

Perspectives on Deer and Deer Management in Carlisle, MA

Results from the 2022 Carlisle Resident Deer Survey

Report Authors: Robert Anderson, John Casellas Connors, and Anne Short Gianotti

Introduction

White-tailed deer (*Odocoileus virginianus*) populations in Massachusetts and across the northeastern United States have changed dramatically over the past two centuries. Hunted nearly to extinction during the latter half of the 19th Century, deer populations in Massachusetts rebounded and deer numbers are now believed to exceed pre-colonial populations (Foster et al. 2002). While the recovery of deer populations is a conservation success, deer densities have reached unprecedented levels in many urban and suburban areas and have become a cause for concern for some residents, town and city officials, and wildlife managers (McCabe and McCabe 1997, Urbanek et al. 2012, Edelblutte et al. 2022). In response to concerns about the impact of deer populations on forest ecosystems, damage to residential landscaping, deer-vehicle collisions, and the role deer may play in the transmission of Lyme disease, many suburban communities have considered and/or implemented local actions to manage growing deer populations. In MA, local actions to manage deer can include eliminating local bylaws that restrict hunting beyond state regulations, opening public properties to hunting, and/or coordinating with private property owners to expand hunting access on private land.

Carlisle, MA is one of several suburban communities in Massachusetts that has recently examined strategies for municipal deer management. Questions about deer management rose to municipal attention in Carlisle in 2015. At that time, the Lyme Disease Committee and the Conservation Commission began to jointly investigate the impacts of the town's deer population and the possibility of actively managing deer by introducing recreational hunting to municipal land in Carlisle. The expansion of recreational deer hunting is a strategy recommended by MassWildlife for suburban municipalities in Massachusetts to reduce deer populations. Deer hunting occurs on private lands in Carlisle but was not permitted on town lands. The town formed a town Deer Committee in 2016 to examine options for municipal deer management, invited outside experts to town meetings to talk about deer and deer management, and collected management plans from nearby communities to consider if/how a program could work in their town. While the Deer Committee concluded that deer management was not a promising strategy for reducing Lyme disease, the town initiated a pilot archery hunting program on town lands in 2018 and 2019 in response to concerns about the impacts of deer on the health of forested ecosystems. This program was met with significant public opposition. Opponents of the program raised concerns about human safety and wellbeing, the legitimacy of the scientific basis for deer management, and the efficacy of the recreational archery hunting program to achieve its goals, among other concerns. The hunting program was suspended in 2020.

To improve our understanding of the range of experiences and views Carlisle residents hold about deer and various options for deer management, we surveyed Carlisle residents in 2022. In this report, we describe the survey methods and present a summary of the results of the 2022 Carlisle Resident Deer Survey.

Survey design and administration

We conducted a survey of residents of Carlisle, MA to gain insights on their perspectives on deer and deer management. Through the survey, we asked respondents about their experiences and personal knowledge of deer in Carlisle, their support for specific management practices that might be considered in Carlisle, their perspectives on deer management practices more generally, their concerns about issues related to deer, and their involvement in community discussions about deer. The content of the questionnaire was guided both by a review of the literature about suburban deer management and insights from our previous research. We pretested the questionnaire with several residents and updated questions with the goals of improving question clarity and minimizing perceived bias in the questions. The survey was administered in April and June 2022 following best practices (Dillman et al., 2014) and survey recipients were given the option to complete the survey either through a print or an online form.

The survey sample included a random selection of 1000 Carlisle households as well as 28 residents who had previously participated in research activities related to this project. The random sample was selected from a publicly available database that contains information on parcels, structures, and property owners in areas zoned for residential uses in Carlisle (MassGIS). The database was current to January 2020 so the research team used data on changed ownership from the Carlisle assessor's office to update the list in March 2022. Households with missing information as well as properties owned by developers were eliminated from the database. In April 2022, the survey was mailed to the 1000 households in the sample. Survey recipients were also provided with a link and unique code to complete the survey online. Of the random sample, 15 were returned undeliverable leaving an effective sampling size of 985 presumed to be delivered to valid addresses. We received 358 completed surveys for a response rate of 36.3% for the random sample. While this is a very strong response rate for surveys of this type, surveys can have systematic bias because those with strong beliefs may be more likely to respond to the survey.

