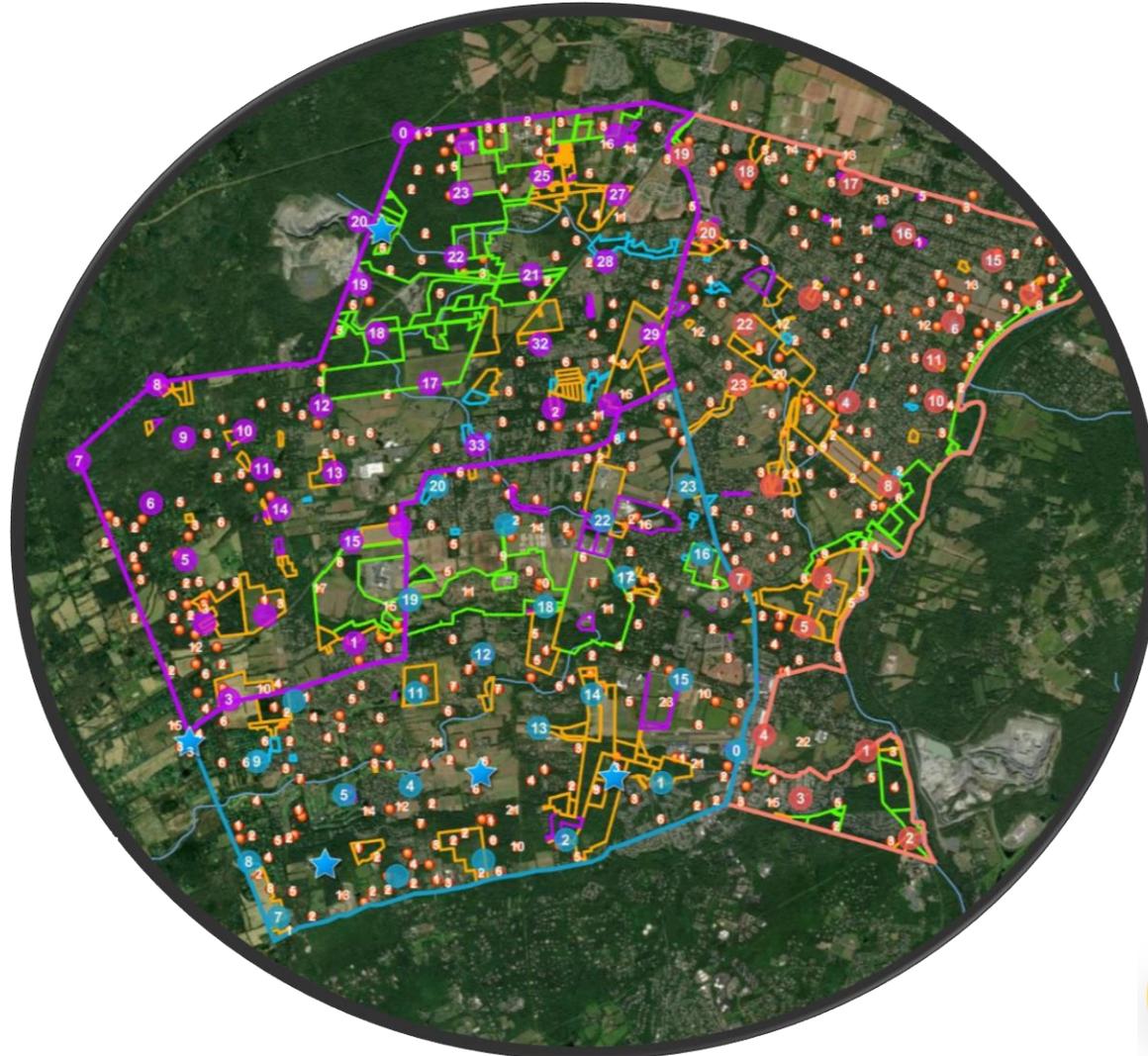


Montgomery Township Deer Management



Why is management of the deer population important?

- Public health: Tick borne diseases
 - Lyme disease
 - 450+ cases in Montgomery since 2010
 - Babesiosis
 - Ehrlichiosis
- Public safety
 - Deer-vehicle collisions
 - 2 fatalities in 2014
- Impacts to forest ecology
 - Browse & rub small tree seedlings → no “next generation” in our forests
 - Prefer native plants, allowing for proliferation of invasives & non-natives



Montgomery Township Deer Management Program

Wildlife Committee

- Originally formed in 1992 as the “Hunting Committee”
- Now known as the Wildlife Committee
 - Ad hoc Committee, members appointed by Mayor
 - Liaisons from Township Committee, Open Space Committee, Agricultural Advisory Committee
- Makes recommendations to the Township Committee to control deer population in the Township
 - Track harvest reporting
 - Review annual surveys from hunters
 - Recommend new properties in consultation with Open Space & Stewardship Director

Montgomery Township Deer Management *Program Beginnings*

- Hunting program began in 2001
- 2001 infrared survey conducted by Hot Shot, Inc. found 88 deer/mi²



- **“Sustainable” levels are considered 10-20 deer/mi²**

Statewide Deer Management Issues

- In 2021 Epizootic Hemorrhagic Disease (EHD) out break was found in all New Jersey counties including Somerset.
 - Localized across certain properties of the Township program
 - High mast crop
 - Flooding across Township
 - Negative publicity amongst hunters persisted into 2022
- Last year hunters recorded the 2nd lowest harvest rate since the late 80s. This year, overall Statewide harvest was up slightly from previous year.
 - Covid year (2020) was the highest in the previous decade

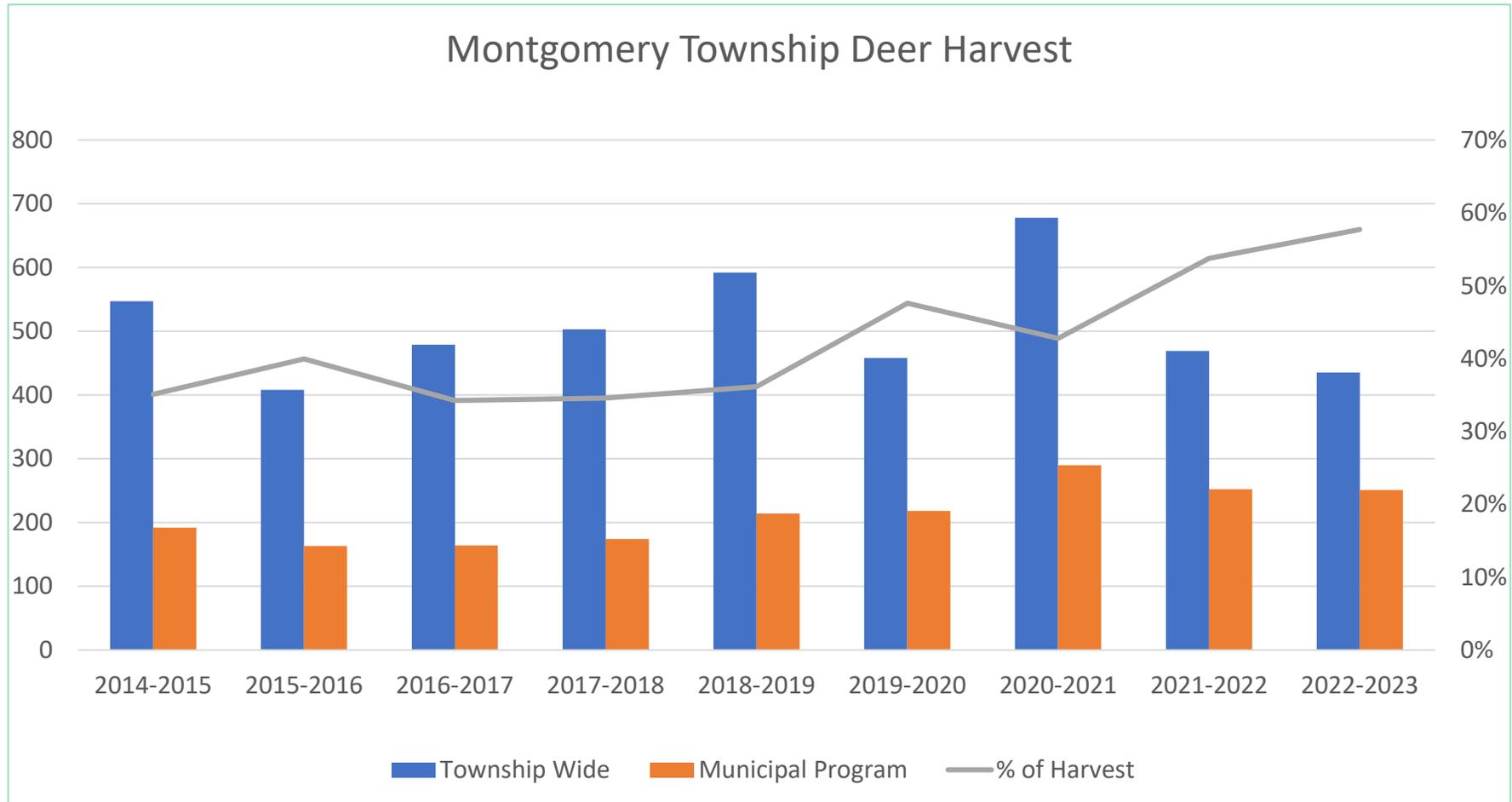
Montgomery Township Deer Management Overview

