

CITIES OF SHAKER HEIGHTS AND BEACHWOOD END OF SEASON HARVESTING REPORT FEBRUARY 15, 2024



Prepared By: James A. Mariano
Precision Wildlife Management LTD
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Executive Summary

The Cities of Shaker Heights and Beachwood continued to take an unprecedented collaborative approach to deer management. The cities once again contracted with Precision Wildlife Management LTD (Precision) to manage the deer population in both cities. The Shaker Heights Wildlife Task Force Committee recommended Precision harvest deer in the city using sharp shooters. Shaker Heights City Council, Safety Committee, Law Department, Finance Department, and the Honorable Mayor David Weiss approved the contract. Beachwood City Council, Safety Committee, Law Department, Finance Department, and the Honorable Mayor Justin Bern's approved the contract. A detailed deer management plan was submitted to the Ohio Department of Natural Resources (ODNR) Division of Wildlife. The ODNR reviewed the plan and authorized both cities to harvest 70 deer under a combined Deer Damage Control Permit # 18192

The Precision team started harvesting deer on December 22, 2023, and finished on January 4, 2024. A total of 70 deer were harvested from both cities. Through the deer management program, 3,086 pounds of venison was donated to the St. Vincent DePaul Food Bank and the Geauga County Veterans Food Bank. The lean ground venison provided an estimated 12,000 meals for people in need. The lean ground venison has a current market value of over \$54,000.00. (Estimated value based on Amazon ground venison priced at \$17.76/pound) The increase in venison yield was due to the increased number of antlered deer harvested this year.

We observed more deer, specifically antlered deer than in any other previous season. This year the antlered deer were observed acting differently in years past. A Precision team member was surrounded by three different antlered deer while putting out corn. The antlered deer circled the Precision team member and stomped their hooves and started moving toward him with a purposeful gait. One antlered deer charged the Precision Team member. This was unusual behavior from years past.

We also observed a fair-sized herd of tagged deer from the South Euclid deer sterilization project visit Beachwood daily. We also observed tagged deer in Shaker.

The Precision team demonstrated the ability to harvest 70 deer safely and humanely in a suburban environment. Despite the challenges presented, we did our best to accomplish this task discreetly. We continued to monitor our bait sites through mid-February.

This report briefly summarizes the culling effort, the challenges faced, and the characteristics of deer harvested during the winter of 2023-2024. We have also included future recommendations.

Deer Management

Mr. Westerfield, Assistant Wildlife Management Supervisor from the Ohio Department of Natural Resources (ODNR), Division of Wildlife, developed a deer management plan for the City of Beachwood last year and was consulted on the deer management program for Shaker Heights since its inception. The cultural carrying capacity decision making model developed by ODNR was utilized based on public safety and public attitude.

The goal of a deer management program is to establish a deer population that maximizes recreational opportunity while minimizing conflicts with agriculture, motor travel and personal safety. A deer management program will not, nor is it intended to, eliminate the deer population. There is a maximum number of animals that an area's native and cultivated resources can support without degradation to the animal's health and environment. ¹

The ODNR, Division of Wildlife states that it does not support, nor does this deer management plan suggest, that deer should be eliminated from the city but rather they be reduced to a level where they minimize conflicts, both potential and realized, in Shaker Heights and Beachwood while still providing the opportunity for residents to see deer. This will most likely be achieved when deer population levels are at or below cultural carrying capacities.²

Deer Management is a long-term commitment that requires planning, adaptability and operating in an unforgiving environment. The Precision team is comprised of committed professionals who work with the cities' executive leadership teams to manage the deer herd and safely, humanely, and discreetly harvest deer. We understand that deer management is a delicate subject and do our best to be sensitive to the residents' concerns. Harvesting deer in the cities presents many challenges. Whereas we do our best to be discreet, inevitably people are going to see us or hear suppressed gun shot on occasion.

The Precision team trains year-round with their systems in a variety of weather conditions both day and night. We started planning for the 2023-2024 season back in April 2023. We debrief the previous season with both cities and look for ways to improve the process and obtain results. We attended council meetings and conference calls. We monitor deer movement and patterns in and around both cities. We worked with Mr. Westerfield of the ODNR, Division of Wildlife concerning managing deer for both cities. We analyze dead deer pick-ups, questionnaire results from both cities and attend ODNR workshops to obtain information from other deer management programs throughout the state. We customize the deer management program to what is important to Shaker Heights and Beachwood. Once the contract was in place, we worked with both cities to acquire additional harvest sites and conducted site safety inspections. We go over logistics, field dressing logistics, processing and delivering fresh ground venison to people in need. We start training daily and all precision marksmen are required to pass the Ohio Peace Officers Qualification course for police sharpshooters. We placed cameras on sites and confirmed deer patterns. We started baiting three weeks prior to harvesting. We monitored the cameras daily from late November. We monitored the weather patterns and attempted to predict the best times to harvest. We adapt to the many challenges throughout the season and have consistently produced results.

