Final Deer Management Report

Village of Cayuga Heights, New York

Submitted by

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INTRODUCTION

Village of Cayuga Heights officials had voiced concerns over deer-vehicle collisions, risks of Lyme disease, and impacts to landscape vegetation because of a locally abundant deer population. The potential for the furtherance of these conflicts prompted Trustees to address the abundance of deer through research conducted by Cornell University in the early- to mid-2000s. After experiencing no relief, there was further discussion regarding management options. Thorough analysis and consultations revealed that there were no legal lethal methods available. Therefore, they decided to pursue a surgical sterilization research project that was conducted during the past two year.

During Fall of 2014 the NYS Legislature passed a law that reduced the discharge setback from occupied structures from 500ft to 250ft for crossbows, and 150ft for archery equipment. This opened up legal access to private property for lethal management actions. After considerable discussion, the Trustees, in consultation with the Chief of Police, decided to pursue a highly structure depredation cull using archery equipment. This involved using strategic use of bait to control deer movements and the most advanced crossbows to ensure humane treatment of animals. The purpose of this report is to summarize the recent deer management program that was intended to directly reduce the local deer population.

SITE DESCRIPTION

The Village of Cayuga Heights (VCH) contains a matrix of suburban and commercial development, parks, and other open-spaces. The absence of any deer management, combined with fertile soils and good-quality habitat, allowed the local deer population to increase to a level incompatible with some land-use and human activities prior to our involvement. Although deer physical condition is not an issue, there is ongoing concern regarding numerous deer/vehicle collisions, Lyme disease risks, and damage to garden and landscape plantings. Camera surveys conducted by Cornell University documented a ~30% population decline one year after the surgical sterilization research project was initiated. This is the first year in which a lethal deer management program has been implemented. The purpose of this management project was to further accelerate the rate of decline of the local deer population.

METHODS

A total of seven sites were prepared and set up after legal access validation was established by Village officials. Sites were baited prior to our arrival by Cornell University personnel. Highly structured baiting was critical in establishing a predictable daily feeding pattern by proximate deer.

Crossbows were selected as the preferred equipment given the densely populated suburban environment and the requirement for no wounded deer or deer traveling long distances after being shot. Also, a high level of discretion was needed to avoid any conflicts with Village residents, as well as ensuring a safe working environment. We used a Bowtech SZ 380 and a

Scorpyd Orion with high-end, gradated optics. Both crossbows are the most modern relative to speed and precision to ensure a humane outcome. Red tactical lights were mounted on each of the crossbows and utilized after sunset.

The use of elevated tree-stands was the preferred method for shooter positioning, both from a scent control and concealment standpoint, as well as to ensure a safe shot angle into the ground. However, in certain locations where tree-stands would either expose shooters to public view, or suitable trees were not available within the permissible work area, ground blinds were utilized. Ground blinds were carefully positioned to take advantage of natural backdrops in terrain to ensure safe arrow flight beyond select deer. Bait was placed within 20 yards of shooter positions, ensuring only high percentage shot opportunities.

Timely notifications were made to landowners and nearby residents (at their request). Shooters arrived 1-2 hours before dark, and remain 2-3 hours after dark, depending on deer activity. We only took high percentage shots, which virtually eliminated wounding loss, and minimized recovery distance of deer carcasses. Deer were prioritized as follows: untagged females, untagged males, tagged females, tagged males.

RESULT AND DISCUSSION

We followed all recommendations presented to Village officials regarding program design and implementation. Total project duration was from 28 January to 15 March 2015 which included a four week weather delay. Culling efforts were conducted from 6 - 14 March 2015 with two shooters, totaling 14 man-days of active culling (Appendix A). All deer shot were recovered (no wounded deer) (Table 1). This is unprecedented performance with archery equipment, and can be attributed to training, good judgment, and proper equipment selection.

In the early stages of culling efforts it became very apparent that quality of bait used was compromising our ability to control deer arrival at select locations. The poor quality bait initially provided by Cornell personnel, coupled with an inconsistent baiting schedule (with weather delays), caused a delay in establishing a consistent feeding pattern of proximate deer and decreased our efficiency.

