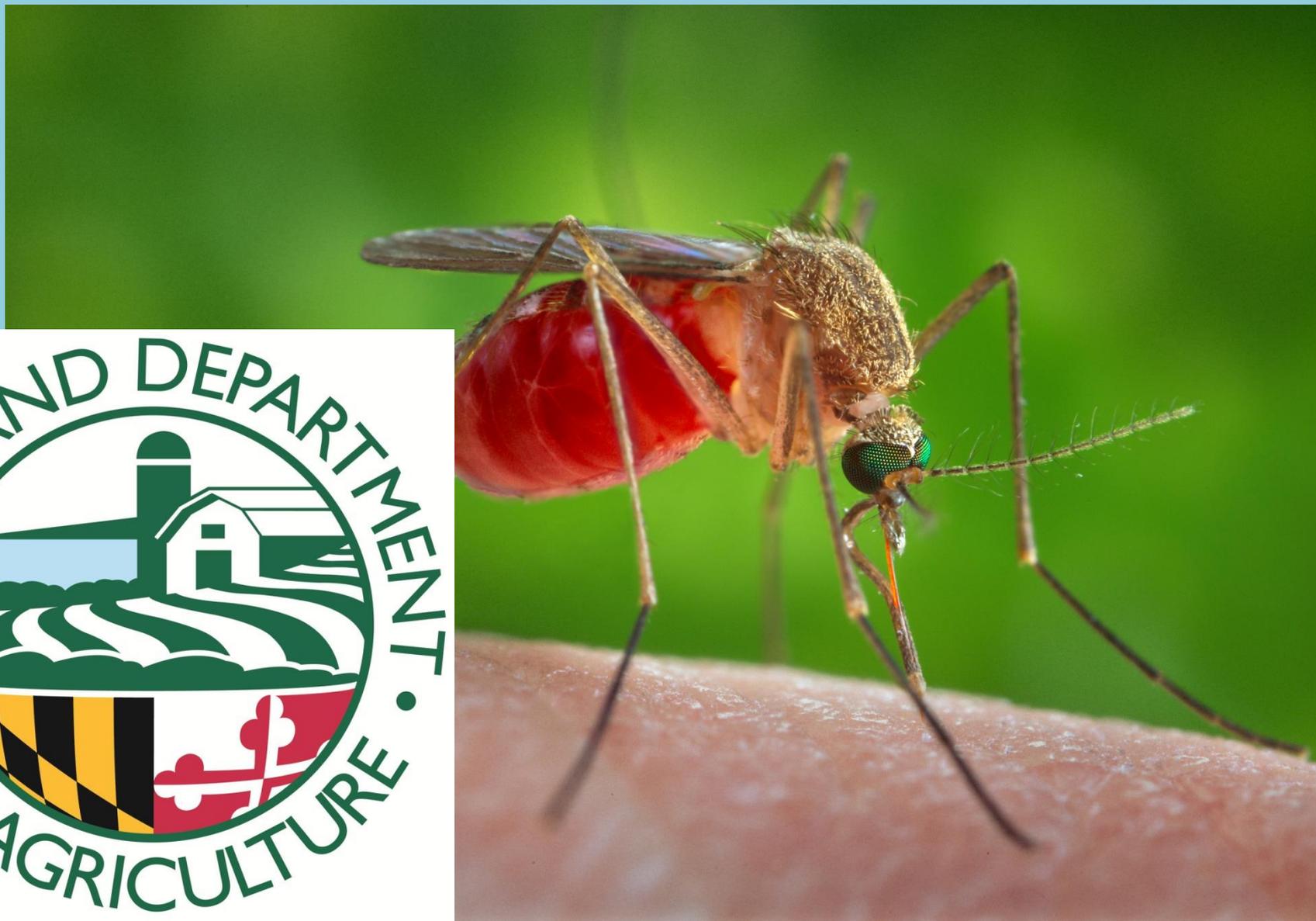