- Over the last 10 years a total of 2,109 deer were harvested for an average of 210 deer/yr.
- 2022/23 was the 3rd highest harvest on record with 251 total deer
- The harvest rate of antlerless deer over the last 5 years averaged 202 deer/yr. or 83% of the total harvest
- 224 of 251 or 89% of the deer harvested in 2022/23 were antlerless, the highest percentage we have recorded
- Currently program is comprised of 103 hunters of which 95 have returned their end of year surveys.

Implemented Program Changes in 2022 and 2023

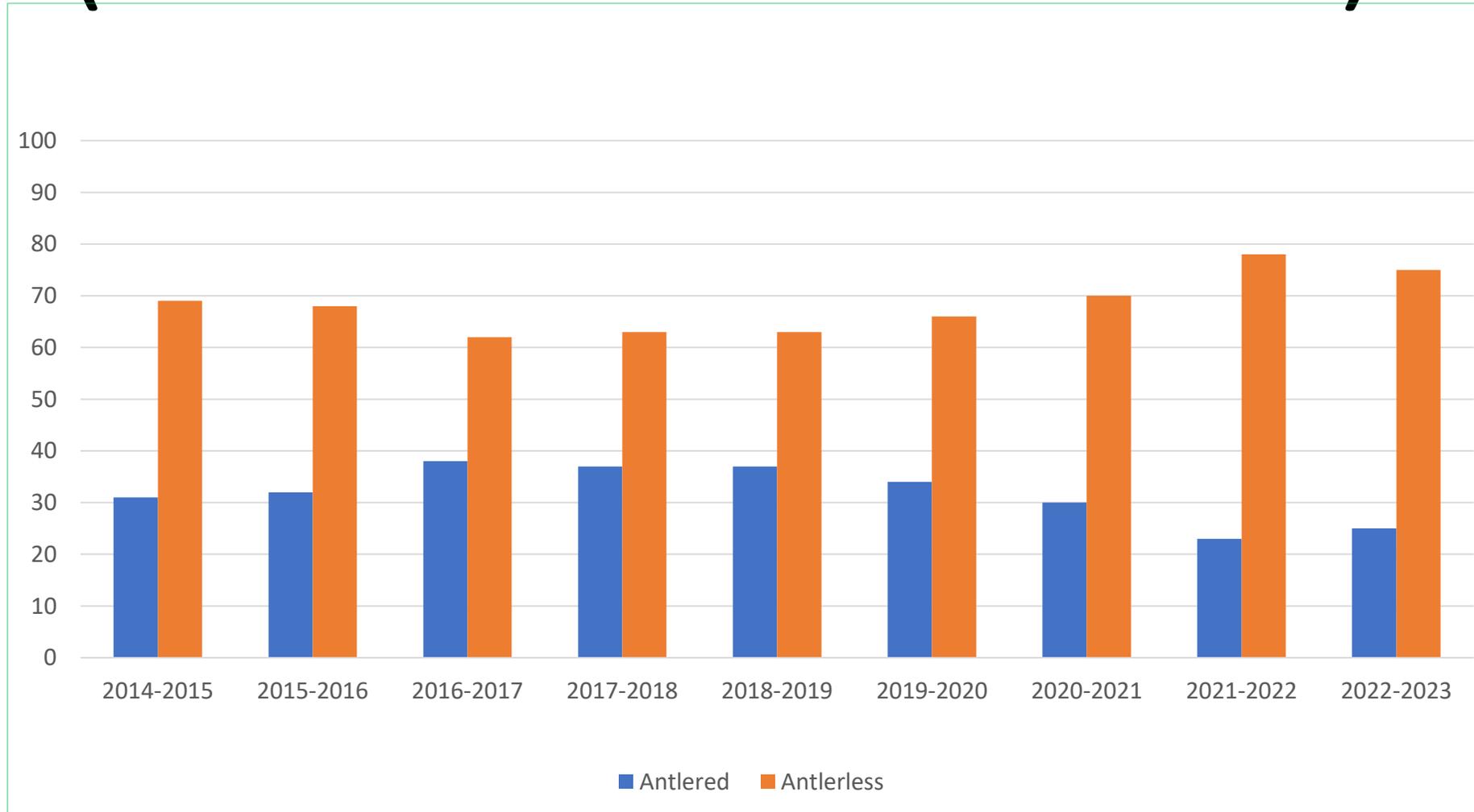
- Added 3 new properties
 - Last 5 years: increased the amount of land in the program by 60%
- Using the Township survey conducted in 2021 to inform decisions.
 - The results of the survey (69 deer per square mile Township wide) reflect an overall **decrease** from the 2001 survey (88 deer per square mile)
- Continued to incentivize antlerless harvest resulting in our highest antlerless harvest to date (89%)
- Youth Leadership Council
 - Facilitated outreach to the community
 - Contributed to development of webpage
 - Published an article in the local High School newspaper

