

2021 BEACHWOOD RESIDENT
DEER SURVEY RESULTS &
POINTS OF EDUCATION

9/29/2021
Lynn B. Johnson, MFA

About the Survey

The 2021 Beachwood Resident Deer Survey was hosted on the City of Beachwood website. The survey opened the morning of July 31, 2021 and closed the evening of August 31, 2021.

Information about the survey was sent to 3,301 single-family households in Beachwood. The postcard art is attached at the end of this document. Of those, 56 postcards were returned as undeliverable and given to Building and Community Development for their records. As such, 3,245 households received the postcard. We requested one response per household.

There were 907 total responses. Eight responses were incomplete or otherwise invalid, bringing the total number of valid responses to 899. (In 2018, we received 729 total respondents from Beachwood residents). As such, our 2021 response rate was 27.7%.

NOTE: When Shaker Heights conducted their deer survey in 2017, “about 200-300” people responded, according to their Mayor’s Office, and they have at least double the adult population of Beachwood.

**With 899 valid responses from 3,245 Beachwood households, the
2021 Beachwood Resident Deer Survey
achieved a 99% confidence level¹ at
a 3.66% confidence interval/margin of error²**

¹ The **confidence level** tells you how sure you can be that the true percentage of the population who would pick an answer lies within the confidence interval/margin of error. The 95% confidence level means you can be 95% certain; the 99% confidence level means you can be 99% certain. (Most researchers use the 95% confidence level.) (<https://www.surveysystem.com/sscalc.htm>)

Also: “What a 95 percent confidence level is saying is that if the poll or survey were repeated over and over again, the results would match the results from the actual population 95 percent of the time.” (<http://www.statisticshowto.com/confidence-level/>)

² For example, if you use a confidence interval (“margin of error”) of 4 and 47% percent of your sample picks an answer, you can be “sure” that if you had asked the question of the entire relevant population, between 43% (47-4) and 51% (47+4) would have picked that answer. (<https://www.surveysystem.com/sscalc.htm>)

Survey Results

Compared to 2020, how has the deer population changed in your neighborhood this year?			
There are fewer deer now		199	22.14%
It is the same		387	43.05%
There are more deer now		313	34.82%
TOTAL RESPONSES		899	100%
How would you change the deer population in Beachwood?			
It needs to be decreased / fewer deer		550	61.18%
Keep it the same		317	35.26%
It needs to be increased / more deer		32	3.56%
TOTAL RESPONSES		899	100%
Do you have concerns about deer in your neighborhood?			
No concerns		221	24.58%
Damage to garden or property		583	64.85%
Disease spread from deer ticks and deer feces		457	50.83%
Safety of residents and pets		301	33.48%
Traffic accidents due to deer in the road		429	47.72%
TOTAL RESPONSES (could give multiple answers)		1991	
Based on the map above, in which area of Beachwood do you live?			
North: Between Cedar Road and Fairmount Blvd.		553	61.51%
Middle: Between Fairmount Blvd. and S. Woodland Ln.		166	18.46%
South: Between S. Woodland Ln. and Harvard Rd.		180	20.02%
TOTAL RESPONSES		899	99.99% (due to rounding)

2021 Deer Population Survey Findings

Percentages throughout this section are rounded from the thousandths place: for example, a mathematical finding of .247 would be rounded to 25%

Total number of valid survey responses: 899

- 61% of residents (550) would decrease the number of deer in Beachwood
35% of residents (317) would keep it the same
4% of residents (32) would increase the number of deer in Beachwood (and would likely argue against deer-population mitigation)
- In the 2018 City of Beachwood deer-population survey:
46% of residents would decrease the number of deer in Beachwood
37% would not decrease the number of deer
16% were unsure
1% did not answer the question.
- Between 2018 and 2021, the percentage change of respondents in favor of decreasing the number of deer in Beachwood INCREASED by 15%. Basically, all of the respondents who replied “unsure” in 2018 changed their opinion to “decrease the number of deer” in 2021.
- Regarding the change in the number of deer in their neighborhood compared to last year,
43% of residents (387) replied “it is the same”
35% of residents (313) replied “there are more deer now”
22% of residents (199) replied “there are fewer deer now”
- Of the 387 households who said their number of neighborhood of deer is the same:
More than half (53%) wanted to decrease the deer population;
Under half (45%) wanted to keep the deer population the same;
Very few (2%) wanted to increase the deer population.
- Of the 199 households who said they have fewer deer in their neighborhood now:
More than a quarter (28%) wanted to decrease the deer population;
Well over half (60%) wanted to keep the deer population the same;
And 13% wanted to increase the deer population.
- Of the 313 households who said they have more deer in their neighborhood now:
92% wanted to decrease the deer population;
8% wanted to keep the deer population the same;
No respondents wanted to increase the deer population.