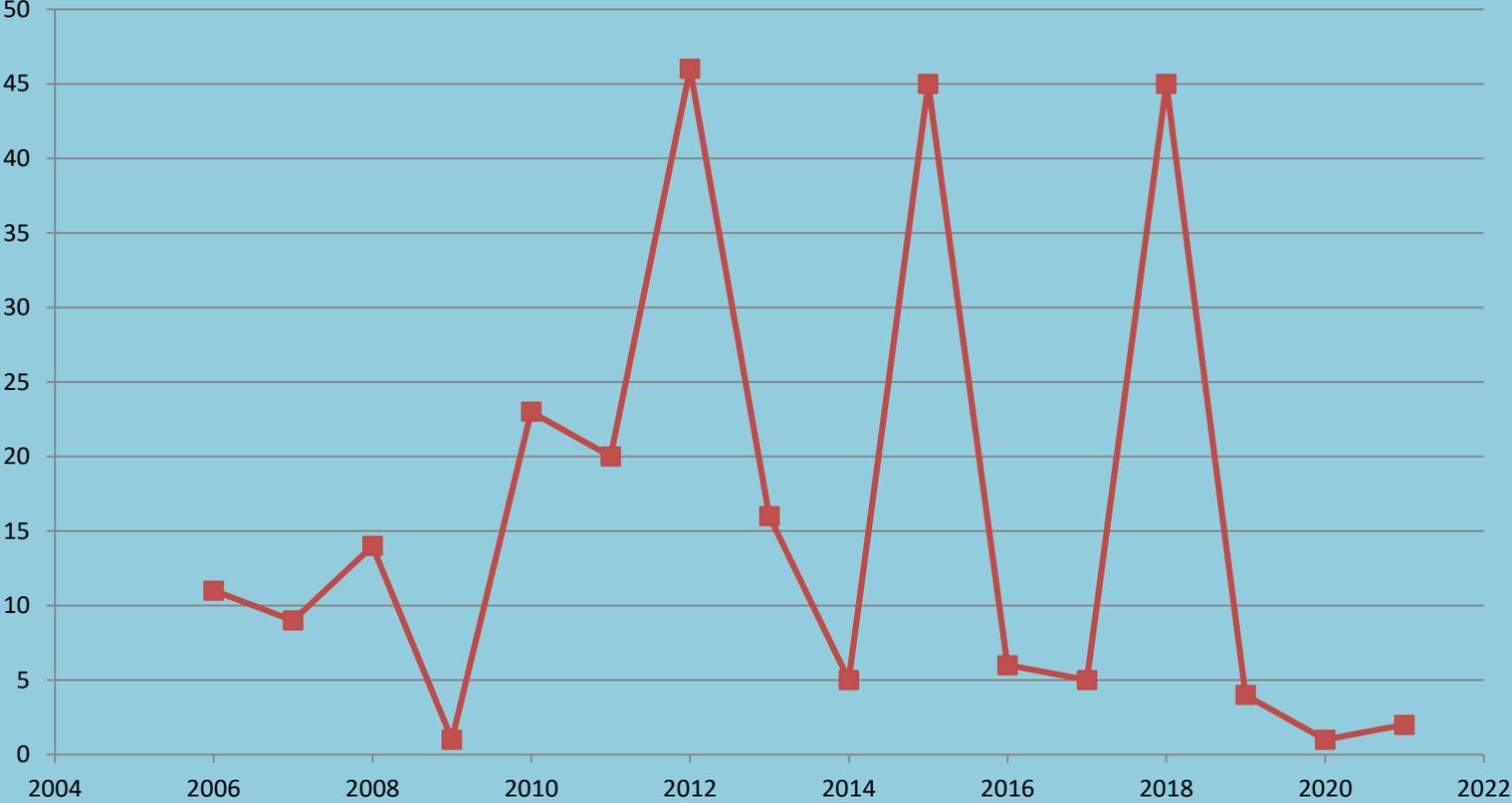