Montgomery Township

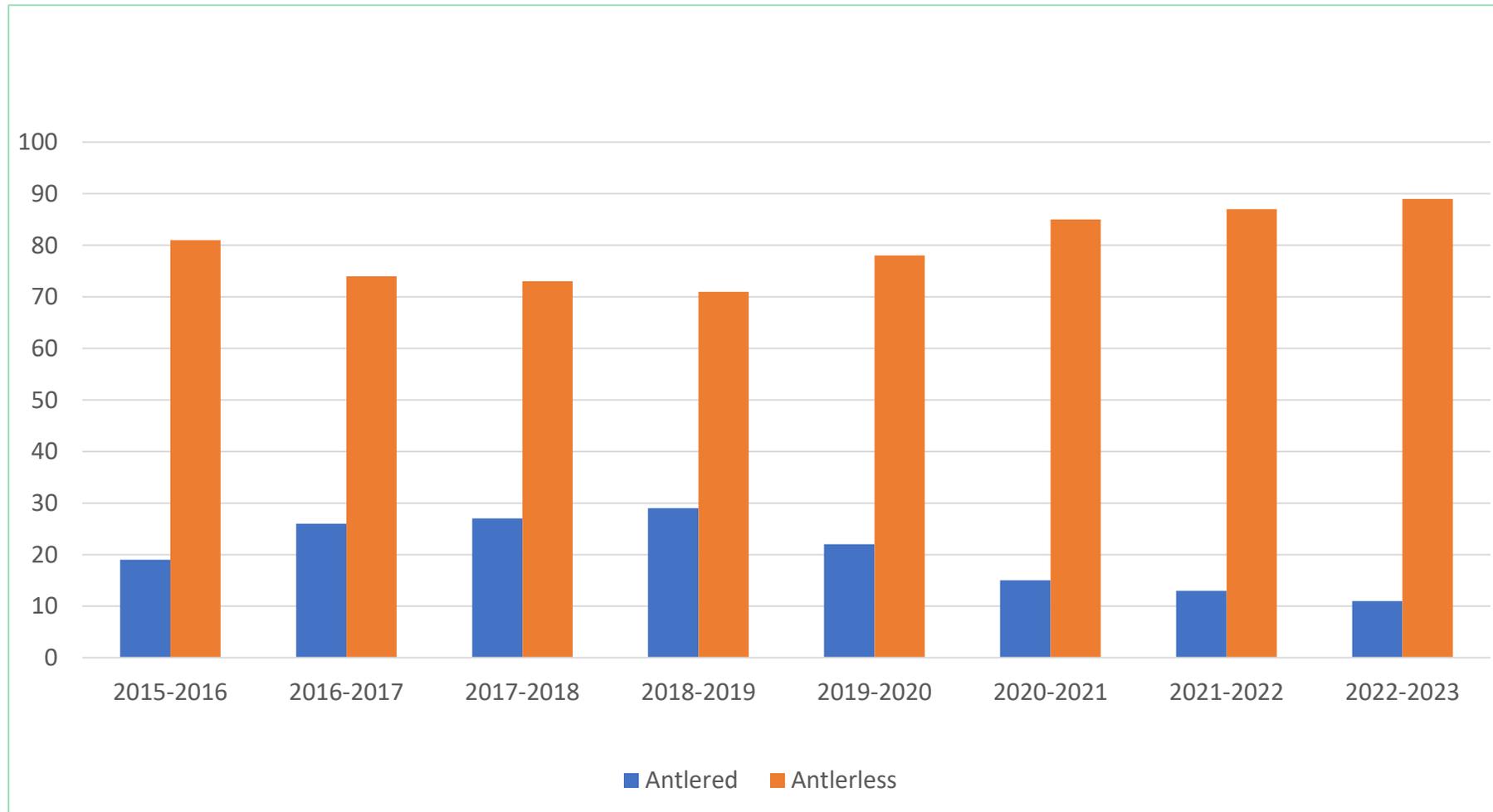


Note: Township -wide includes State, County, Township, and private lands

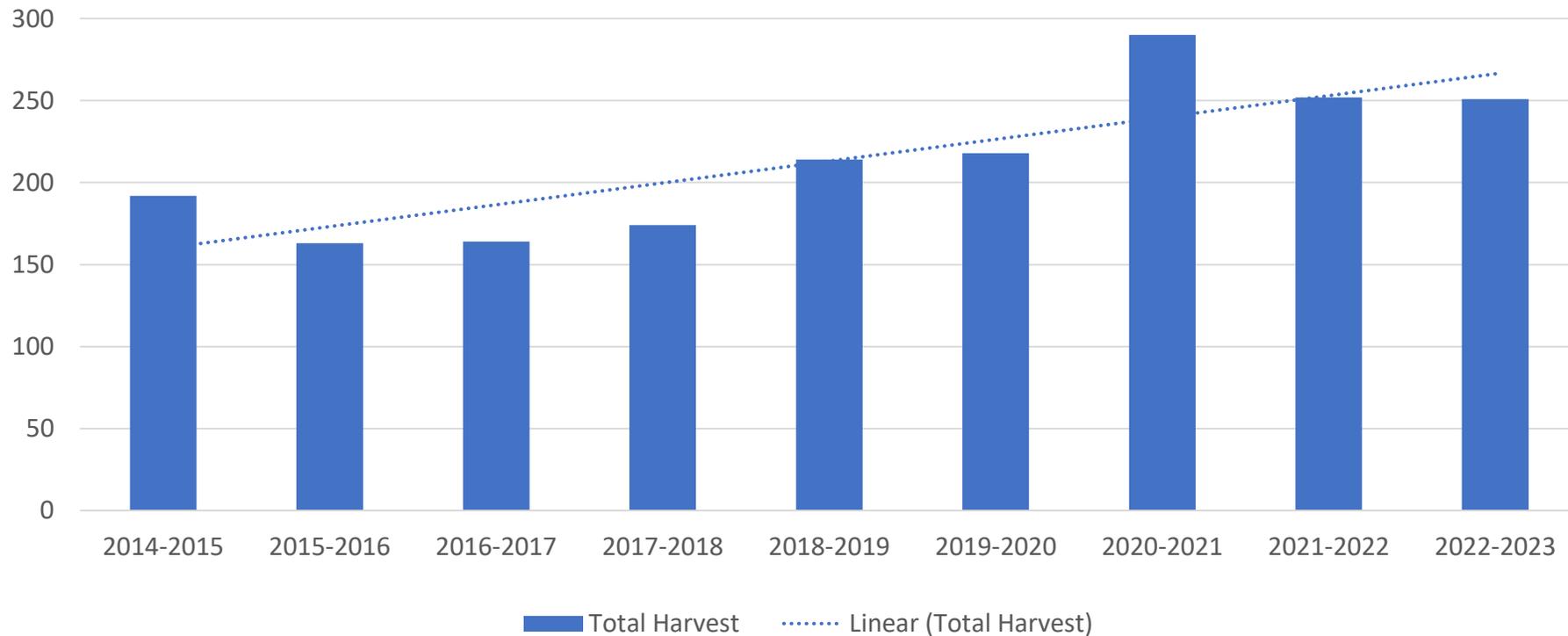
Montgomery Township Deer Harvest (% of Antlered vs. Antlerless)



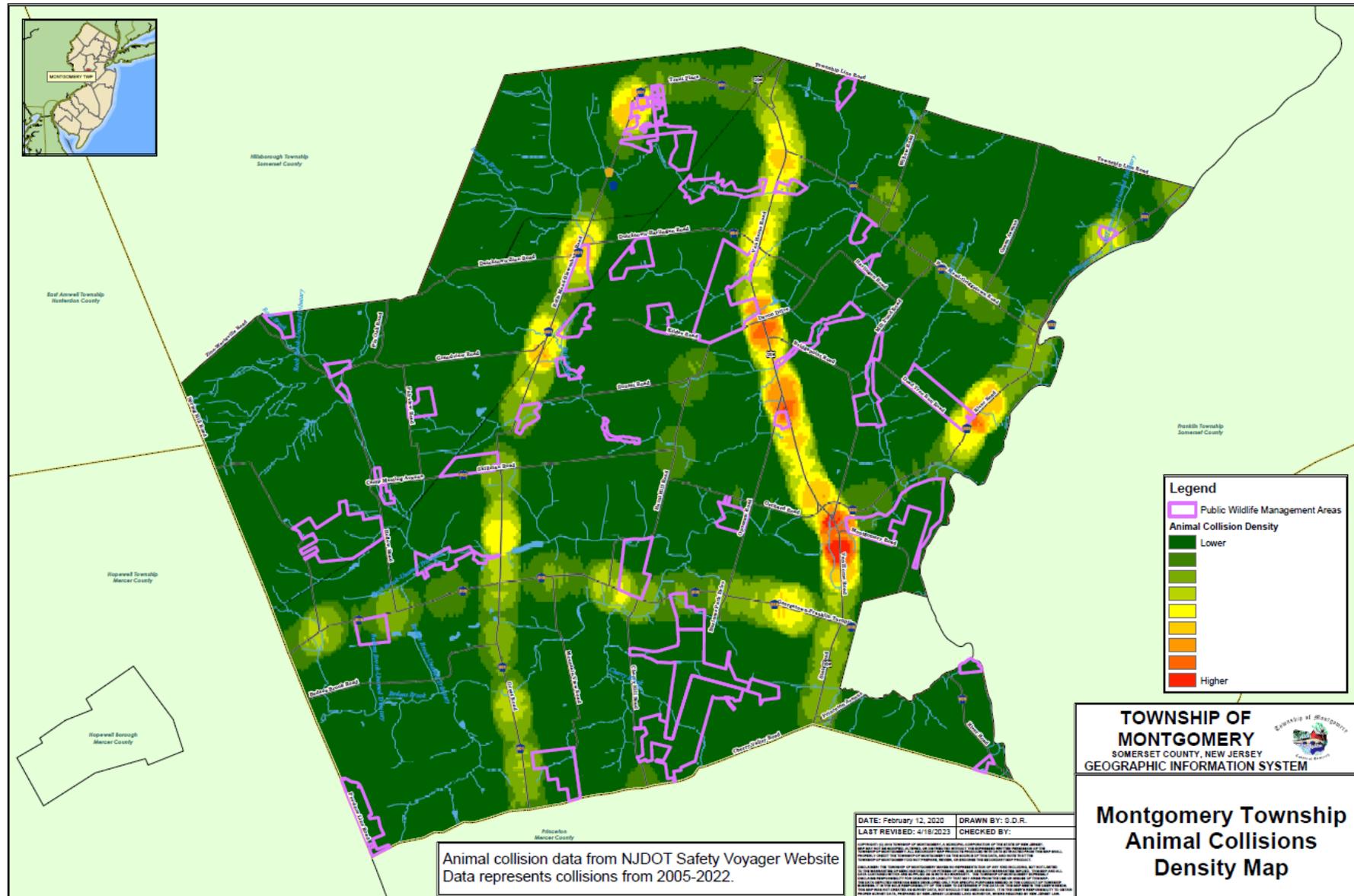
Municipal Program Deer Harvest (% of Antlered vs. Antlerless)



