
Cornell Lands, Deer, and East Hill Communities:

Results from a 2006 Survey of Community Residents



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EXECUTIVE SUMMARY

Study Background and Purpose

Cornell University administrators have a range of concerns about negative impacts that white-tailed deer may have on lands managed by the university and the people who work and recreate on Cornell lands. As the university develops action plans to manage deer-related impacts, administrators want to learn more about how residents of neighboring communities experience deer and view their interactions with deer in the area.

Cornell University sponsored a comprehensive survey of its neighbors to learn more about their interests, experiences, and concerns with respect to the white-tailed deer population in and around campus. University funding for this study was provided by the Division of Government and Community Relations, Office of the Executive Vice President, Office of the Dean of the College of Agriculture and Life Sciences, Cornell Plantations, and the Cornell University Agricultural Experiment Station. The study was designed and implemented by staff in Cornell's Human Dimensions Research Unit (HDRU), Department of Natural Resources. The purpose of the study was to learn more about area residents' experiences with deer and attitudes about deer, as well as to gauge community interest in participating in deer management planning. Information from this study will help Cornell decision makers better understand and address community interests related to deer impacts and management of research lands and open spaces owned by Cornell. Study findings provide additional insight to guide ongoing communication between Cornell personnel and residents of neighboring communities, and will identify community information needs relevant to deer that might be met via extension education programming offered by entities such as Cornell Cooperative Extension of Tompkins County.

Methods

HDRU staff designed a questionnaire to assess area residents' attitudes and experiences with respect to deer. The questionnaire was used in a 4-wave mail survey of East Hill residents. This research was approved by the Cornell University Committee on Human Subjects (Protocol ID# 96-03-005).

The survey population included all homeowners in East Hill communities neighboring Cornell, including Cornell Heights, Cayuga Heights, Northeast, Forest Home, Varna, Ellis Hollow, Snyder Hill/Eastern Heights and Belle Sherman/Collegetown (n=2,638 households). The sample for this study was drawn from real property tax assessment roles for Tompkins County.

Key Findings and Study Conclusions

We received 1,497 completed questionnaires, for an adjusted response rate of 60.3%. Response rate varied by community, from a low of 54.9% in Cayuga Heights, to a high of 73.0% in Forest Home. The following bullets summarize key findings and study conclusions.

- Residents of East Hill communities highly value Cornell lands as a source of amenities (e.g., as open space, as a leisure resource, as natural habitats). They use Cornell lands frequently to spend time outdoors, enjoy nature, or spend time with family, friends, or pets.
- Most residents of East Hill communities interact with deer regularly. They believe deer use both Cornell lands and East Hill neighborhoods as their habitat; that is, they recognize that Cornell and adjacent communities share a common deer herd.
- Most East Hill residents believe deer are having a negative impact on both Cornell lands and neighboring communities. Many are very concerned about a range of negative impacts associated with the presence of deer on Cornell lands and in their communities.
- The majority of residents believe Cornell should be managing deer-related impacts on Cornell lands. A substantial minority believe action by Cornell would benefit their community, but some are uncertain about how Cornell actions would affect neighboring communities.
- Many East Hill residents have heard or read news stories about Cornell's land use, but few have participated in activities where they provided input to decisions about Cornell land management.
- While not reflected in responses from all East Hill residents, a base of general credibility exists for Cornell decision makers. Nevertheless, many East Hill residents are uncertain how much trust to place in Cornell decision makers with respect to land use.
- Substantial numbers of East Hill residents are interested in providing input if Cornell addresses deer-related impacts in the future, but some are skeptical about the degree to which their input will be considered by Cornell decision makers. Many also believe they do not have enough information to give meaningful input about deer management on Cornell lands.

Next Steps

At time of publication, plans are in place to distribute the results of this study to survey respondents and other East Hill residents. In consultation with the New York State Department of Environmental Conservation and others, Cornell staff will design and implement a long-range plan for management of deer-related impacts on Cornell lands. Cornell staff plan to meet with neighborhood groups to keep communities informed of actions being considered by Cornell and to seek input about such actions where possible. Cornell decision makers recognize that deer management issues extend well beyond Cornell lands and hope that these study findings will stimulate continuing dialogue about joint solutions to local deer management issues.

HDRU staff will continue to analyze and synthesize the data from this study to make broader use of the data to inform community-based deer management. Forthcoming manuscripts will be available to the public. Publications on this and other related studies by HDRU may be obtained by contacting HDRU or by visiting our webpage (<http://www.dnr.cornell.edu/hdru/>).

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INTRODUCTION

Background

White-tailed deer (*Odocoileus virginianus*) are common on Cornell lands and in the neighboring communities surrounding the Ithaca campus. Management of deer and the impacts deer are having on people have gained attention in recent years in the East Hill area. Perhaps the most visible, and certainly the best documented example comes from the Village of Cayuga Heights (Chase et al. 1999a, 1999b, 2002; Curtis et al. 2003; Raik et al. 2003, 2004; Shanahan et al. 2001; Siemer et al. 2000). However, similar concerns and issues are emerging in other nearby communities and on lands managed by Cornell University.

Cornell University maintains lands for a variety of educational and research purposes, many of which are compromised by extensive plant damage associated with deer browsing. In addition, deer crossing roadways on and around campus pose an economic and safety risk to motorists. As Cornell administrators develop a long-term approach to managing deer-related impacts on Cornell lands, they wish to do so with a clear understanding of the residents in East Hill communities. These people live, work, and recreate in an area that includes their residential neighborhoods and Cornell University lands, a combined land base providing habitat for their shared local deer population.

Cornell University sponsored a comprehensive survey of its neighbors to learn more about their interests, experiences, and concerns with respect to the local white-tailed deer population. For this study, the Cornell lands of interest included research lands and open spaces on or near the Ithaca campus (e.g., natural areas, botanical gardens, Plantations, woodlots, and agricultural fields). Cornell University funding for this study was provided by the Division of Government and Community Relations, Office of the Executive Vice President, Office of the

Dean of the College of Agriculture and Life Sciences, and Cornell Plantations. Funding also was provided by Cornell University Agricultural Experiment Station federal formula funds, Project number NYC-47433. The survey was designed and implemented by staff in the Human Dimensions Research Unit (HDRU), Department of Natural Resources, at Cornell University.

Purpose

We had five objectives for this study (see Box 1). Our overall purpose was to learn more about area residents’ experiences with and attitudes about deer, and to gauge community interest in participating in deer management planning (i.e., study objectives 1-2). Information from this study will help Cornell decision makers better understand and address community interests related to deer impacts and management of research lands and open spaces owned by Cornell. Study findings provide additional insight to guide ongoing communication between Cornell personnel and residents of neighboring communities, and will identify community information needs relevant to deer that might be met via extension education programming offered by entities such as Cornell Cooperative Extension of Tompkins County.