Maryland 2021

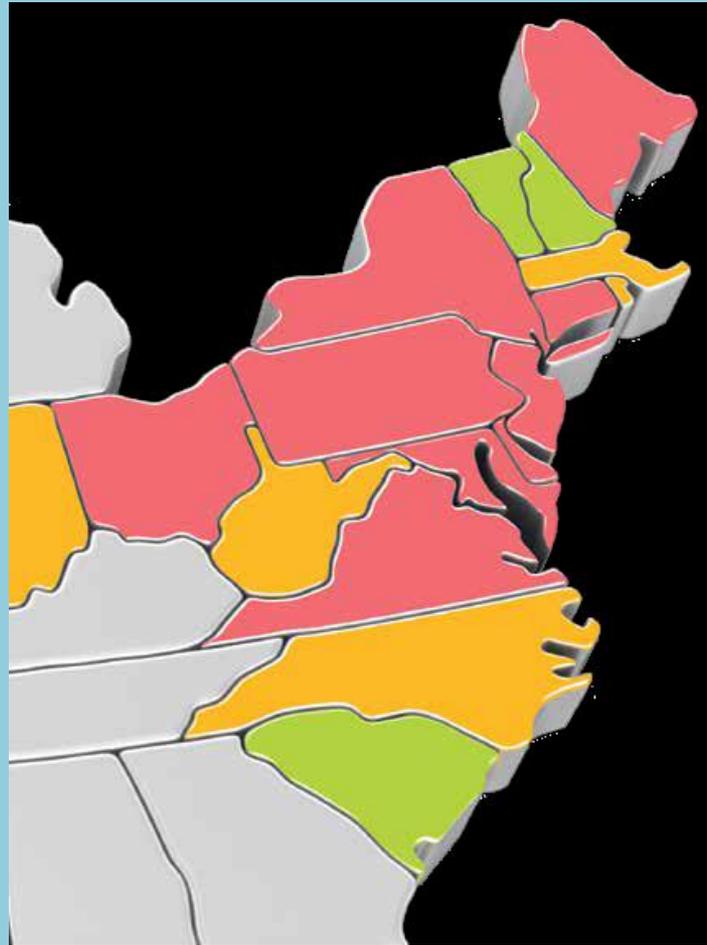


Human West Nile Virus Cases Per Year

Number of Cases per Year



Wing Beats, Summer 2020



What does that mean for 2022?

- We do not know what drives the cycle.
- My theory
 - 1 – bird immunity
 - Robins, house sparrows and house finches
 - Virus goes way up, bird survives
 - 2 - mosquitoes

