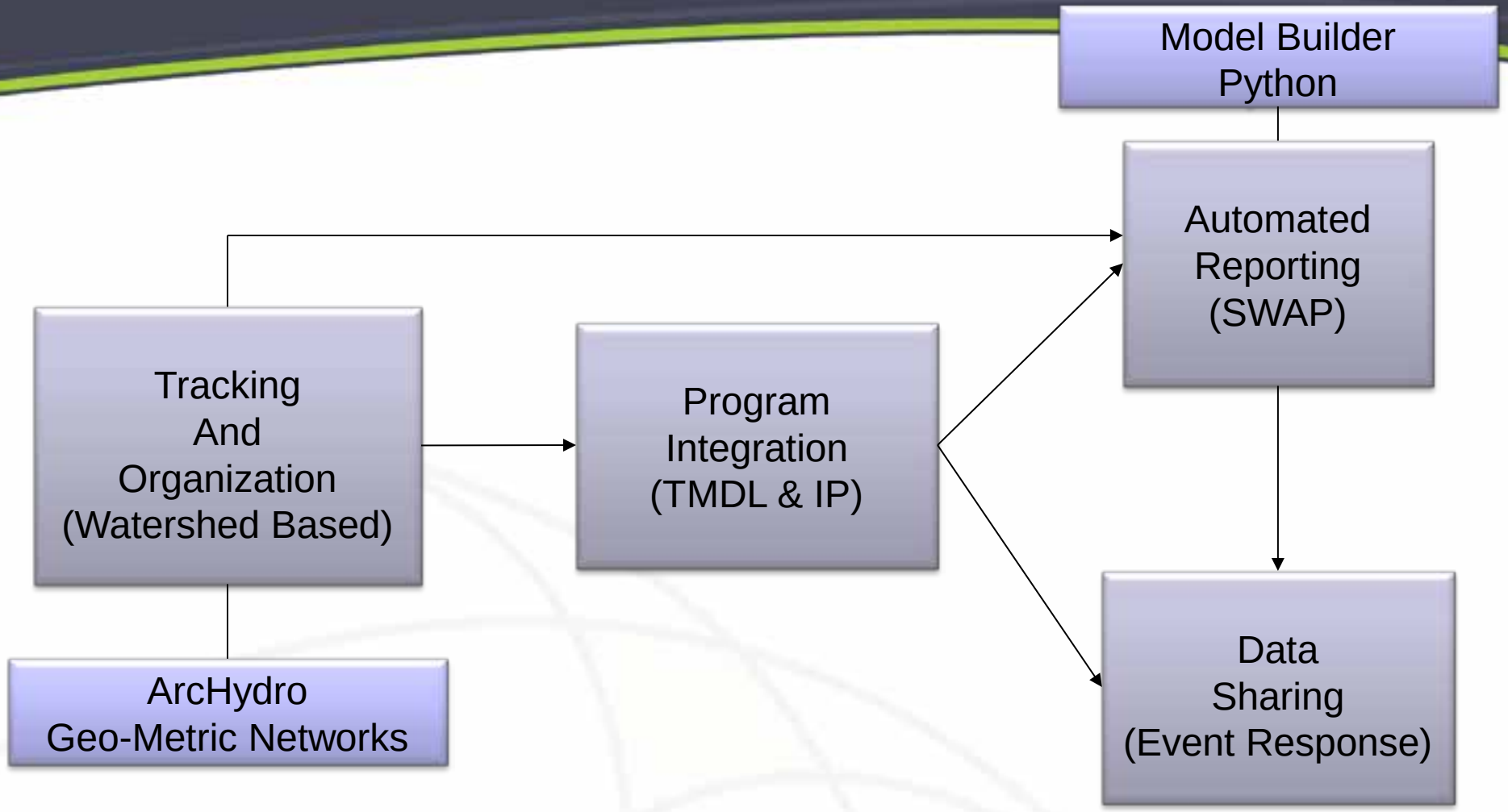
Water Quality and GIS: Results of GIS Supported Programs in Virginia

