

# Using Population and GIS Data Tools to Create Ideal Trap Sites

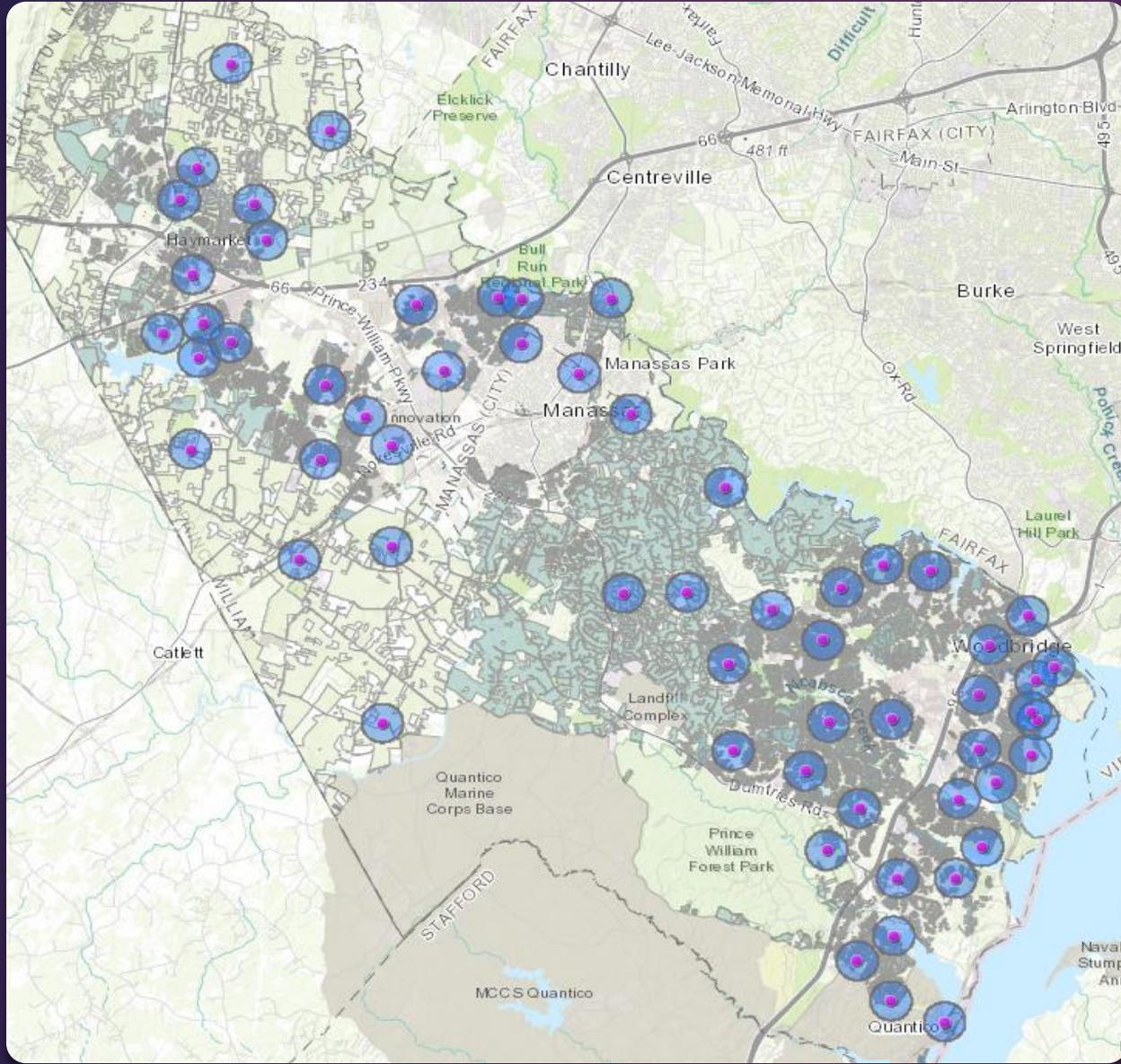
MADELINE MOORE

# Background

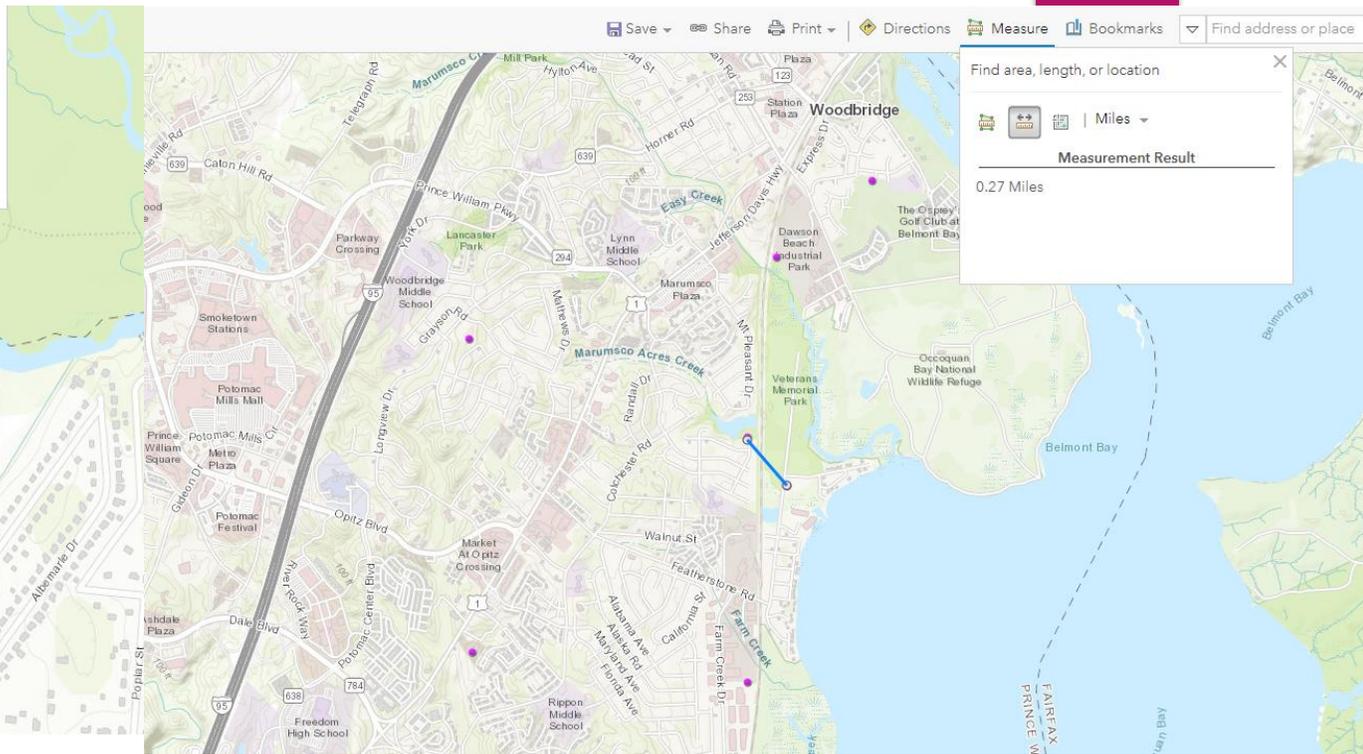
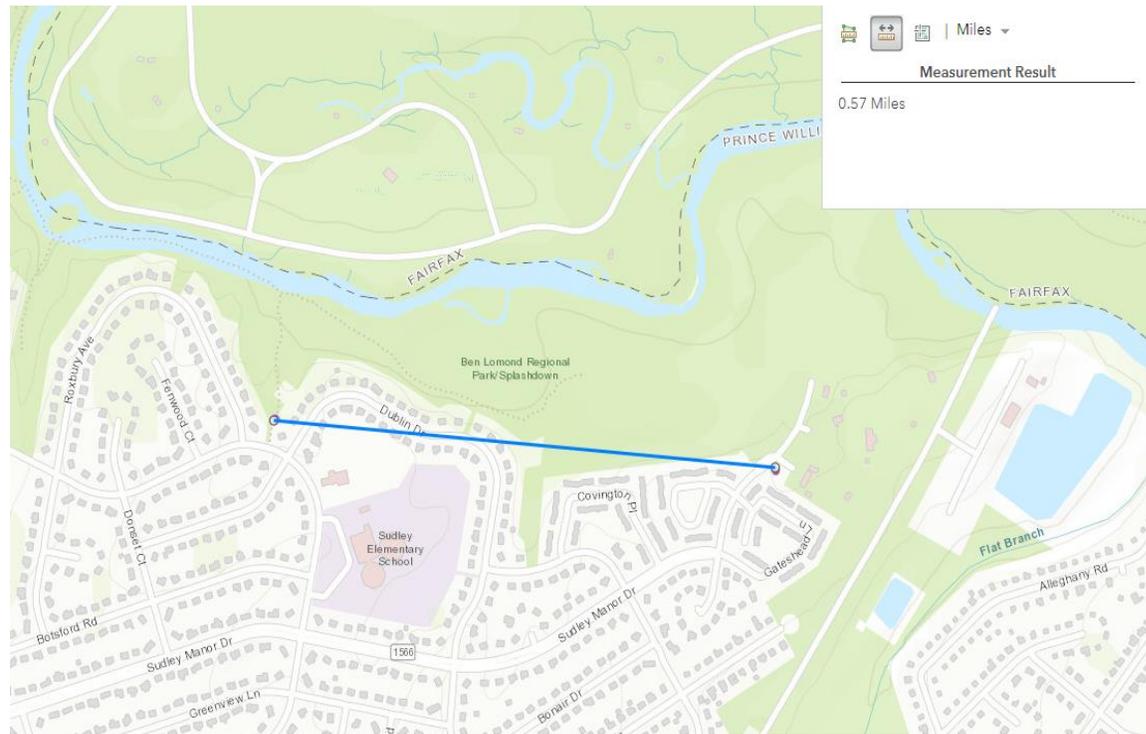
- ▶ Prince William County is home to 463,023 people and the population is continuing to grow at a rate of about 1.72% each year
- ▶ Currently there are 61 total trap sites across the county that are used to monitor for West Nile Virus activity.
- ▶ These sites directly determine the areas that would be sprayed if there were a West Nile Positive Mosquito.
- ▶ The sites that we currently use have been in place for many years and are not currently being updated with the continually growing population across the county.