In addition to the random sample, we distributed the survey to the 28 Carlisle residents who had participated in other aspects of the research (including six residents who were randomly selected to participate in focus groups, seven residents who pretested the survey instrument and had no prior involvement in the research, and 15 residents who had participated in research interviews). While the focus group participants and pre-testers were randomly selected, the interview respondents were selected because of their involvement in public deliberations in deer management. While these interview respondents are likely to have strong views and high participation, they include individuals who support, oppose, and are more ambivalent on the hunt. Since the number of interview respondents is small compared to the overall survey population, we are confident the data is not skewed by their participation. Twenty-six of these participants returned a completed survey for a response rate of 92.8% for this population.

Summary of results

Carlisle residents' views about deer

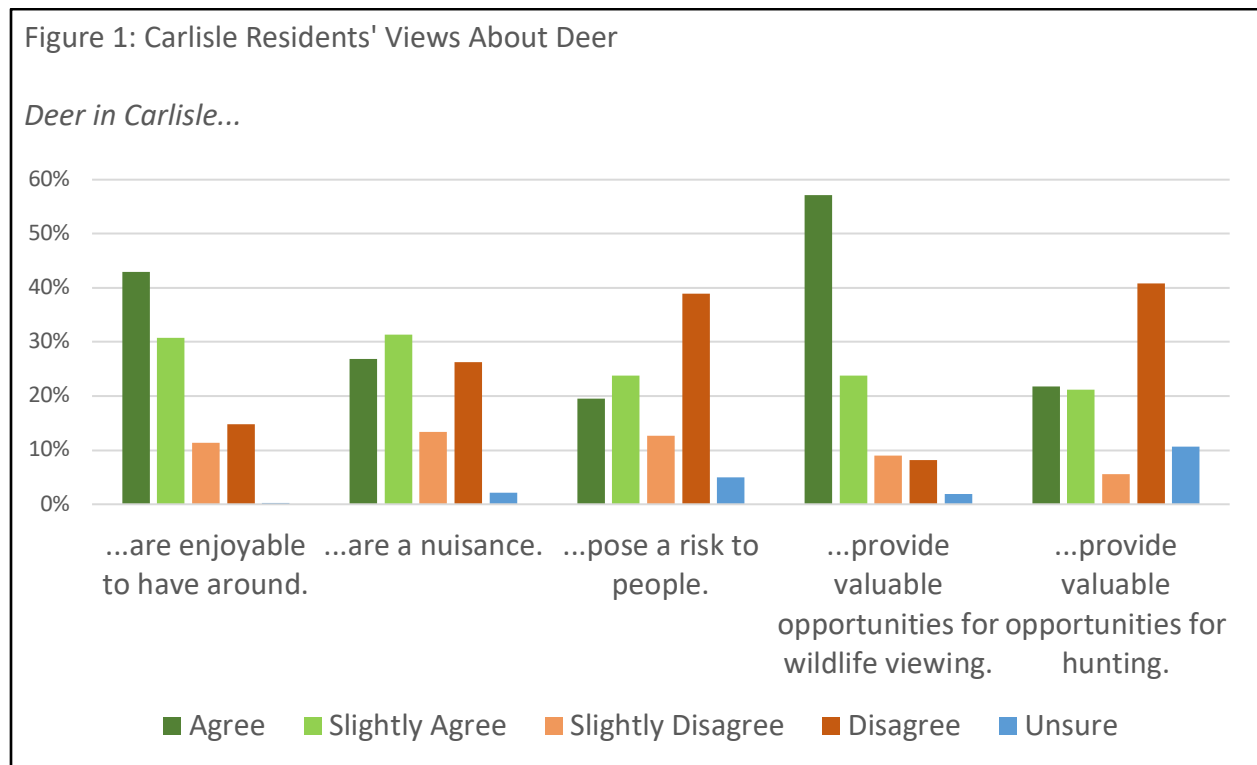
The first set of survey questions asked respondents to describe their experiences and personal knowledge of deer in Carlisle (Figure 1). We found that deer are a common sight in

Carlisle, with most respondents (80%) seeing deer and/or hearing about deer sightings on at least a weekly basis. A substantial majority of respondents agree (including both “agree” and “slightly agree” responses) that deer provide valuable opportunities for wildlife viewing (81%) and are enjoyable to have around (74%). Despite this, a smaller majority (58%) also agree that deer are a nuisance, reflecting the complexity of perspectives - i.e., for at least some respondents, deer are seen as both valued/enjoyable and a nuisance at the same time.

