



*Photo by Steve Droter, Chesapeake Bay Program: <https://flic.kr/p/2eMDazG>*

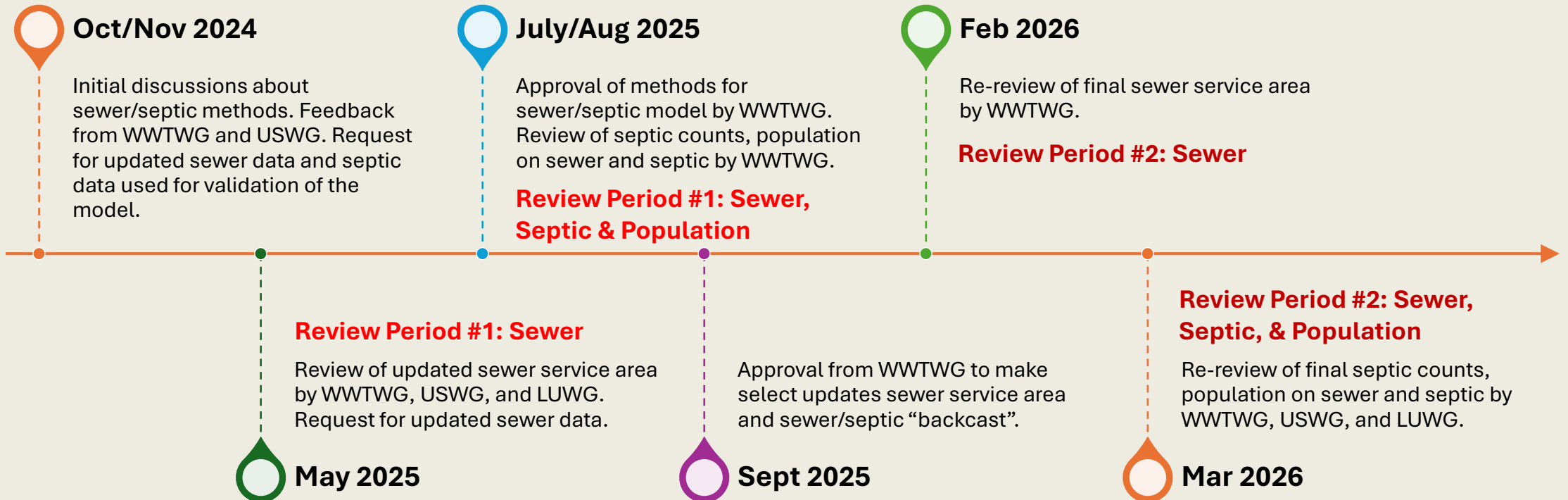
# Feedback from Final Review of the Phase 7 Sewer and Septic Data

Wastewater Treatment Workgroup Meeting

May 28, 2026

Jackie Pickford, USGS-CBPO

# Timeline & Review Periods



# Overview of Feedback

Review Period #2

See [Summary of Feedback](#) Document

Item 1: Some odd trends can be seen in certain counties' population values over time (e.g., Lynchburg City, VA).

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ADDRESSED

The original dataset relied on aggregated population estimates from SILVIS. These values produced inaccurate temporal trends when summarized at the county level.

**ORIGINAL**

| <b>name</b>        | <b>TotalPop20</b> | <b>TotalPop10</b> | <b>TotalPop00</b> | <b>TotalPop90</b> |
|--------------------|-------------------|-------------------|-------------------|-------------------|
| Lynchburg city, VA | 79,009            | 221,619           | 62,357            | 62,215            |

The updated dataset now uses Decennial Census values as county-level controls to ensure consistent and accurate population estimates across all years.

**FINAL**

| <b>name</b>        | <b>TotalPop20</b> | <b>TotalPop10</b> | <b>TotalPop00</b> | <b>TotalPop90</b> |
|--------------------|-------------------|-------------------|-------------------|-------------------|
| Lynchburg city, VA | 79,009            | 75,568            | 65,269            | 66,049            |

Item 2: Minor inconsistencies in counts and population values due to an outdated summary unit file.

