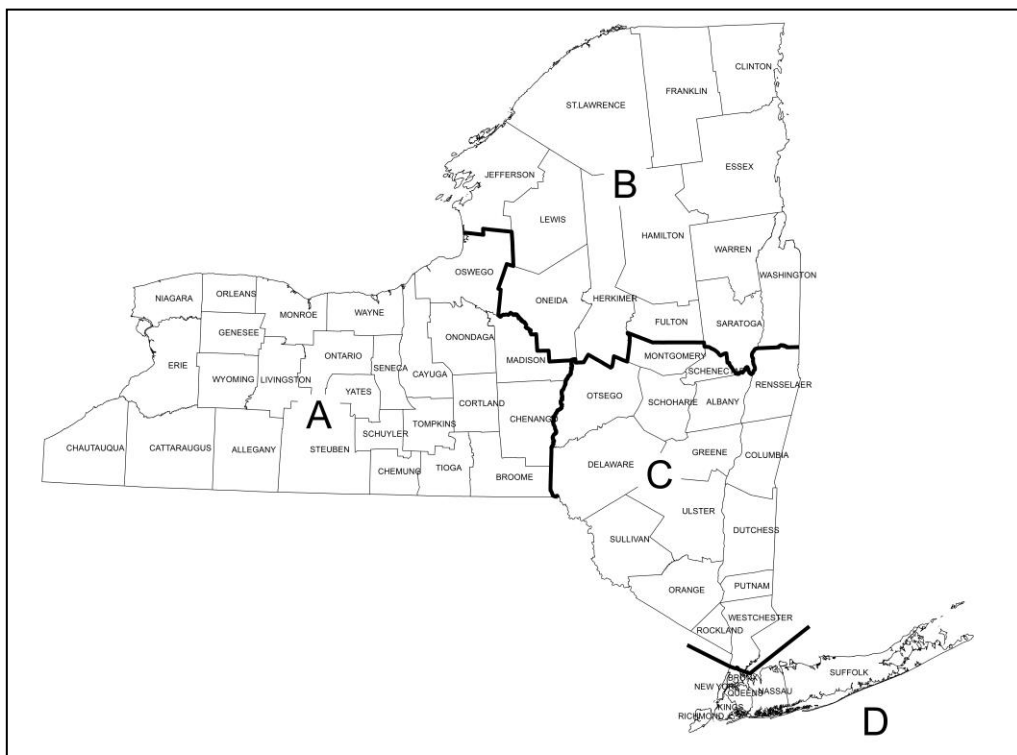


Figure 2. Hunting regions of New York State (A = Western NY, B=Northern NY, C=Southeastern NY, D=Long Island).

We found that, whether they hunted primarily in western New York or in another region, nearly half of respondents rated their chances of seeing, hearing, or harvesting a pheasant on a given hunting trip were poor or very poor. Whether they hunted primarily in western New York or in another region, about 9 out of 10 hunters believed they had an OK, good, or very good chance of avoiding conflicts with other hunters when hunting pheasants on publicly-accessible lands (Table 8).

Table 8. Hunter ratings of pheasant hunting conditions on publicly-accessible lands in New York State, 2022 survey of active New York State pheasant hunters.

	Region hunted most often	n	Quality rating ^a		
			Poor/ Very poor %	OK %	Good, Very good %
Chances of seeing, hearing pheasants during a hunt					
	West	147	47.6	36.7	15.6
	Other regions	174	47.7	30.5	21.8
Chances of harvesting a pheasant on a given trip					
	West	147	47.6	38.8	13.6
	Other regions	175	47.4	33.1	19.4
# places I can hunt pheasants In New York State					
	West	147	33.3	43.5	23.1
	Other regions	172	39.5	40.1	20.3
# places I can hunt <1 hour from my home					
	West	146	32.9	34.2	32.9
	Other regions	171	43.9	28.1	28.1
Size of public land parcels where I can hunt pheasants					
	West	147	25.2	42.9	32.0
	Other regions	172	33.1	40.7	26.2
Quality of cover on public land where pheasants stocked					
	West	145	24.1	41.4	34.5
	Other regions	173	25.4	46.8	27.7
Chances of avoiding conflicts with other pheasant hunters					
	West	147	19.0	42.9	38.1
	Other regions	175	17.1	39.4	43.4
Chances of avoiding conflicts with small game, bow hunters					
	West	147	12.2	42.9	44.9
	Other regions	174	11.5	32.8	55.7

^aError margin around percentages (95% confidence level): West \pm 8.1%, other regions \pm 7.5%

Next, we asked hunters to rate how important 8 conditions were to their satisfaction with pheasant hunting on publicly-accessible lands in New York. Being able to hunt pheasants on large land parcels, being able to hunt on parcels with good cover, and having a place to hunt within a 1-hour drive of home, were rated as very important to pheasant hunting satisfaction by at least half of all respondents. Not seeing or competing with other hunters were the conditions that received the lowest mean importance ratings (Table 9).

Finally, we asked hunters to rank the importance of 6 conditions that could influence their satisfaction with pheasant hunting experiences on publicly-accessible lands. Respondents were instructed to rank the conditions 1 through 6, using each ranking number only once. Some mail survey respondents (n=57) used the same ranking number more than once. To retain these respondents in our analysis, we assigned an average score to conditions with the same ranking. Ranking results for all respondents (n=326) are shown in Figure 3 and in the first row of Table 10. Ranking results that exclude the 57 respondents who used the same ranking number more than once are shown in the second row of Table 10. Active pheasant hunters ranked hearing/seeing pheasants as the most important condition affecting pheasant hunting satisfaction; opportunity to hunt pheasants in multiple places was ranked among the least important conditions (Table 10).

Views on the Wild Pheasant Program

Awareness of Wild Population and Habitat Conditions

The only self-sustaining population of pheasants in NYS is in a portion of the Lake Plain region (DEC 2010). In the survey instrument for the 2021 hunting license holder survey, we included several questions to assess hunters' awareness of wild pheasant populations and habitat conditions for wild pheasant in NYS.

About three in four active or lapsed pheasant hunters were aware that pheasant habitat conditions had declined greatly and that most regions cannot support a wild pheasant population. Awareness was lower among pheasant hunting nonparticipants. Only 34% of nonparticipants knew that most regions of the state cannot support a wild pheasant population; only 20% of nonparticipants knew that pheasant stocking is not done to restore wild pheasants (Table 11).

Table 9. Level of importance active pheasant hunters placed on conditions that could determine satisfaction with the quality of pheasant hunting available on publicly accessible land in New York State, 2022 survey of active New York State pheasant hunters.

	n	Mean ^a	Level of importance ^b				
			Not %	1 %	2 %	3 %	Very %
Being able to hunt pheasants on publicly accessible land with good cover	333	4.40	0.6	2.1	9.6	32.1	55.6
Being able to hunt pheasants on large publicly accessible land parcels	333	4.30	0.9	3.9	11.4	31.5	52.3
Having a place to hunt stocked pheasants within 1-hour drive of my home, regardless of parcel size or cover	333	4.25	0.9	4.8	13.2	30.9	50.2
Having multiple places to hunt stocked pheasants, regardless of proximity to where I live	333	4.18	2.1	4.5	15.0	30.0	48.3
Proportion of hunting trips where I see or hear pheasants	333	4.12	0.9	4.2	19.2	33.0	42.6
Not competing for spots with other pheasant hunters	332	3.71	4.8	7.8	25.9	34.3	27.1
Proportion of trips when I harvest a pheasant	334	3.59	4.2	12.0	27.2	33.8	22.8
Not seeing small game or bow hunters when pheasant hunting	330	3.07	17.3	12.7	31.2	23.3	15.5

^a Range 1 – 5; 1 = not important, 5 = very important.