ESRI User Conference UC560 – San Diego, CA
July 10, 2014 – James Martin

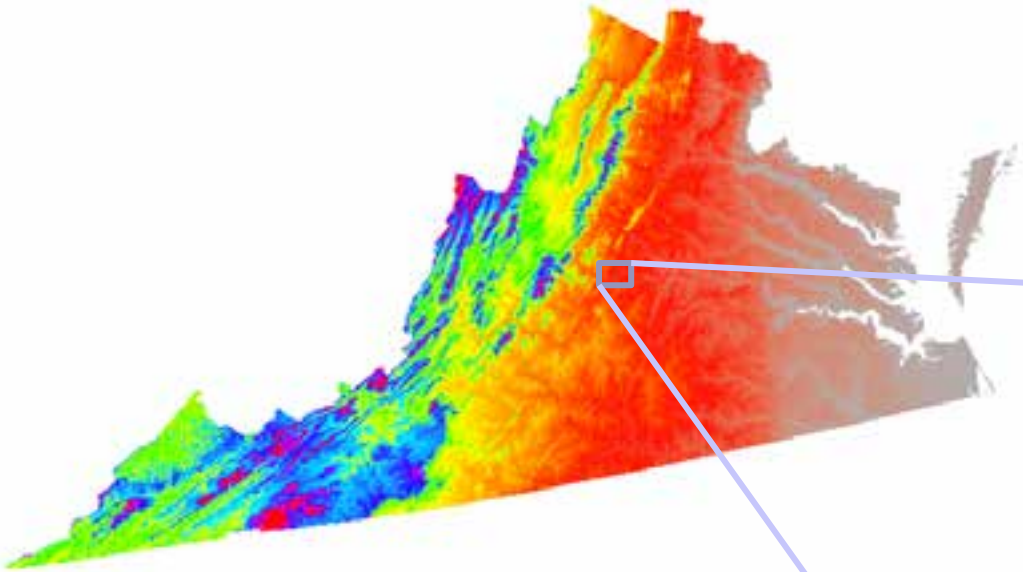
WorldView SOLUTIONS

GIS Water Quality Program Demands

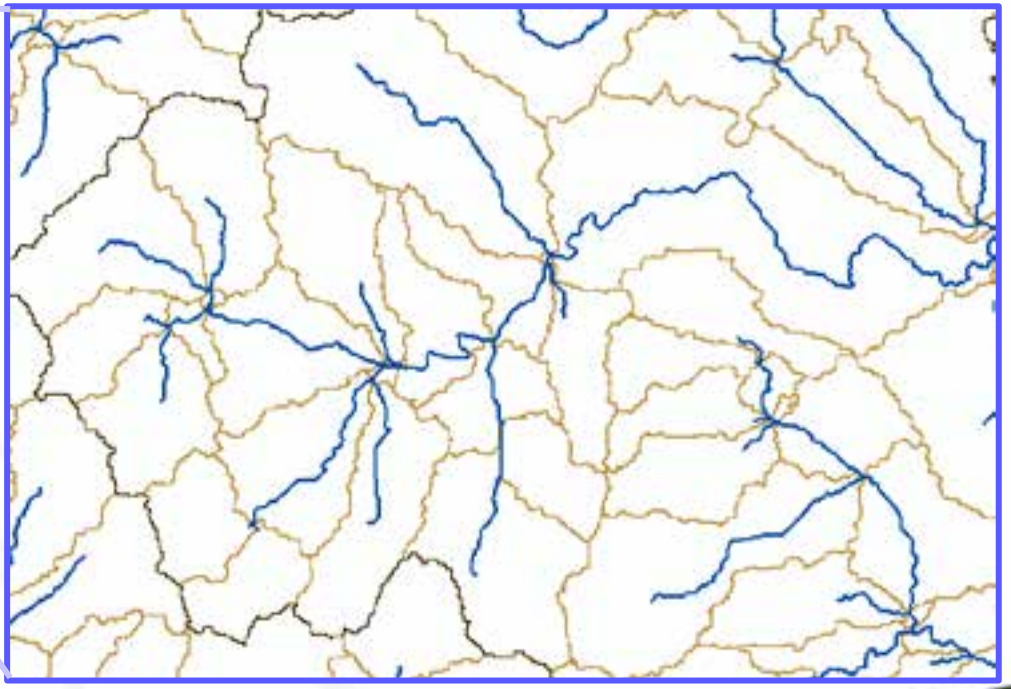


1. Events and Data Response

ArcHydro and DEM Integration

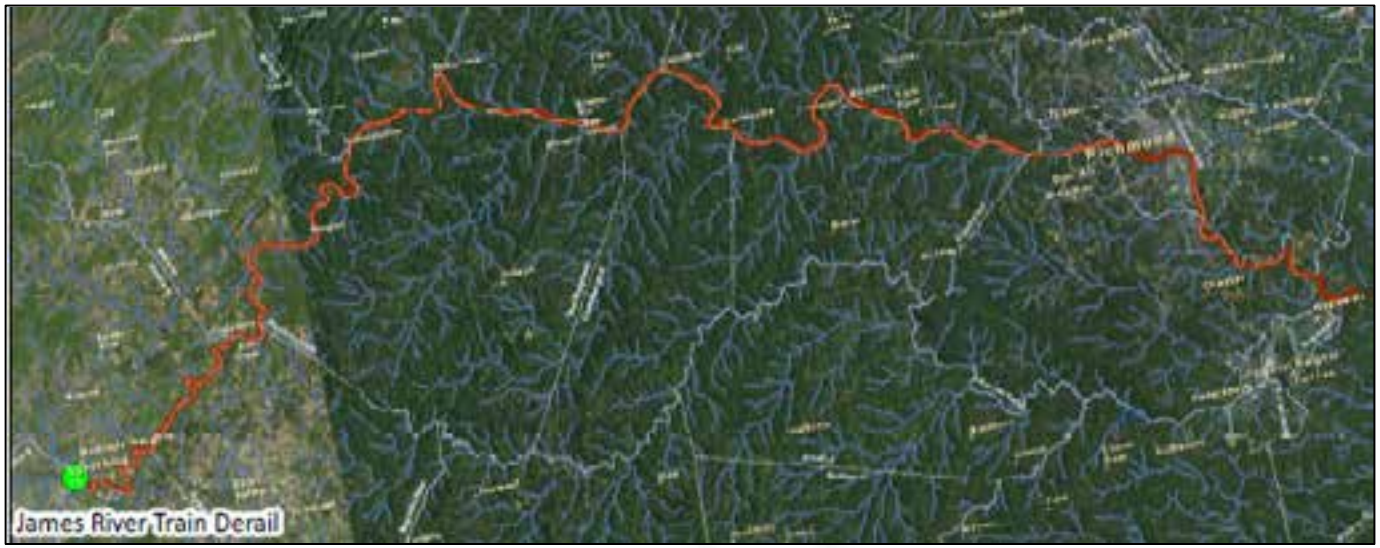