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**ADDRESSED**

Item 3: Discrepancies between local septic system counts and modeled septic system counts.

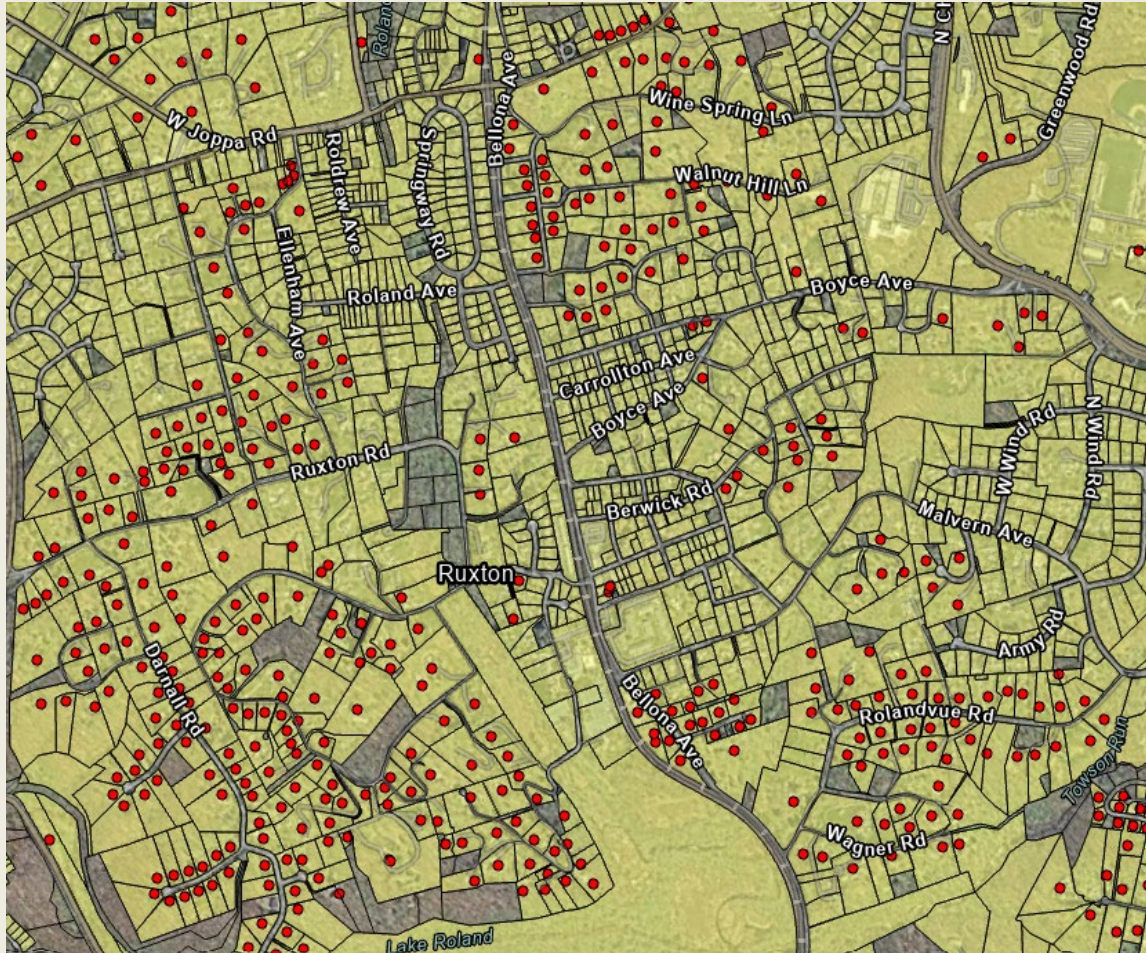
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**INVESTIGATED  
AND IDENTIFIED  
AS A DATA  
LIMITATION**



# Local data account for septic systems within the sewer service area (SSA)

Note: Septic counts are rounded.



