CITIES OF SHAKER HEIGHTS AND BEACHWOOD END OF SEASON DEER HARVESTING REPORT JANUARY 30, 2025

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Precision Wildlife Management LTD
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1. Executive Summary

The **Deer Management Program** for 2024-2025 was initiated to manage deer populations within the cities of Shaker Heights and Beachwood. Precision worked closely with The Shaker Heights Wildlife Task Force, Ohio Department of Natural Resources (ODNR), Division of Wildlife, Shaker Heights Council, Beachwood Council and both cities executive leadership teams to understand the needs of their constituents to develop the goals for the 2024-2025 deer management season. The goals of the deer management program included **aiming to mitigate public safety risks and reduce social carrying capacity.** This is the 3rd consecutive year both cities have taken an unprecedented collaborative approach to deer management. During the 2024-2025 season **90** deer were safely, humanely and discreetly removed from both cities resulting in improvements in both public safety and reducing social carrying capacity.

Key achievements include:

- **90** deer harvested, exceeding last year's target of **70** deer by 29%
- **3,405 lbs. of fresh, lean venison, (providing approximately, 13,600 meals)** donated to the Cleveland Food Bank and Geauga County Veterans Food Bank feeding needy families. Total value: $60,000.00 based on $17.76/lb. on Amazon. *(Figure 5)*
- **Turn-key operation with minimal impact to city services.**
- Precision invested in improved technology, increasing the efficiency of the deer management program this year. This allowed for minimal resident disruption.
- Harvesting Dates: Start: 12/22/24 End: 01/06/25

While challenges such as access to new viable bait sites and migration of deer from bordering cities, the program's overall success has reaffirmed the importance of sustainable deer management strategies.

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2. Program Objectives and Rationale

2.1. Deer Culling Program Objectives

The Deer Culling Program was designed with the following objectives:

- **Control of Deer Population**: Maintaining the deer population within sustainable limits to prevent overgrazing and ecological imbalance, ensuring that the local habitat can support both deer and other wildlife species. Continuing to reduce social carrying capacity to a level where they minimize conflicts, both potential and real by residents. On average, if unmanaged, the deer population will increase 25%-35% yearly.
- **Human Safety**: Reducing deer-related vehicle collisions, which have led to both human injuries, injured deer, and property damage. Precision euthanized four deer this year that were suffering from a deer/vehicle collision. (*Figure 10)*
- **Vegetation and Biodiversity Protection**: Reducing deer pressure on native vegetation, allowing for the recovery of plant species and maintaining healthy ecosystems for other wildlife.

2.2. The ODNR, Division of Wildlife Data

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

- 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	**Beachwood**
1. Damage to landscapes/gardens	1. Damage to landscapes/gardens
2. Damage to trees	2. Safety concerns with vehicles
3. Damage to ecosystem/over browsing	3. Transmission of diseases
4. Transmission of Diseases	4. Damage to Park ecosystems

2.3. Social Carrying Capacity:

In the 2024 Shaker Heights questionnaire, 69% 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 (2024), 65% of Beachwood residents who responded want to see fewer deer. 68% of respondents feel it is necessary to continue with deer management / culling efforts.

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3. Deer Management Operations Methodology and Techniques Used

The Shaker Heights Wildlife Task Force recommended Precision harvest deer in the city using sharpshooters. 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 (ODNR) Division of Wildlife. The ODNR reviewed the plan and authorized both cities to harvest 90 deer under a combined Deer Damage Control Permit # 28006.

