City of Portage Deer Survey

By: The Environmental Science Classes of Kalamazoo Christian High School

PORTAGE
A Natural Place to Move

Vehicle-Deer Accidents

2014 Stats for the 83 Michigan Counties

1- Oakland County with 1,750 crashes

15- Kalamazoo County with 837 crashes

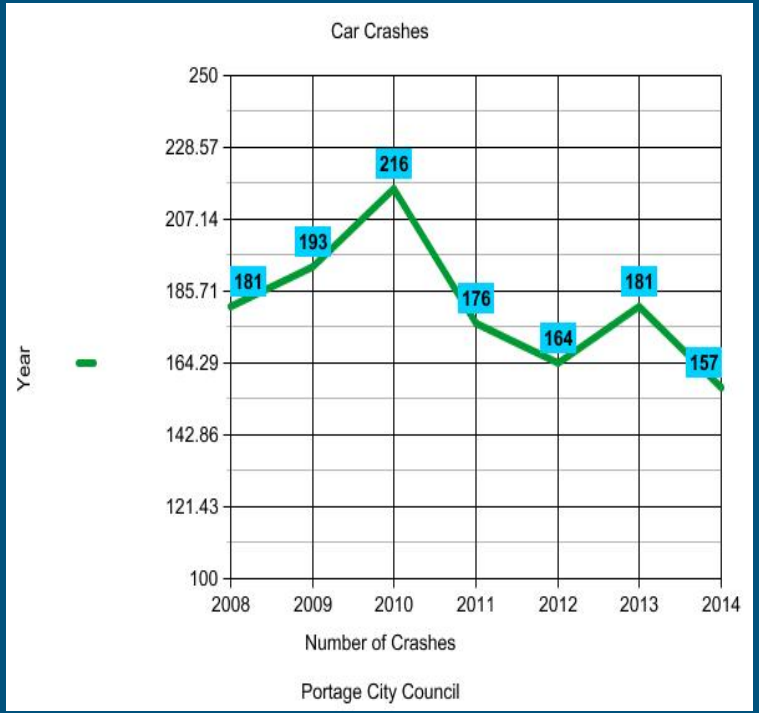
- We would expect accidents per vehicle to be higher in Oakland County, which has 4.9x the population

≈19% of the crashes in Kalamazoo County happen in Portage

This is only 6% of the land area

http://www.michigandeercrash.com/FallDeerRelease2015.pdf

Car-Deer Accidents in Portage



KCHS Survey Process in Conjunction with the Department of Natural Resources

1. Divided map of Portage into 8 equal areas and assigned each group to an area

2. Had each group map out the most efficient route with the goal of maximum coverage(within their area)

3. Each group drove their route and then recorded amount, location, and direction of tracks

4. Divided each group's area into eight equally sized smaller sections

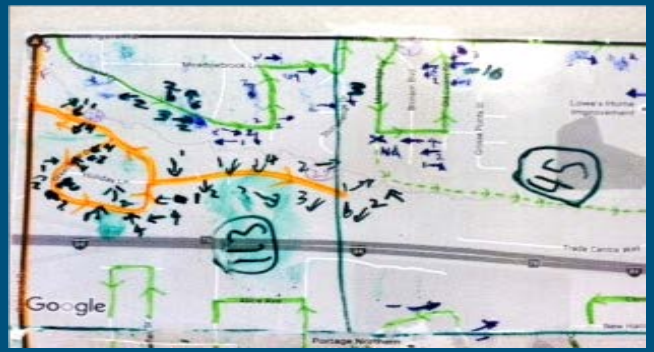
5. Calculated amount of deer per square mile and overall concentration in Portage

6. Identified what we interpreted to be main areas of conflict between high deer concentration and major roadways

Data & Analysis:

Total Deer Tracks Observed: 957

- Area 1: 60
- Area 2: 273
- Area 3: 145
- Area 4: 40
- Area 5: 131
- Area 6: 166
- Area 7: 57
- Area 8: 85



<u>Important Numbers:</u>

Miles driven and walked: 250 miles

Area observed: ≈29% of Portage

<u>Calculation of Area observed:</u>

(Miles Driven * Field of Vision)/ (Area of Portage - Uninhabitable Area)

Analysis & Interpretation:

Formula: 957 * 2.5 ≈ 2400

Estimate of deer herd: 2,400 deer

Miles driven and walked: 250 miles

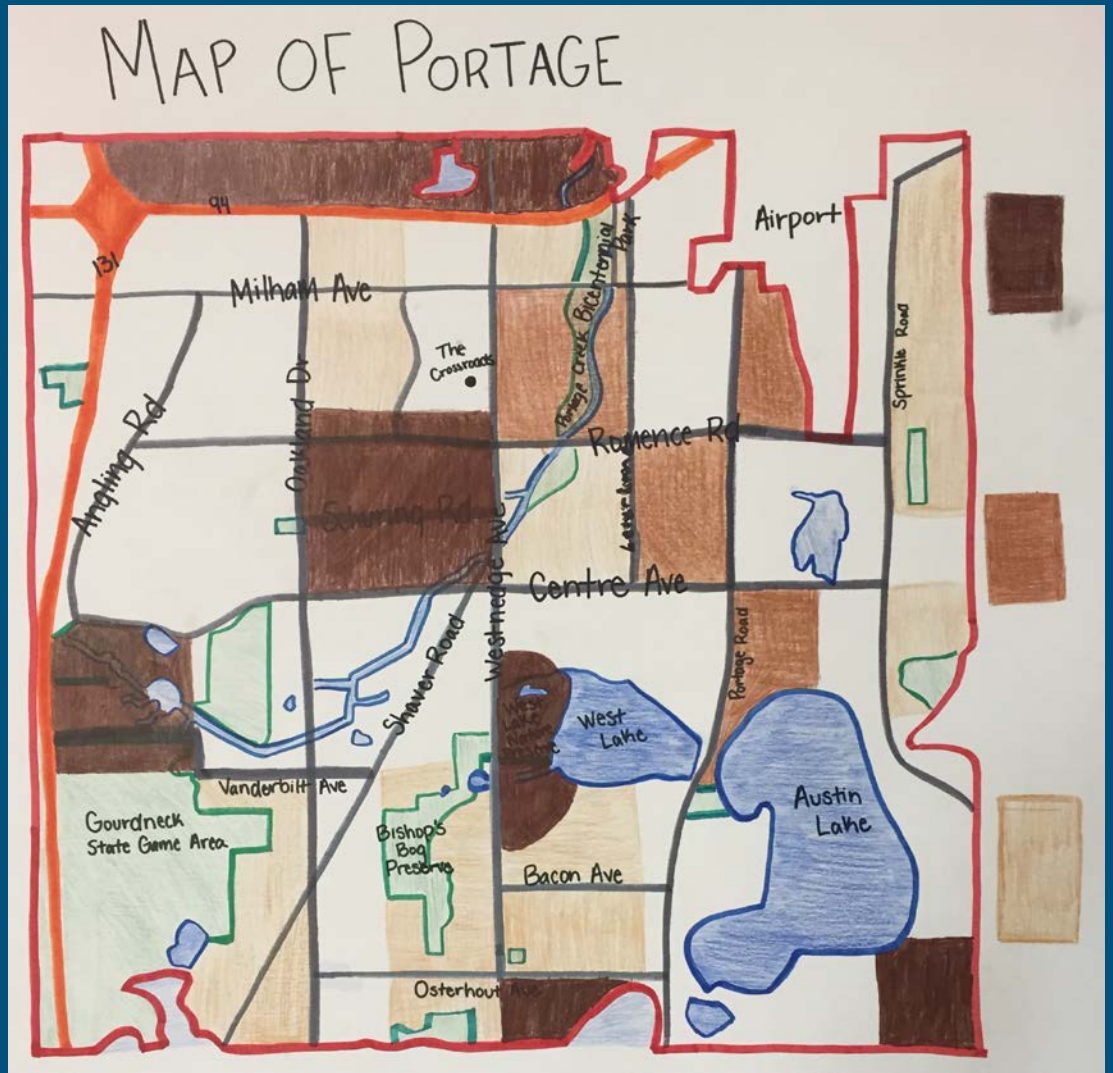
Area observed: ≈29% of Portage

<u>Why did we decide on a factor of 2.5?</u>

1-2 more deer per deer recorded

Areas of possible high concentrations of deer not accesible