^bError margin around percentages (95% confidence level): ± 5.4%.

Table 10. How pheasant hunters ranked the importance of six conditions that could determine their satisfaction with the quality of pheasant hunting available on publicly accessible land in New York State, 2022 survey of active New York State pheasant hunters.

		Mean		95% Conf. interval	
	n	importance ranking ^a	Standard error	lower	upper
Hearing/seeing pheasants (7a)					
All responses ¹	326	2.33	.09	2.16	2.50
Followed ranking instructions ²	269	2.06	.09	1.89	2.22
Harvest success during pheasant season (7b)					
All responses	326	3.30	.09	3.13	3.48
Followed ranking instructions	269	3.18	.10	2.99	3.38
Opportunity to hunt close to home (7d)					
All responses	326	3.60	.09	3.41	3.78
Followed ranking instructions	269	3.55	.09	3.39	3.72
Quality of lands where Pheasants are released (7f)					
All responses	326	4.30	.09	4.12	4.48
Followed ranking instructions	269	3.62	.11	3.42	3.83
Opportunity to hunt pheasants in multiple places (7e)					
All responses	326	4.00	.08	3.84	4.16
Followed ranking instructions	269	4.19	.09	4.01	4.36
Minimizing contact with other hunters (7c)					
All responses	326	3.47	.08	3.32	3.62
Followed ranking instructions	269	4.40	.10	4.21	4.59

^a Range 1 – 6; 1 = most important condition, 6 = least important condition.¹Includes 57 respondents who used the same ranking number more than once. To retain these respondents in the analysis, we assigned an average score to conditions with the same ranking. ²Excludes 57 respondents who used the same ranking number more than once.

Table 11. Awareness of key pheasant management conditions among respondents in three categories of pheasant hunting involvement, 2021 survey of New York State hunting license holders.

Before you received this survey, were you aware that...	n	Yes %	No %	Unsure %
The habitats pheasants need to survive and reproduce have declined greatly in NYS				
Active hunters	97	77.3	16.5	6.2
Lapsed hunters	185	76.2	16.8	7.0
Nonparticipants	166	44.6	47.6	7.8
Total	448	64.7	28.1	7.1
Most regions of NYS cannot support a wild, self-sustaining pheasant population				
Active hunters	98	72.4	20.4	7.1
Lapsed hunters	183	60.7	23.0	16.4
Nonparticipants	167	34.1	54.5	11.4
Total	448	53.3	34.2	12.5
DEC raises pheasants and releases them on publicly-accessible lands for hunting				
Active hunters	98	88.8	5.1	6.1
Lapsed hunters	183	74.9	17.5	7.7
Nonparticipants	167	49.7	44.3	6.0
Total	448	68.5	24.8	6.7
Pheasant stocking is not done to restore wild pheasants in NYS				
Active hunters	98	66.3	21.4	12.2
Lapsed hunters	182	50.0	31.3	18.7
Nonparticipants	165	20.0	63.6	16.4
Total	445	42.5	41.1	16.4

^aError margin around percentages (95% confidence level): active hunters $\pm 10.0\%$, lapsed hunters $\pm 7.3\%$, nonparticipants $\pm 7.6\%$, total $\pm 4.6\%$.

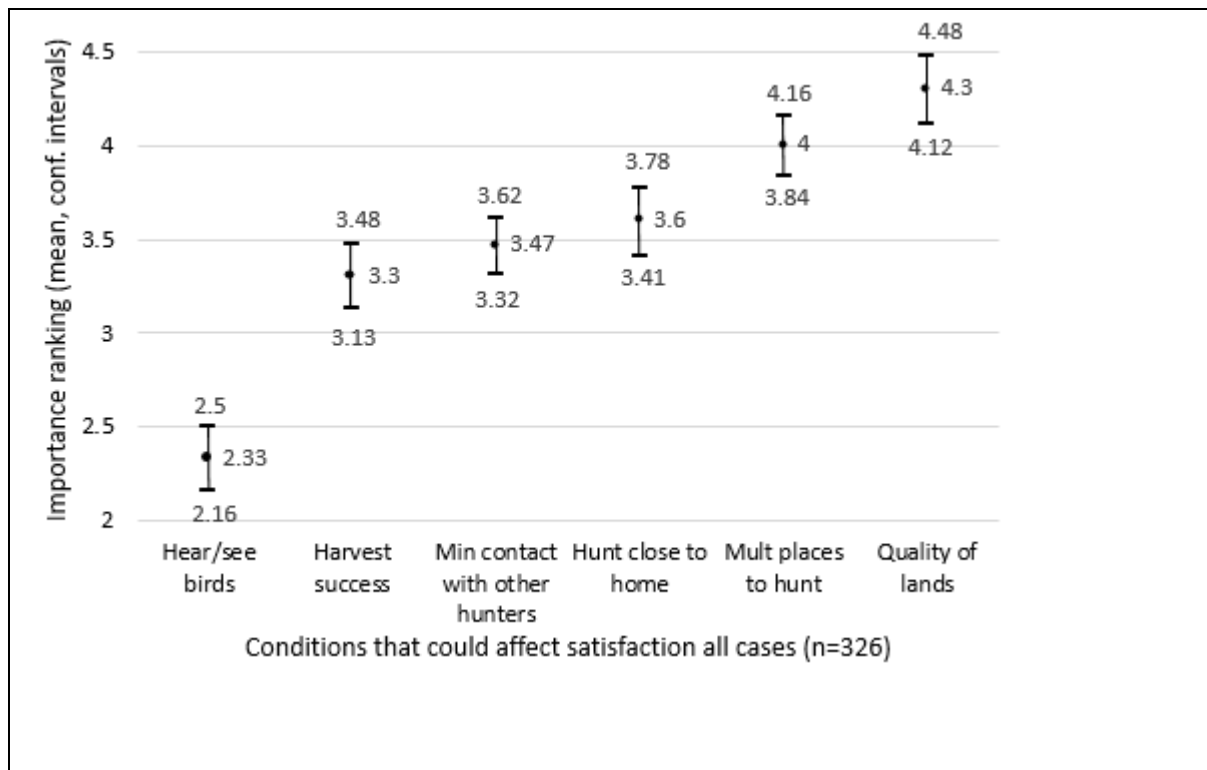


Figure 3. Mean ranking and 95% confidence intervals for six conditions that can influence satisfaction with pheasant hunting on publicly-accessible lands in New York, 2022 active pheasant hunter survey (n=326). Ranking range 1 (most important) to 6 (least important).

Even though three quarters of active or lapsed pheasant hunters were aware that pheasant habitat conditions had declined greatly and that most regions cannot support a wild pheasant population, over 30% of active hunters, and over 40% of lapsed hunters, still expected to find a population of wild pheasants large enough to hunt in both the Lake Plain and Southern Tier regions. More than a third of active and lapsed pheasant hunters were unsure where they might encounter a wild pheasant population in New York large enough to sustain hunting (Table 12).

We included similar questions in the 2022 active pheasant hunter survey. A majority of active pheasant hunters agreed that pheasant habitat had declined greatly in the region where they hunt pheasants most often. Yet, a third or more of respondents to the 2022 active pheasant hunter survey also believed that there was enough pheasant habitat in the region they hunted most often to support a self-sustaining pheasant population, and that more pheasant stocking could restore a self-sustaining wild pheasant population (Table 13).