Baltimore, MD

~6,510 of the 36,180 systems are within the SSA

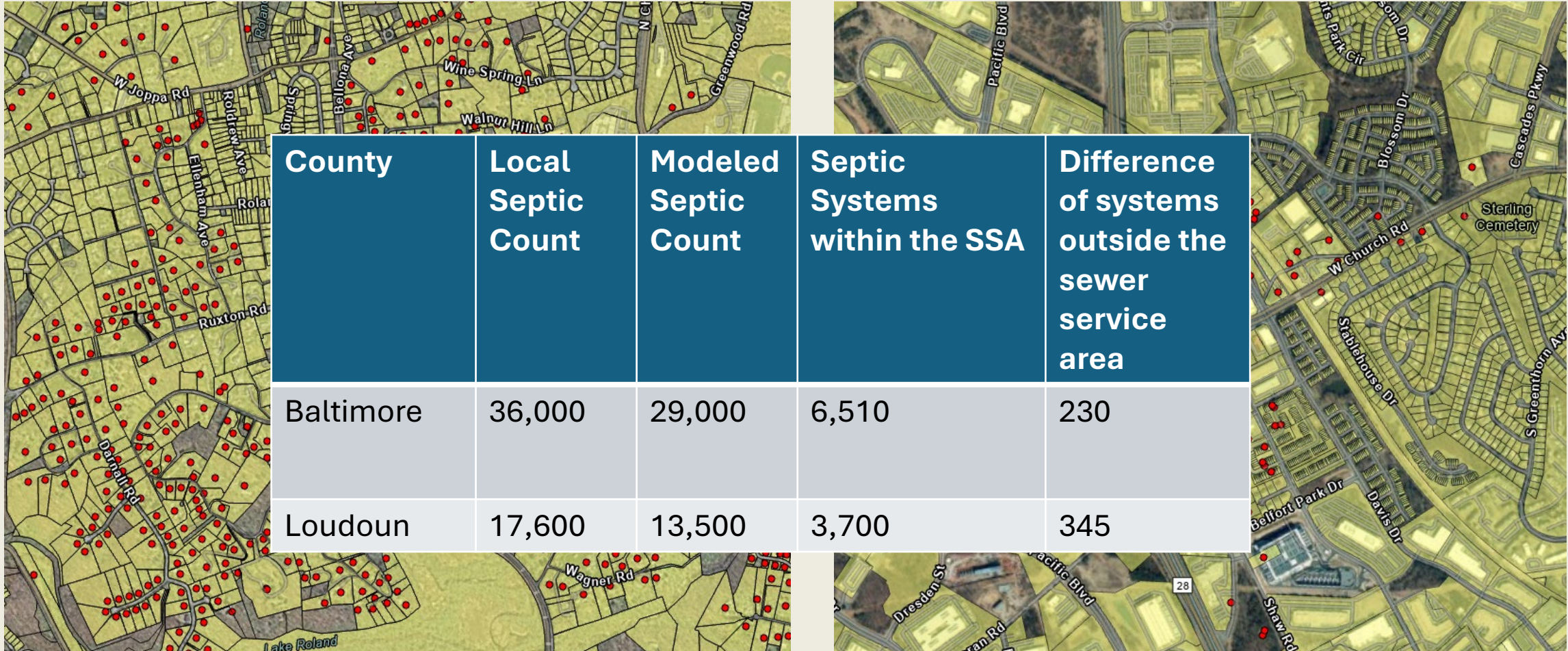
|   |                    |
|---|--------------------|
|  | County Septic Data |
|  | Sewer Service Area |

Loudoun County, VA

~3,700 of 17,598 systems are within the SSA



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# Local data maps multiple septic systems per parcel