3.1. Planning and Preparation

- Analyze relevant data from previous deer culling seasons while collaborating with ODNR Division of Wildlife, Shaker Heights Wildlife Task Force and Shaker Heights/Beachwood Executive leadership teams
- Understand the public need through a Deer Management Program questionnaire and cities dead deer pickup count as well as monitor deer directly and with trail cameras
- Monitor deer movement and patterns in and around both cities to identify safe and viable harvesting sites
- Contact private property owners and their neighbors, fill out ODNR permission forms, city forms, contact processors and coordinate transportation to the food banks
- Conduct site safety inspections and gain approval from the proper channels to harvest deer from the identified locations
- Use lasers at bait sites to establish potential engagement areas and clear engagement lanes on bait sites
- Develop an executable culling plan with the Precision Team and continue essential year-round training
    - The Precision team is comprised of trained marksmen who are required to pass the Ohio Peace Officers Qualification Course for police sharpshooters. The marksmen train in all weather conditions night and day from a variety of shooting platforms and distances. They understand the utmost importance of resident safety and have committed to Precision's mission of safely, humanely and discreetly managing the deer population
- Place trail cameras at approved sites in November to confirm deer movement and patterns. Trail cameras provide real time data and confirm that the same deer traveling in Shaker are traveling in Beachwood and surrounding cities.
- Bait and monitor sites daily 3 weeks prior to harvesting including monitoring weather patterns and pedestrian traffic to understand the safest times to harvest
- Confirm field dressing, processing, and the delivery process of fresh, lean venison to needy families
- Harvest deer, field dress deer, compile statistics and report progress to cities and ODNR

3.2. Execution

- Precision deployed in two person teams in trucks marked with wildlife management placards. Prior to each deployment, the surrounding police departments were notified and provided vehicle pictures and contact information.
- 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 near harvesting locations including on park trails where residents frequented. The signs were bright yellow and affixed to a rod placed in an orange traffic safety cone. (Figure #1)
- 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 from a variety of safe shooting positions on both public and private land. If a shot was not safe, Precision did not engage.

3.3. Equipment, Safety, and Impact Images

Figure 1 (Deer Management Safety Signs)

Figure 2 (Precision Work Vehicle)

Figure 3 (Precision Work Vehicle)

Figure 4 (Corn for Bait Sites)

Figure 5 (Donated Lean, Venison)

4. Data and Outcomes

4.1. Shaker Heights and Beachwood Geographic Distribution and Areas Targeted

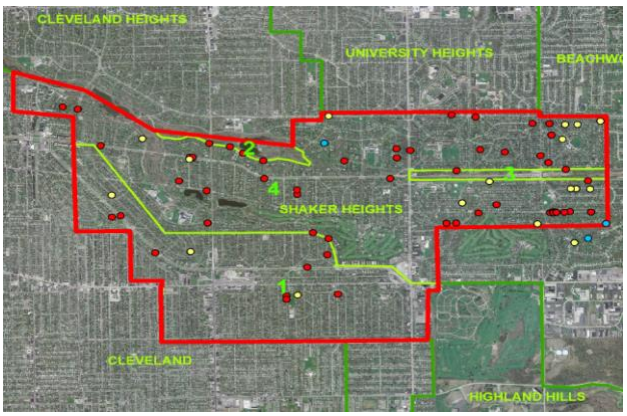
Sites to harvest deer were identified in collaboration with the Shaker Heights and Beachwood executive leadership teams where the risks involved with harvesting deer could be managed. Site surveys were conducted to analyze topography, assess pedestrian/vehicle traffic, and evaluate the site proximity to potential hazards. Precision's priority was to select locations based on safety, deer activity, discreetness, and efficiency. Sites include a mix of city owned land and private property.

Shaker Heights

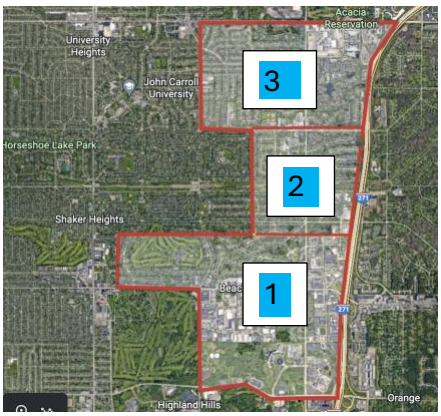
- **Unit #2:**
  - Area contains 65 acres
  - Land predominately owned by the City of Shaker Heights as part of the Parklands
- **Unit #3:**
  - Median strip from Warrensville Center to the border of Beachwood
- **Unit #4:**
  - Area contains 210 parcels (> 1 acre)
  - Primarily private property with average parcel size being .52 acres
  - Includes Shaker Heights County Club, Canterbury Country Club, Southerly Park, the Nature Center, and a large wooded area on the northeastern border

Beachwood

- **Unit #1**
  - Area is located in the southern portion of the city
- **Unit #2**
  - Area is located in the central portion of the city
- **Unit #3**
  - Area is located in the northern portion of the city