¹ Deer Management Plan for City of Beachwood 2022, ODNR, Division of Wildlife, Geoff Westerfield

² Deer Management Plan for City of Beachwood 2022, ODNR, Division of Wildlife, Geoff Westerfield

Harvesting of deer was carried out from December 22, 2023, through January 4, 2024. The Precision team primarily culled Monday through Friday, late afternoon and throughout the evening. These days were selected due to increased pedestrian traffic on Friday, Saturday, and Sunday in the areas near the bait sites. Precision modified the days based on camera activity, deer patterns, and accommodating private property parameters.

Deer were observed on trail cameras and in person throughout both cities. The ratio of antlered deer to non-antlered deer was significantly one sided in favor of antlered deer. In the eight years Precision has been involved in managing deer in the area, we saw the largest number of deer this year with the majority being antlered deer. We observed many deer in the northern and southern zones in Beachwood and in Zone 4 in Shaker. Precision contacted Mr. Geoff Westerfield of the ODNR, Division of Wildlife. We sent Mr. Westerfield multiple photos of antlered deer on sites. We advised that we had limited sites to harvest deer and requested that ODNR, Division of Wildlife allow us to harvest more antlered deer than originally authorized. Mr. Westerfield agreed to increase the number of antlered deer on the permit.

Deer Management is a long-term commitment. On average, if unmanaged, the deer population will increase 25% to 35% yearly. Deer management is a sensitive and emotional subject and often spurs spirited debate. Left unmanaged, the deer herd presents an increased risk of accidents, plant damage, ecosystem impact and conflict with pets and people. Additionally, there is an increased risk of deer suffering from a deer/vehicle collision. The Shaker Police and Beachwood Police do an excellent job of targeting speeders. As a result, deer are struck at slower speeds and when there is a deer vehicle collision, the deer does not always expire right away. Usually, the deer is injured and has a reduction in mobility and suffers infection from the trauma site. Some deer can survive however many suffer from infection then expire. Over the years, we have witnessed several deer with infections and injuries. Both cities' questionnaires revealed that the majority of constituents who participated in the questionnaire were in favor of reducing the deer herd.

Bait Sites

The deer management program in Shaker Heights is in its eighth year, and as a result, the deer have become well educated and wary. Beachwood is in its second year. The Precision team observed deer throughout both cities. The challenge is being able to have access to bait sites throughout both cities that deer are visiting regularly and are conducive to safely, humanely, and discreetly harvesting them.

We observed many of the same bucks in both cities on camera and in person confirming the same deer that roam Shaker Heights roam Beachwood. Many of the deer observed in all the surrounding cities are the same deer and depending on deer patterns and movement will visit multiple cities throughout the year. This is one of the reasons a regionalized approach to deer management makes sense. The antlered deer commanded the bait sites in both cities and the does did not frequent the sites regularly. (See Figure 1.)

We conducted site surveys throughout both cities on the city owned land as well as private property looking for deer activity, as well as surveying the topography and assessing pedestrian and vehicle traffic and proximity to homes and streets. Areas were identified where the risks involved with harvesting deer could be managed. The private property sites were selected based on safety, deer activity, discrete location, and efficiency.

This year, Precision had four bait sites in Shaker Heights. These sites were located from the northeastern and central sectors of the city all the way across to the northwestern and central sectors of the city. We traditionally have not been able to impact the southern section of Shaker.

Precision worked with the Shaker Heights and Beachwood executive leadership teams in attempting to acquire private property bait sites. We assessed potential bait sites throughout both cities, Precision identified numerous viable sites that had the greatest chance to harvest deer safely, humanely, and discreetly.

We were only able to secure six bait sites in Beachwood. Many of the sites had restrictions on the times that Precision was able to harvest. Three sites were in the northern portion of the city, two sites in the central section, and one in the southern section. We continue to work with the Beachwood and Shaker Executive Leadership Teams to acquire viable private property sites.

Many variables affect deer movements; weather, food sources, residents feeding deer, acorn mast, vehicles, pedestrian traffic, dogs, the rut, dominant male deer (bucks), coyotes, South Euclid Deer Sterilization Project and harvesting pressure. After harvesting deer for the past seven years at the same bait sites, the deer have been avoiding these locations. The deer that do visit are extremely wary and the opportunities of harvesting multiple deer at once are much fewer. Once the first deer is harvested, the other deer vacate the area.