*Note: Septic counts are rounded.*



Baltimore, MD

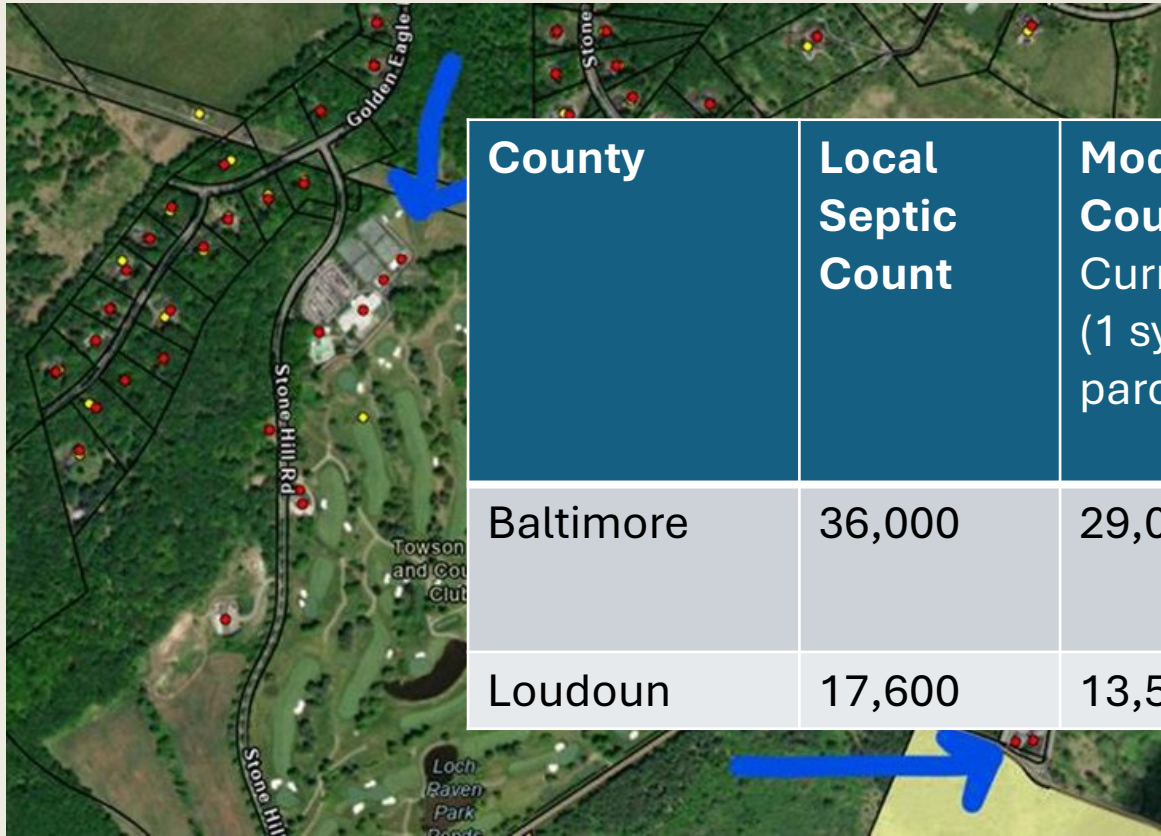


Loudoun County, VA

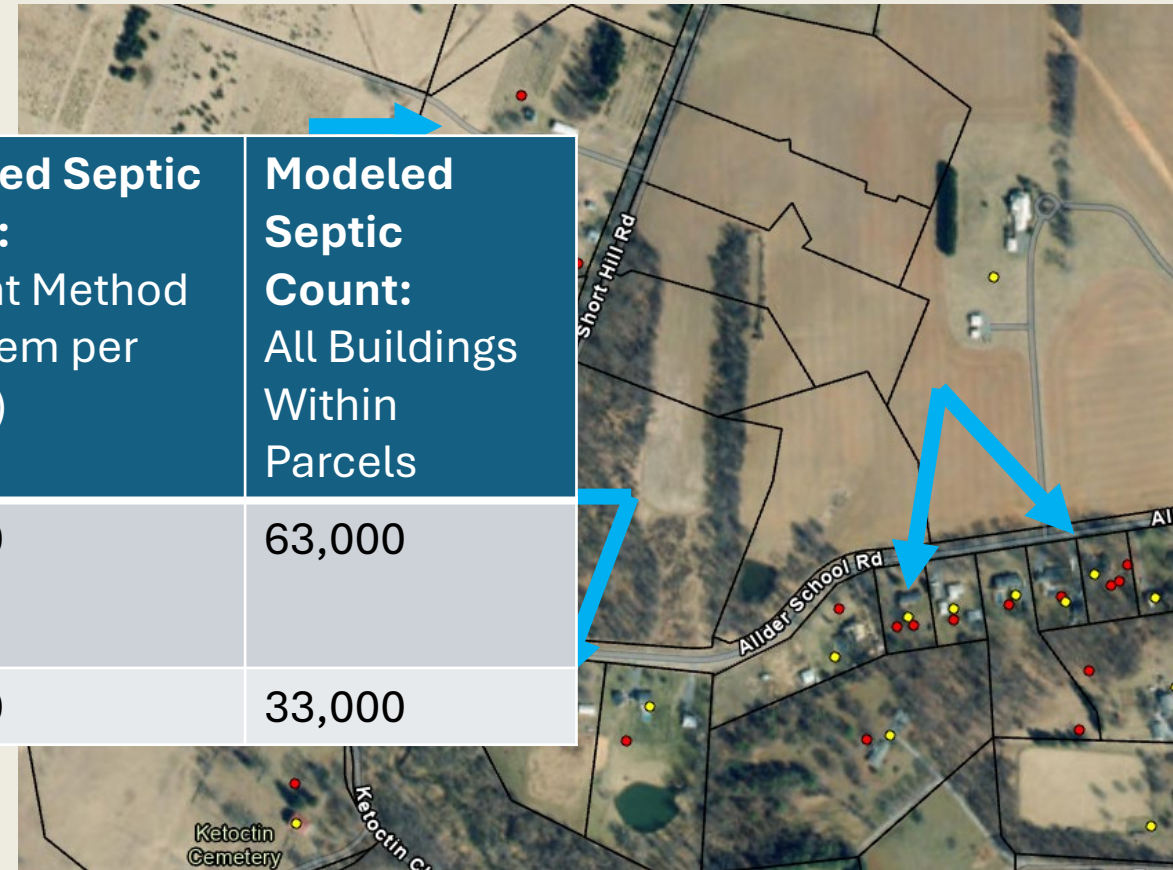
|   |                      |
|---|----------------------|
|  | County Data          |
|  | Phase 7 Modeled Data |

# Local data maps multiple septic systems per parcel

Note: Septic counts are rounded.





Baltimore, MD



Loudoun County, VA

| County    | Local Septic Count | Modeled Septic Count: Current Method (1 system per parcel) | Modeled Septic Count: All Buildings Within Parcels |
|-----------|--------------------|--|--|
| Baltimore | 36,000             | 29,000   | 63,000   |
| Loudoun   | 17,600             | 13,500   | 33,000   |