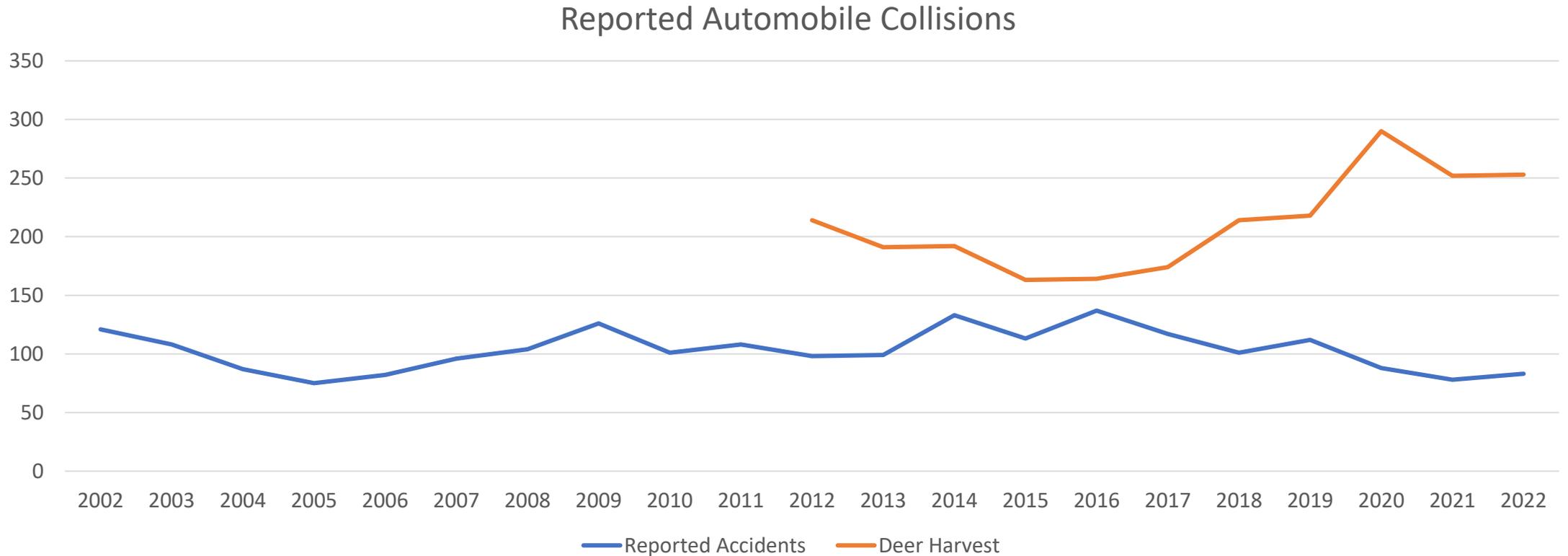
Municipal Deer Management Program Overall Harvest



Deer Collision Map 2005-2022

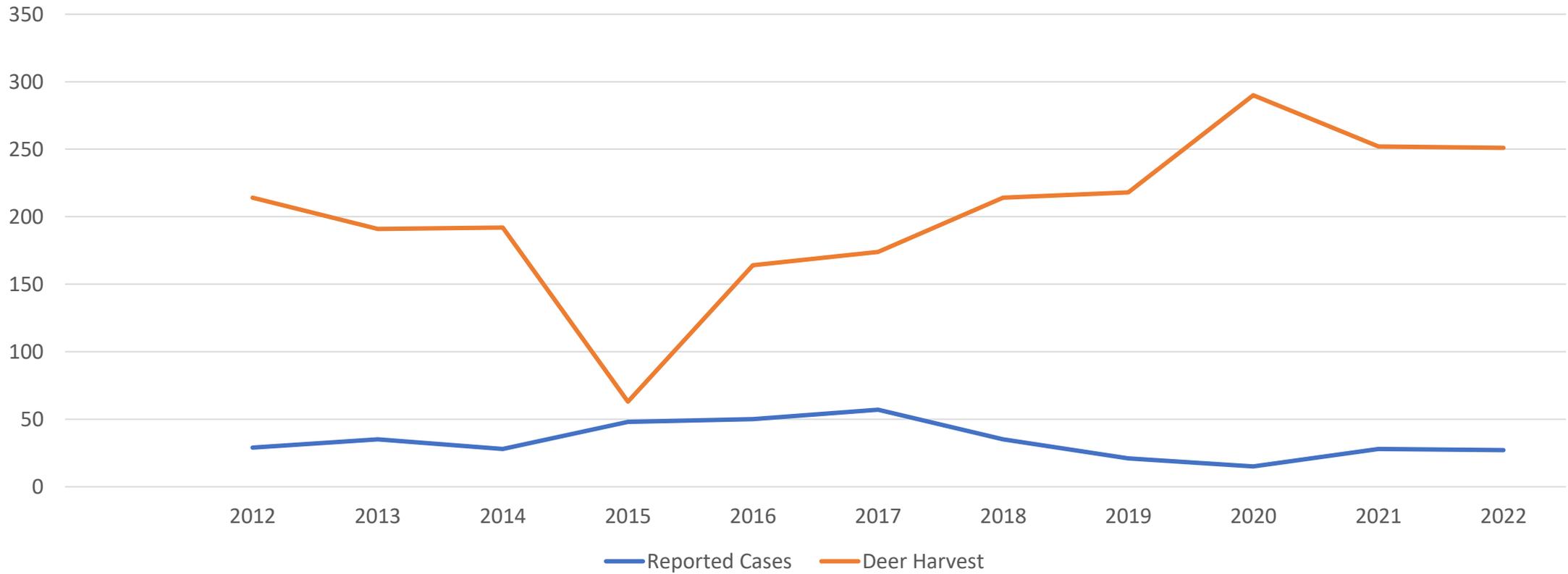


Reported Automobile Collisions 2002-2022



Note: According to NJDEP, because the automobile / deer collision trend is only slightly increasing or staying relatively constant over time, they consider this as an indication or a sign of a successful management program as the number of vehicles on the roads are and continue to increase steadily over the years. They would expect to see a large increase in accidents if the population was not being controlled.