Same deer recorded as different tracks



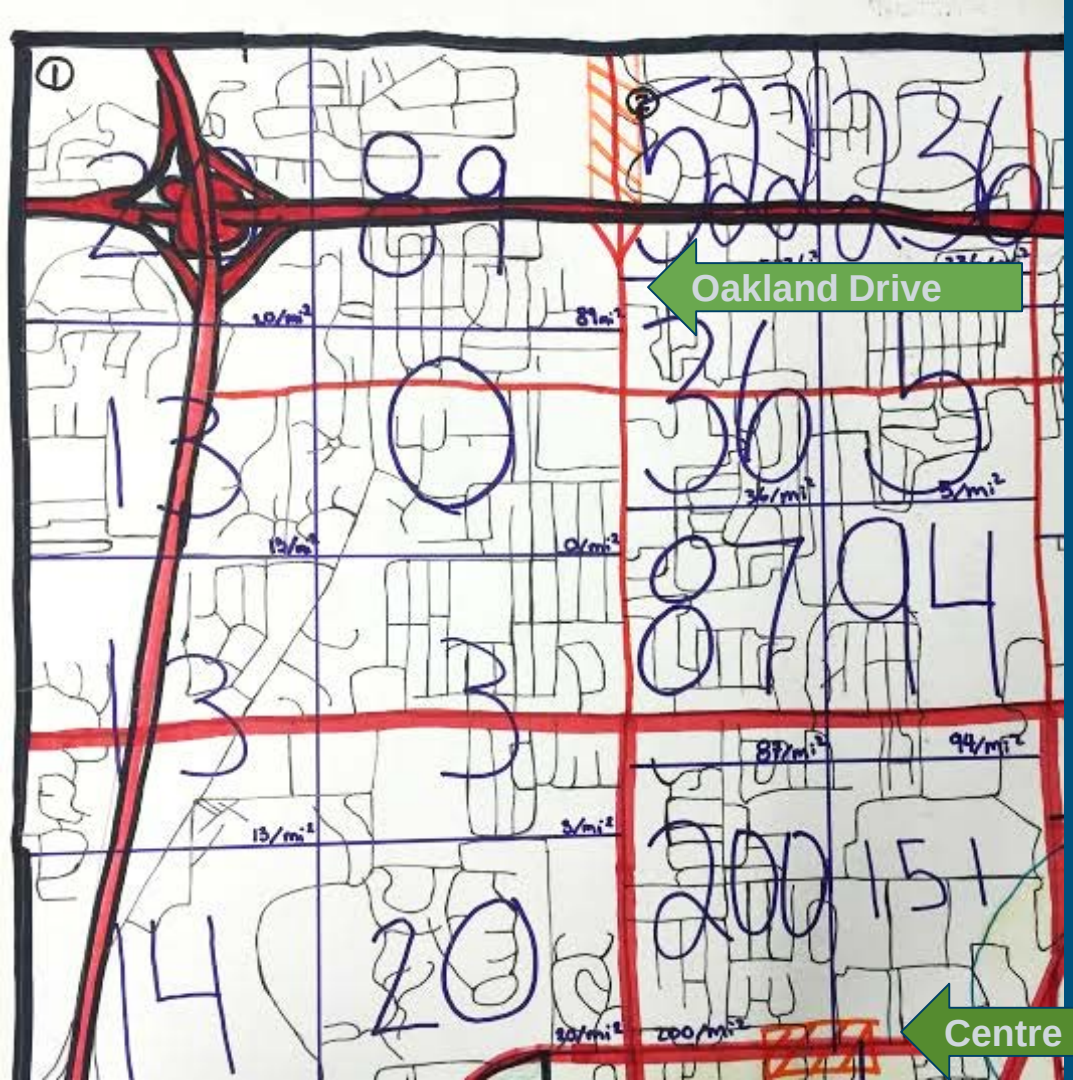
Map of Deer Density

- Dark Brown- Highest amount of deer concentration: 90+
- Brown- Average amount of deer concentration: 60-90
- Light Brown- Minimal deer concentration: 30-60
- White-optimal deer concentration: 0-30