Map of Shaker Heights Units



Map of Beachwood Units

Percentage of Deer Taken in Each Unit

2023/2024 Season

Shaker Heights		**Beachwood**	
Unit #2	15.8%	Unit #1	43.%
Unit #3	8.6%	Unit #2	7.1%
Unit #4	11.5%	Unit #3	14.%

2024/2025 Season

Shaker Heights		**Beachwood**	
Unit #2	17%	Unit #1	40%
Unit #3	2%	Unit #2	24%
Unit #4	9%	Unit #3	8%

Bait Site Observations

The importance of acquiring new bite sites every year is critical. 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 nine years at the same bait sites, the deer have not been frequenting these locations as in years past. The deer that do visit are extremely wary and the opportunities of harvesting multiple deer at once are much fewer. We acquired three new bait sites this year.

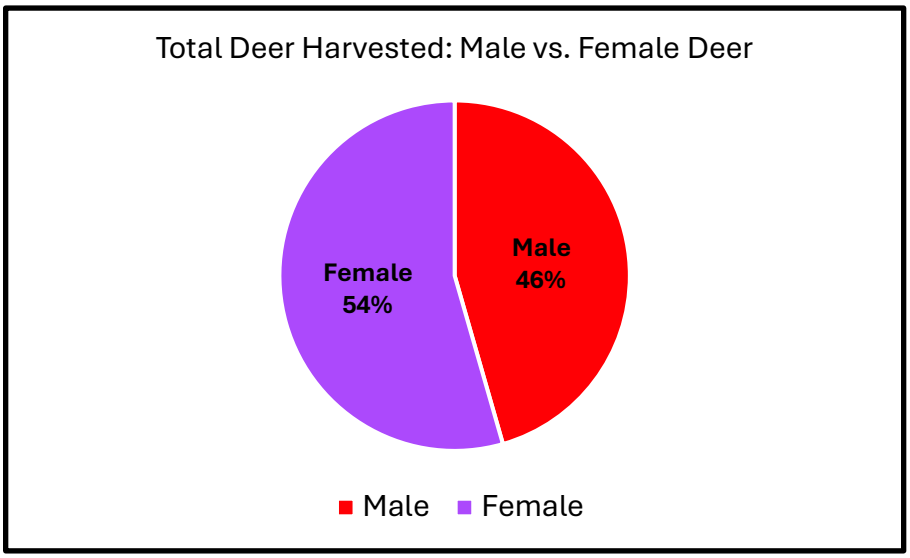
4.2. Total Number of Deer Culled

Overall Total Harvested: A total 90 deer were removed across all zones

Shaker Heights	**Beachwood**
24 deer (27%)	66 Deer (73%)

4.3. Gender and Age Breakdown

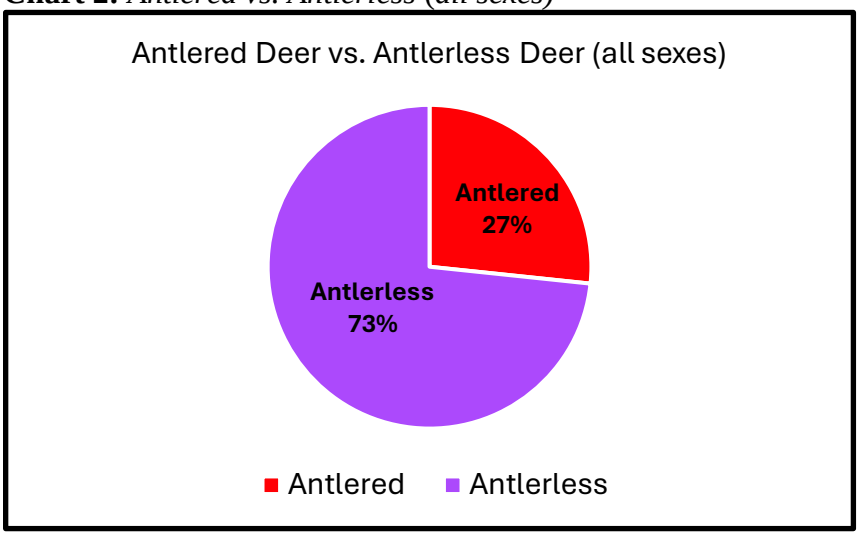
Chart 1: *Male vs Female deer harvested*