- Archydro uses dem (ditgital elevation model) to create data production and analysis mxd work environment.



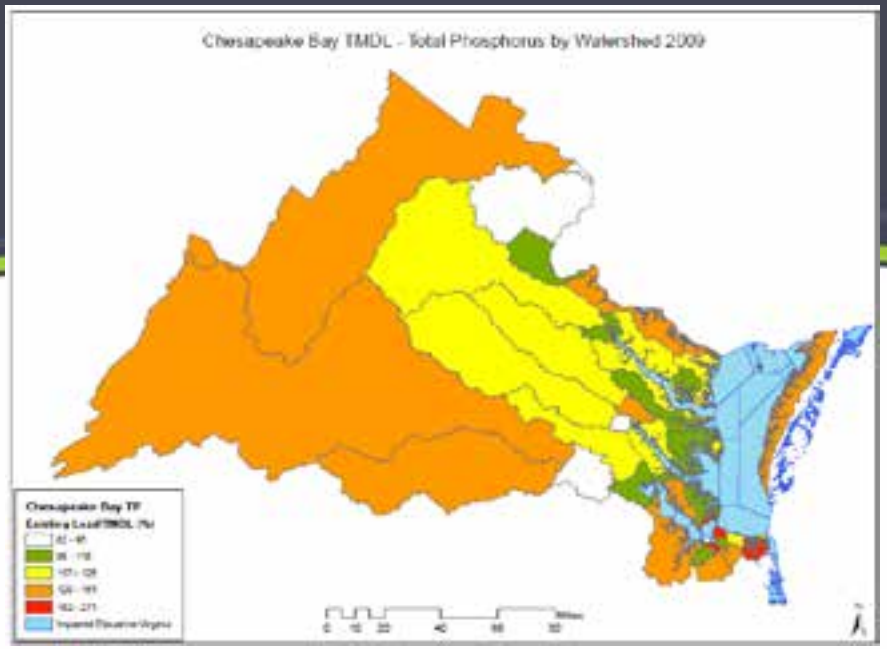
- Once workspace is created, user can perform a variety of tasks including:
  - Watershed delineations
  - Flow path delineation