We have also found that even though we are in our second year in Beachwood, the deer in Zone 1 are unusually wary. The deer in Zone 3 in Beachwood are not wary and it is evident that they are being fed by residents in the area. The deer respond to the sound of corn being placed on the ground. The deer would hear the corn being distributed and come to the site. This is the first year we were able to impact the northern zone (Zone 3) in Beachwood.

We were hoping to have more of an impact on the northern and southern portions of the Beachwood this year as well as the southern portion of Shaker Heights. We will monitor the results this upcoming summer. We are working with both cities to gain more access to deer. Constituents in both cities are concerned about managing the deer population and want to see a reduction in the deer herd, this is evidenced by the questionnaire's responses and the many residents we speak with.

Both Shaker Heights and Beachwood's executive leadership teams are doing their best to obtain results for their constituent's requests to reduce the deer herd throughout both cities.

Our teams patrolled city owned property actively looking for deer. We observed deer on several occasions visiting sites on a daytime pattern. We had to pass on many engagements throughout both cities due to vehicles and pedestrians being in the area. The engagements would have been safe harvests; however, they would have potentially been witnessed harvests.

(Figure 3.)



Figure 1. Bucks dominating bait sites



Figure 2. Herd of tagged deer in Beachwood / South Euclid Project



Figure 3. Herd of does midafternoon.

It is critical to the success of the deer management program to locate new viable bait sites with uneducated deer. Additional private property locations acquired will reduce over-hunting the same areas and provide the opportunity to harvest deer in areas throughout the cities discreetly. We observed many deer in the northern zone area. We observed a herd of eight to ten deer that were tagged deer from the South Euclid study. We observed a herd of tagged deer in Beachwood daily. (See Figure 2 above)

There are many viable private property sites throughout both cities that hold good numbers of deer that can be harvested safely, and discreetly. Appropriate locations can be inconspicuous and increase the ability to further manage the growing deer population throughout both cities.

Scope and Need for Action

The Shaker Wildlife Task Force and City Council recommended that culling continue in the 2023-2024 winter season, as did Beachwood City Council. After consulting with the ODNR, considering the following data, the ability to acquire viable bait sites in both cities, and direct observation, a permit for 70 deer was requested for both cities. The ODNR issued a permit to Precision for 70 deer. The permit was modified by ODNR to allow 60% (42) of the deer harvested to be antlered deer (bucks).

The Precision team harvested 70 deer for the 2023-2024 deer management season. This year we saw more deer, mostly antlered deer, even after harvesting forty-one antlered deer (59%). We continued to see antlered deer visit our bait sites through mid-February.

The most recent questionnaires in both Shaker Heights and Beachwood show those residents that participated in the survey, are concerned about the current deer population in both cities.

The ODNR, Division of Wildlife utilizes the following data to help evaluate the deer management program. The protocol was updated.

- The questionnaire results (Social Carrying Capacity)
- Dead deer pick-ups
- Number of deer that were harvested.
- Direct observation / Deer Count Surveys
- Plant Studies

Most dead deer pick-ups are a result of unreported deer/vehicle accidents.

The top concerns according to the most recent questionnaires were as follows:

Shaker Heights

1. Damage to landscapes/gardens
2. Damage to ecosystem
3. Transmission of disease
4. Aggressive behavior toward humans
5. Decline in deer health due to overpopulation.

Beachwood

1. Damage to landscapes/gardens
2. Transmission of disease
3. Traffic Related Accidents/deer
4. Safety of Pets

In the 2023 Shaker Heights questionnaire, 71% of residents that participated in the deer questionnaire stated they wanted to see a decrease in the deer population as compared to 2015 where 82% wanted to see a decrease in the deer population.

The City of Beachwood reached out to their residents to understand how they are affected by the deer population. According to the results of the city's latest survey (2021), 61% of Beachwood residents who responded want the deer population to be addressed. This is up from 46% in a 2018 survey.

The following represents dead deer pickups in Shaker Heights:

- 2020 28 Dead Deer Pick-ups
- 2021 16 Dead Deer Pick-ups
- 2022 9 Dead Deer Pick-ups
- 2023 35 Dead Deer Pick-ups

The following represents dead deer pickups in Beachwood:

- 2020 27 Dead Deer Pick-ups
- 2021 28 Dead Deer Pick-ups
- 2022 36 Dead Deer Pick-ups
- 2023 28 Dead Deer Pick-ups

In Shaker Heights from 2020 to 2022 there was a 68% decrease in dead deer pickups. From 2022 to 2023 there was a 289% increase in dead deer pick-ups. Precision also observed more deer, mostly antlered deer (bucks) in the 2023-2024 season since the inception of the program.