Male vs. Female Deer

- **41 (46%)** of the deer harvested were males (bucks)
- **49 (54%)** were females (does)

Chart 2: *Antlered vs. Antlerless (all sexes)*



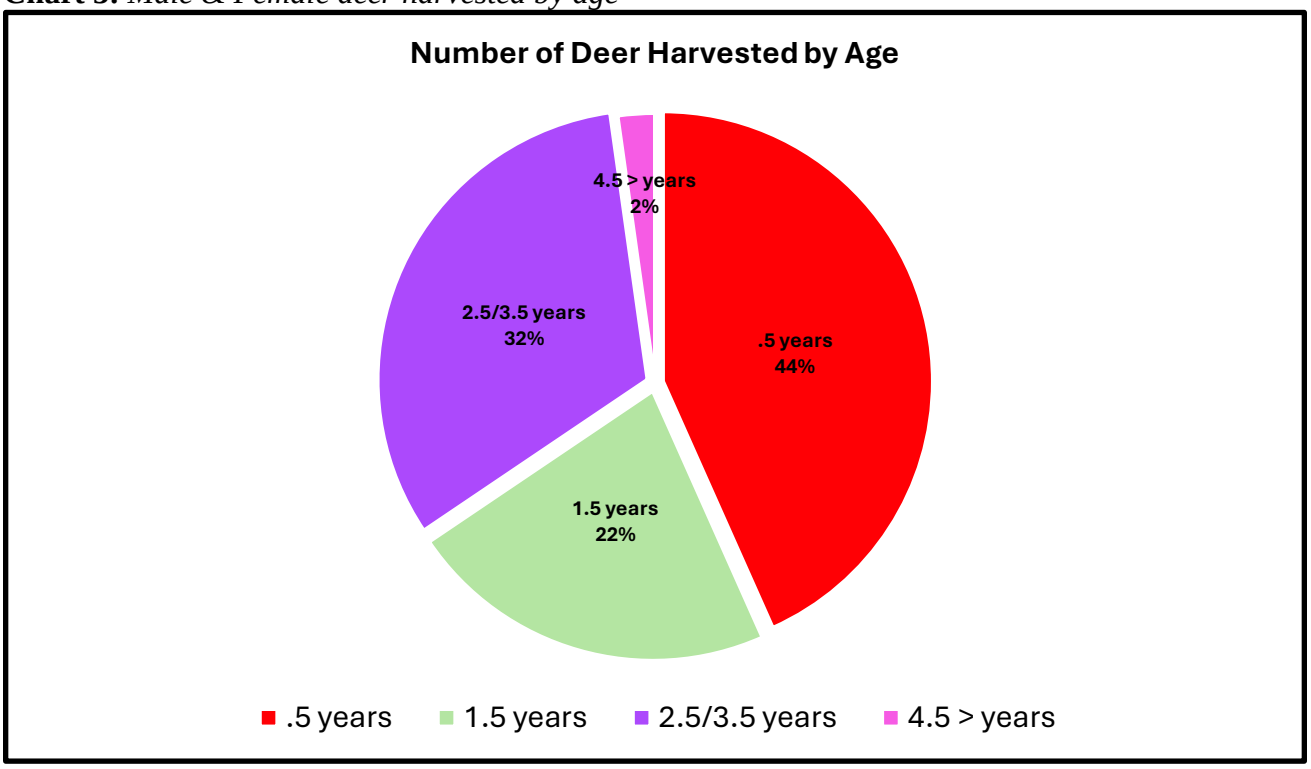
Antlered vs. Antlerless Deer

- **24 (27%)** harvested were antlered deer
- **66 (73%)** harvested were antlerless deer
- 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"*

Figure 6 (Antlered Deer)

Figure 7 (Antlerless Deer)