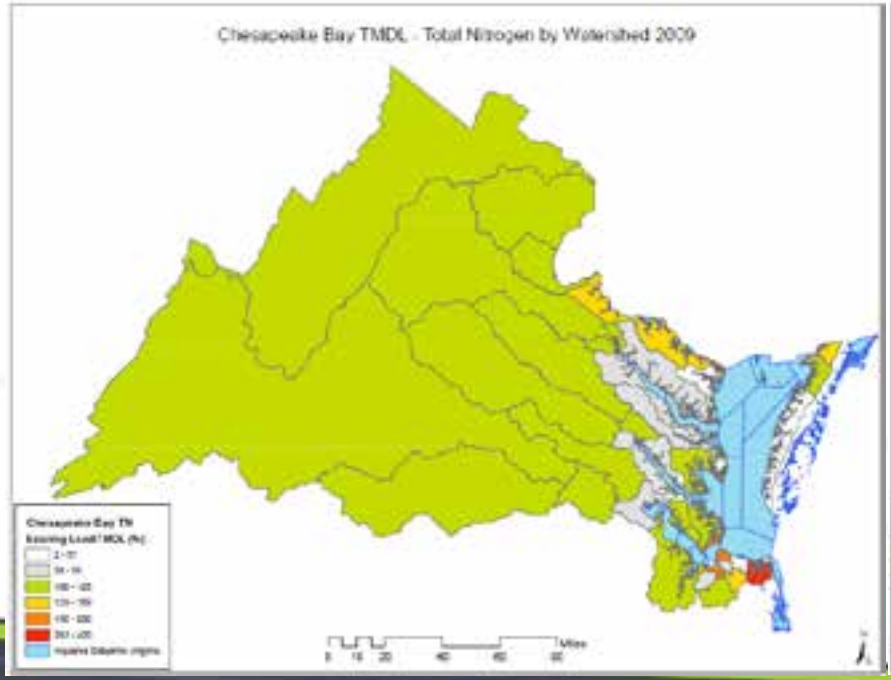
ArcHydro and Event Response

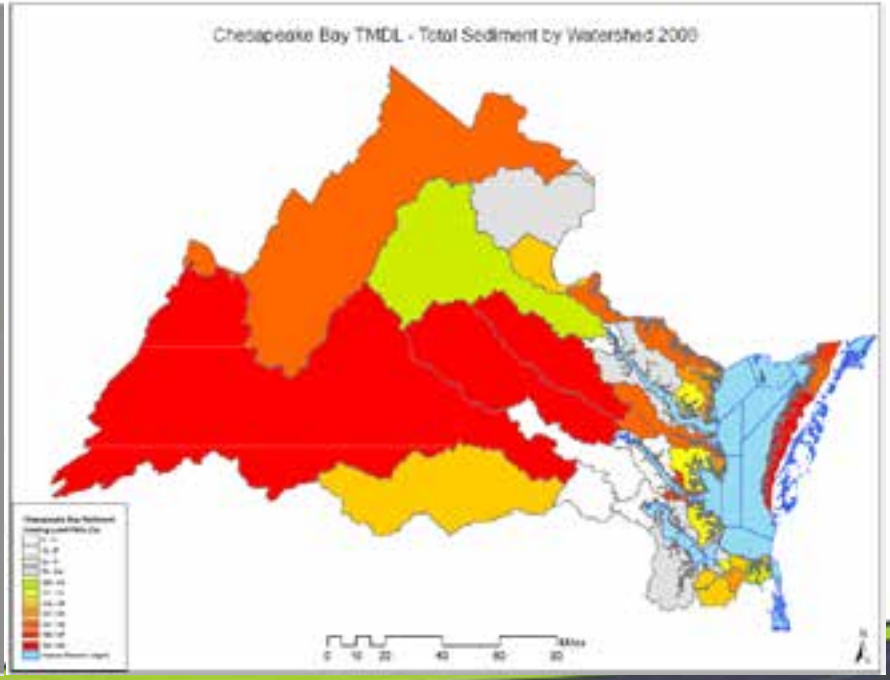


- Surface Water Intakes Generate Corrisponding Watersheds
- Risk Points Generate Flow Paths
- Standardized Reporting of Possible Risks Inform Public and Waterworks Owners