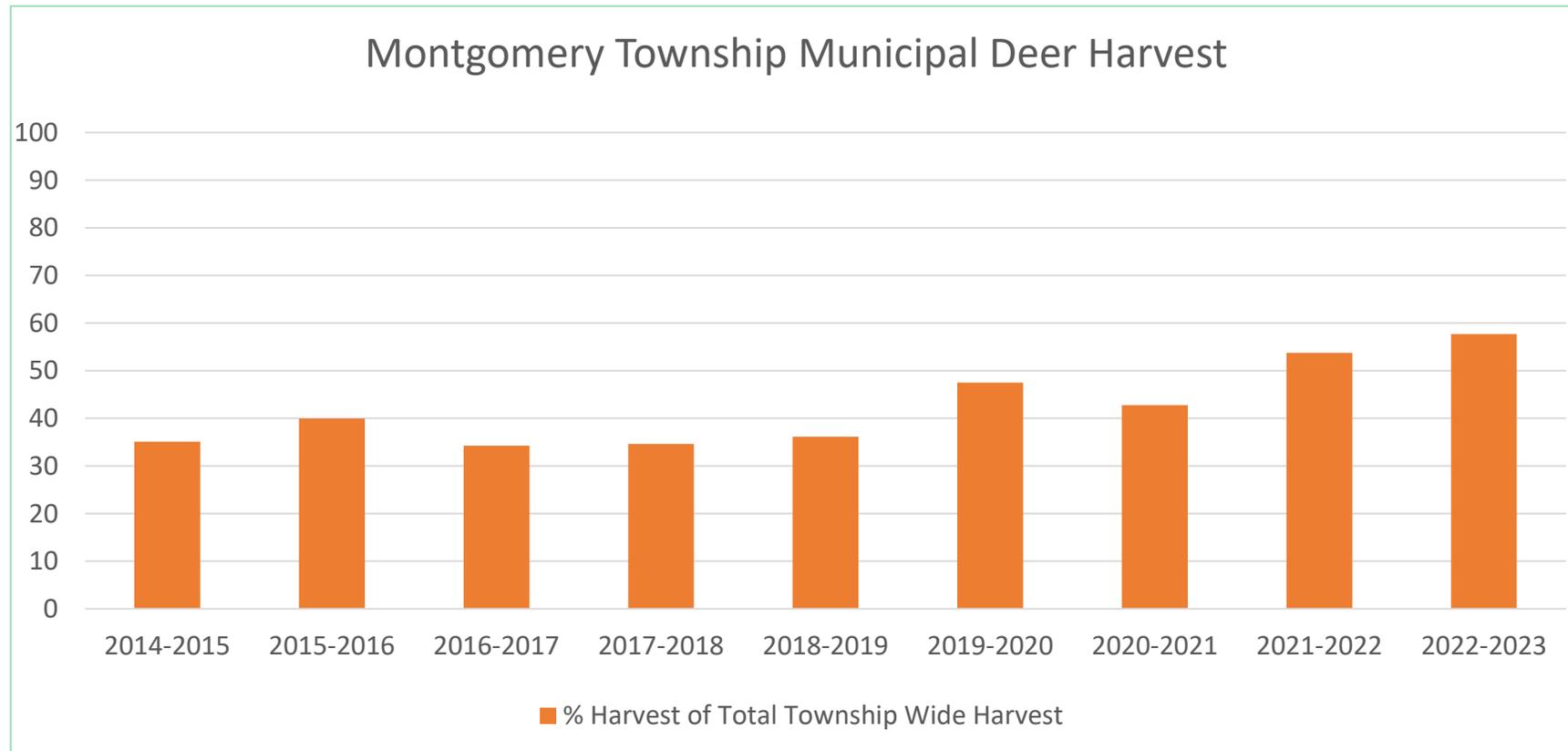
Reported Lyme Disease Cases in Montgomery Township 2012-2022



Changes in Land Usage

- According to NJDEP, from 1972-2018 Montgomery lost 64% of its agricultural land
- For the same period, Montgomery lost 22.5% of its forested land
- Urban land (i.e. residential and commercial) has increased by 554.6%
- Means less opportunity to hunt

Montgomery Wildlife Management Program



With access to only 8.06% of the land in the Township, the municipal program was responsible for 57% of overall harvest Township wide in 2022-2023. Average of 42% of the Township's overall harvest over the past 9 years; 47% over the past 5 years

Montgomery Municipal Program

Community Benefits

- Hunters Helping the Hungry is a 501 (c)(3) non-profit corporation that began in 1997 and has provided over 2 million meals since inception.
- Statewide, in 2022/2023, 984 deer were donated to the program resulting in 30,680 lbs. of venison yielding 122,720 servings to feed the hungry.
- 80 deer were donated from Montgomery's Municipal program to Hunters Helping the Hungry in 2022/2023, roughly 8% of total donation for the HHH program statewide.

Montgomery Municipal Program

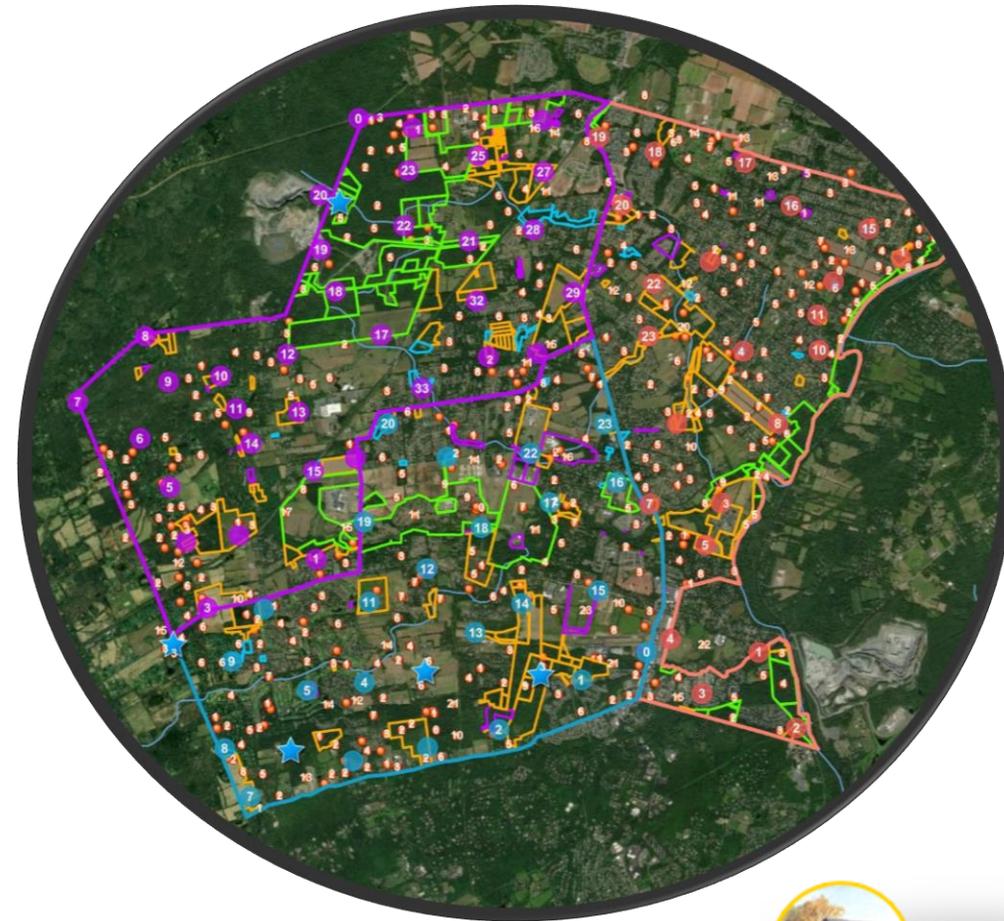
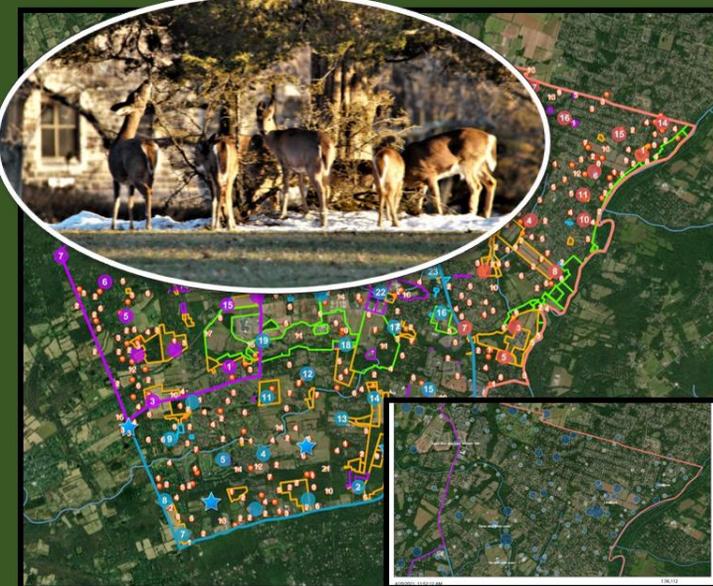
Safety