In Beachwood from 2020 to 2022 there was a 33% increase in dead deer pick-ups. From 2022 to 2023 there was a 22% decrease in dead deer pick-ups. Precision observed more deer in Beachwood than last year, mostly antlered deer (bucks).

The direct observations of Precision team members, combined with the significant increase in dead deer pick-ups in Shaker and only a 22% decrease in dead deer pick-ups from last year in Beachwood was interesting, considering we harvested 70 deer last year.

The following may have caused significant changes in deer movement, causing the number of deer, specifically antlered deer, in Beachwood and Shaker to increase:

- Cleveland, Cleveland Heights, University Heights, Warrensville Heights, Highland Hills do not currently have a deer management program. The numbers of deer are increasing in those communities and could be spilling over into Shaker Heights and Beachwood.
- South Euclid, Lyndhurst, Metro Parks all have deer management programs. A significant number of deer are culled in those areas. Deer are very adaptive and will modify their movement based on a variety of factors, one of them being harvesting pressure. We have not been able to significantly impact the northern zone of Beachwood or the southern zone of Shaker Heights. Deer being adaptive prefer to live where they are not being targeted.

- South Euclid’s deer sterilization project has been continuing and some culling programs have chosen not to harvest tagged deer. Deer movement is being tracked. Tagged, sterilized deer have been observed by Precision on the northern border of Beachwood daily. Tagged deer have also been observed in Shaker Heights. As a result of the South Euclid project, a significant number of deer have been sterilized in the area just north of both Beachwood and Shaker. That area is surrounded by the Metro Parks and Acacia Reservation.
- ODNR has typically only allowed 20% of antlered deer (bucks) to be harvested in all the deer management programs throughout the state. The deer management programs focus on harvesting female deer (does).
- With dead deer pickups on the rise, this could be an indicator that the deer are on the move and the bucks are chasing the does. The bucks are finding themselves competing for does that can breed. The bucks are actively searching for does in estrous. Those bucks may have been establishing dominance due to increased competition. (This may be why those bucks surrounded the Precision team member and one charged them)

The rut is a term used to describe the behavior of deer during the breeding season when male deer pursue female deer that are in estrous and ready to breed. The window that a doe comes into estrous is very small, typically two to three days. With more bucks having less opportunity to find the right window to breed, deer patterns may be affected. Bucks will follow the does until they find the right window.

One hypothesis could be that more antlered deer (bucks) are moving into the area to locate and breed unsterilized does. Bucks in the Metro Parks and Acacia Reservation may be relocating and changing their normal patterns to find does that are able to breed. The unsterilized does may be changing their patterns to move away from the culling up north as well as the increased number of bucks that are tracking them. Some bucks and does in Cleveland, Cleveland Heights, Warrensville Heights, and Highland Hills may be moving to areas with less competition for food, and better breeding opportunities.

Mr. Nick Mikash, Natural Resource Manager for Shaker Lakes Nature Center has been conducting a deer Browse Plot Study since November of 2021. (See Appendix 1) Mr. Mikash sent the following email attached with the report:

“I have attached the report for the ongoing deer browse monitoring plots. The exposed control plot was at 100% mortality as of this winter”. “The enclosed plants continue to persist apart from an elderberry which appears to have died back due to natural causes”. “This is a great illustration of the importance of continuing to manage the deer population aggressively, as they pose a direct threat to our native habitats”.

Methods

Baiting was initiated on city owned and private property sites in both cities. We baited for approximately three weeks prior to culling and daily throughout the season. We also were unable to consistently attract does to bait, with the exception of tagged deer from the South Euclid Study. This was largely due to bucks commanding the bait pile.

Precision deployed in two person teams in trucks marked with wildlife management placards. Prior to deployment, the surrounding police departments were notified and provided vehicle pictures and contact information. Each time the Precision team was harvesting, both Shaker and Beachwood Police Departments were notified. The Precision team had reflective vests on with wildlife management markings, and the Precision marksmen teams had jackets with Wildlife Management markings when harvesting for additional safety. Deer management signs were posted. The signs were bright yellow and affixed to a rod placed in an orange traffic safety cone. The Precision teams did their best to remain discreet while harvesting.

We posted deer management signs on the trails. (*See Figure 4.*) Precision spoke to many residents again this year on the paths and in the parks. The trails and the parks are utilized by residents in both cities on a regular basis even in the early morning hours around 2:00AM - 4:00AM hours. Many residents enjoy walking their dogs. Precision did its best not to impact the residents hiking, running and enjoyment of the park.