2. Chesapeake Bay







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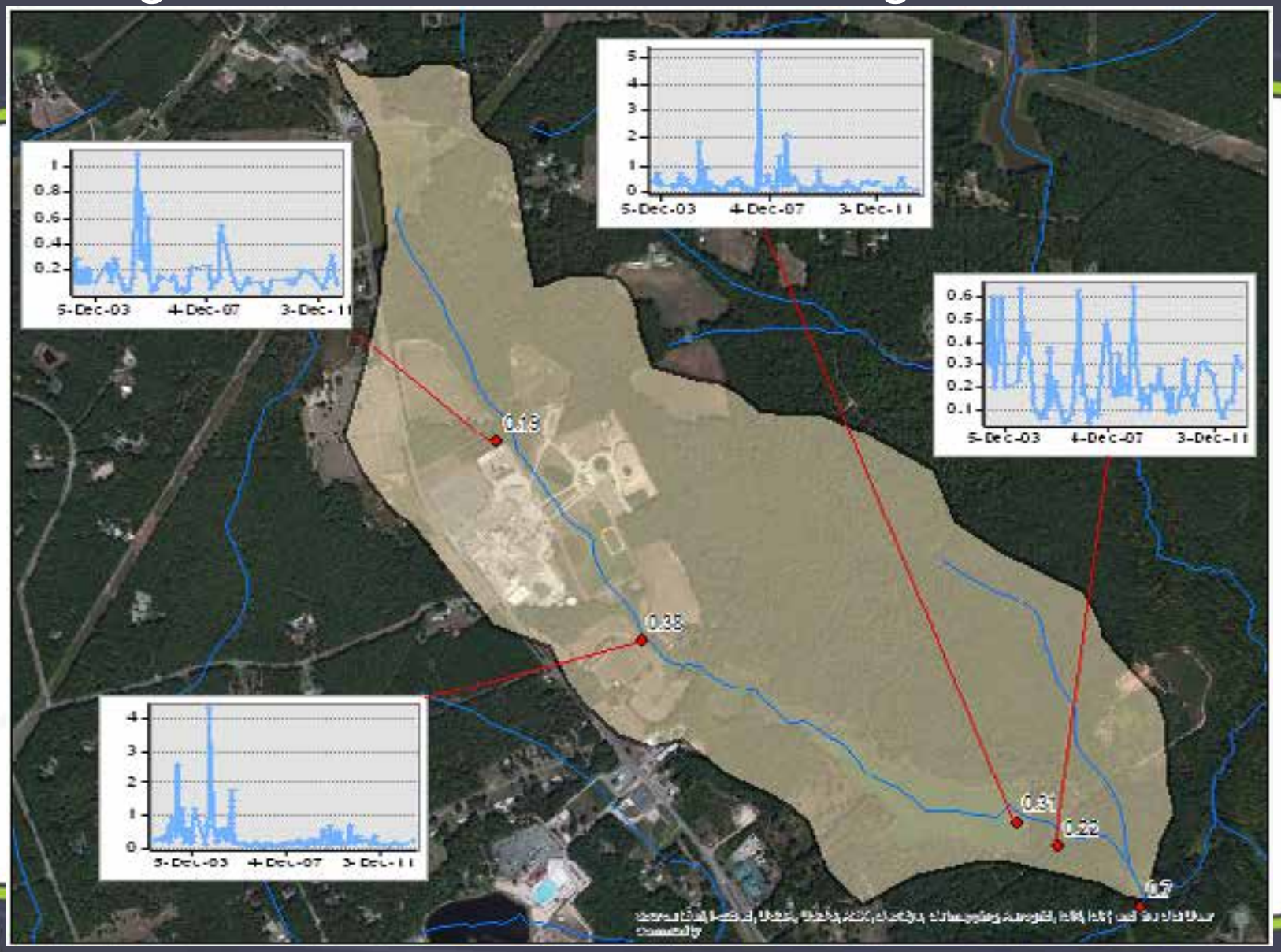
Watershed Based Data Extraction
Monitoring Stations and Understanding Pollutant Loading