Table 12. Percentage of active, lapsed, and non-pheasant hunters who expected to find a self-sustaining population of pheasants large enough to hunt in various regions of New York State, 2021 survey of New York State hunting license holders.

	Hunter group ^a		
	Active pheasant	Lapsed pheasant	Nonparticipants
	Hunter	Hunter	
	(n=76)	(n=151)	(n=151)
	%	%	%
Southern Tier region	38.5	47.8	27.5
Lake Plain region	30.8	25.7	13.7
Long Island	16.5	8.4	6.0
Catskill region	15.4	11.7	14.8
Adirondack region	13.2	7.8	11.0
Alleghany region	8.8	15.1	7.7
Not sure where I would find a self-sustaining pheasant population	33.0	39.1	53.8

^aError margin around percentages (95% confidence level): active hunters $\pm 11.2\%$, lapsed hunters $\pm 8.0\%$, nonparticipants $\pm 8.0\%$, total $\pm 4.8\%$

Table 13. Agreement with statements about region where respondent hunted pheasants most often, 2022 survey of active New York State pheasant hunters.

In the region where I hunt most often ...	n	Response ^a		
		Moderately or Strongly Disagree %	Neither %	Moderately or Strongly Agree %
Habitat that can support pheasants has declined sharply in recent decades				
Western region	145	21.4	9.0	69.7
All other regions	169	20.1	21.3	58.6
There is sufficient habitat to support a self-sustaining pheasant population				
Western region	145	50.3	17.9	31.7
All other regions	169	41.4	18.3	40.2
Stocking more pheasants would restore a wild, self-sustaining pheasant population				
Western region	145	29.0	26.2	44.8
All other regions	168	21.4	26.2	52.4

^aError margin around percentages (95% confidence level): western region $\pm 8.1\%$, other regions $\pm 7.5\%$

Importance of Wild Pheasant

Over half of respondents to the 2021 license holder survey said that the wild pheasant management program was important to them. Both the 2021 and 2022 surveys indicated that the wild pheasant management program is important to active pheasant hunters. Over half of active or lapsed pheasant hunters in the 2021 survey agreed that the wild pheasant program should be a higher priority than the pheasant propagation program. About half of respondents to the 2022 active pheasant hunter survey, and a third of active pheasant hunters in the 2021 survey, disagreed with the statement, “It is unrealistic for hunters to expect DEC to maintain a wild pheasant population in NYS” (Table 14).

Table 14. Opinions about the wild pheasant management program among respondents in three categories of pheasant hunting involvement, 2022 survey of active New York State pheasant hunters and 2021 survey of New York State hunting license holders.

				Response ^{bc}		
				Mod/ str disagree %	Neither %	Mod/ str agree %
The wild pheasant mgt. program is important to me						
2022 survey	Active hunters	336	1.34	5.7	6.3	88.1
2021 survey	Active hunters	97	1.38	3.1	8.2	88.7
	Lapsed hunters	182	0.82	9.3	23.6	67.0
	Nonparticipants	169	0.29	18.3	40.2	41.4
	Total	448	0.75	11.4	26.6	62.1
The wild pheasant mgt. program should be a higher priority than stocking pheasants						
2022 survey	Active hunters	336	0.51	20.2	25.9	53.9
2021 survey	Active hunters	97	0.77	12.4	22.7	64.9
	Lapsed hunters	182	0.73	8.2	32.4	59.3
	Nonparticipants	169	0.29	13.6	48.5	37.9
	Total	448	0.58	11.2	36.4	52.5
It is unrealistic for hunters to expect DEC to maintain a wild pheasant population in NYS						
2022 survey	Active hunters	335	-0.29	50.7	18.2	31.0
2021 survey	Active hunters	96	0.23	32.3	18.8	49.0
	Lapsed hunters	181	0.11	35.4	18.2	46.4
	Nonparticipants	168	-0.03	31.0	36.9	32.1
	Total	445	0.08	33.0	25.4	41.6

^a Range -2 to +2; -2=disagree strongly, -1=disagree mod., 0=neither, 1= agree mod., 2= agree strongly.

^bError margin around percentages (95% conf. level): active hunters \pm 5.4%.

^cError margin around percentages (95% conf. level): active hunters \pm 10.0%, lapsed hunters \pm 7.3%, nonparticipants \pm 7.5%, total \pm 4.6%.

Views on the Pheasant Propagation Program

Majorities of active and lapsed pheasant hunters agreed that the pheasant propagation program is important to them and is worth the investment made by DEC. Majorities of active and lapsed pheasant hunters also thought that the pheasant propagation program contributes to hunter recruitment and retention. Nonparticipants were less likely than active or lapsed pheasant hunters to hold those beliefs, or to agree that pheasant propagation should be a higher priority than restoring wild pheasant (Table 15).

Active pheasant hunters in the 2022 survey had mixed preferences on the best approach for pheasant distribution. Fifty-three percent preferred that DEC emphasize quality of release sites (i.e., release pheasants on relatively few sites with space and cover to hold birds). Thirty seven percent of active hunters preferred that DEC emphasize quantity of release sites (i.e., release birds on as many publicly accessible land parcels as possible, regardless of site quality). The remaining 10% were unsure about their preference for distribution approach. Preference for approach to pheasant distribution was no different for respondents who hunted primarily in the western zone compared with hunters using all other regions combined (west: 55% prefer quality, 34% quantity, 11% unsure; other regions combined: 52% prefer quality, 39% quantity, 10% unsure; $\chi^2 = 0.99$, $df = 2$, $p = 0.61$).

Views on Program Funding

We asked a series of questions in both the 2021 and 2022 surveys to assess hunter views on funding the pheasant management program. The program is currently funded from the NYS Conservation Fund, which includes revenues from sale of all hunting licenses. A majority of hunters—including hunters who had never hunted pheasant in New York—agreed that it is appropriate to continue to pay for the program from the Conservation Fund. Although all hunters contribute to the Conservation Fund, and the Conservation Fund pays for the pheasant propagation program, majorities of lapsed hunters and nonparticipants disagreed that all hunters should contribute funds to propagate pheasants (Table 16).

A substantial minority of nonparticipants agreed that pheasant hunters should pay a fee to cover part of the costs of pheasant propagation, but fewer nonparticipants agreed that pheasant hunters should pay a fee to cover all program costs. Majorities of active pheasant hunters disagreed that pheasant hunters should pay a fee to cover part or all of the costs to administer the program (Table 16).

Table 15. Opinions about the pheasant propagation program among respondents in three categories of pheasant hunting involvement, 2022 survey of active New York State pheasant hunters 2021and survey of New York State hunting license holders.