The private property bait sites were in areas that had good deer signs. One site showed good numbers of deer between 2:00PM and 4:00PM consistently. Unfortunately, we were unable to harvest during those hours at that site due to property owner's request. The deer that were visiting all the other bait sites were mostly antlered male deer (bucks). The bucks were dominating the sites, fighting each other, and chasing the female deer (does) off the bait.

Weather patterns fluctuated from ranges of 28 degrees to highs of 54 degrees. Precision was forced to harvest in rain and high humidity most of the time due to parameters of the owners of the private property locations. When the weather became warmer, deer moved back to other food sources such as acorns and browse. We did our best to be on site when deer were on bait.

We started harvesting the bucks to allow the does to access the bait sites. Within the first day of harvesting in Zone 3 in Beachwood, it was clear the deer were well educated. We noticed deer were not at all relaxed and they would move their heads up and down, not remaining in one spot for extended time periods. As a result, the Precision teams engaged deer at greater distances than usual. This caused them to engage deer from a variety of shooting positions and vantage points. Precision predominantly engaged deer from the roof of a truck. From this elevated position, they were able to harvest deer safely and humanely. On occasion, they located high ground positions and engaged deer from the ground utilizing the topography to harvest deer safely. Precision Teams remained mobile and searched for deer throughout the cities while monitoring the cameras. Deer were engaged in and around the bait sites from distances ranging from 10 to 200 yards. Precision passed on many engagement opportunities due to branches obstructing the target, people being too close, vehicles in the area, deer on the move, or the target not being in front of a proper backstop.



Figure 4: Precision Signs/Vests

Percentage of Deer Harvested

We harvested 70 deer for the 2023-2024 deer management season. 36% of the deer were harvested in Shaker Heights and 64% were harvested in Beachwood. We understand that the deer that roam Shaker Heights also roam Beachwood, and we continue to study and learn about deer patterns and range. Many of the sites are on the borders of both cities. We are looking forward to seeing if the southeast border of Shaker will be impacted with the number of deer taken from the southwest portion of Beachwood. We identified specific areas within each city as management units. (See unit maps below). In Shaker Heights, deer were harvested from Management Unit #2, Unit #3 and Unit #4. In Beachwood deer were harvested from Management Unit #1, Unit #2 and Unit #3.

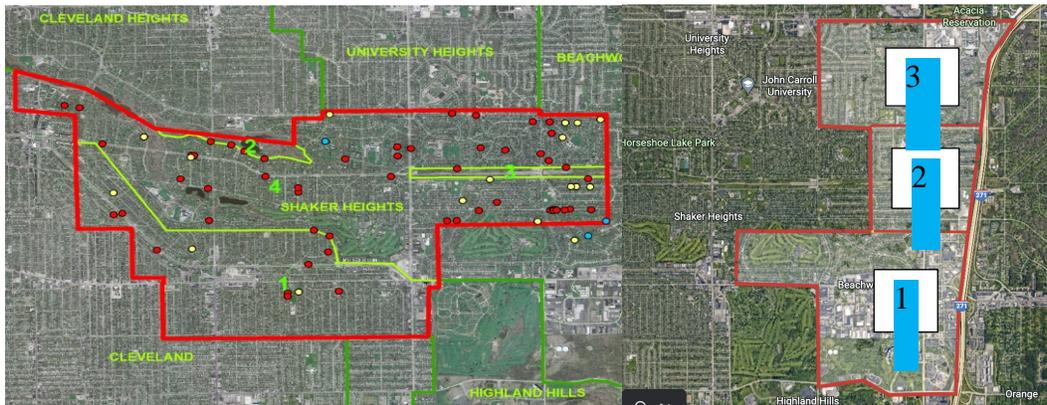
Shaker Heights		Beachwood	
Unit #2	15.8%	Unit #1	43.0%
Unit #3	8.6%	Unit #2	7.1%
Unit #4	11.5%	Unit #3	14.0%

Shaker Deer Management Units #4 & #2 traverse through the entire northern and central part of the city, from the east and west border. 11.5% of the deer were harvested in Unit #4, which is primarily private property with the average parcel size being .52 acres. The unit contains 210 parcels larger than 1 acre. Two golf courses are within this unit: Shaker Heights Country Club and Canterbury Country Club (Canterbury CC is also within Beachwood city limits). Unit #4 also encompasses Southerly Park, the Nature Center as well as the large, wooded area on the most northeastern border. 15.8% was harvested in Unit #2. Unit #2 is 65 acres in size predominately owned by the City of Shaker Heights as part of the Parklands.

Deer were harvested from Beachwood Deer Management Units #1, #2, and #3. 43% were harvested from Unit #1 which comprises the southern portion of the city. This correlates with the USDA FLIR Study taken in 2021 where most of the deer spotted were in the southern and northern portion of the city as well as our direct observations. 7.1% of the deer were harvested from Unit #2 which is in the central portion of the city. 14% of the deer were harvested in Unit #3 which is in the northern portion of the city.