Box 1. Research objectives.	
1	Characterize experiences with and attitudes about deer on and near Cornell lands.
2	Assess community members’ interest in participating in deer management planning.
3	Assess the degree to which experience, individual capacity, and perceptions of institutional capacity affect peoples’ intention to participate in management planning.
4	Measure coorientation between local community members and Cornell managers on problem recognition, involvement, and affiliation with community.
5	Characterize attributes of people with different degrees of intention to participate in management planning and different beliefs about deer and management of Cornell lands.

HDRU has a long-standing interest in improving understanding of community-based deer management (see for example Decker et al. 2004). Our secondary purpose in this study was to continue to develop insight about community-based deer issues that will improve management practice. That purpose is captured in study objectives 3-5 and will be addressed in forthcoming manuscripts.

METHODS¹

Survey instrument

We used a mail survey to collect data for this study. In addition to relying on our previous research experience on community-based deer management, we identified survey topics through a series of discussions with natural resource managers and public participation practitioners, as well as through qualitative interviews with a total of 267 local community residents living near three suburban parks that provided open spaces and deer habitat similar to the situation encountered in East Hill (Leong 2007a, 2007b, 2007c). Those preliminary steps informed development of a 12-page instrument (Appendix A) with sections focused on perceptions about and use of Cornell open space, opinions about Cornell decision making and land management, and information about the backgrounds of respondents. The draft survey instrument was reviewed by survey research specialists at Cornell University and pre-tested with several graduate students and staff at Cornell to gauge readability and respondent burden.

¹ This research project was approved by the Cornell University Committee on Human Subjects (Protocol ID# 96-03-005).

Survey implementation

Our sampling universe was all local homeowners, aged 18 and older, living in East Hill communities. We worked with natural resource managers and GIS professionals to determine geographic boundaries for East Hill communities (Figure 1). We then worked with the county tax assessor offices to gather addresses for all home owners in delineated East Hill communities.

We mailed questionnaires to all 2,638 owner-occupied households identified in the East Hill communities of Cornell Heights, Cayuga Heights, Northeast, Forest Home, Varna, Ellis Hollow, Snyder Hill/Eastern Heights and Belle Sherman/Collegetown. We used a four-wave mailing approach. All members of the sample were mailed a cover letter, questionnaire, and postage-paid return envelope on October 21, 2006. Residents who did not respond to the initial mailing were contacted up to three additional times, with the last reminder mailings taking place in mid-November 2006.

Analysis

This report provides very limited statistical analysis (forthcoming manuscripts will focus on in-depth analysis). In this report we provide descriptive study highlights using a set of tables with frequencies of response in key response categories, by neighborhood. We used chi square tests to identify whether statistically different results had occurred between any of the communities. When differences were identified for a given variable, we conducted post hoc tests using Tukey's HSD test to identify specific subgroups of neighborhoods which differed from one another. Differences are reported at the $p < 0.05$ level of significance.

RESULTS

We received 1,497 completed questionnaires, for an adjusted response rate of 60.3% (Table 1). Response rate varied by neighborhood, from a low of 54.9% in Cayuga Heights, to a

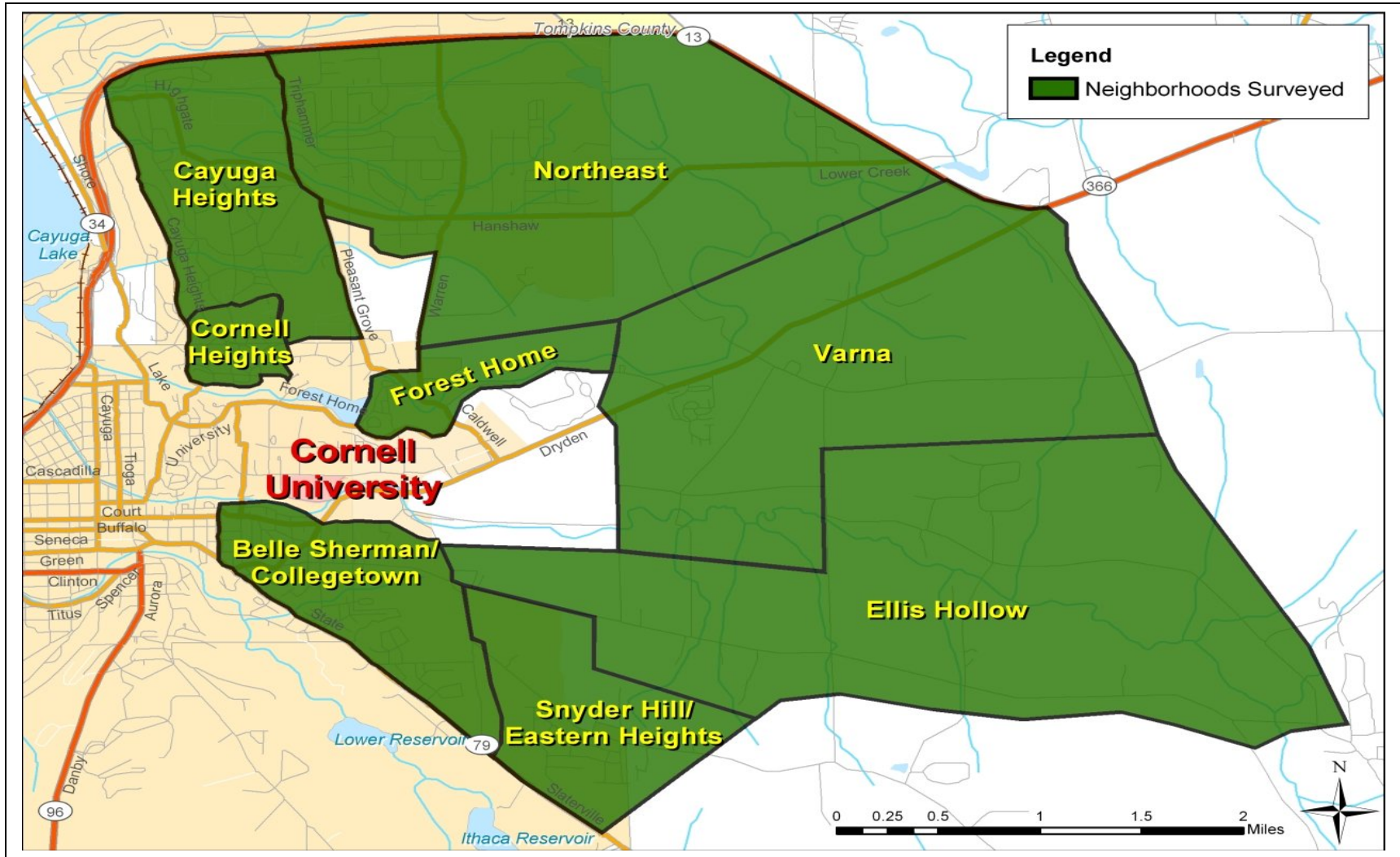


Figure 1. Geographic boundaries used to assign households to a community.