- Of the 678 respondents with at least one concern, the biggest concern was:
“Damage to garden or property” = 583 (65%); followed by
“Disease spread from deer ticks and deer feces” = 457 (51%)
“Traffic accidents due to deer in road” = 429 (48%)
“Safety of residents and pets” = 301 (33%)
- Of the 678 respondents with at least one concern, the leading cause of two concerns:
“Damage to garden or property” + “Disease spread from deer ticks and deer feces”
= 74 (11%)
- Of the 678 respondents with at least one concern, the leading cause of three concerns:
“Damage to garden or property” + “Disease spread from deer ticks and deer feces” +
“Safety of residents and pets” = 90 (13%)
- Of the 678 respondents with at least one concern, 205 (30%) cited all four options as sources of concerns about deer in their neighborhood. This was the highest response among any option in this category.
- Respondents with “No concerns” about deer totaled 221 (25%), a surprisingly lower number of people than the 349 (39%) who responded that Beachwood should either keep the deer population the same or increase the deer population. Therefore, 128 people who are against deer-population mitigation also have at least one concern about the deer population in Beachwood.
- The 221 respondents with “No concerns” about deer were comprised of:
2 “decrease the population” respondents (1%);
188 “keep population the same” respondents (85%); and
31 “increase the population” respondents (14%).
(The outlying 1 “increase the population” respondent was concerned about traffic accidents due to deer in road.)

Points of Education

Deer Diseases

2021 Deer Disease Data

News reports on August 29, 2021 stated that “White-tailed deer in Ohio became the first to test positive for the coronavirus (COVID-19), according to The United States Department of Agriculture’s (USDA) National Veterinary Services Laboratories (NVSL).”

<https://www.silive.com/coronavirus/2021/08/ohio-white-tailed-deer-become-first-to-test-positive-for-covid-19.html>

Please note that Chronic Wasting Disease (CWD, discussed below) has been identified in tissue samples of white-tailed deer in Ohio as of 2020 and 2021.

<https://www.fox19.com/2021/03/09/chronic-wasting-disease-found-another-ohio-deer/>

2018 Deer Disease Data

“Hemorrhagic Disease (HD) is the most important viral disease of white-tailed deer in the United States. It is caused by related orbiviruses of the epizootic hemorrhagic disease (EHD) or bluetongue (BT) virus serogroups. Since disease caused by EHD and BT viruses are indistinguishable without laboratory testing, the general term, hemorrhagic disease (HD), is often used. The virus is transmitted by biting flies of the genus *Culicoides*, which are commonly called midges, sand gnats, or no-see-ums. For this reason, the occurrence of HD is seasonal, and coincides with periods of the year when these biting flies are abundant - typically late July through November. The first hard freeze of the fall causes a sudden decline in *Culicoides* activity, eliminating new cases of HD. ... The severity and distribution of HD outbreaks are highly variable. While HD outbreaks only occur sporadically in Ohio (recent significant disease events include 2007, 2012, and 2017), they can be severe with locally high mortality. Presently, there are no wildlife management tools that can prevent or control HD. While significant localized mortality can cause alarm among the public, past experiences show that HD will not eliminate entire populations, the disease will come to an end with the onset of cold weather, and deer populations will bounce back within a few years. In the summer of 2017, the ODNR Division of Wildlife documented significant HD mortality in several Ohio counties, including Jefferson, Lorain, Belmont, and Cuyahoga.”³

“Chronic Wasting Disease (CWD) is a fatal disease of the central nervous system of mule deer, white-tailed deer, elk, and moose. CWD is disease caused by abnormal proteins, or prions (not a bacteria or virus), that ultimately destroy brain tissue. This type of disease is known as a transmissible spongiform encephalopathy. This family of diseases includes bovine spongiform encephalopathy (mad cow disease), scrapie in sheep, and Creutzfeldt-Jakob Disease in humans. Since 2002 the ODNR Division of Wildlife has conducted statewide CWD surveillance, testing

³ http://wildlife.ohiodnr.gov/Portals/wildlife/pdfs/publications/hunting/Pub%205304_DeerSummary2018.pdf, pg.