Deer were observed throughout Beachwood and there are many viable sites located in Unit #1, Unit #2, and Unit #3. Many viable private property sites throughout the city hold deer and are in discreet locations. Due to limited discreet sites, we were unable to impact the deer herd throughout the city. Deer patterns and the ability of the deer to adapt to their environment changes on a yearly basis. To continue to obtain results we need to focus on obtaining additional viable sites.

The city and the Precision team again had a successful season. We were able to obtain our goal and many of the constituents were not even aware that Precision was harvesting. We were able to provide over 3,000 pounds of venison to those in need and we look forward to impacting the concerns of the constituents as it relates to deer issues. We need the constituents in both Shaker Heights and Beachwood to support the deer management program by allowing Precision access to the viable sites.



Maps of Shaker Heights & Beachwood Deer Management Units

Demographics of Harvested Deer

Chart 1: *Male vs Female deer harvested*

- 47 (67%) of the deer harvested were males (bucks)
- 23 (33%) were females (does)

Chart 2: Antlered vs. Non-antlered (all sexes)

- 41 (59%) harvested were antlered deer
- 29 (41%) harvested were antlerless deer

Of the 70 deer harvested, 41 were antlered bucks (59%), 29 were antlerless deer (41%).
The Ohio Department of Natural Resources defines antlered and antlerless deer as follows:

“Antlerless deer include deer without antlers, and deer with antlers less than 3 inches in length.”

“Antlered deer are deer with at least one antler 3 inches or longer in length”

Chart 3. *Percentage of deer carrying fetuses*

Of the 23 female deer harvested, 15 (65%) were carrying fetuses.

Of the 23 female deer harvested, 8 (35%) were not carrying fetuses. (* seven of those eight does were only .5 years of age)

15 female deer were carrying 31 fetuses.

Out of the total of 23 female deer harvested, the average number of fetuses was 1.3 per female.

- All does that were 1.5 years old (Breeding age) had fetuses except for one.

Chart 4: Male & Female deer harvested by age

Out of the 70 deer harvested:

47 Male (bucks) Deer Harvested

- 6 males were .5 years old (9%)
- 17 males were 1.5 years old (24%)
- 12 males were 2.5 years old (17%)
- 10 males were 3.5 years old (14%)
- 1 male were 4.5 years old (1%)
- 1 male was 5.5 years old (1%)

23 Female (Does) Deer Harvested

- 7 females were .5 years of age (10%)
- 6 female was 1.5 years of age (9%)
- 9 females were 2.5 years of age (13%)
- 1 female were 3.5 years of age (1%)

19% of the deer were .5 years of age

33% of the deer were 1.5 years of age

30% of the deer were 2.5 years of age

16% of the deer were 3.5 years of age

1% of the deer were 4.5 years of age

1% of the deer were 5.5 years of age

2023 - 2024 Season – Critical Analysis

The executive teams in the cities of Shaker Heights and Beachwood continue to demonstrate leadership in partnering to address deer management on behalf of their constituents' concerns. This collaborative approach is gaining momentum toward a regional plan concerning deer management. Their efforts are starting to pay off and additional cities have shown interest in the collaborative approach. This has been years in the making and both executive leadership teams continue to overcome many challenges. This type of collaboration and leadership may prove to be mutually beneficial in long term deer management for multiple cities.

Precision appreciates the opportunity to work with both cities. Deer management is an important issue, and the residents in both cities are concerned about the cultural carrying capacity of deer being exceeded. The residents that responded to the questionnaires in both cities and shared their concerns about deer. Both communities Safety Committees, City Council, Mayors, and The Shaker Wildlife Task Force are committed to addressing the residents' concerns. Left unmanaged, deer populations will continue to increase, and conflict with human beings will be inevitable. Deer management can be an emotional issue with strong opinions on both sides.

The Shaker Wildlife Task Force understands the need for a long-term deer management program, and they have selected sharpshooting as the most effective and humane technique for managing deer in Shaker Heights. Both executive leadership teams concurred and are committed to a long-range deer management plan. Both executive leadership teams also understand the need to evaluate the program yearly and adjust when warranted. We have seen other cities in the area starting to manage their deer population because of concerns of their residents.

Shaker Heights and Beachwood worked together again this year in allowing Precision to harvest deer on both city and private property.