# GIS and population data to influence site locations

- ▶ In order to ensure we are servicing the growing county to the best of our ability with the available time and trapping materials we currently possess we should be re-evaluating the trap locations every few years.
- ▶ County citizens will be able to more visibly see the reasoning behind the placement of traps and spray blocks

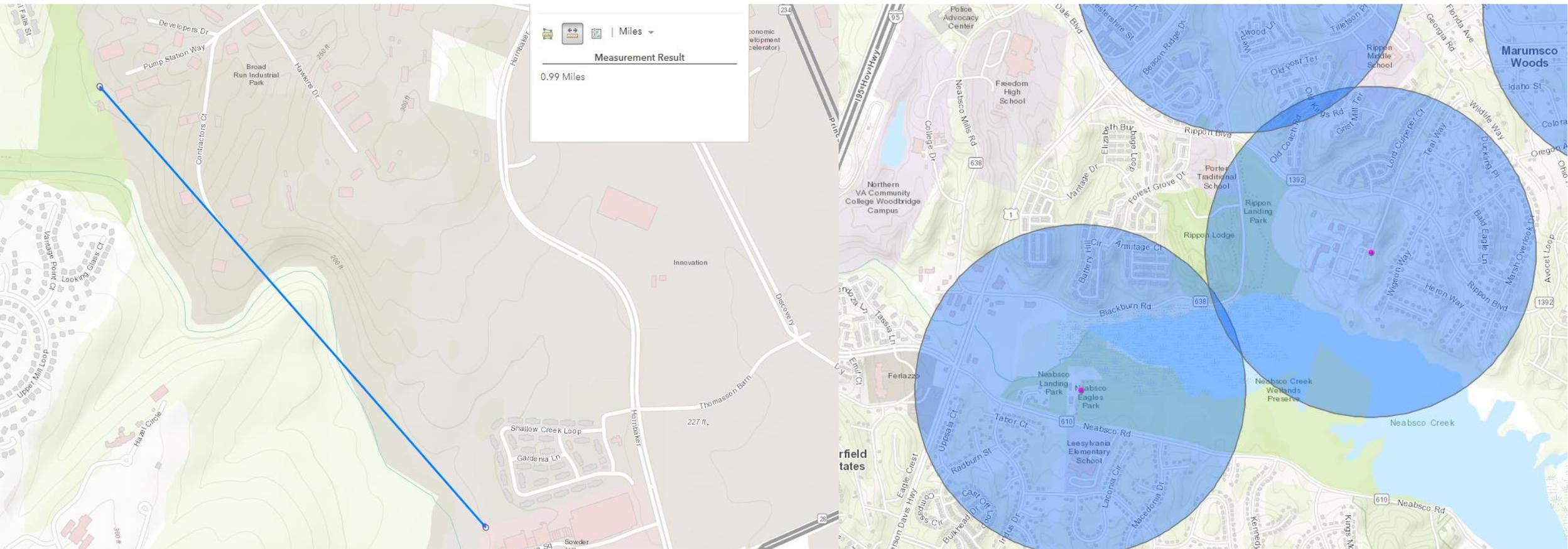


# Current Mosquito Trap Sites in PWC



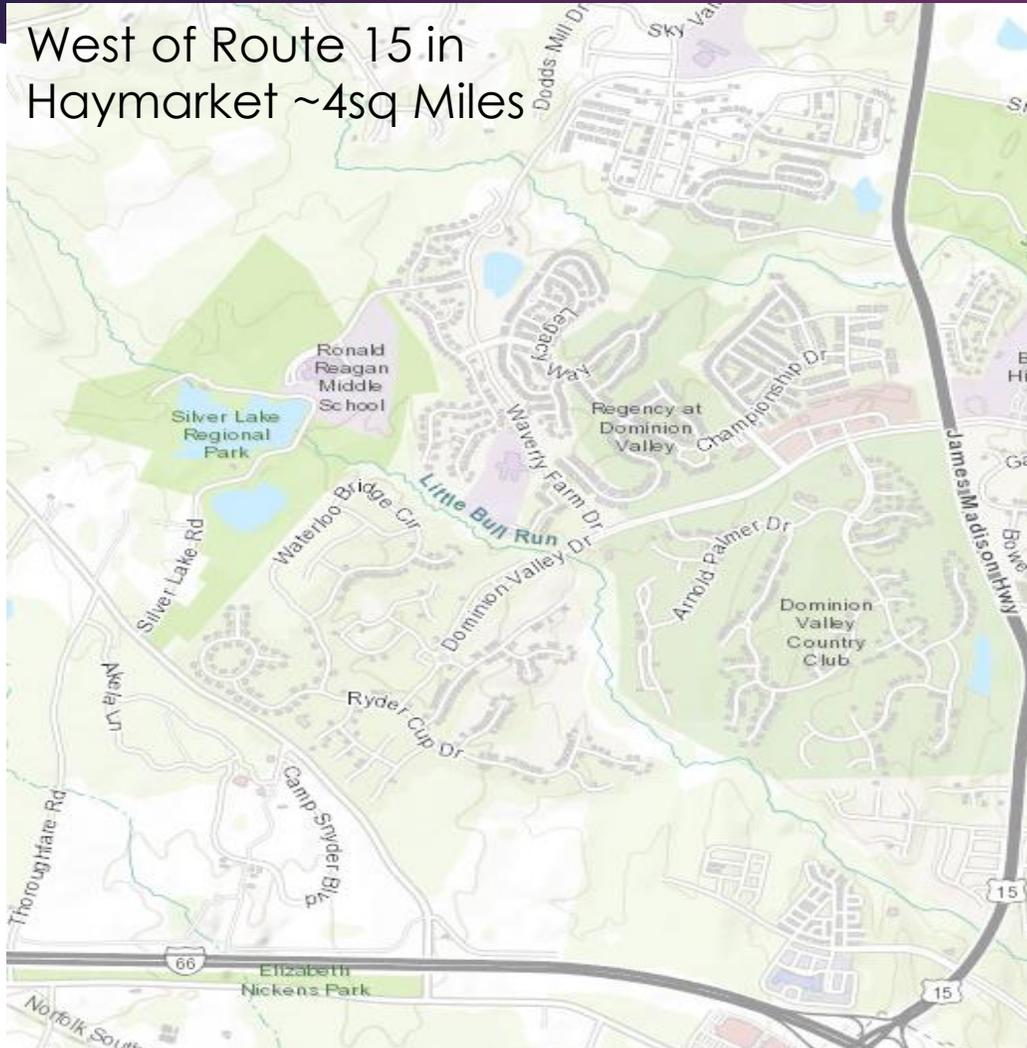
Sites overlap

# Locations not covering Population



# Areas largely populated and not monitored

West of Route 15 in Haymarket ~4sq Miles