Chart 3: *Male & Female deer harvested by age*



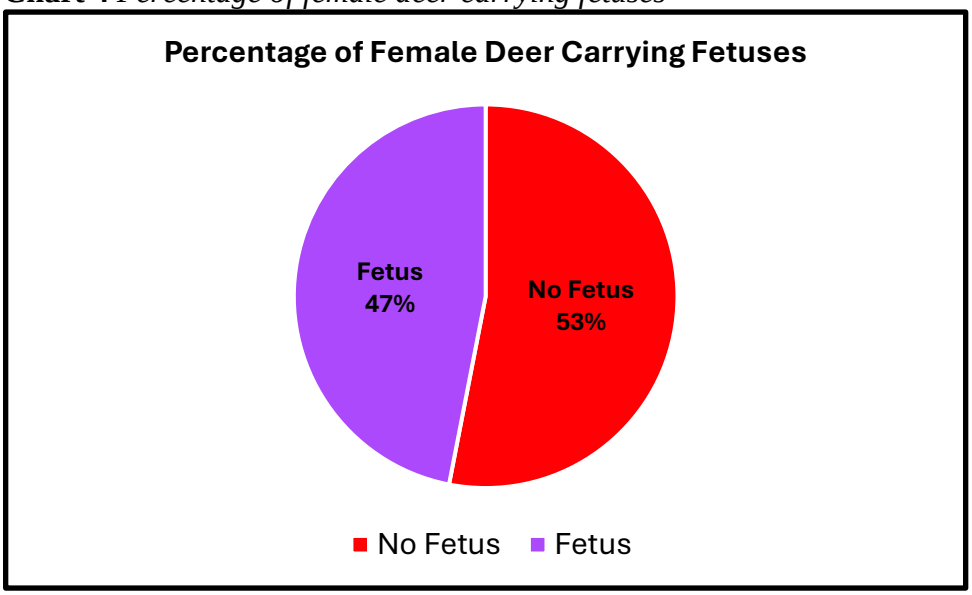
Deer Harvested by Age

- .5 years old: 39 (44%)
- 1.5 years old: 20 (22%)
- 2.5/3.5 years old: 29 (32%)
- 4.5 & older: 2 (2%)

41 Male Deer	**49 Female Deer**
.5 years old: 16 (18%)	.5 years old: 23 (26%)
1.5 years old: 10 (11%)	1.5 years old: 10 (11%)
2.5/3.5 years old: 13 (14%)	2.5/3.5 years old: 16 (18%)
4.5 years old & >: 2 (2%)	4.5 years old & >: 0 (0%)