Respondents are more narrowly divided on whether deer pose a risk to people (43% agree or slightly agree, while 52% disagree or slightly disagree) and whether they provide valuable opportunities for hunting (43% agree or slightly agree, 46% disagree or slightly disagree).

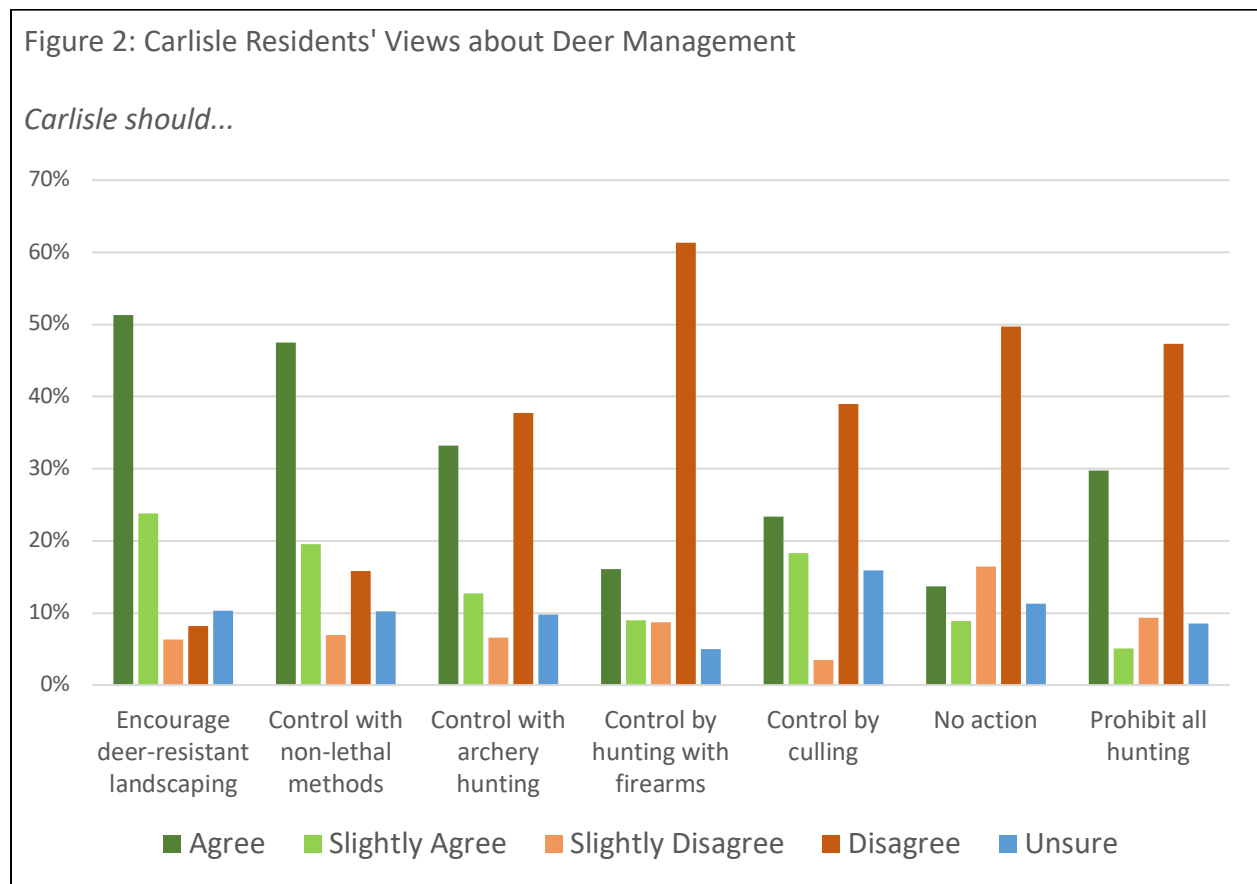
We also asked respondents about their perceptions regarding changes in the deer population in Carlisle. Half of survey respondents (50%) believe that the local deer population has grown over the time they’ve lived in Carlisle and approximately one-fifth (21%) believe the population has been stable. Only 5% of respondents believe it has declined. Nearly a quarter of respondents (24%) report that they are not sure how the deer population has changed. *Note:* Care should be taken in interpreting this data as we do not report these results in relation to how long respondents have lived in Carlisle.