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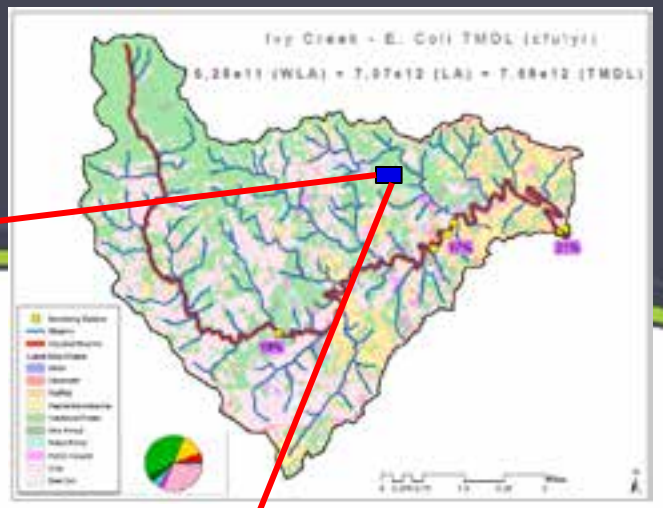
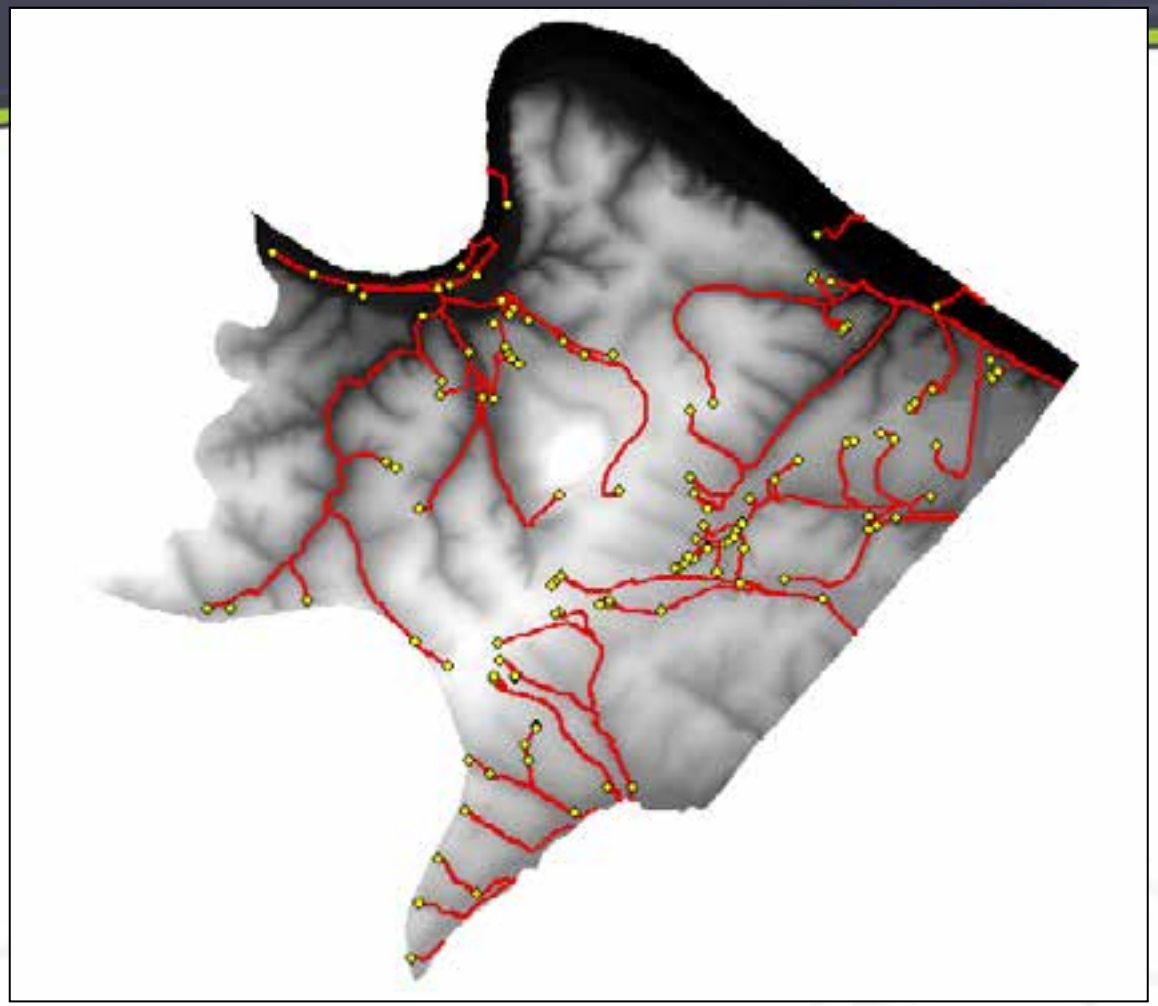
Storm Water and Sanitary Sewer Maintenance