Table 1. Response rates by community.

Community	Sample	Returns	Not deliverable	Not usable	Adjusted response rate (%)
Cornell Heights	73	39	2	1	54.9
Cayuga Heights	547	291	34	6	56.7
Northeast	712	375	40	6	55.8
Forest Home	81	57	3	1	73.0
Varna	106	67	3	1	65.0
Ellis Hollow	248	156	9	3	65.2
Snyder Hill / Eastern Heights	218	138	8	2	65.7
Belle Sherman / Collegetown	653	369	57	3	61.9
Unknown (ID removed)		5			
Total	2,638	1497	156	23	60.3

high of 73.0% in Forest Home (Table 1). Our study budget did not include resources for a nonrespondent follow-up. However, we were able to compare the geographic locations of respondents and nonrespondents. We utilized CrimeStat III (version 3.0, Ned Levine & Associates, Houston, TX) to perform Nearest Neighbor analysis and K Means Clustering on respondent and non-respondent household locations, and then compared results using ArcGIS 9.1 (ESRI, Inc., Redlands, CA). We found that both groups were significantly clustered (respondents: Nearest Neighbor Index=0.520, $Z=-35.26$, $p=0.0001$; nonrespondents: Nearest

Neighbor Index=0.482, $Z=-33.78$, $p=0.0001$), but that spatial distribution of respondents was similar to that of nonrespondents.

The following sections summarize study results within all the major categories of questions in the mail survey instrument. We note differences between neighborhoods that have practical implications for gathering input from or communicating with community residents.

Respondent characteristics

The majority of respondents (58%) were female. Mean age of all respondents was 58 years (range 25 to 98 years). Respondents had a high level of education attainment; 88% had a bachelor's degree or higher and 65% held a graduate degree. Most respondents (75%) had lived near Cornell lands for 10 years or more; half the respondents had lived near Cornell for 20 years or more (mean 23 years; median 20 years; mode 20 years).

A majority (66%) participated in wildlife viewing (Table 2). Respondents in Forest Home and Ellis Hollow reported the highest levels of wildlife viewing (74% and 78%, respectively). More than one in four respondents reported photographing, painting, or sketching wildlife (Table 2). Few respondents participated in hunting; hunting involvement was highest among respondents from Varna and Ellis Hollow (Table 2).

Use of Cornell lands

About 75% of respondents had spent time visiting Cornell lands during the previous 12 months (i.e., 75% did more than simply drive through Cornell lands on their way to another destination). The majority (65%) of those who visited tended to stay for more than an hour on each trip, and many used Cornell open spaces often (mean annual visits 59; median visits 20). The most common reasons for a visit to open spaces at Cornell were to: enjoy nature (83%), get outside (72%), exercise (65%), or spend time with other people or pets (58%) (Table 3).

Table 2. Rates of participation in outdoor activities, by community.

	<u>% by community</u>								
	Cornell Heights	Cayuga Heights	North east	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	Overall
(n)	(39)	(287)	(377)	(57)	(63)	(157)	(139)	(363)	(1,482)
Viewing wildlife	59.0	63.1	63.1	73.7	68.3	77.7	66.2	66.1	66.2
Picnicking	53.8	51.2	50.4	52.6	42.9	50.3	50.4	60.6	52.9
Photo/sketch	17.9	23.3	28.9	31.6	34.9	38.9	37.4	24.5	28.7
Boating	30.8	30.3	27.3	24.6	27.0	32.5	20.1	29.2	28.2
Camping	12.8	10.1	14.6	10.5	20.6	17.8	18.0	15.2	14.6
Fishing	5.1	8.4	12.5	10.5	12.7	15.9	9.4	10.5	11.0
Hunting	2.6	2.1	2.9	1.8	11.1	9.6	2.9	1.9	3.5
Horse riding	.0	2.1	2.7	.0	7.9	6.4	3.6	3.6	3.3

Table 3. Reasons for visiting Cornell lands offered by the 73% of homeowners in East Hill communities who visited Cornell lands for a purpose other than passing through on the way to another destination.

	<u>% by community</u>								Overall
	Cornell Heights	Cayuga Heights	Northeast	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	
(n)	(34)	(216)	(266)	(54)	(44)	(129)	(100)	(282)	(1,125)
To enjoy nature	97.1	81.0	81.2	96.3	79.5	84.5	81.0	83.7	83.3
To get outside	79.4	67.1	64.7	79.6	75.0	74.4	76.0	78.0	72.2
To exercise	88.2	57.4	56.8	81.5	81.8	67.4	70.0	67.7	65.2
Spend time with people or pets	61.8	60.2	47.4	74.1	81.8	57.4	65.0	57.8	58.2
To get away from demands	35.3	31.0	25.9	33.3	45.5	29.5	31.0	29.1	30.0
To volunteer or work	11.8	9.7	13.2	3.7	11.4	11.6	5.0	15.6	11.6

Most respondents (92%) agreed or strongly agreed with the statement, “Cornell lands make my community a special place to live.” Similar proportions agreed that Cornell lands are an important place for recreation (86%), provide habitat for plants and animals (93%), and protect the landscape from development (82%) (Table 4).

We found that the majority of residents in all neighbors use and appreciate Cornell lands. However, responses to multiple items suggest that Forest Home residents are particularly likely to value open spaces at Cornell as a leisure resource and an amenity that enhances their quality of life. About 95% of Forest Home respondents had visited Cornell lands in the past 12 months, and 20% said their average visit lasted two or more hours. Homeowners in Forest Home were more likely than those in four of the other communities (all communities other than Cornell Heights, Ellis Hollow, and Northeast) to agree with the statement, “Cornell lands are an important place for recreation in my community” (one-way ANOVA: $F_7=2.734$, $P = 0.008$, observed power 0.913; post hoc Tukey: Forest Home – Cayuga Heights $P = .027$, Forest Home – Varna $P = .044$, Forest Home – Snyder Hill $P = .002$, Forest Home – Belle Sherman $P = .035$).