17,493 deer. To date, there has yet to be a wild, free-ranging deer test positive for the disease in Ohio. In 2017, a total of 1,512 deer were submitted for CWD testing. ODNR Division of Wildlife staff collected 779 road-killed deer from 57 counties and hunters submitted 661 deer (16 of which were escaped captive deer) for CWD testing. An additional 15 escaped or confiscated captive cervids, deer displaying abnormal behavior and/or poor physical condition (n=55), a euthanized research animal, and one deer found dead under suspicious circumstances were also tested for CWD in 2017. **CWD was not detected in any of these samples.**⁴

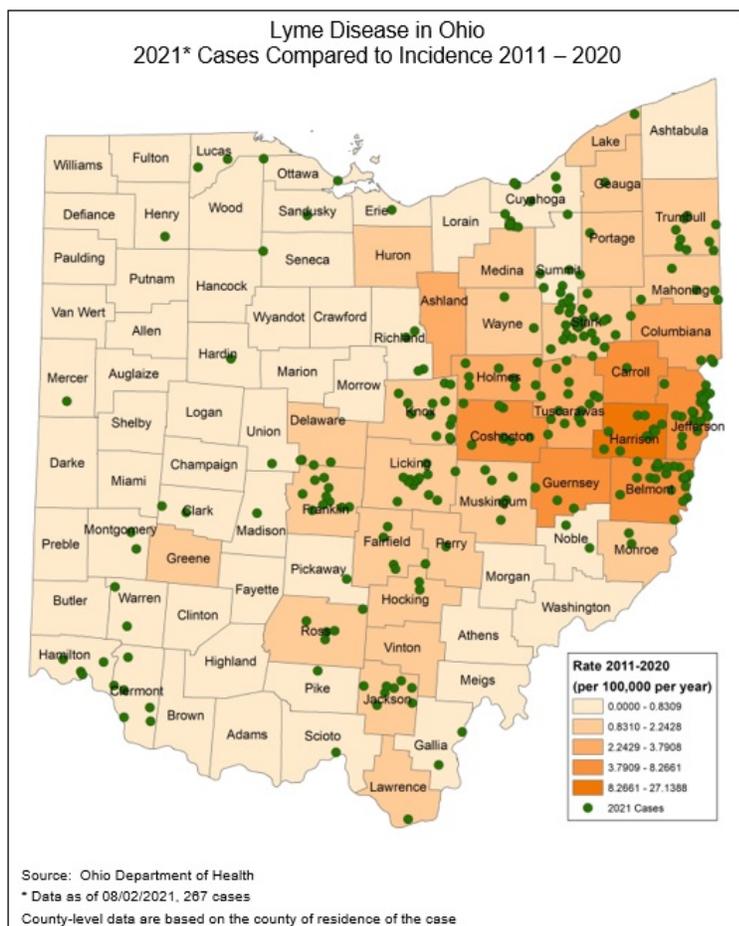
⁴ Ibid, pg. 13

Lyme Disease (2021 Data)

Lyme Disease cases are consistently increasing in Ohio. Lyme Disease is carried by deer ticks. More information is available online at <https://www.odh.ohio.gov/lyme>.

Ohio Lyme Disease Annual Case Statistics					
Year	Human Cases	Deaths	Median Age (Years)	Age Range of Cases (Years)	Counties with Reported Lyme Cases
2010	44	0	34.5	3 – 62	24
2011	53	0	34	5 – 84	25
2012	67	0	33	3 – 86	30
2013	93	0	43	2 – 84	34
2014	119	0	35	1 – 78	32
2015	154	0	41	1 – 85	45
2016	160	0	37	3 – 85	40
2017	270	0	40	3 – 86	44
2018	293	0	33	1 – 90	50
2019	468	0	23	1 – 86	66
AVG	172	0	35.5	n/a	39
TOTAL	1,721	0	n/a	n/a	n/a

NOTE: The deer population in Ohio is estimated to increase by 25% annually. Based on the data in this table, the average annual increase in Ohio Lyme Disease cases is 22%



Deer Sterilization (2018)

According to the Ohio Department of Natural Resources (ODNR), surgical sterilization methods are more invasive and not a solidly effective tool for managing the population. “Our deer migrate, and that’s the biggest hurdle,” said Geoff Westerfield of ODNR. The migratory aspect of our deer means it is difficult to track animals who have been sterilized to make sure they do not develop post-op infections or other issues.