The propagation program...	Survey		n	Mean ^a	Response ^b		
					Mod/ str disagree %	Neither %	Mod/ str agree %
is important to me	2022	Active hunters	334	1.39	4.5	5.7	89.8
		Active hunters	94	1.37	1.1	11.7	87.2
	2021	Lapsed hunters	170	0.74	8.2	28.2	63.5
		Nonparticipant	150	0.35	14.0	44.0	42.0
		Total	414	0.74	8.7	30.2	61.1
is worth the investment	2022	Active hunters	333	1.40	5.4	5.1	89.2
		Active hunters	93	1.48	1.1	3.2	95.7
	2021	Lapsed hunters	170	0.84	10.6	20.0	69.4
		Nonparticipant	150	0.52	11.3	38.7	50.0
		Total	413	0.87	8.7	23.0	68.3
helps recruit new hunters	2022	Active hunters	334	1.14	7.5	13.2	79.3
		Active hunters	92	1.18	4.3	17.4	78.3
	2021	Lapsed hunters	167	0.88	12.0	18.0	70.1
		Nonparticipant	150	0.42	10.7	46.7	42.7
		Total	409	0.78	9.8	28.4	61.9
Helps retain new hunters	2022	Active hunters	334	1.27	6.6	7.2	86.2
		Active hunters	91	1.35	3.3	13.2	83.5
	2021	Lapsed hunters	169	0.94	8.9	17.2	74.0
		Nonparticipant	150	0.51	8.0	44.7	47.3
		Total	410	0.88	7.3	26.3	66.3
should be higher priority than restoring wild pheasant pop.	2022	Active hunters	NA	NA	NA	NA	NA
		Active hunters	91	0.58	15.4	35.2	49.5
	2021	Lapsed hunters	168	0.28	25.0	32.7	42.3
		Nonparticipant	149	-0.12	24.8	56.4	18.8
		Total	408	0.20	22.8	41.9	35.3

^a Range -2 to +2; -2=disagree strongly, -1=disagree moderately, 0=neither, 1= agree moderately, 2= agree strongly.

^bError margin around percentages (95% conf. level): 2022 active hunters \pm 5.4%

^cError margin around percentages (95% conf. level): 2021 active hunters \pm 10.3%, lapsed hunters \pm 7.6%, nonparticipants \pm 8.0%, total \pm 4.9%

Table 16. Opinions about funding for the pheasant propagation program among respondents in three categories of pheasant hunting involvement, 2022 survey of active New York State pheasant hunters and 2021 survey of New York State hunting license holders.

	Survey Year	Group	n	Mean ¹	Response ^{bc}		
					Mod/str disagree	Neither	Mod/ str agree
					%	%	%
Appropriate to fund propagation program with general hunting license revenues	2022	Active hunters	344	1.30	5.2	6.7	88.1
	2021	Active hunters	93	1.22 ^a	7.5	6.5	86.0
		Lapsed hunters	170	0.79 ^{abc}	14.7	13.5	71.8
		Nonparticipants	146	0.51 ^{bc}	15.1	29.5	55.5
		Total	409	0.79	13.2	17.6	69.2
All hunters should contribute funds to propagation program	2022	Active hunters	NA	NA	NA	NA	NA
	2021	Active hunters	92	0.66 ^a	19.6	17.4	63.0
		Lapsed hunters	171	0.06 ^{ab}	32.2	25.7	42.1
		Nonparticipants	148	-0.18 ^b	35.6	35.8	27.7
		Total	411	0.11	30.9	27.5	41.6
Pheasant hunters should pay a user fee to cover part of program costs	2022	Active hunters	344	-0.58	54.7	17.4	27.9
	2021	Active hunters	92	-0.06 ^{ab}	42.4	12.0	45.7
		Lapsed hunters	171	-0.07 ^a	34.5	28.7	36.8
		Nonparticipants	149	0.29 ^b	20.1	33.6	46.1
		Total	412	0.06	31.1	27.6	42.2
Pheasant hunters should pay a user fee to cover all program costs	2022	Active hunters	342	-1.14	74.3	13.5	12.3
	2021	Active hunters	93	-0.93 ^a	71.0	15.1	14.0
		Lapsed hunters	171	-0.67 ^b	54.4	28.7	17.0
		Nonparticipants	149	-0.33 ^{ab}	42.3	34.2	23.5
		Total	413	-0.61	53.8	27.6	18.6

¹ Range -2 to +2; -2=disagree strongly, -1=disagree moderately, 0=neither, 1= agree moderately, 2= agree strongly.

^a Means with the same letter (a-a, b-b, c-c) are different at the $p < 0.05$ level of significance.

^bError margin around percentages (95% conf. level): 2022 active hunters $\pm 5.3\%$.

^cError margin around percentages (95% conf. level): 2021 active hunters $\pm 10.2\%$, lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 8.1\%$, total $\pm 4.8\%$.

Majorities of active pheasant hunters disagreed that DEC spends too much money on the pheasant program. Active hunters were divided on whether money spent on pheasant propagation would be better spent on restoring habitat or on other small game management (Table 17).

We used a final set of questions in both surveys to ask hunters whether they supported or opposed 4 mechanisms to fund the pheasant propagation program. Survey results indicated substantial hunter support for using the Conservation Fund to pay for pheasant propagation. Survey results also indicated substantial hunter support for funding propagation with revenues from sales of an annual permit to hunt pheasants on publicly-accessible lands. Hunters were less supportive of funding propagation with revenues from an annual permit to hunt pheasants anywhere in New York State. Hunters were least likely to support the idea of raising the hunting license fee as a means to pay for pheasant propagation (Table 18).

DISCUSSION

Program administrators in DEC need representative information on pheasant hunting and hunters to set goals and objectives in the next pheasant management plan. We addressed DEC information needs through a linked pair of hunter surveys completed in 2021 and 2022. Of particular interest was gaining an understanding of hunters' views on wild pheasant management, pheasant propagation, and means of funding pheasant propagation.

Study findings suggest that maintaining a wild pheasant population in New York State is important to most active pheasant hunters, a majority of lapsed pheasant hunters, and a substantial minority of license holders who have never participated in pheasant hunting in New York. We expected to find broad hunter support for wild pheasant restoration, given levels of hunter support for wild pheasant restoration demonstrated in other states (Johnson et al. 2014). But findings also indicate that many hunters may misunderstand the limited potential for pheasant population restoration in New York. Results suggest that a third or more of active pheasant hunters believe that restoration of a huntable population of wild pheasants is still possible in the region they hunt most often. We hypothesize that several misperceptions contribute to hunter expectations for wild population restoration. Hunters may mistakenly believe that they are hunting and harvesting wild pheasants, even though the vast majority of pheasants encountered and harvested in New York were released by DEC or a private party. Moreover, hunters may be unaware that most released birds do not survive to the following breeding season, or that sites where pheasants are released typically don't have suitable breeding habitat for pheasants.

Table 17. Opinions about relative priority of funding for the pheasant propagation program among respondents in three categories of pheasant hunting involvement, 2022 survey of active New York State pheasant hunters and 2021 survey of New York State hunting license holders.

	Survey year	Group	n	Mean ¹	Response ^{bc}		
					Mod/str	Mod/str	
					Disagree ¹ %	Neither %	Agree ² %
DEC spends too much money on propagating pheasants	2022	Active hunters	345	-1.19	76.8	19.4	3.8
	2021	Active hunters	91	-0.98 ^{ab}	63.7	29.7	6.6
		Lapsed hunters	170	-0.47 ^a	44.1	41.2	14.7
		Nonparticipants	147	-0.27 ^b	28.6	59.2	12.2
		Total	408	-0.51	42.9	45.1	12.0
Money for propagation better spent on restoring habitat	2022	Active hunters	345	-0.28	42.0	34.2	23.8
	2021	Active hunters	94	-0.03 ^{ab}	34.0	35.1	30.9
		Lapsed hunters	171	0.34 ^a	22.2	33.3	44.4
		Nonparticipants	149	0.30 ^b	14.1	49.7	36.2
		Total	414	0.23	22.0	39.6	38.4
Money for propagation better spent on small game management	2022	Active hunters	344	-0.67	55.5	29.7	14.1
	2021	Active hunters	93	-0.43 ^{ab}	49.5	25.8	24.7
		Lapsed hunters	171	0.01 ^a	31.6	36.3	32.2
		Nonparticipants	147	0.16 ^b	20.4	49.7	29.9
		Total	411	-0.04	31.6	38.7	29.7

¹ Range -2 to +2; -2=disagree strongly, -1=disagree moderately, 0=neither, 1= agree moderately, 2= agree strongly.