Main Areas of Conflict

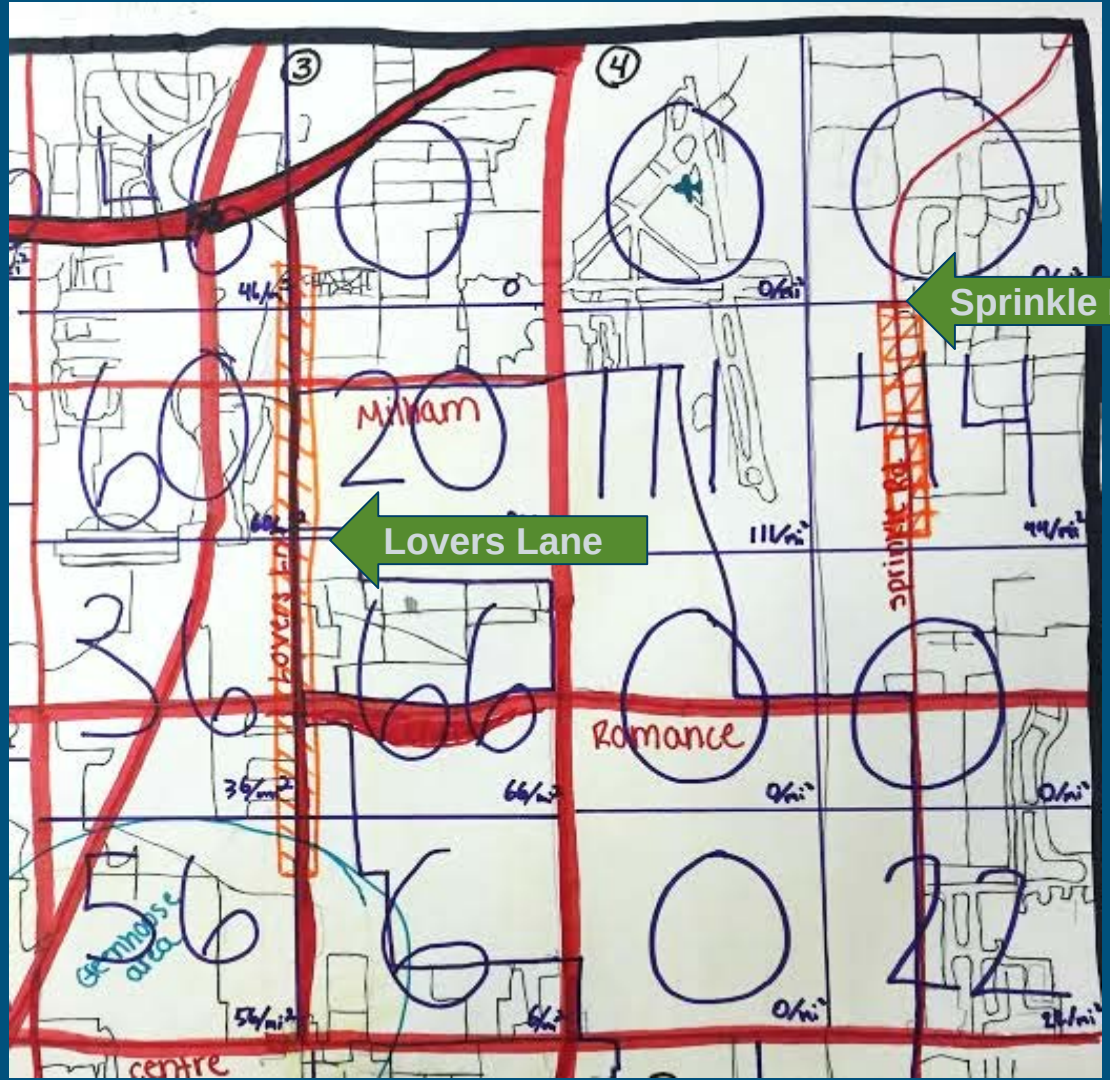
1. North of I-94 between US-131 and Lovers Lane
2. Southeast area of Austin Lake
3. West Lake Nature Preserve
4. Area from Vanderbilt to Centre and US-131 to curve in Vanderbilt
5. Area south of Osterhout, east of Westnedge extended and west of Lovers Ln
6. Area from Westnedge to Oakland and Centre to Crossroads Mall

-The numbers in each of the 64 equally divided sections on the following maps depict the estimated deer density utilizing the previously mentioned formula