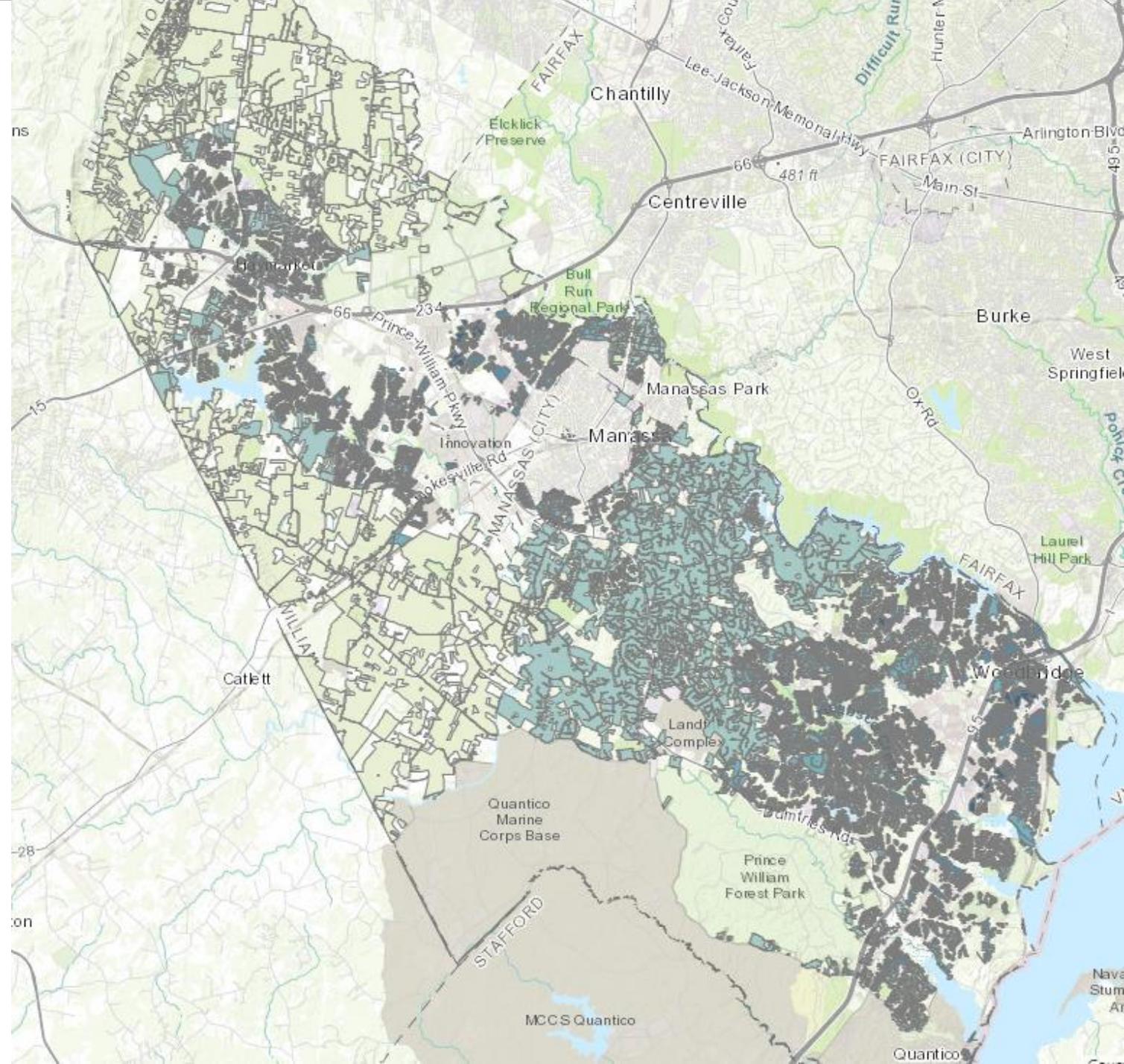
Minnieville/Smoketown area ~6sq Miles

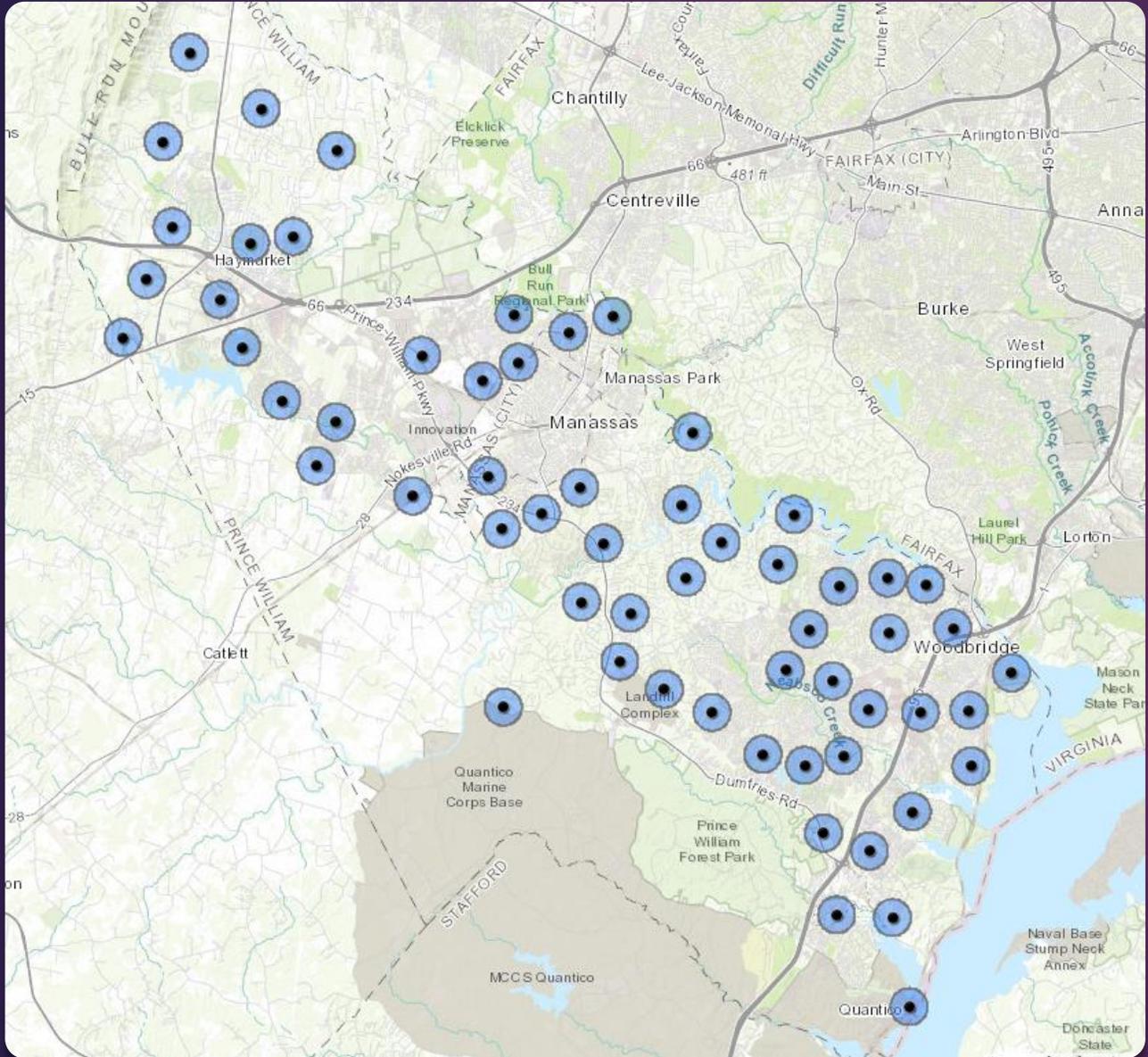


# Population, land use, and ArcPRO

Using GIS I created a map that shows exactly where the population of the county resides by taking out any area that wasn't a residence

This map can be updated as the land use and population data is updated every few years to ensure we are providing maximum available coverage to our citizens





Population,  
Land use and  
Housing data  
to randomize  
trap  
locations

Randomizing sites while keeping trap numbers similar in each area of the county

- ▶ East of 95: From 17 □ 15
- ▶ Central: From 22 □ 25
- ▶ West: From 19 □ 20