^a Means with the same letter (a-a, b-b, c-c) are different at the $p < 0.05$ level of significance.

^b Error margin around percentages (95% conf. level): 2022 active hunters $\pm 5.3\%$.

^c Error margin around percentages (95% conf. level): 2021 active hunters $\pm 10.3\%$, lapsed hunters $\pm 7.5\%$, nonparticipants $\pm 8.1\%$, total $\pm 4.9\%$.

Table 18. Level of support for four possible means of funding the pheasant propagation program among respondents in three categories of pheasant hunting involvement, 2022 survey of active New York State pheasant hunters and 2021 survey of New York State hunting license holders.

	Survey year	Group	n	Mean ¹	Response ^{ab}		
					Mod. / strongly Oppose %	Neither %	Mod. / strongly Support %
Continue to use Conservation Fund	2022	Active hunters	345	1.35	5.2	6.1	88.7
		Active hunters	98	1.34	3.1	7.1	89.8
	2021	Lapsed hunters	177	0.83	11.9	17.5	70.6
		Nonparticipants	162	0.64	13.0	25.3	61.7
		Total	437	0.87	10.3	18.1	71.6
Annual permit to hunt publicly-accessible land	2022	Active hunters	345	-0.32	50.7	8.7	40.6
		Active hunters	97	0.16	37.1	8.2	54.6
	2021	Lapsed hunters	175	-0.05	38.3	21.7	40.0
		Nonparticipants	163	0.48	18.4	24.5	57.1
		Total	435	0.19	30.6	19.8	49.7
Annual permit to hunt anywhere in New York State	2022	Active hunters	345	-0.81	66.1	8.4	25.5
		Active hunters	98	-0.24	46.9	14.3	38.8
	2021	Lapsed hunters	179	-0.17	43.6	19.0	37.4
		Nonparticipants	163	0.15	25.8	25.8	45.4
		Total	440	-0.07	38.9	20.5	40.7
Increase hunting license Fee to support all game management	2022	Active hunters	344	-0.51	57.3	12.5	30.2
		Active hunters	97	-0.11	40.2	18.6	41.2
	2021	Lapsed hunters	178	-0.60	58.4	14.0	27.5
		Nonparticipants	162	-0.61	52.5	25.3	22.2
		Total	437	-0.49	52.2	19.2	28.6

¹ Range -2 to +2; -2=oppose strongly, -1=oppose moderately, 0=neither, 1= agree moderately, 2= agree strongly.

^bError margin around percentages (95% conf. level): 2022 active hunters \pm 5.3%.

^cError margin around percentages (95% conf. level): 2021 active hunters \pm 10.0%, lapsed hunters \pm 7.4%, nonparticipants \pm 7.7%, total \pm 4.7%.

Our findings confirm that pheasant hunters place high value on the propagation program and rely on the program for hunting opportunities. Most active and lapsed pheasant hunters agreed that the pheasant propagation program is important to them, that it is worth the investment made by DEC, and that it helps recruit and retain new hunters. Moreover, approximately four out of five active pheasant hunters pursued pheasants on publicly-accessible lands, where any pheasants encountered are likely to be propagated birds. Wildlife managers were aware that pheasant propagation is a popular program, so these findings were consistent with expectations.

Survey findings underscored the important roles that hearing, seeing, and harvesting pheasants play in hunter satisfaction and hunter retention. Hearing or seeing pheasants during pheasant season was ranked as the most important condition that influenced participants' satisfaction with pheasant hunting on publicly-accessible lands in New York. Nearly half of active pheasant hunters who responded to the 2022 survey rated their chances of seeing or hearing a pheasant on a given hunting trip as poor or very poor. A majority of lapsed hunters reported that low probability of seeing pheasants was moderately or very important as a reason why their participation in pheasant hunting had lapsed.

The finding that hearing/seeing pheasants was very important to pheasant hunting satisfaction is consistent with previous research. A strong positive relationship between seeing, hearing, and having opportunities to harvest game and hunting satisfaction has been documented in multiple studies across a range of hunting activities (Decker et al. 1980, Langenau et al. 1981, McCullough and Carmen 1982, Hammitt et al. 1990, Gigliotti 2000, Hayslette et al. 2001, Heberlein and Kuentzel 2002, Fulton and Manfredo 2004, Brunke and Hunt 2008, Shrestha et al. 2012, Gruntorad et al. 2020), including pheasant hunting (Anderson and David 1998, Frey et al. 2003, Wszola 2020).

Because most pheasants in New York are propagated birds, opportunities to see, hear, and harvest pheasants are constrained by logistics associated with stocking and the level of resources available for the propagation program. Additional logistical support and resources (e.g., staffing, funding) may be necessary for DEC to expand opportunities to see, hear, and harvest pheasants. But despite their interest in additional opportunities to encounter pheasants, pheasant hunters expressed mixed support for establishing new sources of dedicated funding for pheasant propagation. Results suggest that a substantial proportion of active pheasant hunters would oppose funding the program with fees from an annual permit to hunt pheasants on publicly-accessible lands, and a majority of all hunting license buyers would oppose supporting the program through a hunting license fee increase.

Study Limitations This study had several limitations. Low sample sizes limited our ability to compare respondents by level of involvement in pheasant hunting or region where respondents hunted most often. In the 2021 survey, we reported results for respondents who were active pheasant hunters, but those results should be viewed cautiously because the sample size was <100 active pheasant hunters. Reporting results for active pheasant hunters in the 2021 survey is useful, however, because those results echo the broad patterns observed in findings from the 2022 active pheasant hunter survey, and thus increase our confidence that the same general patterns observed are representative of the entire population of active pheasant hunters in New York.

In the 2022 survey, sample sizes were inadequate to permit separate analysis of results for respondents who hunted primarily in the Northern, Southeast, or Long Island regions. It was still valuable to analyze results for respondents who hunted most often in the Western zone, because about half of all New York hunting license holders reside in western New York and a majority of pheasant stocking sites are in western New York.

Conclusions and Management Implications

Findings from this study make it clear that hearing and seeing pheasants plays an important role in pheasant hunting satisfaction. It is reasonable to assume that management actions that increase the rate at which hunters see and hear pheasants could lead to greater hunter satisfaction with pheasant hunting in New York State. Managers may be able to increase encounters with pheasant by modifying current stocking practices. For example, managers could increase the number birds released, the number of release days, the timing of releases, or the number of locations on which birds are released. All of these potential management actions have be considered within logistical and resource limitations. Some changes in stocking approach (e.g., timing and location) are possible within current resource limitations. Other actions (e.g., a substantial increase in number of birds raised and released) would not be feasible without additional funding for the pheasant propagation program.

While many hunters would like to see a wild pheasant population restored across the state, many may be unaware that, given current landscape-scale habitat conditions and trends, restoring wild pheasants throughout the state is likely an unrealistic goal. And while hunter satisfaction would likely increase if DEC stocked more pheasants, a majority of hunters are unwilling to pay additional permit or license fees that could fund expansion of the pheasant propagation program. Creating hunter expectations based on understanding of ecological conditions and agency resource constraints poses a challenge for DEC managers. Efforts by DEC to inform hunters about wild pheasant management and pheasant propagation could increase the proportion of the hunter population who hold accurate perceptions about these topics,

giving hunters the information they need to weigh the tradeoffs associated with agency resource constraints and new funding mechanisms. Additional emphasis on communication with hunters could cultivate hunter expectations based on understanding of ecological conditions and resource constraints, laying a foundation for productive deliberation about ways to enhance pheasant hunting opportunities in New York.