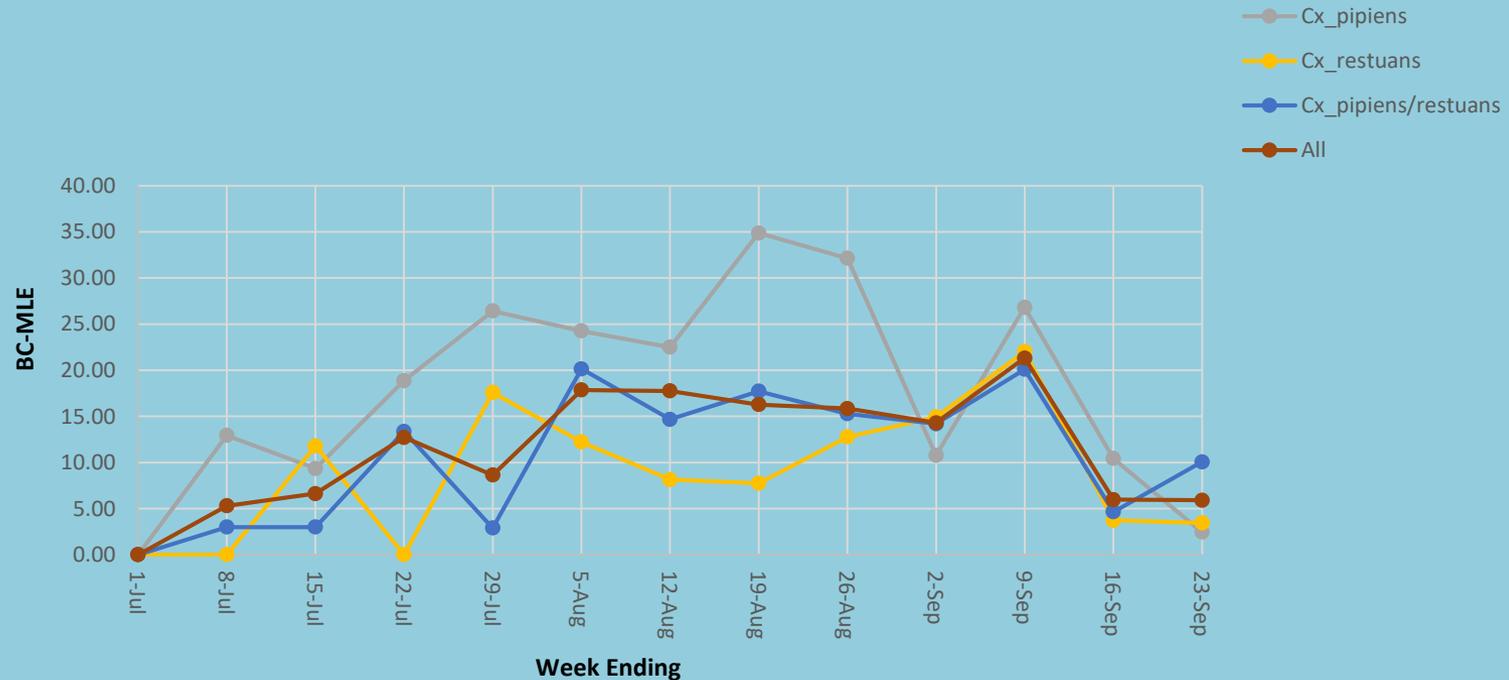
Gravid traps

- Prince George's County 16 to 24 per week
- Anne Arundel County 10 per week
- Baltimore County 4 per week
- Eastern shore
 - 5 counties, traps for 3 years