There appeared to be a marked difference in reaction (even among naive deer) when shots originated from a ground blind position, as opposed to shots originating from an elevated tree-stand position. On multiple occasions, a number of deer were in relative proximity (20-50m) to the bait when an actively feeding deer was shot from a tree stand. Being fairly naive, they would hesitate, but then continue to the bait after the deer that was shot ran off. Less naive deer would most likely not exhibit similar behavior. Conversely, when a group of deer were actively feeding at a ground blind bait site simultaneously, and a deer was shot, the other deer reacted much more negatively to the sound of the shot from ground level, and scattered without returning. Furthermore, deer approached the bait sites with ground blinds more cautiously than they did tree stand locations. On a number of occasions, deer were in proximity to a tree-stand site anticipating bait when a shooter would approach and climb into the stand. The deer would watch the shooter settle in the tree stand and would then proceed seemingly unalarmed into the baited area. They had no recognition of the human threat once above ground height, whereas they remained wary of a ground level presence. From a management perspective, it is critical to maintain this naiveté if further reductions in densities are desired.

On numerous occasions, multiple deer in a group were harvested from tree stand positions. On one occasion 7 of 8 deer were taken in succession, and on multiple occasions 4 of

5 deer were taken in succession. Ground blind use, while fairly productive, was not as conducive to simultaneous multiple kills. The vast majority of kills from ground blinds were of single deer that approached bait at varying intervals. Deer travelled an average of 55m after being shot.

The use of red tactical lights mounted on the crossbows was very advantageous after dark. The red illumination did not alter the behavior of any actively feeding deer, allowing them to remain calm and continue feeding while the shooter prepared for the shot.

Table 1. Harvest data.

Statistics	
Total Deer Killed - 48	
Untagged Deer	22
Tagged Deer	26
Adult Females	35
Adult Males	8
Fawns	5
Deer killed from tree-stands	30
Deer killed from ground blinds	18
Wounded loss = 0	

There appeared to be a late winter/early spring migration of deer to the warmer western side of the Village. Cornell personnel have witnessed this previously in more severe winters. Therefore nearly all of the unmarked females were transitory and likely would not have remained in the Village once the deep snow dissipated.

Program costs stayed within projections and there were no conflicts during the entire program. It is critical that the Village continue the program to continue to address deer that immigrate and to further the population reduction. As long as the points of access permit the attraction of any untagged deer that immigrate there will be no need for near-future sterilization efforts. It is likely that even with a limited effort this year that the local population will be near 100; reduced from nearly 225 two years ago.

ACKNOWLEDGEMENTS

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Appendix A: Tagged Deer Harvest Data

Marked Deer Harvest Data			
DATE	**EAR TAG #**	**SEX**	
3/6/2015	C16	F	
3/6/2015	C19	F	
3/6/2015	C48	F	
3/6/2015	C83	F	
3/7/2015	C133	F	
3/7/2015	H02	M	
3/8/2015	C43	F	
3/8/2015	C57	F	
3/8/2015	C81	F	
3/8/2015	C27	F	
3/9/2015	C121	F	
3/11/2015	C05	F	
3/11/2015	C09	F	
3/11/2015	C11	F	
3/11/2015	C140	F	
3/11/2015	C67	F	
3/11/2015	C128	F	
3/12/2015	C80	F	
3/12/2015	C55 (Collar)	F	
3/13/2015	C60 (Collar)	F	
3/13/2015	C141 (Collar)	F	
3/13/2015	C34	F	

3/13/2015	C63	F	
3/14/2015	C147	F	
3/14/2015	C44	F	
3/14/2015	C107	F	
		26 Total Marked Deer	
Unmarked Deer Harvest Data			
DATE	**SEX**	**Age**	
3/7/2015	M	Adult	
3/7/2015	F	Adult	
3/7/2015	F	Adult	
3/7/2015	F	Adult	
3/7/2015	F	Adult	
3/7/2015	F	Fawn	
3/7/2015	F	Fawn	
3/7/2015	F	Adult	
3/8/2015	M	Adult	
3/8/2015	M	Adult	
3/8/2015	F	Adult	
3/12/2015	M	Adult	
3/12/2015	M	Adult	
3/13/2015	F	Adult	
3/13/2015	F	Adult	
3/13/2015	F	Adult	
3/13/2015	F	Fawn	
3/13/2015	M	Fawn	
3/13/2015	M	Adult	
3/14/2015	F	Adult	
3/14/2015	F	Fawn	
3/14/2015	M	Adult	
	22 Unmarked Deer		
	14 Females (10		
	8 Males (7 Adult)		