4.4. Female Deer Carrying Fetuses

Chart 4 *Percentage of female deer carrying fetuses*

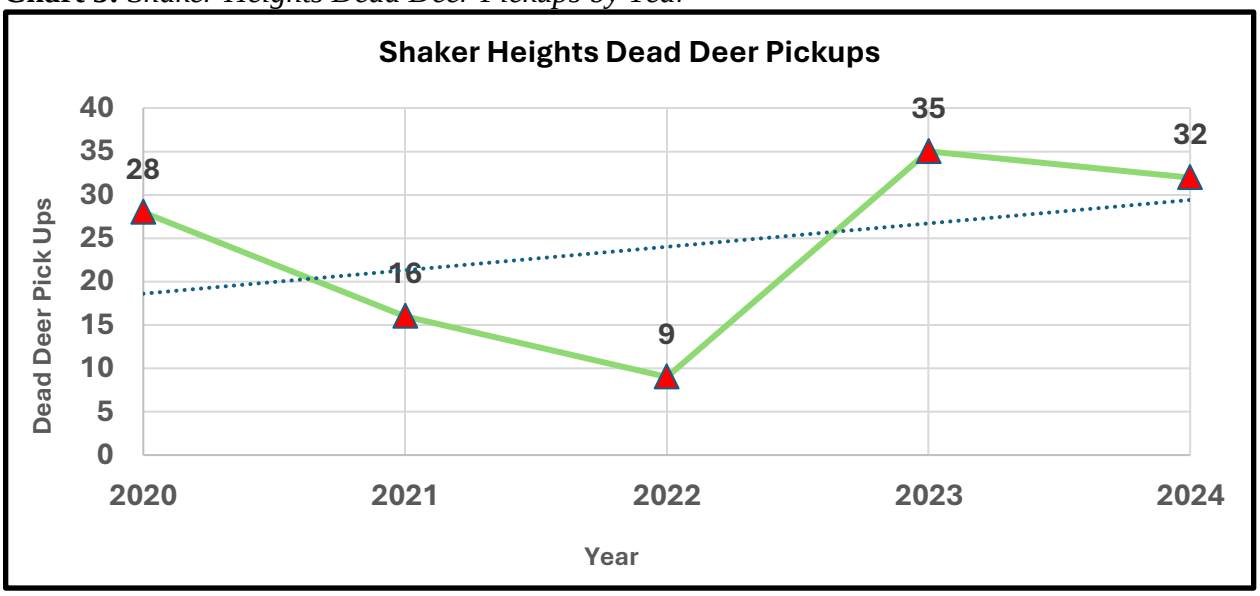


Female Deer Carrying Fetuses

- 23 female deer were carrying **45** fetuses
- Of the 49 female deer harvested, **23 (47%)** were carrying fetuses
- Of the 49 female deer harvested, **26 (53%)** were not carrying fetuses. **(*23 of those 49 female deer were only .5 years of age (47%))**
- Out of the total of 49 female deer harvested, the average number of fetuses was 1.0 per female
- All female deer that were **1.5 years old (Breeding age)** had fetuses except for one

4.5. Dead Deer Pick-Ups

Chart 5: *Shaker Heights Dead Deer Pickups by Year*



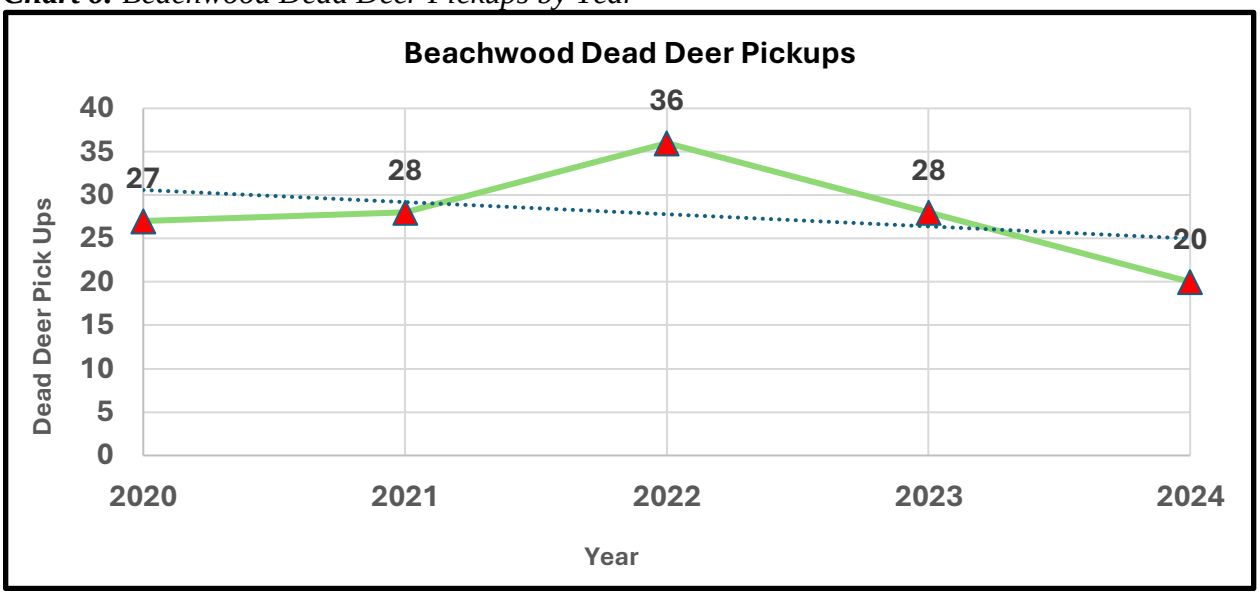
Number of Dead Deer Pickups in Shaker Heights

- 2020 28 Dead Deer Pick-ups
- 2021 16 Dead Deer Pick-ups
- 2022 9 Dead Deer Pick-ups
- 2023 35 Dead Deer Pick-ups
- 2024 32 Dead Deer Pick-ups

Dead Deer Pickup Shaker Heights Observations

- 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 pickups. During the 2023-2024 season Precision observed a substantial increase in antlered deer (bucks)
- During the 2024-2025 season Precision observed a more equal proportion of deer both antlered and antlerless
- From 2023 to 2024 there was a 9% decrease in dead deer pickups