Sterilization of deer is also expensive and does not address concerns about deer/vehicle accidents or landscape damage in the short term. Additionally, it might not hinder the population at all. Cornell University attempted a sterilization program on their campus with unexpected results:

A team of biologists led by Paul Curtis, an associate professor and extension wildlife specialist at Cornell, began to closely track changes in the deer population. Initially, the results looked promising: The birth rate went down. Yet the total number of deer remained steady over five years. Something strange was going on.

“Sterilization definitely did decrease fawn numbers, and doe numbers also declined,” Curtis said. “However, these population reductions were offset by increasing buck numbers. There were about 100 deer on campus when we started, and there were still about 100 deer [five years later].”

Something was attracting an abnormal number of mature bucks. Cornell’s biologists realized that the reproductive cycle of the ligated does was to blame.

Under normal conditions, all female whitetails go into heat within several weeks of each other and become pregnant at around the same time. This annual event is called the rut. However, if a doe is not impregnated during the rut, it will enter heat again the following month and again the month after that. Because the ligated does were unable to become pregnant, they continued to produce chemical signals of readiness to reproduce — signals that can attract bucks from miles away.⁵

Per the same article, “If some form of surgical sterilization or contraception is eventually successful among free-ranging populations of wild deer, it could change the way that urban and suburban communities deal with excessive deer numbers.”⁶

⁵ https://www.washingtonpost.com/national/health-science/trying-to-limit-the-number-of-deer-with-surprising-results/2014/09/29/3c16f9dc-28a5-11e4-958c-268a320a60ce_story.html?utm_term=.54d3f1901831

⁶ Ibid.

Deer “Birth-Control” Methods (2021)

According to the Ohio Department of Natural Resources, no products or pharmaceuticals currently are approved for deer in an open (migratory) population like the deer in Beachwood.

Deer “Birth-Control” Methods (2018)

The claim that “It is a fact that PZP, a safe immuno-contraception (birth control) protein (NOT a hormone) used in many other mammals for years with 90% effectiveness, is being used on free-roaming deer in other states”⁷ does not ring true. There are not currently any one-shot vaccines available that are effective in blocking fertilization in deer. “Until that one-shot form of the vaccine has been perfected in deer, two shots are necessary the first year and a single annual booster thereafter unless one takes the approach in which as many deer as possible are darted the first year without looking for any significant results for that year and then given a booster the second year.”⁸

Such a program has not been proven effective for managing deer births in an open population, and also does not provide touchless effectiveness, as to be truly effective the vaccinated deer would need to be tagged or notched to denote their participation in the program.

Tufts University in Massachusetts is studying the use of a contraceptive vaccine in white-tailed deer. The method involves stimulating the deer’s immune system to prevent pregnancy. Earlier experiments with captive deer have been successful. While it will be years until the results are clear, the ongoing challenges in the wild include high cost (it costs about \$1,300 each time a deer is captured and given a shot) as well as the difficulty of monitoring large numbers of individual deer and getting them booster shots.

“It is nearly impossible to keep free-ranging deer on a booster schedule,” said Curtis, who has also been involved with immunocontraception experiments in deer. Without being restricted to an enclosure, deer that have been given shots can either hide or wander out of the study area. Deer from outside the study area will tend to move in and occupy the habitat opened up by a declining local population.⁹

⁷ <https://www.change.org/p/greater-cleveland-food-bank-stop-accepting-mass-slaughtered-deer-meat-from-cleveland-metroparks>

⁸ http://www.pzpinf.org/pzp_faqs.html

⁹ https://www.washingtonpost.com/national/health-science/trying-to-limit-the-number-of-deer-with-surprising-results/2014/09/29/3c16f9dc-28a5-11e4-958c-268a320a60ce_story.html?utm_term=.54d3f1901831

Potential Deer Sanctuaries

2021 info:

A resident who is involved with the board of the Cleveland Museum of Natural History offered to put the Mayor's Office in touch with that organization, which manages "tens of thousands" of acres of reserve land. As of September 29, we have received no contact from that organization.