Finally, we asked respondents if they prefer deer numbers to stay the same, decrease, or increase. Most respondents prefer for deer numbers to either decrease (44%) or stay the same (35%); 17% are not sure or have no opinion; only 4% prefer for deer numbers to increase.



Carlisle residents' views about deer management in Carlisle

The second segment of the survey asked respondents to rate their level of agreement with a series of statements about deer management options in Carlisle, with the options "agree," "slightly agree," "slightly disagree," "disagree," and "unsure" (Figure 2). Two-thirds (66%) of respondents believe the town should take some action to manage deer populations, but they are divided over what these actions should be. A majority of respondents are supportive of deer-resistant landscaping (75%) and of controlling deer populations with non-lethal methods (67%). A majority of respondents do not support deer management through hunting using firearms (70%). Respondents are more divided about deer management through archery hunting (46% agree or slightly agree with controlling deer with archery hunting while 44% disagree or slightly disagree) and culling (42% agree or slightly agree with controlling deer through culling while 42% disagree or slightly disagree). More than half of respondents are opposed to the idea of prohibiting all hunting in town (57%), while nearly one-third of respondents support a prohibition of hunting in town (35%).



Carlisle residents' perspectives about deer management in general

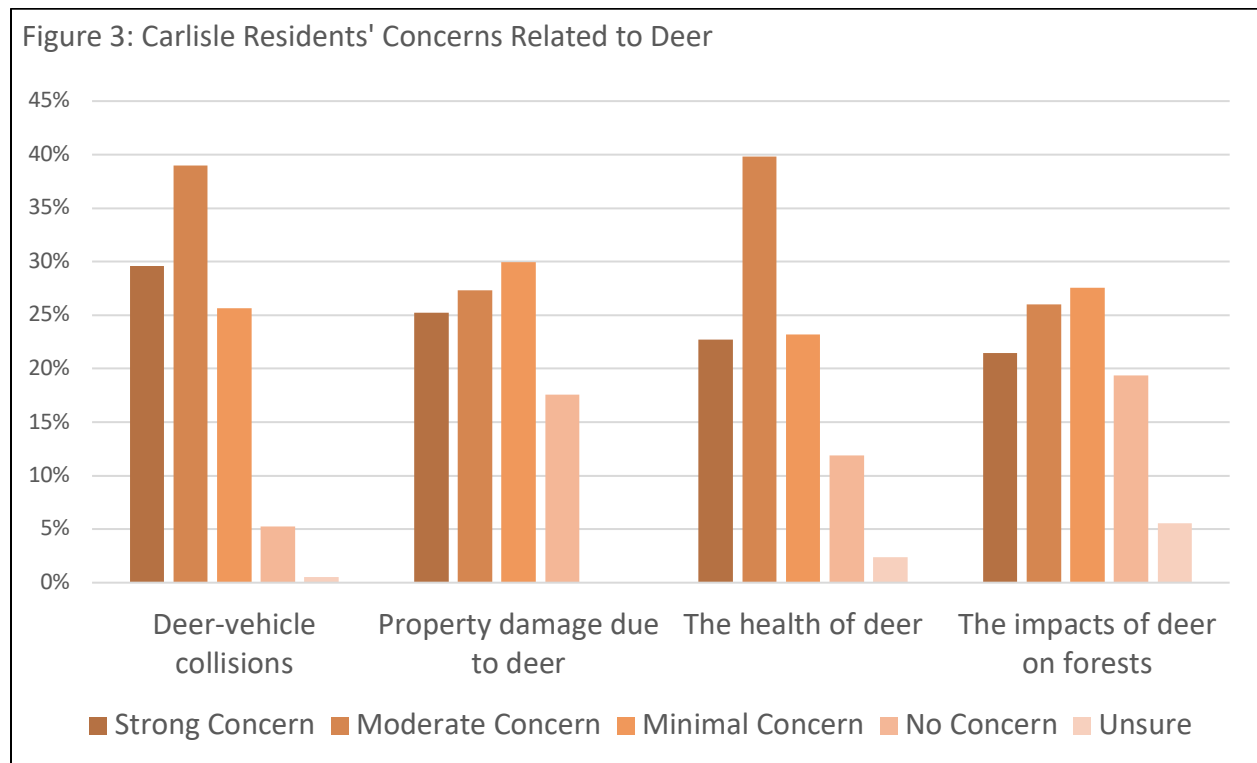
Next, we asked respondents to describe their perspectives on archery hunting, hunting with firearms, and culling of deer in general (i.e., *not* specifically in the context of Carlisle), with the phrasing "Is [management practice] ever an appropriate solution for deer management?". A small majority of respondents believe archery hunting can be an appropriate solution for