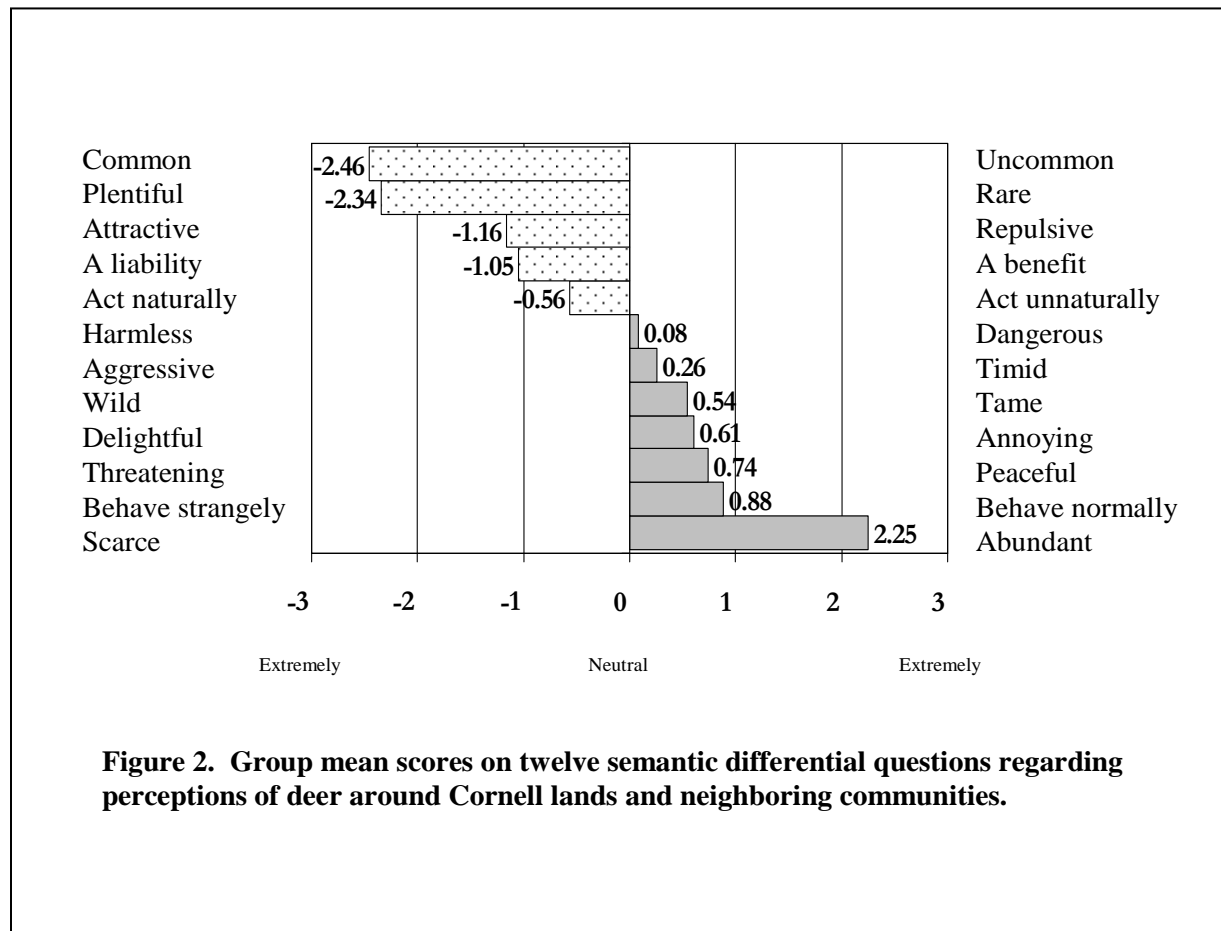
Deer-related attitudes, perceptions, and concerns

Over one third (37%) of respondents reported seeing deer on Cornell lands almost daily and most (86%) see deer on Cornell lands at least occasionally. Nearly all (99%) occasionally see deer in their community and 82% see deer in their community almost daily. Not surprisingly given these observation reports, the majority of East Hill homeowners also believe deer in the area are common and abundant (Figure 2).

The majority of East Hill homeowners view deer as attractive (Figure 2). Most (89%) believe the local deer herd uses both Cornell lands and neighboring communities (Table 5), and

Table 4. Attitudes about amenity values that Cornell lands provide to neighboring communities.

Cornell lands:	<u>% who agree by community</u>								Overall (n)
	Cornell Heights	Cayuga Heights	North east	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	
make my comm. a special place to live	94.9	92.6	93.0	96.4	82.8	91.6	90.6	91.0	91.8 (1460)
are an important place for recreation for my comm.	89.7	84.9	88.9	96.4	70.3	87.2	80.9	86.6	86.1 (1464)
provide habitat for plants and animals	97.4	90.4	94.0	94.6	90.5	94.8	91.3	91.6	92.5 (1459)
protect the landscape from development	73.7	81.7	83.3	89.3	78.1	86.4	83.2	80.5	82.4 (1463)
provide open space for my comm.	94.7	87.3	91.3	92.9	81.3	90.4	87.0	89.9	89.4 (1462)
play a significant role in my comm.	94.6	90.1	86.7	92.9	79.7	87.1	81.9	85.1	86.7 (1459)
are managed by good neighbors	68.4	71.1	71.7	67.3	61.3	68.4	75.4	69.8	70.4 (1440)
are places where people in my comm. spend leisure time	97.4	85.5	84.9	94.6	68.8	85.8	82.6	81.1	83.9 (1462)
preserve natural resources	89.7	85.2	88.4	87.5	76.2	87.2	84.1	85.4	86.0 (1461)



three-quarters believe it is reasonable to have some deer on Cornell lands and in their community (Figure 2, Table 5). However, about two-thirds of East Hill residents regard deer in the area as a liability (Figure 2). About 60% agreed that deer in and around Cornell seriously damage plants and other resources on Cornell lands and create serious safety risks for people (Table 5).

When asked which of four statements best reflected their feelings about deer in the area, about 12% of residents checked the statement, “I enjoy deer AND I do not worry about deer-related impacts.” A large majority—71%—checked the statement, “I enjoy deer BUT I worry about deer-related impacts.” Sixteen percent checked, “I do not enjoy deer” and 1% had no particular feelings about deer (Table 6). Cayuga Heights and Northeast residents were most likely to check the response, “I do not like deer.”

Table 5. Agreement/disagreement with belief statements about deer.

Topic (n)	Disagree, Strongly Disagree	Neutral	Agree, Strongly Agree	Unsure
Our local deer herd uses both Cornell lands and neighboring communities (n=1442)	2.0	3.5	88.8	5.7
It is reasonable to have some deer on Cornell lands and in my community (n=1438)	10.8	7.4	79.6	2.1
Deer seriously damage plants and other resources on Cornell lands (n=1442)	4.1	17.2	60.0	18.7
Deer in and around Cornell lands create serious safety risks for people (n=1441)	20.7	15.7	59.0	4.6
Deer in and around Cornell lands create a serious nuisance for people (n=1443)	22.5	16.5	55.2	5.9
The habitat is better for deer on Cornell lands than in neighboring communities (n=1432)	17.2	24.9	45.3	12.6
Deer in and around Cornell lands create serious health risks for people (n=1441)	28.1	22.5	37.8	11.7
Cornell is part of the local community (n=1440)	1.9	2.2	94.6	1.3
Cornell should start now to address deer-related impacts on their lands (n=1438)	6.7	13.9	73.3	6.1
It is important to understand how other people view deer-related impacts (n=1434)	5.0	19.9	70.8	4.3
Addressing deer-related impacts on Cornell lands would affect neighboring communities (n=1443)	2.7	6.3	83.7	7.3
Addressing deer-related impacts on Cornell lands would affect me positively (n=1432)	9.7	21.1	47.9	21.3
Addressing deer-related impacts on Cornell lands would affect me negatively (n=1425)	46.2	21.5	10.0	22.3

Table 6. Attitude toward deer on Cornell lands and in East Hill communities.