Gravid Traps

- Maximum Likelihood Estimation

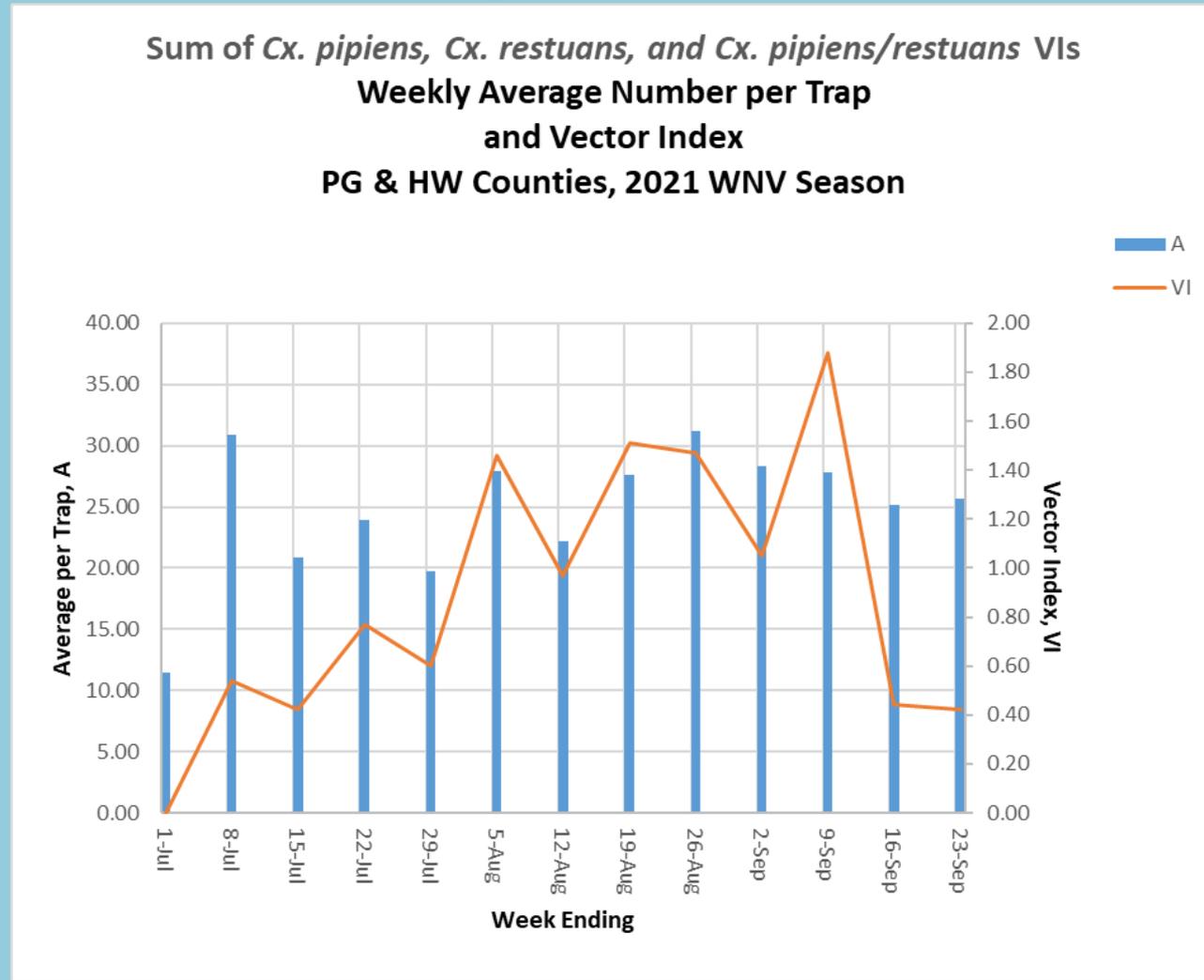
Bias-corrected Maximum Likelihood Estimation (BC-MLE)
PG & HW Counties, by Species, 2021 Season