- The Precision Wildlife team understands the importance of professionalism, need for a specific skill set, and need to be discrete while operating in an unforgiving environment.
- Getting an early start is important as the season is often unpredictable. Other cities such as Cleveland Heights, University Heights, Warrensville Heights, and Highland Hills may want to work with Shaker and Beachwood in the near future. Contacting potential private property locations to harvest deer is labor intensive and time consuming. Precision appreciates the cities doing their best to obtain a signed contract by the end of October and encourage their constituents to allow Precision to harvest on their property.

Conclusion

Deer management is a complex issue requiring a multi-faceted approach. Residents have very different opinions about the presence of deer. Some view increased interaction between deer and humans as favorable; others view it as problematic. According to the questionnaires, the majority of the constituents in both cities are in favor of reducing the deer herd. The evidence presented by Mr. Mikash indicates the ecosystem is affected by the deer. The increase in dead deer pickups is an indicator that deer are presenting a risk of increased deer/vehicle collisions. Residents are concerned about the damage caused to their landscaping and gardens as well as ticks. The sharp shooting option the Wildlife Task Force has recommended has proven to be safe, humane, and efficient. We will continue to explore additional options and come up with responsible recommendations that suit the unique needs of both communities in the future.

The City of South Euclid has taken a multi-disciplined approach and has been involved in a study involving an experimental program of sterilizing the does as well as a sharpshooting program. The deer are tranquilized, and a surgical procedure is performed, and the deer is then tagged and released. ODNR advises that if a tagged deer is harvested that the tag number and location should be reported. They also advise that the deer should not be consumed due to the tranquilizer and surgery being performed. We chose not to harvest the tagged deer. We observed several tagged deer from the study in Beachwood daily. We reported the findings to the ODNR.

Valuable information may be acquired from the study such as deer patterns, home range, if sterilized deer bring more bucks to the area, or stay in the area. Sterilized deer still damage landscape and the ecosystem and present a risk of deer/vehicle collisions. We will continue to monitor the data received. There also may be some unintended consequences of the study that will impact residents of Shaker Heights, Beachwood, and surrounding cities.

Precision has observed a significant number of deer in Cleveland Heights, Highland Hills, Warrensville Heights, and University Heights. A regional or task force approach to deer management should continue to be pursued. In Shaker, prior to the program, the deer population was growing more than 35% each year. It is only a matter of time that the surrounding cities will have a deer problem affecting their residents.

Season eight in Shaker Heights and season two in Beachwood has concluded and we have certainly impacted the deer numbers where we have been able to harvest. As the program continues and the deer become more educated it will become more labor intensive to harvest numbers of deer. The deer will be harder to engage, and the more restrictions placed on locations and tactics will become problematic. More time will need to be spent hunting deer. It will become increasingly important to increase the number of productive bait locations as not to overharvest the same areas and increase the odds of multiple harvesting opportunities.

We look forward to seeing if taking the increased number of antlered deer has an impact.

It is difficult to accurately predict the exact number of deer in Shaker Heights, Beachwood, and the surrounding cities. Whereas the Precision team is not comprised of wildlife biologists, the deer that they observed appeared healthy. There were more deer observed this year in both cities with the majority being bucks. Several factors this year may have changed the patterns of the deer to include the number of deer that have been sterilized in the South Euclid Study. We

continued to observe bucks on all our bait sites even after we reached our goal of 70 deer. We only observed a few antlerless deer on the bait sites. We did observe several antlerless deer in areas we were unable to access. Shaker Heights and Beachwood provides ideal habitats for deer by providing ample food, water, and cover. Instead of looking at the number of deer per square mile, modern deer management looks at trends and the *effects* of deer overabundance, such as deer health, ecosystem health and deer-human conflicts. The ecosystem at the Shaker Heights Nature Center has been affected by deer according to Mr. Mikash's plant study findings and direct observation.

When it comes to urban deer, wildlife biologists often advise that instead of asking how many deer an urban environment could biologically support, the more salient task is assessing how many deer a community finds acceptable - the cultural carrying capacity.

Recommendations for 2023-2024

- Continue with the precision marksmen approach (i.e., Precision Wildlife Management LTD)
- Continue to pursue a regionalized deer management approach to include Highland Hills, Warrensville Heights, Cleveland Heights and University Heights.
- Pursue locating viable private property culling opportunities.
- Continue to monitor deer patterns, locate and intercept deer throughout both cities.
- Continue to evaluate the deer management program and adapt.