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APPENDIX A: 2021 GENERAL HUNTER QUESTIONNAIRE

YOUR HUNTING ACTIVITIES

1. Did you hunt the following seasons or species in New York State in the last 5 years? (Check one box per line.)

Big game archery	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Big game firearms	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Turkey	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Ruffed grouse	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Pheasant	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Woodcock	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Ducks or geese	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Cottontail rabbit	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Squirrel	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

2. Which category below best describes your involvement in pheasant hunting in New York State? (Check one box.)

- ☐ I have never hunted pheasants in NYS
- ☐ I have hunted pheasants, but not in the last 5 years
- ☐ I have hunted pheasants in the last 5 years, but not every year
- ☐ I have hunted pheasants every year for the last 5 years

3. Have you ever paid money to hunt pen-raised game birds (e.g., pheasant, quail) at a private shooting preserve in New York? (Check one box.)

- ☐ Yes
- ☐ No

4. How important were the following experiences to your development as a hunter? (Check one box per line.)

	Not important	Slightly important	Moderately important	Very important
Hunting pheasants stocked by DEC or another organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hunting wild pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other small game hunting experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hunting big game (e.g., deer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. If you do not currently hunt pheasants in New York, how important are the following as reasons why you don't currently hunt pheasants? (Check one box per line.)

	Not important	Slightly important	Moderately important	Very important
More interested in other kinds of hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low chance of seeing pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too many other hunters on public land with stocked pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't know where to hunt pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have to travel long distance to find a place to hunt pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor quality of pheasants in NYS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have no one to hunt pheasants with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't have a bird hunting dog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't know how to hunt pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor quality pheasant habitat in NYS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hunting stocked pheasants doesn't feel like real hunting to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. How likely are you to go pheasant hunting on publicly accessible lands in NYS in the future? (Check one box.)

- ☐ Definitely will not hunt pheasants
- ☐ Probably will not
- ☐ Not sure
- ☐ Probably will
- ☐ Definitely will hunt pheasant

7. To what extent would the following circumstances encourage you to go pheasant hunting on public lands with open hunting access in the future? (Check one box per line.)

What if DEC ...	Makes no difference	Might encourage	Likely to encourage	Definitely would encourage
Increased the number of birds they release per year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released pheasants in locations closer to where you live.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had fewer overall stocking sites but created “premier” stocking locations with improved grassland habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased the number of locations where they release pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sponsored special pheasant hunts for youth and mentors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offered “how-to” seminars on pheasant hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Released pheasants later in the season (e.g., after deer season)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

WHAT YOU KNOW ABOUT WILD PHEASANT IN NYS

We ask the following questions to learn how familiar hunters are with wild, self-sustaining pheasants and their management in NYS.

8. Where would you expect to find a self-sustaining population of pheasants large enough to hunt in New York State? *(Check all that apply.)*

- ☐ Adirondack region
- ☐ Catskill region
- ☐ Alleghany region
- ☐ Lake Plains region
- ☐ Southern Tier region
- ☐ Long Island
- ☐ Not sure where I would find a self-sustaining pheasant population

9. Please indicate whether you were aware of the following conditions before you received this survey. *(Check one box per line.)*

Before you received this survey, were you aware that ...	Yes	No	Unsure
The habitats that pheasants need to survive and reproduce have declined greatly in NYS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most regions of NYS cannot support a wild, self-sustaining pheasant population.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC raises pheasants and releases them on publicly-accessible lands for hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pheasant stocking is not done to restore wild pheasants in NYS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YOUR VIEWS ON THE WILD PHEASANT MANAGEMENT PROGRAM

Below, we provide a brief summary of the wild pheasant management program in NYS. We then ask a few questions to learn how hunters view the wild pheasant management program.

Program summary: Wild pheasant management occurs in the Lake Plains of western New York, including a focus area in the Genesee Valley. In the Lake Plains, DEC protects hen pheasants through hunting regulations and provides input to federal agricultural policies that may affect pheasants. Within the focus area, DEC works with organizations and agencies to promote habitat improvements that benefit pheasants and has provided assistance to private landowners to establish grasslands for nesting and winter cover. Long-term persistence of wild pheasants in NY is unlikely without radical landscape-scale habitat change and population restoration efforts.

10. Please indicate how much you disagree or agree with each statement. (*Check one box per line.*)

	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
The NYS <u>wild pheasant</u> management program is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The NYS <u>wild pheasant</u> management program should be a higher priority to DEC than stocking pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is unrealistic for hunters to expect DEC to maintain a wild pheasant population in NYS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YOUR VIEWS ON THE PHEASANT PROPAGATION PROGRAM

Below, we provide a brief summary of the pheasant propagation program in NYS. We then ask several questions to learn how hunters view that program.

Program summary: Each year, DEC staff at the Reynolds Game Farm raise and release over 30,000 adult pheasants. Prior to and during the pheasant hunting season, DEC distributes the birds across more than 100 release sites open to public hunting. At least 10% of adult pheasants are released at youth pheasant hunts and special sponsored hunts for groups such as women hunters or hunters with disabilities. The program also provides thousands of day-old chicks to individuals and organizations, who care for, raise, and release birds. The annual operating budget for the pheasant propagation program (including pheasant rearing, pheasant distribution, program administration, and facility maintenance) is approximately \$1 million, supported by the state's "Conservation Fund" (hunting, trapping, and fishing license revenue).

11. Please indicate how much you disagree or agree with each statement. (Check one box per line.)

The NYS pheasant <u>propagation</u> program...	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
Is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is worth the investment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helps recruit new hunters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helps retain existing hunters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Should be a higher priority to DEC than trying to restore a wild pheasant population.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YOUR VIEWS ON PROGRAM FUNDING

Questions in this section will help DEC understand hunter views on funding for pheasant propagation.

12. Please indicate how much you disagree or agree with each statement. (Check one box per line.)

	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
It is appropriate to fund the pheasant propagation program with general hunting license revenues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>All hunters</u> should contribute funds to DEC's program to raise and release pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEC spends too much money on raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money used to raise and release pheasants would be better spent on restoring habitat for wild pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money used to raise and release pheasants would be better spent on management of other small game (e.g., ruffed grouse, turkeys, rabbits).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pheasant hunters should pay a user fee that covers <u>part of the cost</u> of raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pheasant hunters should pay a user fee that covers <u>all costs</u> of raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Some states have pheasant hunting licenses, permits, or stamps that provide dedicated funding for pheasant propagation. In exchange for a fee, these permits grant hunters privileges to hunt state raised and released pheasants. In New York, hunting license types and fees are the purview of the state legislature.

Note: In the following questions, the “DEC pheasant propagation program” refers to the activities and resources necessary to breed, raise, and distribute pheasants. Birds are released to provide hunting opportunities. These releases are not expected to restore wild pheasant populations.

13. Please indicate how much you would support or oppose the following means of funding DEC’s pheasant propagation program. (Check one box per line.)