– These numbers are about intermediary compared to historical information in different states

Gravid traps

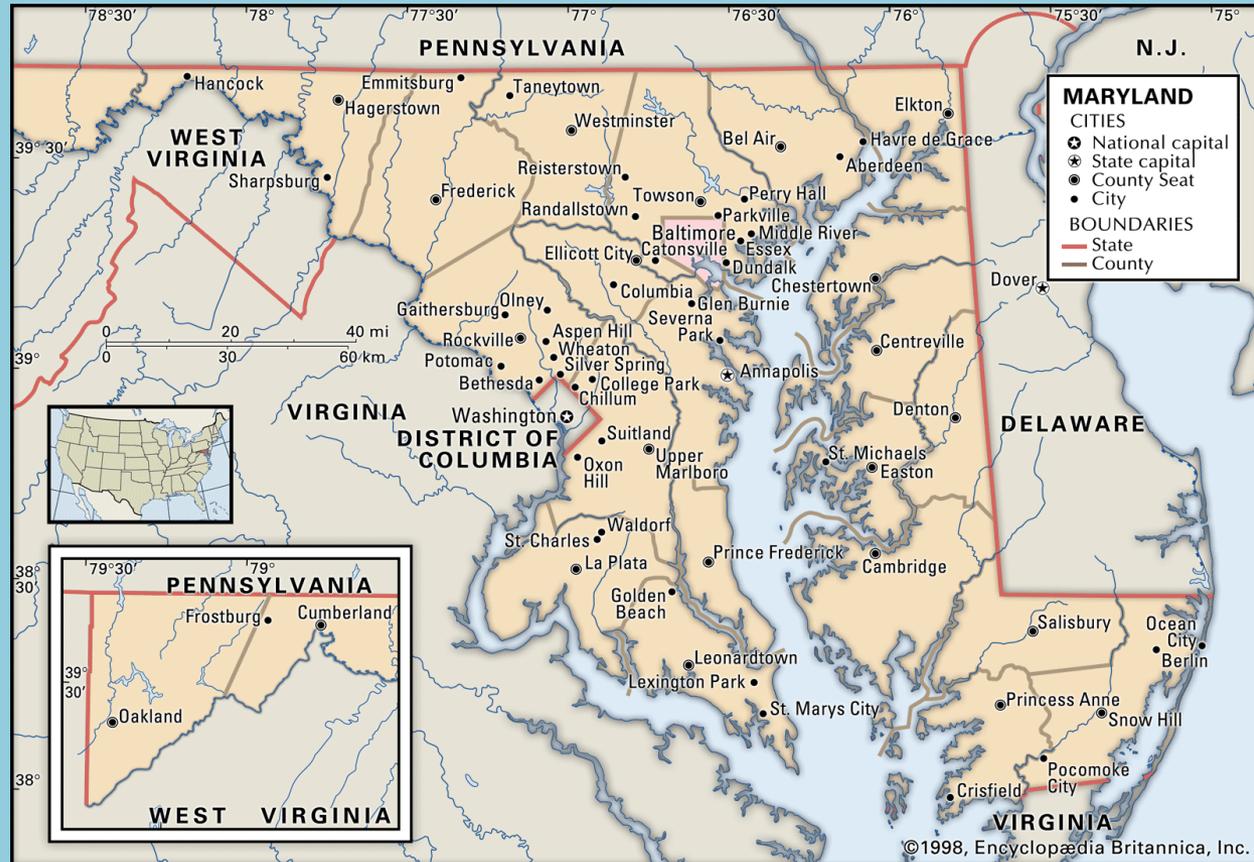
- Vector Index



We are intervening at the same time we collect information

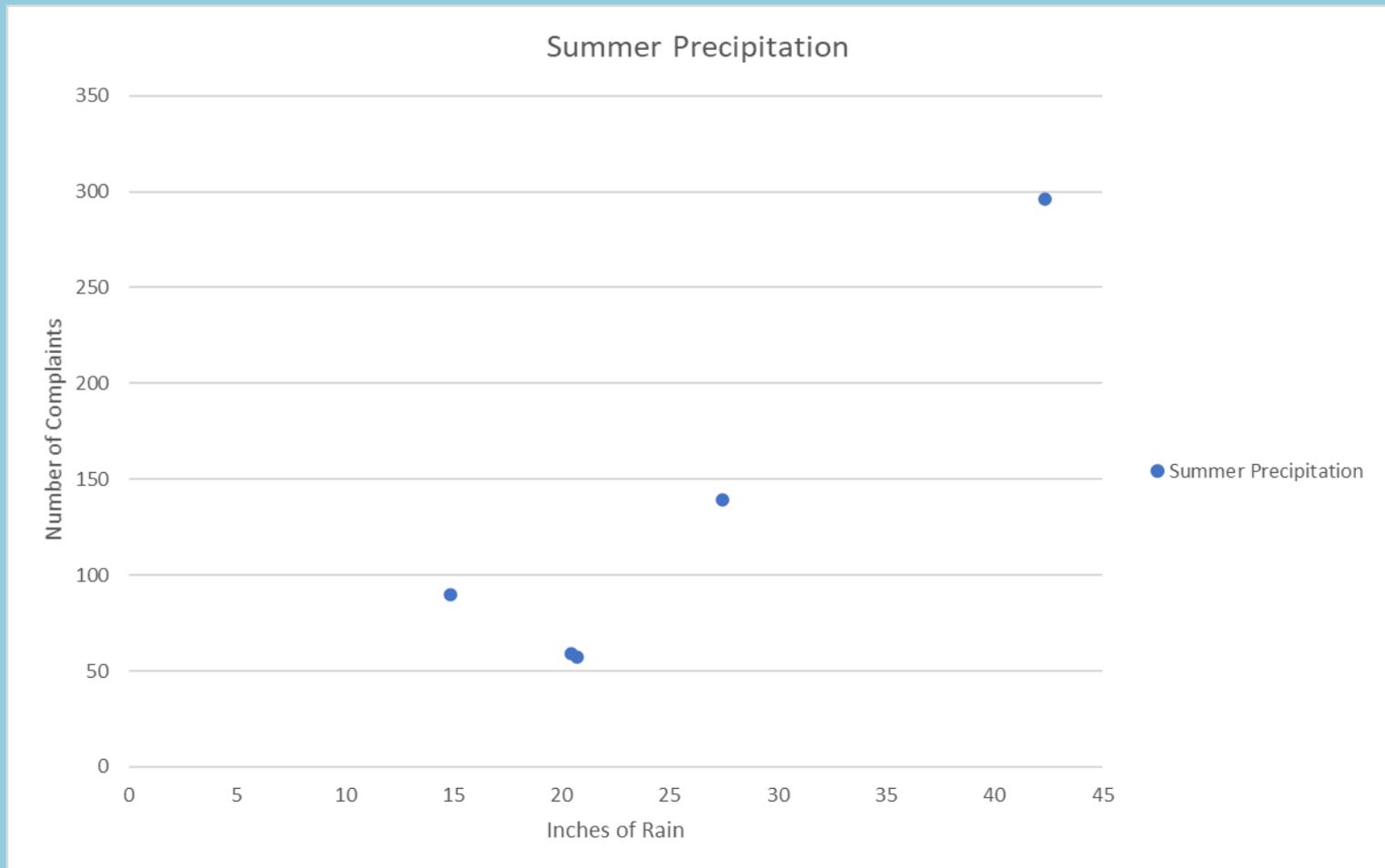
Database on dead crows

- Data from
 - Gaithersburg
 - Timonium
 - Newark DE