	<u>% by community</u>								
	Cornell Heights	Cayuga Heights	Northeast	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	Overall
(n)	(36)	(280)	(368)	(55)	(64)	(157)	(131)	(348)	(1439)
No particular feelings	0.0	1.4	2.2	0.0	3.1	0.0	1.5	1.1	1.4
Enjoy and do not worry	13.9	7.9	7.3	16.4	21.9	12.7	17.6	13.8	11.7
Enjoy BUT worry	77.8	68.9	70.4	72.7	68.8	78.3	71.8	67.8	70.7
Do not enjoy	8.3	21.8	20.1	10.9	6.3	8.9	9.2	17.2	16.3

We assessed community residents' concerns about a range of deer-related impacts. We found that substantial proportions of residents were very concerned about deer damage to naturally-growing plants as well as flowers, trees, and shrubs used as landscaping (Tables 7-8). Respondents rated the same top concerns (deer-car collisions, damage to landscaping plants, and damage to natural plants) with respect to both Cornell lands and neighboring communities (Table 7-8). Three of four respondents said they were very concerned about deer-car collisions (98% expressed at least some concern about such collisions). Two-thirds were very concerned about plant damage in their community. About half were very concerned about diseases carried by deer.

Attitudes about Cornell and Cornell land management

Three-fourths of respondents agreed with the statement, "Cornell should start now to address deer-related impacts on their lands" (Table 5). Most (84%) believe their community would be affected in some way if Cornell engaged in deer management; 48% believed their community would be affected positively; 10% believed their community would be affected negatively (Table 5). Homeowners in Forest Home were more likely than those in five of the other communities (all communities other than Varna and Cornell Heights) to anticipate negative effects (one-way ANOVA: $F_7=4.594$, $P > 0.001$, observed power 0.995; post hoc Tukey: Forest Home – Cayuga Heights $P = .001$, Forest Home – Northeast $P > .001$, Forest Home – Ellis Hollow $P = .001$, Forest Home – Snyder Hill $P = .007$, Forest Home – Belle Sherman $P = .001$).

Connections to Cornell and credibility of Cornell decision makers

Ninety-four percent of East Hill respondents agreed with the statement, "Cornell is part of the local community" (Table 5). Approximately 60% of East Hill respondents believe Cornell decision-makers demonstrate several key traits of credibility. However, about one in three

Table 7. Concerns about deer on Cornell lands.

Topic	Level of concern			n
	Not at all concerned	Somewhat concerned	Very concerned	
Deer-car collisions	4.8	21.5	73.7	1333
Damage to landscaped flowers, trees and shrubs caused by deer	12.8	31.2	55.9	1332
Damage to naturally growing flowers, trees and shrubs caused by deer	16.1	31.8	52.1	1343
Damage to vegetable gardens caused by deer	20.5	31.0	48.5	1316
Diseases and/or parasites carried by deer	16.6	38.0	45.4	1328
Starving, sick or injured deer	26.6	48.0	25.4	1321
Fawns that are born too late to survive winter	42.3	37.7	20.0	1301
Presence of deer feces	51.3	30.6	18.1	1316
People's behavior around deer	44.5	38.6	16.9	1311
Deer behavior around people	52.5	33.6	13.9	1312
Deer interacting with pets	64.2	23.6	12.1	1303
Deer getting into trash	68.7	20.7	10.6	1307

Table 8. Concerns about deer in respondent's community.

Topic	Level of concern			n
	Not at all concerned	Somewhat concerned	Very concerned	
Deer-car collisions	1.7	19.3	78.9	1401
Damage to landscaped flowers, trees and shrubs caused by deer	7.5	22.1	70.4	1400
Damage to naturally growing flowers, trees and shrubs caused by deer	11.4	23.8	64.8	1402
Damage to vegetable gardens caused by deer	12.9	24.0	63.1	1393
Diseases and/or parasites carried by deer	13.3	36.9	49.9	1394
Starving, sick or injured deer	23.0	44.5	32.6	1370
Presence of deer feces	37.9	33.7	28.4	1371
Fawns that are born too late to survive winter	41.5	36.3	22.2	1343
People's behavior around deer	42.1	38.4	19.5	1366
Deer behavior around people	48.4	34.6	17.1	1383
Deer interacting with pets	56.6	27.2	16.2	1381
Deer getting into trash	65.0	21.2	13.8	1377

responded in the neutral category on credibility items, indicating uncertainty or ambiguity on the topic. For example, 37% agreed with the statement, “I trust Cornell decision-makers to make good decisions about land management,” but 16% disagreed, 24% answered “neutral” and 23% responded “unsure” (Table 9). Only 20% of Forest Home respondents agreed with this statement (Table 9). Residents of Forest Home were more likely than respondents in five other communities (all communities other than Varna and Cornell Heights) to distrust Cornell decision-makers on this topic (one-way ANOVA: $F_7=5.408$, $P > 0.001$, observed power 0.999; post hoc Tukey: Forest Home – Cayuga Heights $P > .001$, Forest Home – Northeast $P > .001$, Forest Home – Varna $P = .015$, Forest Home – Snyder Hill $P > .001$, Forest Home – Belle Sherman $P > .001$).

Interest in opportunities to provide input to Cornell on deer management

About one in five respondents believed they had enough information to provide meaningful input on deer management on Cornell lands if asked (Table 10). In most communities relatively few had ever offered input on Cornell land management decisions (Forest Home was an exception; half or more respondents from Forest Home had attended a public meeting, talked with public officials, or talked with Cornell staff about Cornell land management) (Table 11). However, about one in three indicated that if Cornell begins discussing actions to reduce deer-related impacts on university lands, they would be likely to: talk with officials about deer-related impacts, submit written comments, or participate in a related community activity (Table 12). Approximately half (53%) indicated they would probably attend a public meeting about deer-related impacts if Cornell begins discussing deer management actions (Table 12). Forest Home residents were most likely to say they would participate in a range of input opportunities.

Table 9. Perceptions of Cornell as a land manager and community partner, by community.