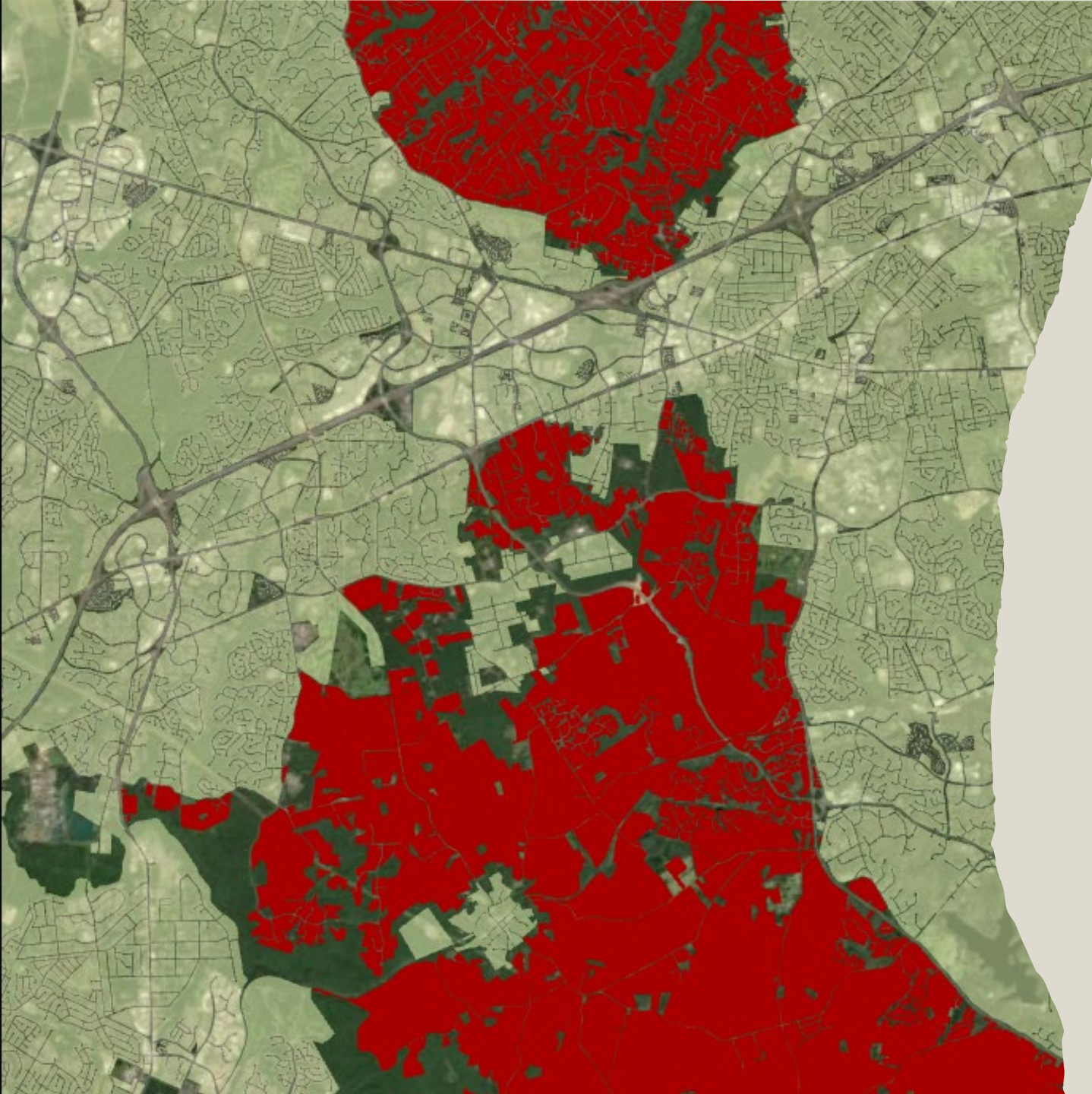
|   |                      |
|---|----------------------|
|  | County Data          |
|  | Phase 7 Modeled Data |

Item 4: Overcounting of septic population in  
blocks that have households on sewer and  
septic

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**ADDRESSED**




### ORIGINAL

- Population on sewer and septic systems was evenly distributed based on parcel counts
- Resulted in a slight overestimation of population on septic

### FINAL

- Used state-specific median household size to estimate population on septic
- Assigned remaining population to sewer service

 = sewer service area

 = septic footprint



Discussion/Questions?

# Acronyms

- CAST: Chesapeake Assessment Scenario Tool
- CBP: Chesapeake Bay Program
- CBLCM: Chesapeake Bay Land Change Model
- CBW: Chesapeake Bay Watershed
- LUWG: Land Use Workgroup
- P6: Phase 6 [Watershed Model]
- P7: Phase 7 [Watershed Model]
- SSA: Sewer Service Area
- USGS: United States Geological Survey
- USWG: Urban Stormwater Workgroup
- WWTWG: Wastewater Treatment Workgroup
- WTWG: Watershed Technical Workgroup