deer management in at least some cases (53% yes, 31% no, 16% unsure). Nearly half of respondents believe culling can be an appropriate solution for deer management in at least some cases (46% yes, 29% no, 26% unsure). Respondents are divided on whether hunting with firearms can be an appropriate solution for deer management (42% yes, 43% no, 15% unsure).

We also asked whether respondents' views on deer management have changed while living in Carlisle. Most respondents said their views have *not* changed, though roughly one-quarter of respondents report that their views on deer *have* changed (26% yes, they have changed, 68% no, they have not changed, 6% unsure). *Note:* Care should be taken in interpreting this data as we do not report these results in relation to how long respondents have lived in Carlisle.

Carlisle residents' concerns related to deer:

The fourth segment of the survey asked respondents to rate their level of concern about issues related to deer, with the options "strong concern," "moderate concern," "minimal concern," "no concern," and "unsure." Each of the issues identified in our survey (deer-vehicle collisions, property damage due to deer, health of deer, and impacts of deer or forests) evoked a significant level of concern (Figure 3). Twenty percent of respondents indicated strong or moderate concern about a deer-related issue not previously listed. The most common other concern was about ticks/Lyme disease/zoonotic disease (11% of respondents named this concern in the open-ended comment space in Q28).



Carlisle residents' involvement in community discussions

Finally, we asked respondents to indicate the ways they have been involved in discussions about deer and deer management in Carlisle. Based on these responses, we grouped respondents based on whether their involvement represented *active* engagement (including one or more of the following: "Gave public comment at a meeting," "Contacted town officials about deer," "Served on a town committee that has discussed deer," "Written an op-ed, letter to the Editor, or developed other materials for distribution in town," "Conducted independent research on deer," and/or "Signed a petition"), *passive* engagement (including one or more of the following: "Read about it in the Mosquito," "Talked with neighbors and/or others in town," and/or "Attended or watched meetings regarding deer,") or no involvement. Twenty-four percent of respondents had active involvement, 65% of respondents had passive involvement, and 11% of respondents had no involvement.

References:

Dillman, D.A., Smyth, J.D. and Christian, L.M., 2014. *Internet, phone, mail, and mixed-mode surveys: The tailored design method*. John Wiley & Sons.

Foster, D. R., Motzkin, G., Bernardos, D., & Cardoza, J. 2002. Wildlife dynamics in the changing New England landscape. *Journal of Biogeography*, 29(10-11): 1337-1357.

Edelblutte, É., Short Gianotti, A.G. and Casellas Connors, J.P., 2022. Perceptions, concerns, and management of white-tailed deer among municipal officials. *Human Dimensions of Wildlife*, 27(5), pp.436-456.

McCabe, T. R. and R. E. McCabe. 1997. Recounting Whitetails Past. In *The Science of Overabundance: Deer Ecology and Population Management*, eds. McShea W.J., Underwood, H.B., Rappole, J.H. Washington, DC: Smithsonian. Inst. Press, pp. 11-26.