	<u>% who agreed or strongly agreed, by community</u>								Overall (n)
	Cornell Hts	Cayuga Hts	North East	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	
Cornell is an educational resource for my community	100.0	96.1	95.4	94.7	96.7	99.4	92.5	96.9	96.2 (1441)
I feel welcome on Cornell lands	97.3	95.0	89.4	94.7	93.3	90.3	88.1	92.6	91.8 (1438)
I feel a connection to Cornell	91.9	80.1	73.5	80.7	72.1	78.1	76.7	78.4	77.5 (1429)
Cornell works with local communities for shared purposes	58.3	69.1	68.1	50.9	50.8	67.3	70.1	66.6	66.4 (1433)
CU employees are dedicated to preserving and protecting Cornell lands	68.6	64.9	60.3	80.7	63.9	53.2	67.2	65.0	63.4 (1428)
Rules and reg.s at CU help preserve and protect its lands for the future.	45.7	62.0	56.7	64.3	54.1	53.2	57.1	54.6	56.8 (1429)
My community helps care for CU lands	45.7	31.4	38.4	66.7	41.0	39.2	35.8	37.3	38.0 (1425)
I trust Cornell decision-makers to make good decisions about land management	20.6	42.4	38.6	19.6	41.0	30.1	41.0	37.5	37.3 (1426)
Cornell decision-makers listen to opinions from people like me	14.3	30.7	34.4	26.8	32.8	26.1	30.8	28.3	30.1 (1424)
I support the land management decisions made by Cornell decision-makers	17.6	31.6	31.3	20.0	23.0	17.6	24.6	22.8	26.1 (1418)

Table 10. Agreement with belief statements about Cornell use of public input for land management decisions, by community.

Input opportunity	<u>% who agreed or strongly agreed, by community</u>								Overall (n)
	Cornell Heights	Cayuga Heights	North east	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	
I have enough opportunities to provide input.	21.6	21.9	19.6	29.6	28.8	19.2	22.6	18.4	20.8 (1416)
I believe my input would be taken seriously.	31.6	31.7	38.1	23.6	42.4	28.4	38.0	31.1	33.5 (1422)
I have enough information to give meaningful input.	31.6	25.4	18.9	43.6	25.4	23.2	15.4	17.5	21.5 (1414)
The different ways that CU asks for my opinion encourage me to give input.	38.5	35.2	39.5	29.1	40.7	39.7	41.2	32.7	36.8 (1418)
I am comfortable voicing my opinion.	75.7	58.9	57.5	70.9	64.4	70.5	56.6	56.1	60.1 (1415)
Public input leads to better land management decisions.	68.4	64.3	72.3	67.3	69.5	76.8	69.6	69.1	69.8 (1414)
Interactions help build future relationships.	68.4	68.0	75.8	66.7	67.8	77.3	77.8	72.8	73.1 (1403)

Table 11. Experiences related to obtaining information about Cornell lands management or offering input on Cornell land management.

	<u>% who reported the experience, by community</u>								
Behavior related to Cornell land management in past 12 months	Cornell Heights	Cayuga Heights	North east	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	Overall (n)
Read or listened to news	74.4	59.9	56.5	83.6	61.3	67.3	63.5	62.7	62.3 (1436)
Talked with Cornell staff	28.2	9.4	11.0	58.9	14.5	20.5	11.8	14.9	15.2 (1446)
Participated in a related community group or activity	12.8	7.2	7.4	50.9	9.7	11.5	5.1	14.1	11.2 (1443)
Talked with public officials	18.4	7.2	6.6	26.8	9.7	5.1	6.6	11.3	8.9 (1443)
Attended a public meeting	17.9	4.3	3.6	48.2	6.5	3.8	5.1	8.7	7.4 (1446)
Provided written comments on a plan	2.6	4.3	4.7	10.9	1.6	5.1	4.4	5.1	4.8 (1441)
Wrote a letter to a newspaper	0.0	0.4	0.5	1.8	0.0	0.6	0.7	0.8	0.6 (1447)

Table 12. Likelihood that residents would participate in involvement opportunities, by community.

Involvement opportunity	<u>% likely or very likely to participate, by community</u>								Overall (n)
	Cornell Heights	Cayuga Heights	North east	Forest Home	Varna	Ellis Hollow	Snyder Hill E. Hts	Belle Sherman	
Read or listen to news	97.4	91.8	94.0	98.2	86.9	97.4	95.6	94.4	94.1 (1450)
Talk with Cornell staff	34.2	35.9	42.1	75.4	34.4	43.6	29.4	35.8	39.1 (1442)
Participate in a related community group or activity	34.2	32.1	38.5	75.4	36.1	39.4	31.6	30.9	36.1 (1441)
Talk with public officials	33.3	39.7	39.1	61.4	27.9	31.6	26.5	33.5	36.1 (1443)
Attend a public meeting	41.0	53.2	54.5	80.7	49.2	53.2	49.3	48.6	52.6 (1448)
Provide written comments on a plan	33.3	39.7	39.1	61.4	27.9	31.6	26.5	33.5	36.8 (1442)
Write a letter to a newspaper	8.1	6.9	12.9	26.3	10.0	8.3	10.3	9.1	10.4 (1437)

Though many community residents are interested in providing input on deer management on Cornell lands, many expressed skepticism about opportunities to provide input. Only one in three residents in neighboring communities believed their input would be taken seriously (Table 10) and 50% thought they could have little or no influence on management of Cornell lands.

CONCLUSIONS

This study provides information that can inform approaches to deer management on Cornell lands and in adjacent communities. We expect to gain additional insights as more in-depth analysis occurs related to study objectives 3-5. However, our initial analyses lead us to the following early conclusions.

- Residents of East Hill communities highly value Cornell lands as a source of amenities (e.g., as open space, as a leisure resource, as natural habitats). They use Cornell lands frequently to spend time outdoors, enjoy nature, or spend time with family, friends, or pets. Thus, deer management measures that impede recreational uses of Cornell open space are likely to raise concerns among some community residents.
- Most residents of East Hill communities interact with deer regularly. They believe deer use both Cornell lands and East Hill communities as their habitat—they recognize that Cornell and adjacent communities share a common deer herd.
- Most East Hill residents believe deer are having a negative impact on both Cornell lands and neighboring communities. Many are very concerned about a range of negative impacts associated with the presence of deer on Cornell lands and in their communities.
- The majority of residents believe Cornell should be managing deer-related impacts on Cornell lands. A substantial minority believe action by Cornell would benefit their community, but some are uncertain about how Cornell actions would affect neighboring communities.
- Many East Hill residents have heard or read news stories about Cornell's land use, but few have participated in activities where they provided input to decisions about Cornell land management.
- While not reflected in responses from all East Hill residents, a base of general credibility exists for Cornell decision makers. Nevertheless, many East Hill residents are uncertain how much trust to place in Cornell decision makers with respect to land use.