Possible means of funding DEC’s pheasant propagation program:	Strongly Oppose	Moderately Oppose	Neither	Moderately Support	Strongly Support
Continue to fund the program from the NYS Conservation Fund (which includes revenues from sale of hunting licenses).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create an annual pheasant hunting permit that would be required to hunt pheasants <u>on public land</u> in NYS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create an annual pheasant hunting permit that would be required to hunt pheasants <u>anywhere</u> in NYS (including private land).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase hunting license fee to support game management, including pheasant management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BACKGROUND INFORMATION

14. What is your gender? *(Check one box.)*

- ☐ Male
- ☐ Female
- ☐ Other/prefer not to say

15. Which category below best describes your total household income last year? *(Check one box.)*

- ☐ Less than \$25,000
- ☐ \$25,000 - \$49,999
- ☐ \$50,000 - \$99,999
- ☐ \$100,000 or more

THANK YOU FOR YOUR INPUT!

(Please use the space below to offer any comments.)

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APPENDIX B: 2022 PHEASANT HUNTER QUESTIONNAIRE

YOUR HUNTING ACTIVITIES

1. Did you hunt the following seasons or species in New York State in the last 5 years? (*Check one box per line.*)

Big game archery	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Big game firearms	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Turkey	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Ruffed grouse	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Woodcock	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Ducks or geese	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Cottontail rabbit	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Squirrel	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

2. Which category below best describes your involvement in pheasant hunting in New York State? (*Check one box.*)

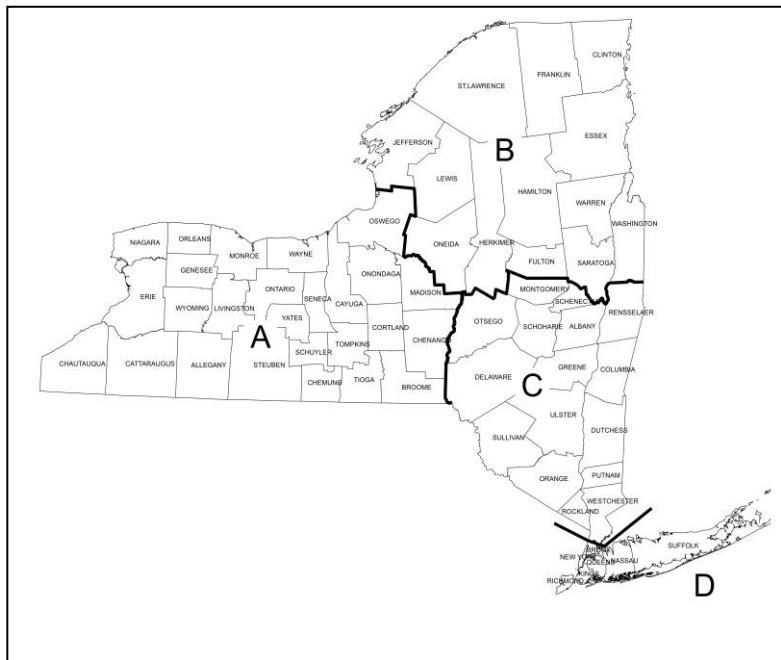
<input type="checkbox"/>	I hunted pheasants <u>every year</u> for the last 5 years
<input type="checkbox"/>	I hunted pheasants in the last 5 years, <u>but not every year</u>
<input type="checkbox"/>	I hunted pheasants, but <u>not in the last 5 years</u> →
<input type="checkbox"/>	I have <u>never</u> hunted pheasants in New York State →
If you have not hunted pheasants in the last 5 years, skip to end	

3. Over the last 5 years, how many days per year did you typically hunt pheasants on private and public land? (Do NOT count days on a shooting preserve.)

Your pheasant hunting on:	Number of days you hunted			
	0	1-2	3-7	8+
A. Private land for free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Publicly accessible land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- In which region did you hunt pheasant most often on publicly accessible land in NY during the last 5 years?

(**A (West)** | **B (North)** | **C (South)** **D (Long Isl.)**



1. How would you rate the current pheasant hunting conditions on publicly accessible land in New York State? (Check one box per line.)

Current conditions on publicly-accessible land:	Very poor	Poor	OK	Good	Very Good
Chances of seeing or hearing pheasants during a hunt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chances of harvesting a pheasant on a given hunting trip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chances of avoiding conflicts with other pheasant hunters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chances of avoiding conflicts with small game or bow hunters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of places where I can hunt stocked pheasants within 1-hour drive of my home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of places in NYS where I can hunt stocked pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of public land parcels where I can hunt pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of cover on public land where pheasants are stocked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- On a scale of 0 to 4, how important are the following conditions in determining your satisfaction with the quality of pheasant hunting available on publicly accessible land in New York State? (0=“not important” and 4=“very important”. Check [v] one box per line.)

	Not important Very important				
Pheasant hunting conditions:	0	1	2	3	4
Hearing/seeing pheasants when pheasant hunting					
Proportion of hunting trips where I see or hear pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harvest success during pheasant season					
Proportion of trips when I harvest a pheasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimizing contact with other hunters during pheasant hunts					
<i>Not competing</i> for spots with other pheasant hunters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Not seeing</i> small game or bow hunters when pheasant hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity to hunt close to home					
Having a place to hunt stocked pheasants within 1-hour drive of my home, regardless of parcel size or cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity to hunt in multiple places					
Having multiple places to hunt stocked pheasants, regardless of proximity to where I live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of publicly accessible lands where pheasants are released					
Being able to hunt pheasants on large publicly accessible land parcels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being able to hunt pheasants on publicly accessible land with good cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Below, the items that you rated in the last question have been grouped into 6 broad categories. Please **RANK** the categories from most important (#1) to least important (#6) based on how much they affect your satisfaction with pheasant hunting on publicly accessible land in NYS. (Write “1” for the most important category. Write “6” for the least important category. Then, assign a rank of 2 through 5 to the remaining categories.)

Conditions that can affect satisfaction with the pheasant hunting in New York	Importance to you
Hearing/seeing pheasants (proportion of hunts where I hear or see pheasants)	Rank: ____
Harvest success during pheasant season (Proportion of trips where I harvest a pheasant)	Rank: ____
Minimizing contact with other hunters during pheasant hunts (Not competing for hunting spots with other pheasant hunters, not seeing small game or bow hunters when I am hunting pheasant)	Rank: ____
Opportunity to hunt close to home (Having a place to hunt stocked pheasants within 1-hour drive of home, regardless of parcel size or cover)	Rank: ____
Opportunity to hunt pheasants in multiple places (Having multiple places where I can hunt stocked pheasants, regardless of proximity to where I live)	Rank: ____
Quality of publicly accessible lands where pheasants are released (Size of land parcels and quality of cover on parcels where pheasants are stocked)	Rank: ____

- Which of the following approaches to pheasant distribution would you prefer? (Check [v] one box.)

- ☐ **Emphasize quantity of release sites:** release birds on as many publicly accessible land parcels as possible, regardless of site quality
- ☐ **Emphasize quality of release sites:** release pheasants on relatively few sites with the space and cover to hold birds
- ☐ Unsure

2. Is there a location where you could hunt stocked pheasants on publicly-accessible land in NY within a 1-hour drive of your home? (Check one box.)

- ☐ Yes
- ☐ No
- ☐ Unsure

3. What is the maximum amount of time you are willing to drive (one-way) to hunt stocked pheasants on publicly-accessible land in NY? (Check one box.)

- ☐ Less than 30 minutes
- ☐ Less than 1 hour
- ☐ Less than 2 hours
- ☐ Driving distance does not matter to me
- ☐ Unsure

4. Please indicate how much you disagree or agree with each statement about the region where you hunt pheasants most often. (Check one box per line.)