- Annual safety orientation
 - NJDEP, Police, Wildlife Committee members & staff
- Each hunter provides proof of their own \$1,000,000 insurance policy
- Annual background check
- Call-in number prior to hunting
- To date, there have been ***zero incidents / accidents*** associated with the program

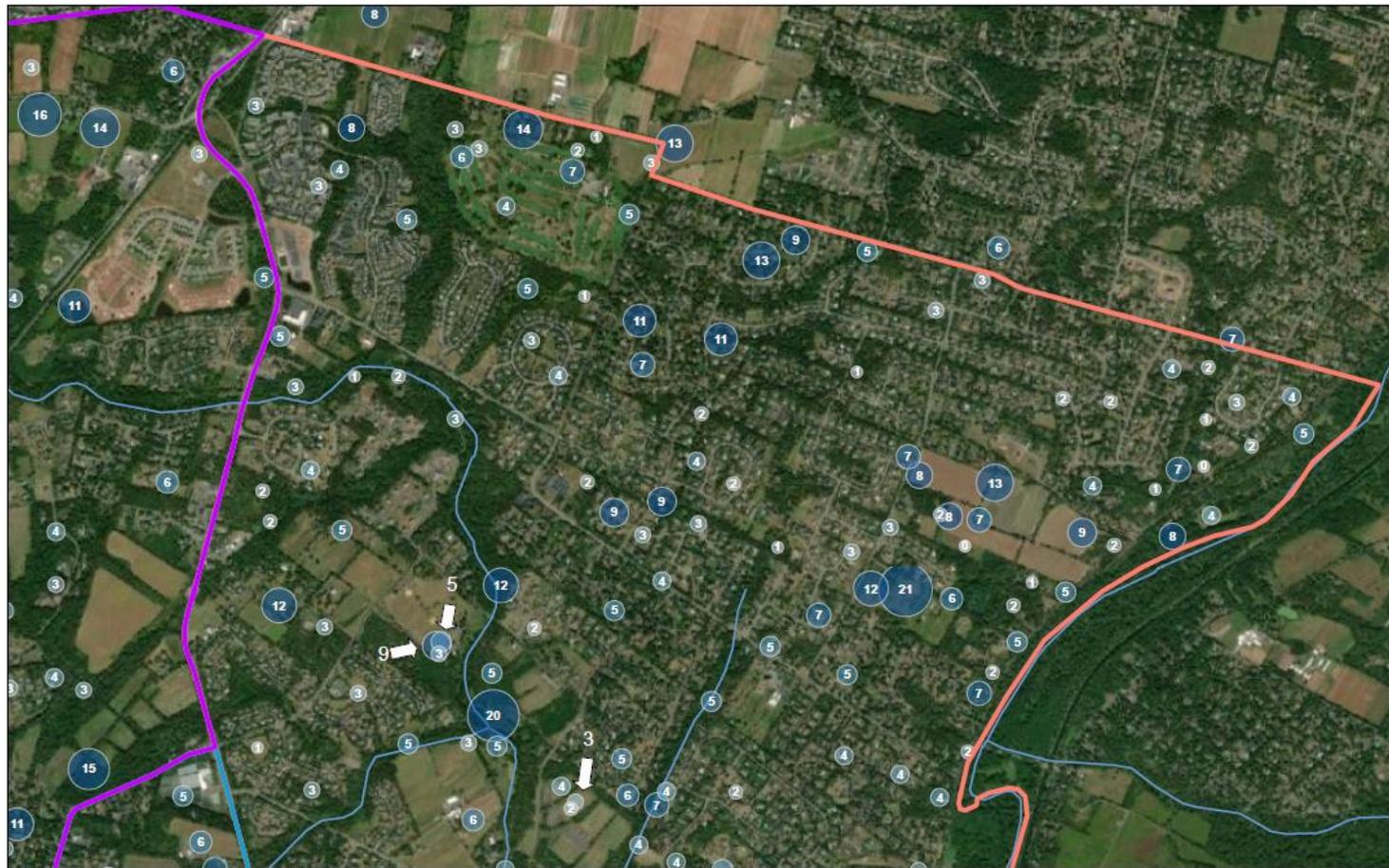
Montgomery Township Deer Distribution Survey

April 2021, Steward Green

White-Tailed Deer (*Odocoileus virginianus*)
Population Density Survey using sUAS Infrared:
Montgomery Township, New Jersey- Spring 2021



East Section - North



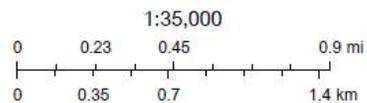
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Deer_Points_Montgomery_Twp_2021

- 1
- 2.5

- 5 Montgomery_Sections Southwest
- 7.5 East
- 10 Northwest

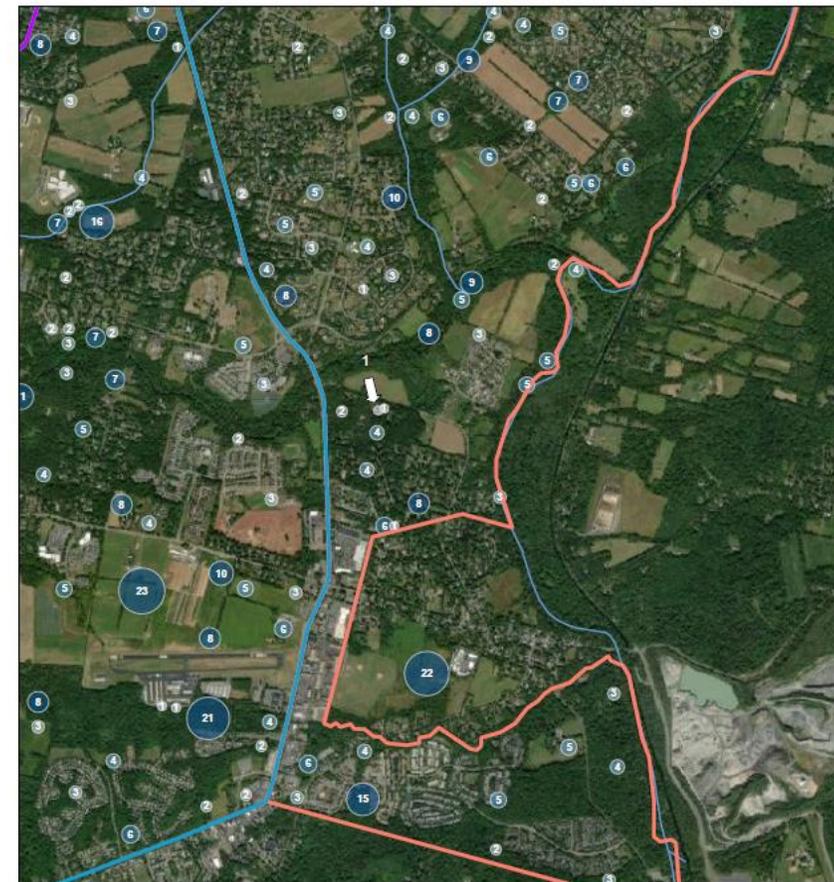
USA Detailed Streams



Maxar

ArcGIS Web AppBuilder
Maxar | source: National Hydrography Dataset: USGS |

East Section - South



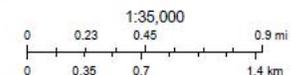
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Deer_Points_Montgomery_Twp_2021