- Substantial numbers of East Hill residents are interested in providing input if Cornell addresses deer-related impacts in the future, but some are skeptical about the degree to which their input will be considered by Cornell decision makers. Many also believe they do not have enough information to give meaningful input on deer management on Cornell lands.
- Community acceptance of Cornell's deer management actions will likely reflect the extent to which those actions are informed by community input *and* improve East Hill community experiences vis-à-vis deer (diminish negative impacts and reduce concerns of community residents).

Next Steps

At time of publication, plans are in place to distribute the results of this study to survey respondents and other East Hill residents. Cornell staff will design and implement a long-range plan for management of deer-related impacts on Cornell lands. Cornell staff plan to meet with neighborhood groups to keep communities informed of actions being considered by Cornell and to seek input about such actions where possible. Cornell decision makers recognize that deer management issues extend well beyond Cornell lands and hope that these study findings will stimulate continuing dialogue about joint solutions to local deer management issues.

HDRU staff will continue to analyze and synthesize the data from this study to make broader use of the data to inform community-based deer management. Forthcoming manuscripts will be available to the public. Publications on this and other studies by HDRU may be obtained by contacting HDRU or by visiting our webpage (<http://www.dnr.cornell.edu/hdru/>).

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APPENDIX A: Survey instrument

YOUR EXPERIENCES WITH CORNELL LANDS AND DEER

In this questionnaire we are focusing on your experiences associated with *open lands owned by Cornell* (e.g., natural areas, botanical gardens, Plantations, agricultural fields, etc.).

1. Have you passed through or visited lands owned by Cornell University anytime in the last 12 months?

- Yes
 No (*If no, please skip to Question 6*)

2. When you have visited Cornell lands, how much time did you usually spend there? *Please check one.*

- Passing through on my way to somewhere else (*skip to Q. 5*)
 Less than 1 hour
 1-2 hours
 More than 2 hours

3. Why did you visit Cornell lands?

Please check all that apply.

- To enjoy nature
 To spend time with family, friends, or pets
 To exercise
 To be outside
 To get away from the usual demands of life
 To volunteer or work
 Other, please specify: _____

4. How many visits have you made to Cornell lands in the past 12 months?

___ visits

5. How often have you seen deer on Cornell lands?

Please check one.

<input type="checkbox"/> Nearly every time, a lot of deer	<input type="checkbox"/> Nearly every time, a few deer	<input type="checkbox"/> Once in a while	<input type="checkbox"/> Hardly ever see deer
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6. How often do you see deer in your community near Cornell lands? Please check one.

<input type="checkbox"/> Almost daily, a lot of deer	<input type="checkbox"/> Almost daily, some deer	<input type="checkbox"/> Once in a while	<input type="checkbox"/> Hardly ever see deer
---	---	---	---

7. Please indicate to what extent you agree or disagree with the following statements about Cornell lands and your community.

Please circle one number for each item.

Cornell lands...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Sure
make my community a special place to live	1	2	3	4	5	9
are an important place for recreation for my community	1	2	3	4	5	9
provide habitat for plants and animals	1	2	3	4	5	9
protect the landscape from development	1	2	3	4	5	9
provide open space for my community	1	2	3	4	5	9
play a significant role in my community	1	2	3	4	5	9
are managed by good neighbors	1	2	3	4	5	9
are places where people in my community spend leisure time	1	2	3	4	5	9
preserve natural resources	1	2	3	4	5	9

YOUR OPINIONS ABOUT DEER ON CORNELL LANDS AND IN YOUR COMMUNITY

8. To help us understand your opinions about deer, we have listed sets of words which might be used to describe deer. Please check the box between the two words which is closest to your opinion.

Example: Reading a book is...

	Extremely	Moderately	Slightly	Neutral	Slightly	Moderately	Extremely	
fun	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	boring

This person thinks reading a book is slightly fun.

Now please indicate your opinions about deer below.

Deer in and around Cornell lands and my community are...

	Extremely	Moderately	Slightly	Neutral	Slightly	Moderately	Extremely	
wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	tame
common	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	uncommon
aggressive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	timid
delightful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	annoying
scarce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	abundant
acting naturally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	acting unnaturally
harmless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	dangerous
a liability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a benefit
plentiful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	rare
threatening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	peaceful
attractive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	repulsive
behaving strangely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	behaving normally

9. Generally, how do you feel about deer on Cornell lands and in your community? Please check one.

- I have no particular feelings about deer
- I enjoy deer AND I do not worry about deer-related impacts
- I enjoy deer BUT I worry about deer-related impacts
- I do not enjoy deer

10. Please indicate whether you are concerned about these potential deer-related impacts, both on Cornell lands and in your community:

Please circle one number for each item.

	On Cornell lands			In your community		
	Not at all concerned	Somewhat concerned	Very concerned	Not at all concerned	Somewhat concerned	Very concerned
Starving, sick or injured deer	1	2	3	1	2	3
Fawns that are born too late to survive winter	1	2	3	1	2	3
Presence of deer feces	1	2	3	1	2	3
Damage to naturally growing flowers, trees and shrubs caused by deer	1	2	3	1	2	3
Damage to landscaped flowers, trees and shrubs caused by deer	1	2	3	1	2	3
Damage to vegetable gardens caused by deer	1	2	3	1	2	3
Deer getting into trash	1	2	3	1	2	3
Deer interacting with pets	1	2	3	1	2	3
Deer behavior around people	1	2	3	1	2	3
People's behavior around deer	1	2	3	1	2	3
Diseases and/or parasites carried by deer	1	2	3	1	2	3
Deer-car collisions	1	2	3	1	2	3
Other (Please specify): _____	1	2	3	1	2	3

**11. Please indicate to what extent
YOU agree or disagree
with the following statements.**

Please circle one number for each item.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Sure
It is reasonable to have some deer on Cornell lands and in my community	1	2	3	4	5	9
The habitat is better for deer on Cornell lands than in neighboring communities	1	2	3	4	5	9
Our local deer herd uses both Cornell lands and neighboring communities	1	2	3	4	5	9
Deer seriously damage plants and other resources on Cornell lands	1	2	3	4	5	9
Deer in and around Cornell lands create a serious nuisance for people	1	2	3	4	5	9
Deer in and around Cornell lands create serious health risks for people	1	2	3	4	5	9
Deer in and around Cornell lands create serious safety risks for people	1	2	3	4	5	9
Cornell should start now to address deer-related impacts on their lands	1	2	3	4	5	9
Addressing deer-related impacts on Cornell lands would affect neighboring communities	1	2	3	4	5	9
Addressing deer-related impacts on Cornell lands would affect me positively	1	2	3	4	5	9
Addressing deer-related impacts on Cornell lands would affect me negatively	1	2	3	4	5	9
It is important to understand how other people view deer-related impacts	1	2	3	4	5	9
Cornell is part of the local community	1	2	3	4	5	9

12. Please indicate to what extent you think Cornell University decision-makers agree or disagree with the following statements.