Urbanek, R. E., Nielsen, C. K., Davenport, M. A., & Woodson, B. D. 2012. Acceptability and Conflict Regarding Suburban Deer Management Methods. *Human Dimensions of Wildlife*, 17(6): 389-403.

Acknowledgements: The survey was conducted and analyzed by members of the Managing Suburban Wilds Project with significant contributions from Sara Cavallo, Émilie Edelblutte, Abigail Murray, as well as the authors of this report. We are grateful for the time and insights from all research participants. Financial support for the research was provided by the National Science Foundation (NSF-BCS-1832191 and NSF-BIO-1924200)

Appendix A: Full survey results

1. I see deer or hear about deer sightings in Carlisle:

	Daily	Weekly	Monthly	Every few months	Yearly	Rarely	Never	Total
Number of respondents	100	202	58	16	3	3	0	382
Percentage of Total	26.18%	52.88%	15.18%	4.19%	0.79%	0.79%	0.00%	

2. I see or hear about signs of deer in Carlisle:

	Daily	Weekly	Monthly	Every few months	Yearly	Rarely	Never	Total
Number of respondents	131	155	46	21	2	12	5	372
Percentage of Total	35.22%	41.67%	12.37%	5.65%	0.54%	3.23%	1.34%	

3. Deer in Carlisle are enjoyable to have around.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	163	117	43	56	1	380
Percentage of Total	42.9%	30.8%	11.3%	14.7%	0.3%	

4. Deer in Carlisle are a nuisance.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	102	119	51	100	8	380
Percentage of Total	26.8%	31.3%	13.4%	26.3%	2.1%	

5. Deer in Carlisle pose a risk to people.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	74	90	48	147	19	378
Percentage of Total	19.6%	23.8%	12.7%	38.9%	5.0%	

6. Deer in Carlisle provide valuable opportunities for wildlife viewing.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	216	90	34	31	7	378
Percentage of Total	57.1%	23.8%	9.0%	8.2%	1.9%	

7. Deer in Carlisle provide valuable opportunities for hunting.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	82	80	21	154	40	377
Percentage of Total	21.8%	21.2%	5.6%	40.8%	10.6%	

8. Please feel free to say more about the experiences and information that shape your answers above
Responses vary.

9. Since I first moved to Carlisle, deer populations have:

	Declined	Remained Stable	Grown	Unsure	Total
Number of respondents	20	80	188	92	380
Percentage of Total	5.3%	21.1%	49.5%	24.2%	

10. I have lived in Carlisle for _____ year(s).

Responses range from 1 to 80 years:

- 1 to 3 years: 34 respondents (8.9% of those who answered the question)
- 4 to 10 years: 53 respondents (13.8% of those who answered the question)
- 11 to 20 years: 71 respondents (18.5% of those who answered the question)
- More than 20 years: 226 respondents (58.9% of those who answered the question)

11. I would prefer deer numbers in Carlisle to:

	Decrease	Stay the Same	Increase	Unsure	No Opinion	Total
Number of respondents	167	131	15	32	35	380
Percentage of Total	43.95%	34.47%	3.95%	8.42%	9.21%	

12. Carlisle should encourage residents to use deer-resistant landscaping.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	194	90	24	31	39	378
Percentage of Total	51.3%	23.8%	6.3%	8.2%	10.3%	

13. Carlisle should control deer populations using non-lethal methods.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	177	74	26	59	38	374
Percentage of Total	47.33%	19.79%	6.95%	15.78%	10.16%	

14. Carlisle should control deer populations using archery hunting.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	126	49	25	143	37	380
Percentage of Total	33.16%	12.89%	6.58%	37.63%	9.74%	

15. Carlisle should control deer populations using hunting with firearms.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	61	34	33	233	19	380
Percentage of Total	16.1%	8.9%	8.7%	61.3%	5.0%	

16. Carlisle should control deer populations by culling.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	87	69	13	146	60	375
Percentage of Total	23.20%	18.40%	3.47%	38.93%	16.00%	

17. Carlisle should not take any action to manage deer populations.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	51	33	62	185	42	373
Percentage of Total	13.67%	8.85%	16.62%	49.60%	11.26%	