- 1
- 2.5
- 5
- 7.5
- 10

- 5 Montgomery_Sections East
- 7.5 Northwest
- 10 Southwest

USA Detailed Streams



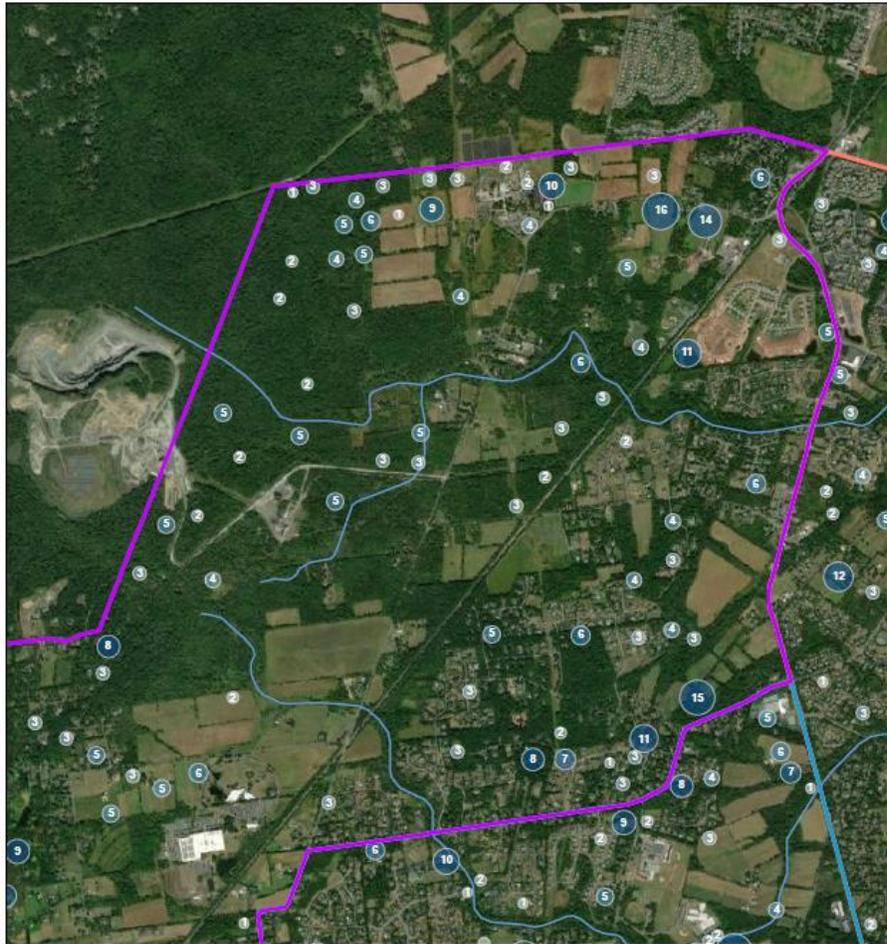
Maxar

ArcGIS Web AppBuilder
Maxar | source: National Hydrography Dataset: USGS |

Deer Density- Montgomery Township NJ- **Entire Township: 2,241 deer, 69 deer/mi²**

East Section- 814 deer, 88 deer/mi² Northwest Section- 607 deer, 51 deer/mi² Southwest Section- 820 deer, 73 deer/mi²

Northwest Section - North



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1:40,000

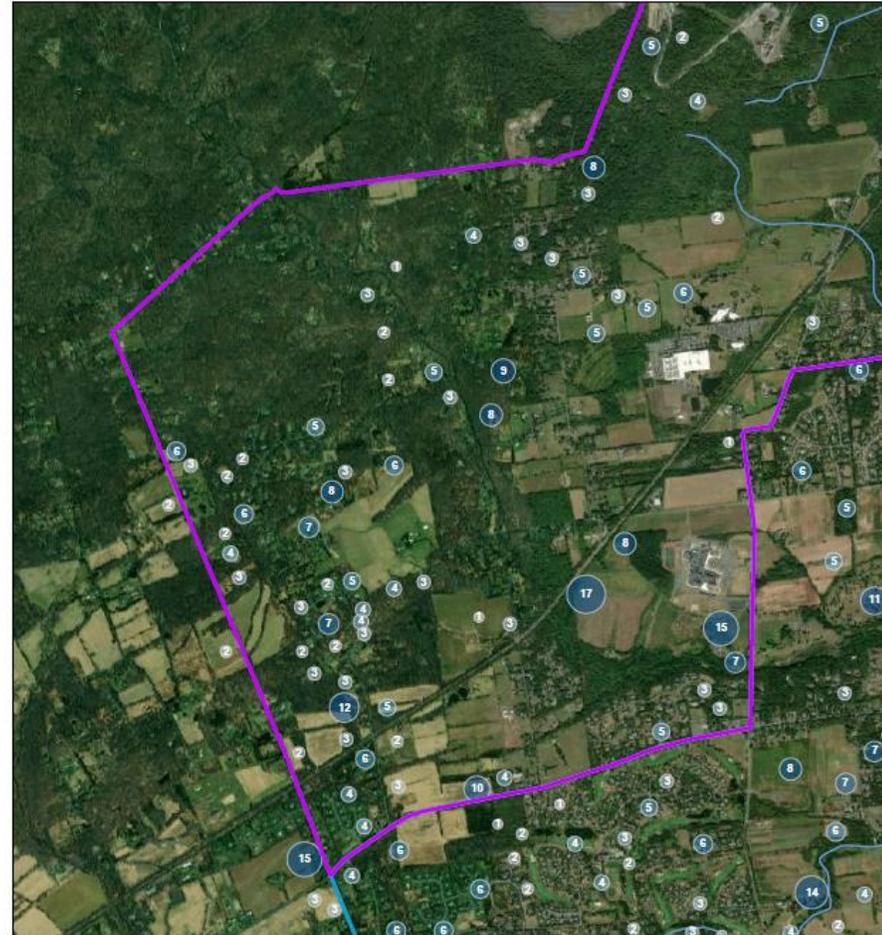
Deer_Points_Montgomery_Twp_2021 Montgomery_Sections



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ArcGIS Web AppBuilder
Maxar | source: National Hydrography Dataset: USGS |