Northwest Portage Areas of Conflict

- Oakland North of 131
- Centre between Oakland and Shaver Road

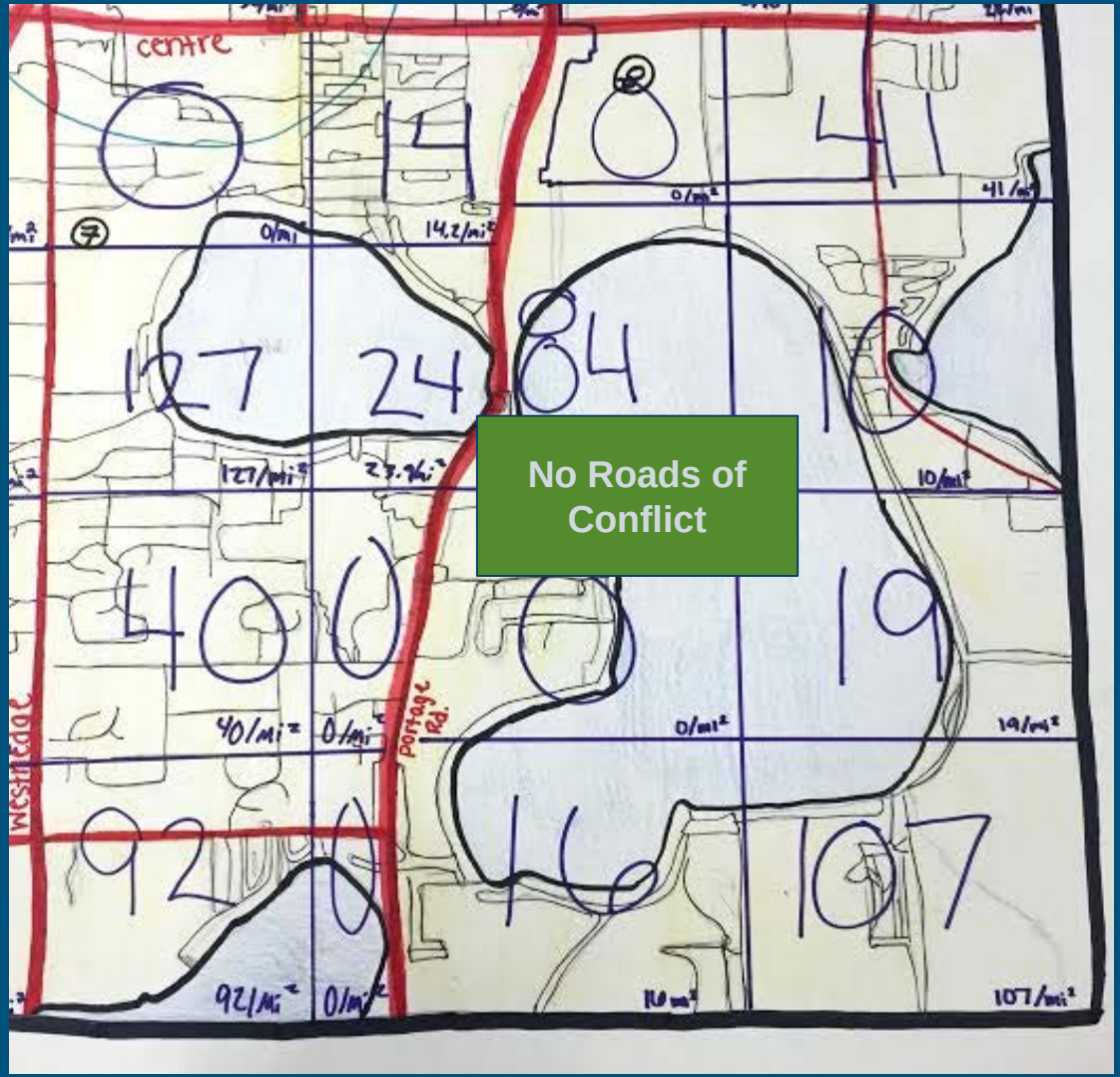


Northeast Portage Areas of Conflict

- The majority of Lovers Lane
- Sprinkle Road Southeast of the Airport

Southwest Portage Areas of Conflict

- Vanderbilt Ave
- Centre Ave between Oakland and 131
- In between Oakland and Westnedge



Southeast Portage

- No areas of conflict were identified because of not meeting certain criteria even though there were pockets of higher density.
- The lower speed-limits diminish the chance of accidents.

Interpretation

The goal of this survey was to scientifically gather data on deer distribution in the city of Portage.

But the raw data illustrating pockets of high densities of deer sign among neighborhoods and along busy sections of roads is indisputable.

2nd Hour

Thank You!

We are grateful for the opportunity to be able to use our science and our time to help the community of Portage.

7th Hour