Please circle one number for each item.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Sure
Cornell decision-makers think it is reasonable to have some deer on Cornell lands and in my community	1	2	3	4	5	9
Cornell decision-makers think the habitat is better for deer on Cornell lands than in neighboring communities	1	2	3	4	5	9
Cornell decision-makers think our local deer herd uses both Cornell lands and neighboring communities	1	2	3	4	5	9
Cornell decision-makers think deer seriously damage plants and other resources on Cornell lands	1	2	3	4	5	9
Cornell decision-makers think deer in and around Cornell lands create a serious nuisance for people	1	2	3	4	5	9
Cornell decision-makers think deer in and around Cornell lands create serious health risks for people	1	2	3	4	5	9
Cornell decision-makers think deer in and around Cornell lands create serious safety risks for people	1	2	3	4	5	9
Cornell decision-makers think they should start now to address deer-related impacts on their lands	1	2	3	4	5	9
Cornell decision-makers think that addressing deer-related impacts on Cornell lands would affect neighboring communities	1	2	3	4	5	9
Cornell decision-makers think addressing deer-related impacts on Cornell lands would affect me positively	1	2	3	4	5	9
Cornell decision-makers think addressing deer-related impacts on Cornell lands would affect me negatively	1	2	3	4	5	9
Cornell decision-makers think it is important to understand how other people view deer-related impacts	1	2	3	4	5	9
Cornell decision-makers think that Cornell is part of the local community	1	2	3	4	5	9

YOUR EXPERIENCES WITH CORNELL LAND MANAGEMENT

13. Have you done any of the following IN THE PAST 12 MONTHS?

Please circle one category for each item.

Read or listened to news about Cornell's land use	Yes	No	Not Sure
Talked with Cornell staff about land management	Yes	No	Not Sure
Talked with public officials about Cornell's land use	Yes	No	Not Sure
Provided written comments to a management plan, impact statement, or survey (excluding this survey) about Cornell lands	Yes	No	Not Sure
Written a letter to a newspaper about Cornell lands	Yes	No	Not Sure
Attended a public meeting about Cornell lands	Yes	No	Not Sure
Participated in a community group or community activity related to an issue involving Cornell lands	Yes	No	Not Sure

14. If Cornell was to consider addressing deer-related impacts in the future, how likely is it that you would do any of the following ?

Please circle one number for each item.

Very Unlikely
Unlikely
Likely
Very Likely
Not Sure

Read or listen to news about Cornell actions to address deer-related impacts	1	2	3	4	9
Talk with Cornell staff about deer impacts	1	2	3	4	9
Talk with public officials about deer impacts	1	2	3	4	9
Provide written comments to management plan, impact statement, or survey related to deer impacts on Cornell lands	1	2	3	4	9
Write a letter to a newspaper about deer impacts	1	2	3	4	9
Attend a public meeting about deer impacts	1	2	3	4	9
Participate in a community group or community activity related to deer impacts	1	2	3	4	9

15. Please indicate to what extent you agree or disagree with the following statements about management and planning for Cornell lands.

Please circle one number for each item.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Sure
I have enough opportunities to provide input on Cornell's land management decisions	1	2	3	4	5	9
I believe my input is (or would be) taken seriously by Cornell decision-makers	1	2	3	4	5	9
I have enough information to give meaningful input on deer management on Cornell lands	1	2	3	4	5	9
The different ways that Cornell asks for my opinion (e.g., via written comments, conversations with staff, public meetings, etc.) encourage me to provide input	1	2	3	4	5	9
I am comfortable voicing my opinion about land management decisions at Cornell	1	2	3	4	5	9
Public input leads to better land management decisions by Cornell	1	2	3	4	5	9
Interactions between myself, Cornell decision-makers, experts, and people with ideas different from my own help build future relationships	1	2	3	4	5	9

16. How much influence do you think people like yourself can have on the management of Cornell lands? Please check one.

- A lot
 Some
 Very little
 None at all

17. How much influence do you think people like yourself can have in making the communities surrounding Cornell a better place to live? Please check one.

- A lot
 Some
 Very little
 None at all

18. Please indicate to what extent you agree or disagree with the following statements about management of Cornell lands.

Please circle one number for each item.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Sure
I feel welcome on Cornell lands	1	2	3	4	5	9
Cornell is an educational resource for my community	1	2	3	4	5	9
Cornell works with local communities for shared purposes	1	2	3	4	5	9
Cornell employees are dedicated to preserving and protecting Cornell lands	1	2	3	4	5	9
The rules and regulations at Cornell help preserve and protect its lands for the future.	1	2	3	4	5	9
My community helps care for Cornell lands	1	2	3	4	5	9
Cornell decision-makers listen to opinions from people like me	1	2	3	4	5	9
I support the land management decisions made by Cornell decision-makers	1	2	3	4	5	9
I trust Cornell decision-makers to make good decisions about land management	1	2	3	4	5	9
I feel a connection to Cornell	1	2	3	4	5	9

19. I believe that Cornell decision-makers ...

Please check one box along the scale for each pair.

	Nearly Always	Sometimes	Rarely	Neutral	Rarely	Sometimes	Nearly Always	
are trustworthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are not trustworthy
are knowledgeable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are not knowledgeable
are fair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are unfair
tell the whole story	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	do not tell the whole story
are unbiased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are biased
are concerned about my community's well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are unconcerned about my community's well-being
are concerned about the public interest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	are unconcerned about the public interest
watch out for my community's interests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	do not watch out for my community's interests

BACKGROUND INFORMATION

All information you provide is kept strictly confidential and is never associated with your name.

20. In what year were you born? 19 _____

21. Are you male or female? Male Female

22. How long have you lived in a community near Cornell lands

_____ years

23. Which activities you have participated in, at any location (not just on Cornell lands or in your community), during the last 12 months: *Please check all that apply.*

- Hiking/Walking outdoors
- Biking
- Picnicking
- Camping
- Boating/Canoeing
- Wildlife viewing
- Nature photography/Painting/Sketching
- Horseback riding
- Hunting
- Fishing

24. What is the highest level of formal education you have completed? *Please check one.*

- Some high school
- High school diploma/G.E.D.
- Some college or technical school
- Associate's Degree (e.g., A.A.)
- College undergraduate degree (e.g., B.A., B.S.)
- Graduate degree (e.g., M.S., Ph.D., M.D.)

25. Please use the space below for any additional comments:

THANK YOU FOR YOUR PARTICIPATION!

To return this questionnaire, simply seal it and drop it into the nearest mailbox.
Postage has already been provided.