Northwest Section - South



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1:40,000

Deer_Points_Montgomery_Twp_2021



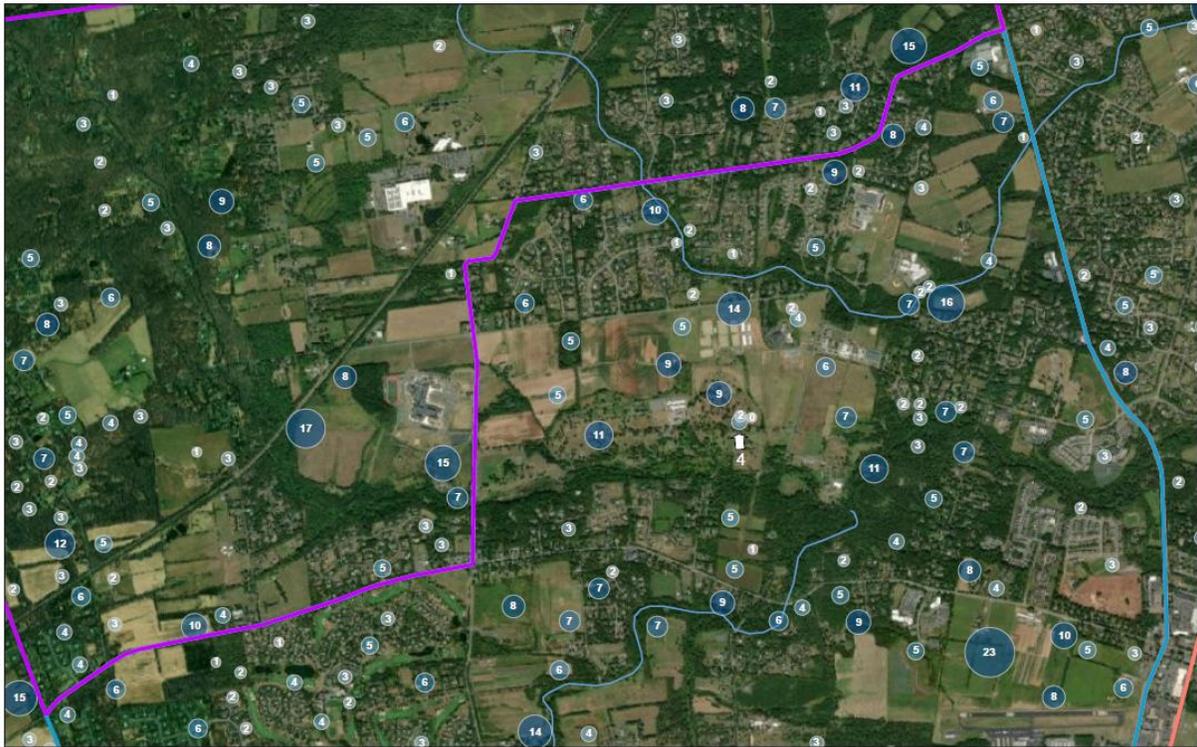
Maxar

ArcGIS Web AppBuilder
Maxar | source: National Hydrography Dataset: USGS |

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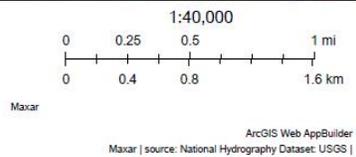
Southwest Section - North



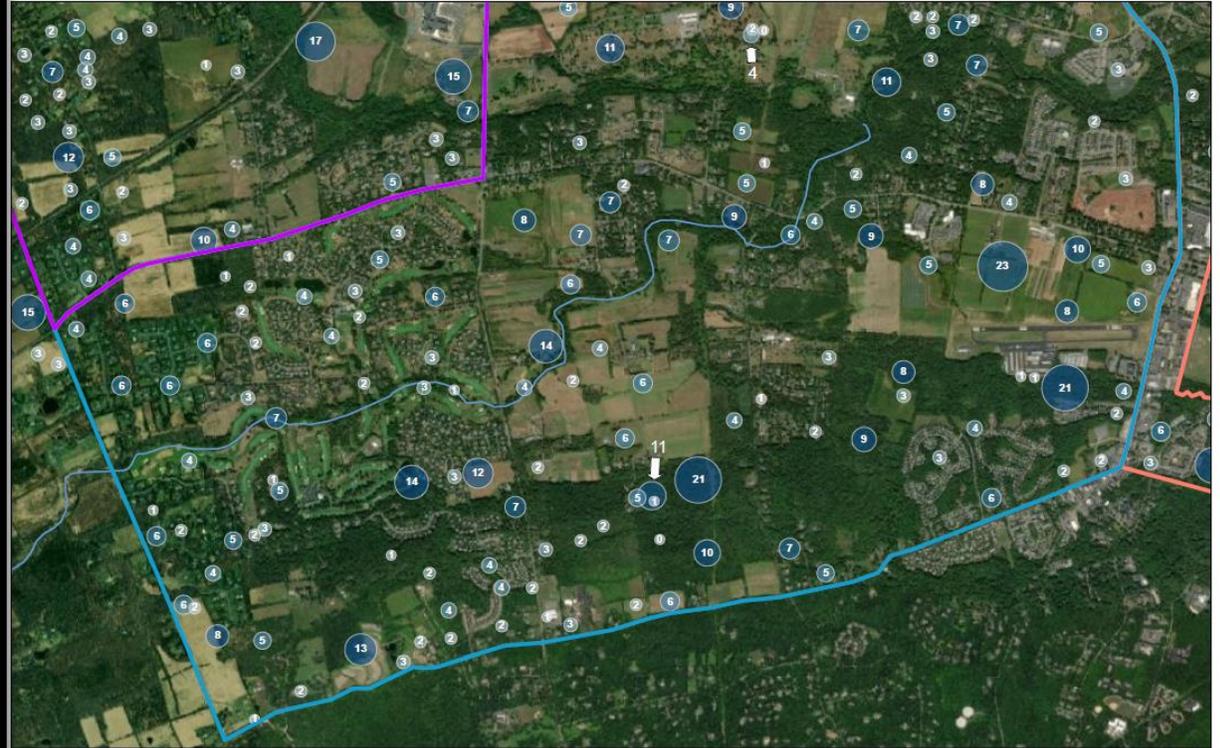
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Deer_Points_Montgomery_Twp_2021

- 1
- 2.5
- 5 Montgomery_Sections
- 7.5 East
- 10 Northwest
- Southwest
- USA Detailed Streams



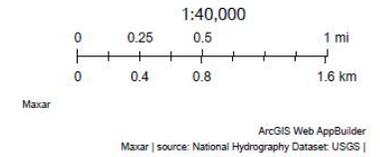
Southwest Section - South



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Deer_Points_Montgomery_Twp_2021

- 1
- 2.5
- 5 Montgomery_Sections
- 7.5 East
- 10 Northwest
- Southwest
- USA Detailed Streams



OBJECTID	Count of Points	GlobalID	Shape_Area	Shape_Length	Section	CoverageSet	Sum deer_confi	Minimum deer_confi	Maximum deer_confi	Mean deer_confi	Standard Deviation deer_confi	Area in Square Kilometers	Area Square Miles	Area Acres	Deer/Square Mile
1	174	240512da-886d-499e-af22-79d8a5bab79e	41436732.22	42330.15874	1	East	814	0	21	4.68	3.33	23.98	9.26	5925.21	87.92
2	170	b3d7d28e-c348-404f-9b50-117266875e68	50175278	31097.08655	3	Southwest	820	0	23	4.82	3.81	29.06	11.22	7181.72	73.07
3	135	db340061-72e5-4482-a0ae-0908a02dd5fb	53743807.01	35528.40159	2	Northwest	607	1	17	4.50	3.08	31.10	12.01	7684.88	50.55
					Total:		2241					84.14	32.49	20791.81	68.98

Deer Density- Montgomery Township NJ- Entire Township: 2,241 deer, 69 deer/mi²

East Section- 814 deer, 88 deer/mi² Northwest Section- 607 deer, 51 deer/mi² Southwest Section- 820 deer, 73 deer/mi²



Montgomery Municipal Program

Moving Forward

- Program has been a model program for others in the area (Hopewell, Hillsborough, etc.)
- Respected by NJDEP colleagues and counterparts
- Cost effective way to manage the herd
- Committee annually assesses the program including modifying permit numbers, improving the donation process, etc., which influences harvest rates
 - Population survey helps with this
- Even though NJDEP's Fish and Wildlife considers this program extremely successful and a model program for other local municipalities, there is always work to be done
- We can do more with more resources whether it be knowledge (i.e. gained from the updated township survey) or access to additional properties

Questions?