Thank You

On behalf of Precision Wildlife Management LTD, we would like to thank the cities of Shaker Heights and Beachwood for providing us with the opportunity to serve you. We appreciate the confidence and trust you have placed in us, and we will continue to do our best to continue to earn it. A special thank you to both Executive Leadership Teams and the Honorable Mayor Weiss and the Honorable Mayor Bern's for their leadership in challenging times. A special thank you Chief Administrative Officer Jeri Chaikin and City Administrator Tina Turik for their insight and valued assistance. We also appreciate Deputy Chief John Resic and Commander Dan Grispingo for being the single point of contact for Precision. Thank you to Director Chris Arrietta for his assistance. Thank you again for another successful season and the opportunity to serve the fine residents of Shaker Heights and Beachwood

The Precision Wildlife Team

Nature Center Deer Browse Plot Results
January 2024
Nick Mikash, Natural Resources Manager

On 3 November 2021, a deer exclosure study plot and paired control were installed in a highly deer impacted area near the Nature Center building. The area is just off the Stearn's Trail which is frequented by visitors and school groups regularly. Plots were created as 10 x 10-foot squares with 8-foot tall deer fencing around the exclosure plot. Inside each plot we planted 5 native woody plants, the species typical of the plant material we install as part of our habitat restoration. They included: sugar maple, witch-hazel, spicebush, elderberry and red oak. Initial plant heights were measured upon installation.

While the intent was to look at long term deer impact on vegetation, we noticed browse damage on elderberry within the first 24 hours. Within the first week, sugar maple was also browsed. After 1 year, plants in the exposed plot showed heavy impact from deer browse and 3 of the 5 were in fact no longer present above ground level. Some of the protected plants show a slightly lower height after 1 year, but at the time of measurement, leaf drop had occurred which is the reason for the discrepancy. Initial measurements were of freshly installed plants with leaves still attached. By mid-summer 2023 the remaining control plants were declining significantly, heavy browse damage resulted in no leaf out and remaining stems were desiccating. Upon measurement in January, all 5 plants were now dead with no significant stem remaining. See accompanying data for full results.

This small study shows results typical of the ongoing deer damage that we see at the Nature Center. Plants must be caged for protection which can add up to 30% to the total cost of restoration plantings. Deer also impact ornamental and demonstration gardens and limit what we are able to plant in many cases. In addition to browse, buck rub is responsible for damage to both existing trees and shrubs and newly planted material. Deer have also been an issue for our bird banding personnel. Deer can damage the expensive nets by running into them and have also been documented consuming birds directly out of the nets given the opportunity. The browse related failure of all exposed plants shows the damage that our over-abundant white tail deer population can have on native plants and habitat restoration efforts.

Deer Browse Plot, Est 3 Nov 2021

**Exposed
Plot**

Date	Species	Height, inches	Damage observed	Notes
11/4/2021	Acer saccharinum	37.5	N	
11/4/2021	Hamamelis virginiana	9.5	N	
11/4/2021	Lindera bezoin	6.5	N	
11/4/2021	Quercus rubra	34.5	N	
11/4/2021	Sambucus canadensis	44	Y	

11/10/2021	Acer saccharinum	34.5	Y	
11/10/2021	Hamamelis virginiana	9.5	N	
11/10/2021	Lindera bezoin	6.5	N	
11/10/2021	Quercus rubra	34.5	N	
11/10/2021	Sambucus canadensis	42	Y	
11/17/2022	Acer saccharinum	0	Y	
11/17/2022	Hamamelis virginiana	0	Y	
11/17/2022	Lindera bezoin	0	Y	
11/17/2022	Quercus rubra	30	Y	
11/17/2022	Sambucus canadensis	43	Y	
1/26/2024	Acer saccharinum	0	N/A	Dead
1/26/2024	Hamamelis virginiana	0	N/A	Dead
1/26/2024	Lindera bezoin	0	N/A	Dead
1/26/2024	Quercus rubra	0	N/A	Dead
1/26/2024	Sambucus canadensis	18	N/A	Dead

Deer Browse Plot, Est 3 Nov
2021

Protected plot

Date	Species	Height, inches	Damage observed	Notes
11/4/2021	Acer saccharinum	35	N	
11/4/2021	Hamamelis virginiana	11	N	
11/4/2021	Lindera bezoin	10	N	
11/4/2021	Quercus rubra	32	N	
11/4/2021	Sambucus canadensis	33	N	
11/17/2021				
2	Acer saccharinum	35	N	
11/17/2021				
2	Hamamelis virginiana	11	N	
11/17/2021				
2	Lindera bezoin	9	N	
11/17/2021				
2	Quercus rubra	31	N	
11/17/2021				
2	Sambucus canadensis	40	N	
1/26/2024	Acer saccharinum	34	N	mid-winter measurements, no foliage
1/27/2024	Hamamelis virginiana	12	N	mid-winter measurements, no foliage
1/28/2024	Lindera bezoin	11.5	N	mid-winter measurements, no foliage
1/29/2024	Quercus rubra	31	N	mid-winter measurements, no foliage
1/30/2024	Sambucus canadensis	34	N	appears dead