2018 info:

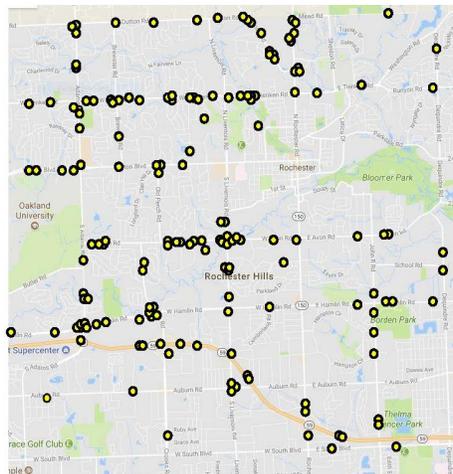
In hopes of fulfilling some residents' wishes that the Beachwood deer be transported to sanctuaries, the Mayor's office has phoned the following organizations: Lagoon Deer Park in Sandusky, OH 419-684-5701 (Jeff - LM) and Humane Society Wildlife Land Trust (three designated sanctuaries in Ohio 800-729-SAVE (Linda Winter – LM).

Moving deer out of town might result in other deer migrating to Beachwood from neighboring communities. Additionally, according to Rochester Hills, MI Natural Resources Director Matt Einheuser, "relocation is very stressful on deer."¹⁰

¹⁰ Phone call between Matt Einhauser and Lynn Johnson, 9/20/18, 11:17a.m. (duration 19:32)

Rochester Hills, MI Deer Cull (2018)

A petition against the Shaker Heights Deer Cull suggested that the City of Rochester Hills, MI is an area similar to Shaker Heights and has instituted “a very successful and simple non-lethal plan”¹¹ for controlling deer populations. The Mayor’s Office has reviewed this plan from Rochester Hills. It includes a map of Deer-Vehicle accident sites¹² (yellow dots denote deer-crash locations):



2016 Deer Crash Locations in Rochester Hills
per Police Accident Reports Documented
with the Traffic Improvement Association (TIA)

Additionally, the Rochester Hills deer population reached an all-time high in 2016. Figures for 2017 are not available “due to weather.”¹³

Based on information from a phone call with Rochester Hills, MI Natural Resources Director Matt Einheuser: In 2009, after the highest year yet of deer-vehicle collisions, the City of Rochester Hills planned to do a culling with the help of sharpshooters from the sharpshooters in the Sherriff Department. The cull was safe and everything went well. Protesters against the cull travelled from out-of-state to dissuade the deer from travelling to the cull area. Twenty deer had been culled when protesters had the program put on hold by the City Council. One of the 20 deer had run a little ways off, still in the park, and was videotaped by a protestor. They have not had a cull since, though if the number of deer-vehicle collisions rise over 200 in a year, the City’s Deer Management Advisory Committee would re-visit culling and other population-management efforts.

¹¹ <https://www.deerdefendersofohio.org/shaker-hts>

¹² <https://www.rochesterhills.org/DocumentCenter/View/8606>

¹³ <https://www.rochesterhills.org/DocumentCenter/View/8607>

APPENDIX: Postcard Sent to Beachwood Single-Family Households

BEACHWOOD DEER SURVEY 2021



Your opinion is necessary to determine Beachwood's deer-management strategy. Please click the Deer Survey 2021 Quick Link in the top left column of our home page to answer our one-minute survey. Responses required by AUGUST 31, 2021.

One response per household, please.

Questions? Can't respond online? Call the Mayor's Office at 216-292-1901.

YOUR OPINION MATTERS!

Answer online today at the Quick Link on www.BeachwoodOhio.com

CITY OF
Beachwood
25325 Fairmount Blvd.
Beachwood, OH 44122

FIRST-CLASS MAIL
PRESORTED
U.S. Postage
PAID
Cleveland, Ohio
Permit No. 3394

**YOUR OPINION
IS NEEDED!**



1 P1 T1
RESIDENT
24447 ALBERT LN
BEACHWOOD OH 44122-2301

Answer online today at the Quick Link on www.BeachwoodOhio.com