In the region where I hunt pheasants most often...	Strongly Disagree	Moderately Disagree	Unsure	Moderately Agree	Strongly Agree
Habitat that can support pheasants has declined sharply in recent decades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is sufficient habitat to support a self-sustaining pheasant population.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stocking more pheasants would restore a wild, self-sustaining pheasant population.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YOUR VIEWS ON THE WILD PHEASANT MANAGEMENT PROGRAM

Below, we provide a brief summary of the wild pheasant management program in NYS. We then ask about your views on the wild pheasant management program.

Program summary: Wild pheasant management has historically occurred in the Lake Plains of western New York, including a focus area in the Genesee Valley. In the Lake Plains, DEC protects hen pheasants through hunting regulations and provides input to federal agricultural policies that may affect pheasants. Within the focus area, DEC works with organizations and agencies to promote habitat improvements that benefit pheasants and has provided assistance to private landowners to establish grasslands for nesting and winter cover. Long-term persistence of wild pheasants in NY is unlikely without radical landscape-scale habitat change and population restoration efforts.

5. Please indicate how much you disagree or agree with each statement. (Check one box per line.)

	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
The NYS <u>wild pheasant</u> management program is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The NYS <u>wild pheasant</u> management program should be a higher priority to DEC than stocking pheasants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is unrealistic for hunters to expect DEC to maintain a wild pheasant population in NYS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YOUR VIEWS ON THE PHEASANT PROPAGATION PROGRAM

Below, we provide a brief summary of the pheasant propagation program in NYS. We then ask several questions to learn how hunters view that program.

Program summary: Each year, DEC staff at the Reynolds Game Farm raise and release over 30,000 adult pheasants. Prior to and during the pheasant hunting season, DEC distributes the birds across more than 100 release sites open to public hunting. At least 10% of adult pheasants are released at youth pheasant hunts and special sponsored hunts for groups such as women hunters or hunters with disabilities. The program also provides thousands of day-old chicks to individuals and organizations, who care for, raise, and release birds. The annual operating budget for the pheasant propagation program (including pheasant rearing and distribution, program administration, and facility maintenance) is approximately \$1 million, supported by the state's "Conservation Fund" (hunting, trapping, and fishing license revenue).

6. Please indicate how much you disagree or agree with each statement. (*Check one box per line.*)

The NYS pheasant <u>propagation</u> program...	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
Is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is worth the investment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helps recruit new hunters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helps retain existing hunters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would be more satisfying to me if some pheasants were also stocked after the regular deer season.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FUNDING THE PHEASANT PROPAGATION PROGRAM

In the following questions, the “DEC pheasant propagation program” refers to the activities and resources necessary to breed, raise, and distribute pheasants and manage access for hunters. Birds are released to provide hunting opportunities. These releases are not expected to restore wild pheasant populations.

7. Please indicate how much you disagree or agree with each statement. (Check one box per line.)

	Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree
It is appropriate to fund the pheasant propagation program with general hunting license revenues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEC spends too much money on raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money used to raise and release pheasants would be better spent on restoring habitat for wild pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money used to raise and release pheasants would be better spent on management of other small game (e.g., ruffed grouse, turkeys, rabbits).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pheasant hunters should pay a user fee that covers <u>part of the cost</u> of raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pheasant hunters should pay a user fee that covers <u>all costs</u> of raising and releasing pheasants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Some states have pheasant hunting permits that provide dedicated funding for pheasant propagation. In exchange for a fee, these permits grant hunters privileges to hunt state raised and released pheasants. In New York, hunting license types and fees are the purview of the state legislature.

8. Please indicate how much you would support or oppose the following means of funding DEC's pheasant propagation program. (Check one box per line.)

Possible means of funding DEC's pheasant propagation program:	Strongly Oppose	Moderately Oppose	Neither	Moderately Support	Strongly Support
Continue to fund the program from the NYS Conservation Fund (which includes revenues from sale of all hunting licenses).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create an annual pheasant hunting permit that would be required to hunt pheasants <u>on publicly accessible land</u> in NYS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create an annual pheasant hunting permit that would be required to hunt pheasants <u>anywhere</u> in NYS (including private land).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase hunting license fee to support game management, including pheasant management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR YOUR INPUT!

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APPENDIX C: RESPONDENT-NONRESPONDENT COMPARISONS

Table C1. Outcome of contacts with nonrespondents, 2021 landowner survey.

Outcome	<u>Records</u>	
	n	%
Interview completed	75	26.8
Unable to reach (listed telephone number no longer in service; incorrect telephone number; caller was not recognized and was automatically screened out)	149	53.2
Opted out of interview (not interested in participating in the survey, hung up the phone before answering any questions, asked to be removed from call list)	39	13.9
Physically unable to respond (physically able to complete survey; respondent out of the country)	10	3.6
Under age 18, so could not interview	4	1.4
Individual stated that they had returned a questionnaire	3	1.1
TOTAL RECORDS DIALED	280	100.00

Table C2. Comparison of respondents to nonrespondents on whether they had hunted big game, turkey, ruffed grouse, or pheasant in the past 5 years.

		Respondents (n=494) (n) %	Nonrespondents (n=74) (n) %	χ^2	df	P value
In the past 5 years, have you hunted...						
Big game (bow)						
	Yes	(240) 49.6	(30) 40.5	2.10	1	0.146
	No	(244) 50.4	(44) 59.5			
Big game (gun)						
	Yes	(430) 88.8	(64) 86.5	0.35	1	0.553
	No	(54) 11.2	(10) 13.5			
Turkey						
	Yes	(256) 52.9	(18) 24.3	20.96	1	<0.001
	No	(228) 47.1	(56) 75.7			
Ruffed grouse						
	Yes	(121) 25.1	(7) 9.5	8.81	1	0.002
	No	(362) 74.9	(67) 90.5			
Pheasant						
	Yes	(109) 22.5	(10) 13.5	3.10	1	0.078
	No	(375) 77.5	(64) 86.5			

Table C3. Comparison of respondents to nonrespondents on whether awareness of conditions related to pheasant habitat and pheasant propagation in New York State.

Before you received this survey, were you aware that...	Respondents (n) %	Non respondents (n) %	χ^2	df	P value
Most regions of NYS cannot support a wild, self-sustaining population of pheasants					
Yes	(242) 53.5	(32) 43.2	2.87	2	0.238
No	(154) 34.1	(32) 43.2			
Unsure	(56) 12.4	(10) 13.5			
Total	(452)	(74)			
DEC raises pheasants and releases them on publicly-accessible lands for hunting					
Yes	(311) 68.7	(48) 64.9	1.81	2	0.405
No	(112) 24.7	(23) 31.1			
Unsure	(30) 6.6	(3) 4.1			
Total	(453)	(74)			
Pheasant stocking is not done to restore wild pheasants in NYS					
Yes	(192) 42.7	(28) 37.8	4.25	2	0.119
No	(185) 41.1	(39) 52.7			
Unsure	(73) 16.2	(7) 9.5			
Total	(450)	(74)			

Table C4. Comparison of respondents to nonrespondents on stage of pheasant hunting involvement.

	Respondents (n=481)	Non respondents (n=74)			P value
	(n) %	(n) %	χ^2	df	
Active pheasant hunters (Had hunted pheasant in past 5 years)	(102) 21.3	(10) 13.5	10.92	2	0.004
Lapsed pheasant hunters (Had hunted pheasant > 5 yrs ago)	(195) 40.8	(21) 28.4			
Nonparticipants (Had never hunted pheasant in NYS)	(181) 37.9	(43) 58.1			