Chart 6: *Beachwood Dead Deer Pickups by Year*



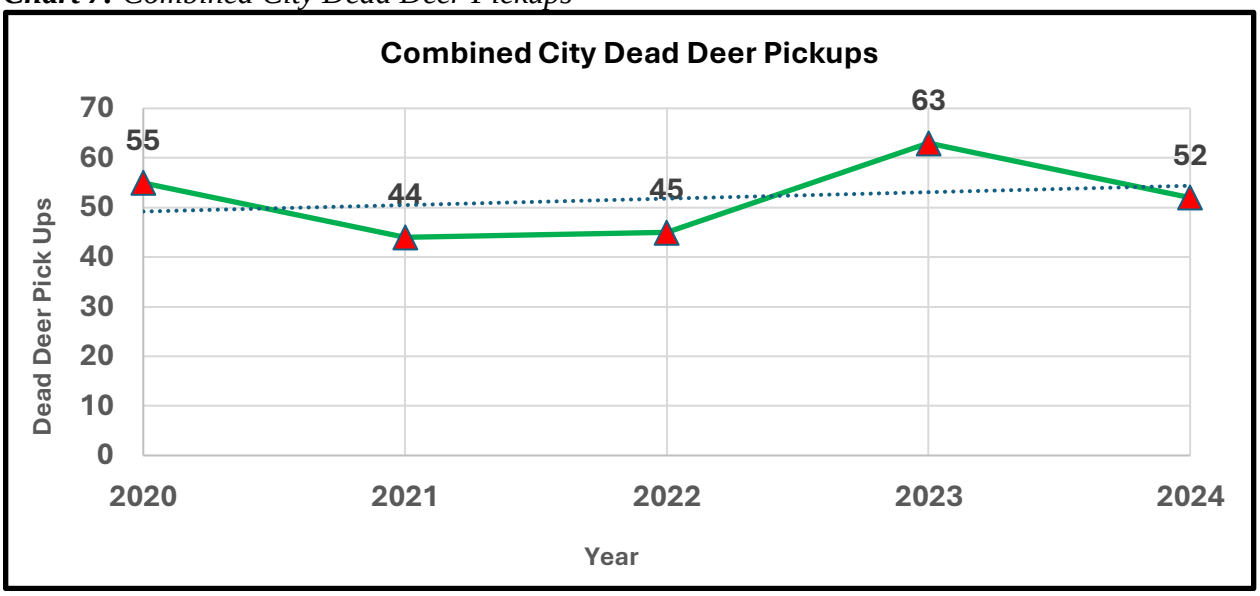
Number of Dead Deer Pickups in Beachwood

- 2020 27 Dead Deer Pick-ups
- 2021 28 Dead Deer Pick-ups
- 2022 36 Dead Deer Pick-ups
- 2023 28 Dead Deer Pick-ups
- 2024 20 Dead Deer Pick-ups

Dead Deer Pickup Beachwood Observations

- 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 pickups. 2022 was Beachwood's first year utilizing the deer culling program. During the 2023-2024 season Precision observed a substantial increase in antlered deer (bucks)
- During the 2024-2025 season Precision observed a more equal proportion of deer both antlered and antlerless
- From 2023 to 2024 there was a 29% decrease in dead deer pickups

Chart 7: *Combined City Dead Deer Pickups*



Number of Dead Deer Pickups in both Cities

- 2020 55 Dead Deer Pick-ups
- 2021 44 Dead Deer Pick-ups
- 2022 45 Dead Deer Pick-ups
- 2023 63 Dead Deer Pick-ups
- 2024 52 Dead Deer Pick-ups

Dead Deer Pickup Combined City Observations

- From 2023 to 2024 there was a combined **17%** reduction in dead deer pickups
- Based on the trending data, dead deer pickups are being consistently managed across both cities
- During the 2024-2025 season Precision observed an increased number of coyotes in both cities which could have an impact on deer movement and deer frequenting bait sites
- The following may have caused significant changes in deer movement, causing the numbers in Beachwood and Shaker to increase:
    - Cleveland, Cleveland Heights, University Heights, Warrensville Heights, and 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. We observed a good number of deer coming in from Cleveland Heights. After harvesting 90 deer this season our cameras are still showing a good number of deer in that area.
    - South Euclid, Lyndhurst, and the Metro Parks all have deer management programs. A significant number of deer are culled in those areas. Deer are very adaptative 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 to include the Shaker / Beachwood deer management program. Deer movement is being tracked. Greater number of tagged sterilized deer have been observed by Precision on the northern border of Beachwood daily again this year. Greater number of tagged deer have also been observed in Shaker Heights this year. *(Figure 9).* We have observed them both on camera and in person. 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. Tagged deer do not appear to be afraid of humans. This year a herd of tagged deer followed a Precision Team Member while he was baiting. We harvested several non-tagged deer and removed them while tagged deer were within ten yards of us. That area is surrounded by the Metro Parks and Acacia Reservation.