18. Carlisle should prohibit all deer hunting in town.

	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure	Total
Number of respondents	112	19	35	179	32	377
Percentage of Total	29.71%	5.04%	9.28%	47.48%	8.49%	

19. Is archery hunting ever an appropriate solution for deer management?

	Yes	No	Unsure	Total
Number of respondents	199	115	61	375
Percentage of Total	53.07%	30.67%	16.27%	

20. Is hunting with firearms ever an appropriate solution for deer management?

	Yes	No	Unsure	Total
Number of respondents	158	161	56	375
Percentage of Total	42.1%	42.9%	14.9%	

21. Is culling ever an appropriate solution for deer management?

	Yes	No	Unsure	Total
Number of respondents	171	106	94	371
Percentage of Total	46.09%	28.57%	25.34%	

22. Have your opinions of deer management changed while living in Carlisle?

	Yes	No	Unsure	Total
Number of respondents	95	252	21	368
Percentage of Total	25.82%	68.48%	5.71%	

23. Please use this space to explain your answers to questions 19-22.

Responses vary.

Please rate your level of concern about the following issues related to deer:

24. Deer-vehicle collisions

	Strong Concern	Moderate Concern	Minimal Concern	No Concern	Unsure	Total
Number of respondents	113	150	98	20	2	383
Percentage of Total	29.50%	39.16%	25.59%	5.22%	0.52%	

25. Property damage due to deer

	Strong Concern	Moderate Concern	Minimal Concern	No Concern	Unsure	Total
Number of respondents	96	105	114	67	0	382
Percentage of Total	25.13%	27.49%	29.84%	17.54%	0.00%	

26. The health of deer

	Strong Concern	Moderate Concern	Minimal Concern	No Concern	Unsure	Total
Number of respondents	86	151	89	45	9	380
Percentage of Total	22.63%	39.74%	23.42%	11.84%	2.37%	

27. The impacts of deer on forests

	Strong Concern	Moderate Concern	Minimal Concern	No Concern	Unsure	Total
Number of respondents	82	99	104	73	21	379

Percentage of Total	21.64%	26.12%	27.44%	19.26%	5.54%	
---------------------	--------	--------	--------	--------	-------	--

28. Other, please describe:

- 63 respondents noted concerns about the role deer could play in the transmission of disease to humans, of these 4 noted broad concerns about deer, 3 noted concerns about COVID, and 57 noted concerns about the Lyme disease and other tick-borne diseases (Note: one respondent noted concerns about both COVID and tick-borne diseases)
- 8 respondents noted concerns about the safety and/or appropriateness of hunting in Carlisle
- 6 respondents noted concerns about deer damage to landscaping, gardens, and crops
- 4 respondents noted concerns about the impacts of deer on local ecosystems
- 3 respondents noted concerns about deer-vehicle collisions
- 2 respondents noted concerns about deer well-being
- 2 respondents noted concerns about the relationship of deer and coyotes

29. How have you been involved in discussions about deer? (Select all that apply)

- Read about it in the Mosquito: 321 respondents (83.6%)
- Talked with neighbors and/or others in town: 243 respondents (63.2%)
- Voted in town meeting: 125 respondents (32.6%)
- Attended or watched meetings regarding deer: 95 respondents (24.7%)
- Conducted independent research on deer: 35 respondents (9.1%)
- Served on a town committee that has discussed deer: 31 respondents (8.1%)
- Contacted town officials about deer: 31 respondents (8.1%)
- Signed a petition: 30 respondents (7.8%)
- Gave public comment at a meeting: 26 respondents (6.8%)
- Wrote an op-ed or letter to the Editor or developed other materials for distribution in town: 11 respondents (2.9%)
- Have not been involved: 97 respondents (25.3%)

Appendix B: Survey instrument

START HERE: CARLISLE DEER SURVEY 2022

When completing the survey, you will encounter the following key terms related to deer. Please take a moment to look over the following definitions before opening the survey:

Signs of deer	Deer tracks, deer browsing on plants, scat, dropped antlers, etc.
Deer management	Action taken by individuals or organizations to change the population of deer and/or their impacts through increasing, maintaining, or reducing current population levels.
Deer-resistant landscaping	Fencing or netting to prevent deer from accessing certain spaces, deer repellents and sprays, deer-resistant plants, and other interventions to reduce the potential impacts of deer through behavior modification.
Non-lethal methods	Non-lethal methods to reduce deer populations include using deer contraceptive interventions to lower birth rates or efforts to capture and release deer outside of town.
Archery hunting	Hunting deer using a bow and arrow during the appropriate hunting season.
Hunting with firearms	Hunting deer using shotguns or muzzle-loaded guns during the appropriate hunting season.
Culling	Culling involves efforts to control deer populations by killing deer using methods not available to hunters (such as bait, traps, killing outside of the hunting season) by permitted agents, which can include wildlife control professionals, employees, and volunteers.

CARLISLE DEER SURVEY 2022							
Describe your experiences and personal knowledge of deer in Carlisle:							
1. I see deer or hear about deer sightings in Carlisle:	Daily	Weekly	Monthly	Every few months	Yearly	Rarely	Never
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I see or hear about signs of deer in Carlisle:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deer in Carlisle...							
3. ...are enjoyable to have around.	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure		
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
4. ...are a nuisance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
5. ...pose a risk to people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
6. ...provide valuable opportunities for wildlife viewing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
7. ...provide valuable opportunities for hunting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
8. Please feel free to say more about the experiences and information that shape your answers above:							
<i>More comment space on back</i> ➡							

Based on your experiences and understanding about deer in Carlisle, please circle your answer to the following questions:				
9. Since I first moved to Carlisle, deer populations have:	Declined	Remained Stable	Grown	Unsure
10. I have lived in Carlisle for _____ year(s).				
11. I would prefer deer numbers in Carlisle to:	Decrease	Stay the Same	Increase	Unsure No Opinion

Using your understanding and viewpoints, please rate your level of agreement with the following statements:					
	Agree	Slightly Agree	Slightly Disagree	Disagree	Unsure
12. Carlisle should encourage residents to use deer-resistant landscaping.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Carlisle should control deer populations using non-lethal methods.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Carlisle should control deer populations using archery hunting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Carlisle should control deer populations using hunting with firearms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Carlisle should control deer populations by culling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Carlisle should not take any action to manage deer populations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Carlisle should prohibit all deer hunting in town.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe your perspectives on deer management (Circle your answer):			
19. Is archery hunting ever an appropriate solution for deer management?	Yes	No	Unsure
20. Is hunting with firearms ever an appropriate solution for deer management?	Yes	No	Unsure
21. Is culling ever an appropriate solution for deer management?	Yes	No	Unsure
22. Have your views on deer management changed while living in Carlisle?	Yes	No	Unsure
23. Please use this space to explain your answers to questions 19-22.			
<i>More comment space on back</i> ➡			

Please rate your level of concern about the following issues related to deer:

	Strong Concern	Moderate Concern	Minimal Concern	No Concern	Unsure
24. Deer-vehicle collisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Property damage due to deer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. The health of deer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. The impacts of deer on forests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Other (please indicate below): _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your involvement in community discussions:

29. How have you been involved in discussions about deer? (Select all that apply)

<input type="checkbox"/> Read about it in the <i>Mosquito</i>	<input type="checkbox"/> Served on a town committee that has discussed deer
<input type="checkbox"/> Talked with neighbors and/or others in town	<input type="checkbox"/> Written an op-ed, letter to the Editor, or developed other materials for distribution in town
<input type="checkbox"/> Attended or watched meetings regarding deer	<input type="checkbox"/> Conducted independent research on deer impacts
<input type="checkbox"/> Gave public comment at a meeting	<input type="checkbox"/> I have not been involved
<input type="checkbox"/> Contacted town officials about deer	<input type="checkbox"/> Not listed, please describe (below or on back):
<input type="checkbox"/> Signed a petition	_____
<input type="checkbox"/> Voted in town meeting	_____

see reverse for additional comment space →

30. Is there anything else you want to share about deer or deer management in Carlisle?

Thank you for completing the survey! Please return the survey using the pre-stamped envelope.
 If you would like an electronic summary of the study sent to you at the end of the project, please include your email here: _____