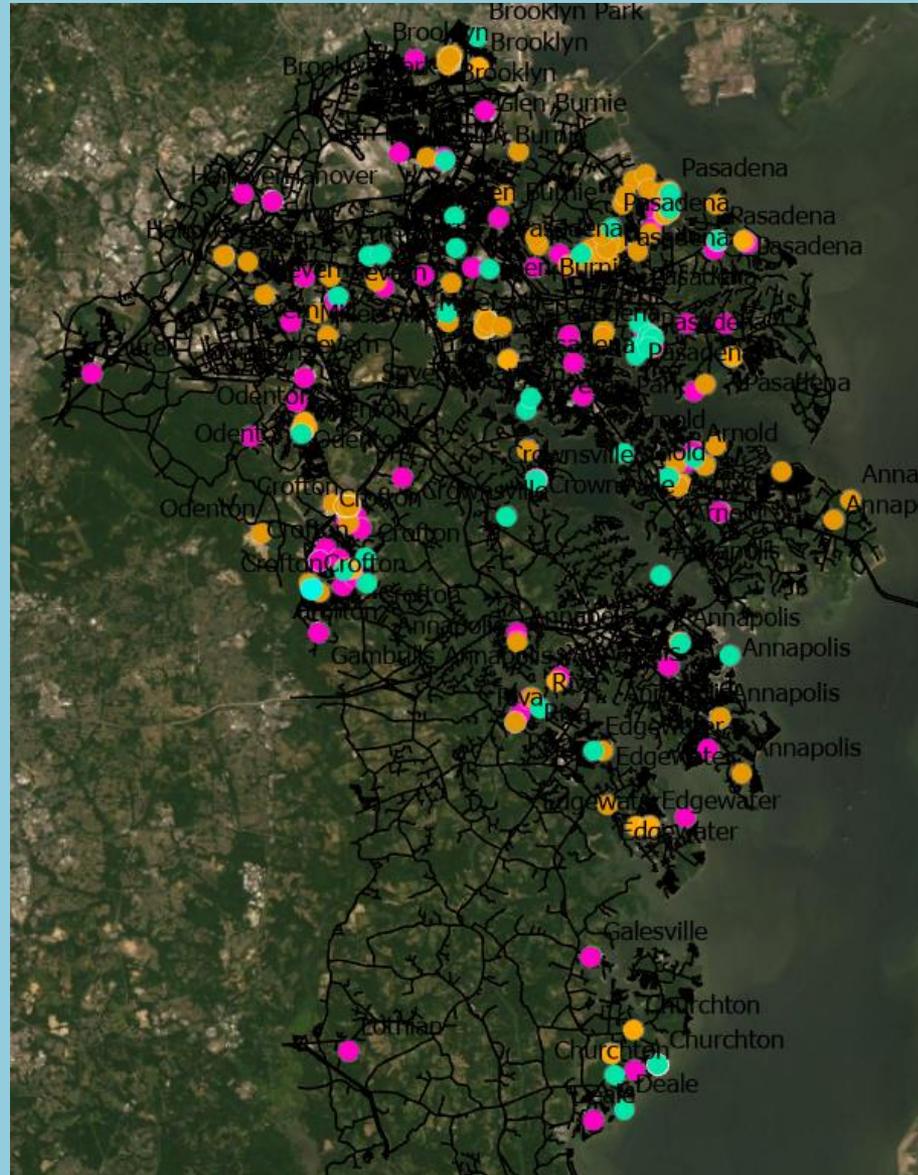


Rainfall

- Correlation of rainfall and complaints



Where are complaints coming from



Conclusions

- Peak in human morbidity every 3 years for 3 cycles (2012, 2015 & 2018)., but only 2 cases in 2021.
 - We can't compare gravid traps with previous years
- Complaints are correlated with rainfall
-