Figure 8 (Coyotes on bait sites)

Figure 9 (Tagged deer from South Euclid's Experimental Sterilization Project))

5. **Challenges and Issues**
    - **Access to Viable Bait Sites:** It is important to have access to more viable private property bait sites where deer frequent and can be harvested discreetly is critical to the success of the program.
    - **Weather and Terrain:** This season weather patterns fluctuated from ranges of 17 degrees to highs of 58 degrees including rain, snow, and fog. 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.
    - **Ticks:** We observed an increased number of ticks on deer, which may be caused by the weather patterns.
    - **Injured Deer:** We observed a razer broadhead in a harvested deer indicating that the deer was shot by a person with either a crossbow or bow and survived. In addition, Precision euthanized four deer this year that were suffering from a deer/vehicle collision.

Figure 10 (Injured deer from car)

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6. **Environmental and Ecological Impact**

Mr. Nick Mikash, Natural Resource Manager for Shaker Lakes Nature Center has been conducting a deer Browse Plot Study since November of 2021. (*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". (See Appendix 1)

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7. Recommendations for 2025-2026

- 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

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8. Conclusion

The **Deer Management and Program** has produced results in addressing the ecological, safety, and human-wildlife conflict issues (Social Carrying Capacity) posed by an overabundant deer population. While challenges remain, especially in terms of locating viable bait sites, and having surrounding cities join Shaker and Beachwood in a regionalized approach to deer management; Precision has had measurable success in reducing deer-related incidents and seeing a reduction in the number of constituents wanting a reduction in the deer herd (Social Carrying Capacity). Precision has been involved in deer management in Shaker for the past nine years and in the last three years in Beachwood. We have met our goal each year with minimum impact on city services and little or no complaints. We harvested 90 deer this year safely, humanely and discreetly and most constituents in both cities did not even know we were there. **Most importantly we are managing the deer herd and helping families in need.** We are proud of our partnership with Shaker Heights and Beachwood in providing fresh, lean venison to needy families. We look forward to continuing to work with the cities of Shaker Heights and Beachwood as they continue to evolve their regional deer management program.

The benefit of Precision's deer management process is to:

- Professionally harvest deer safely, humanely and discreetly with little or no complaints
- Provide fresh, lean, venison to families and individuals in need while reducing the deer herd
- Positively work toward maintaining a healthy deer population within cultural carrying capacity of the residents
- Reduce negative impact to the eco system
- Reduce landscape and garden damage
- Reduce the potential for deer/vehicle collisions (deer/vehicle collisions damage cars, cause potential injury to residents and injure deer that suffer for weeks before infection causes their death)
- Safely remove deer from the city after harvesting (field dressing and processing takes place out of the city and reduces the possibility of service workers and residents coming in contact with ticks or causing an inconvenience of the byproducts of butchering)
- Provide a turnkey operation, that allows for minimum disruption to residents and city services

9. **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 Berns for their leadership in challenging times. A special thank you Chief Administrative Officer Jeri Chaikin and City Administrator Tina Turick for their insight and valued assistance. Thank you to Chief Wayne Hudson and Chief Dan Grispino and the men and women of both police departments. We also appreciate Commander John Cole and Deputy Chief John Resic 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

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10. **Appendices**

Appendix 1

- Shaker Nature Center Browse Plot Study

NATURE CENTER
AT SHAKER LAKES

Nature Center Deer Browse Plot Results
January 2025
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 of 2024, all 5 plants were dead with no significant stem remaining. See the accompanying data for full results. To continue monitoring the impact we plan to reinstall plants in the exposed plot in 2025 and will continue the monitoring process to gauge deer pressure.

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	
11/17/2022	Acer saccharinum	35	N	
11/17/2022	Hamamelis virginiana	11	N	
11/17/2022	Lindera bezoin	9	N	
11/17/2022	Quercus rubra	31	N	
11/17/2022	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