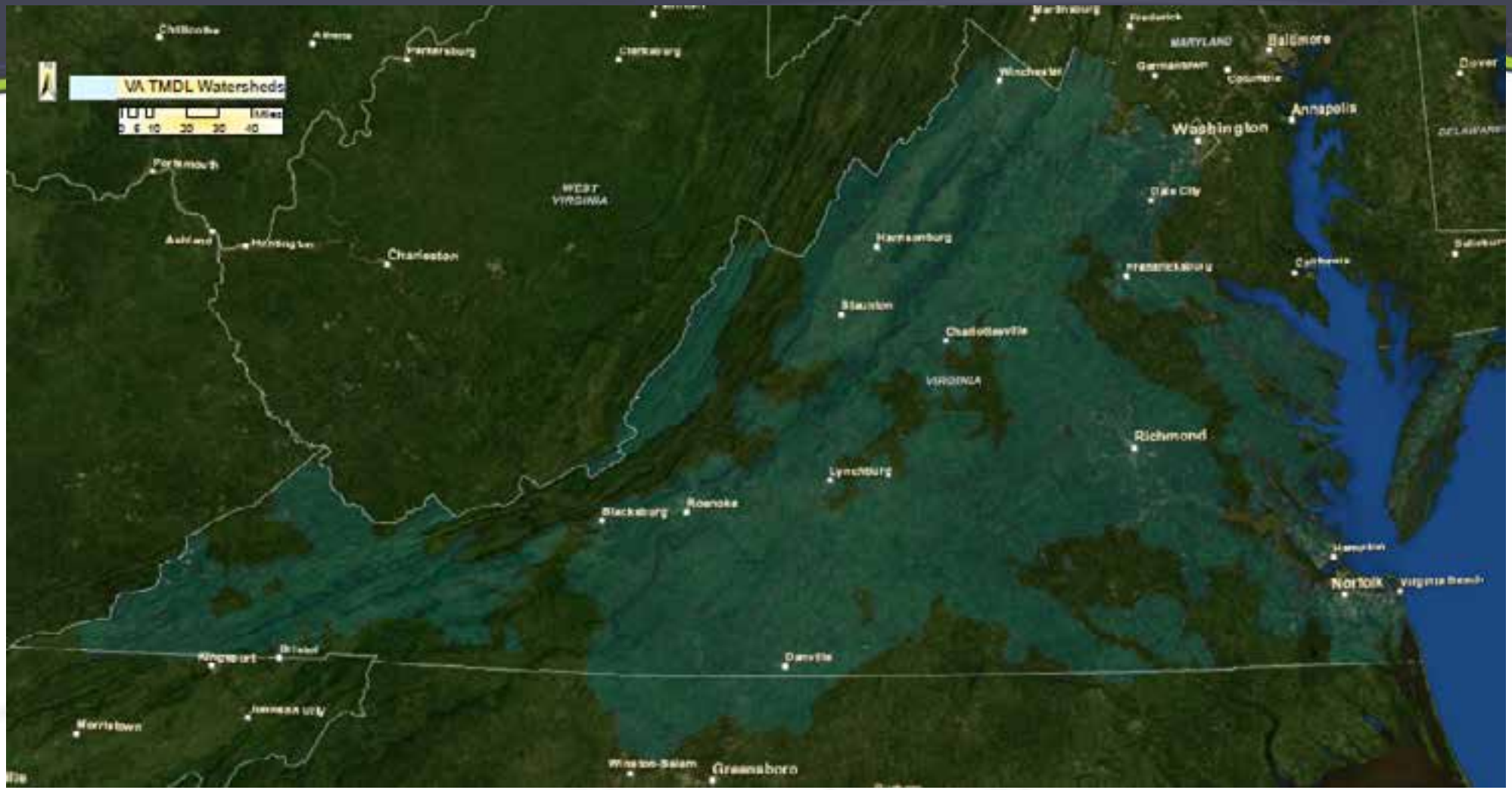


Flow Path Delineation to Support Storm Water Tracking



- Outfalls Locations
- Model Creation
- Generate Flow Paths

3. Virginia TMDL Watersheds (865)



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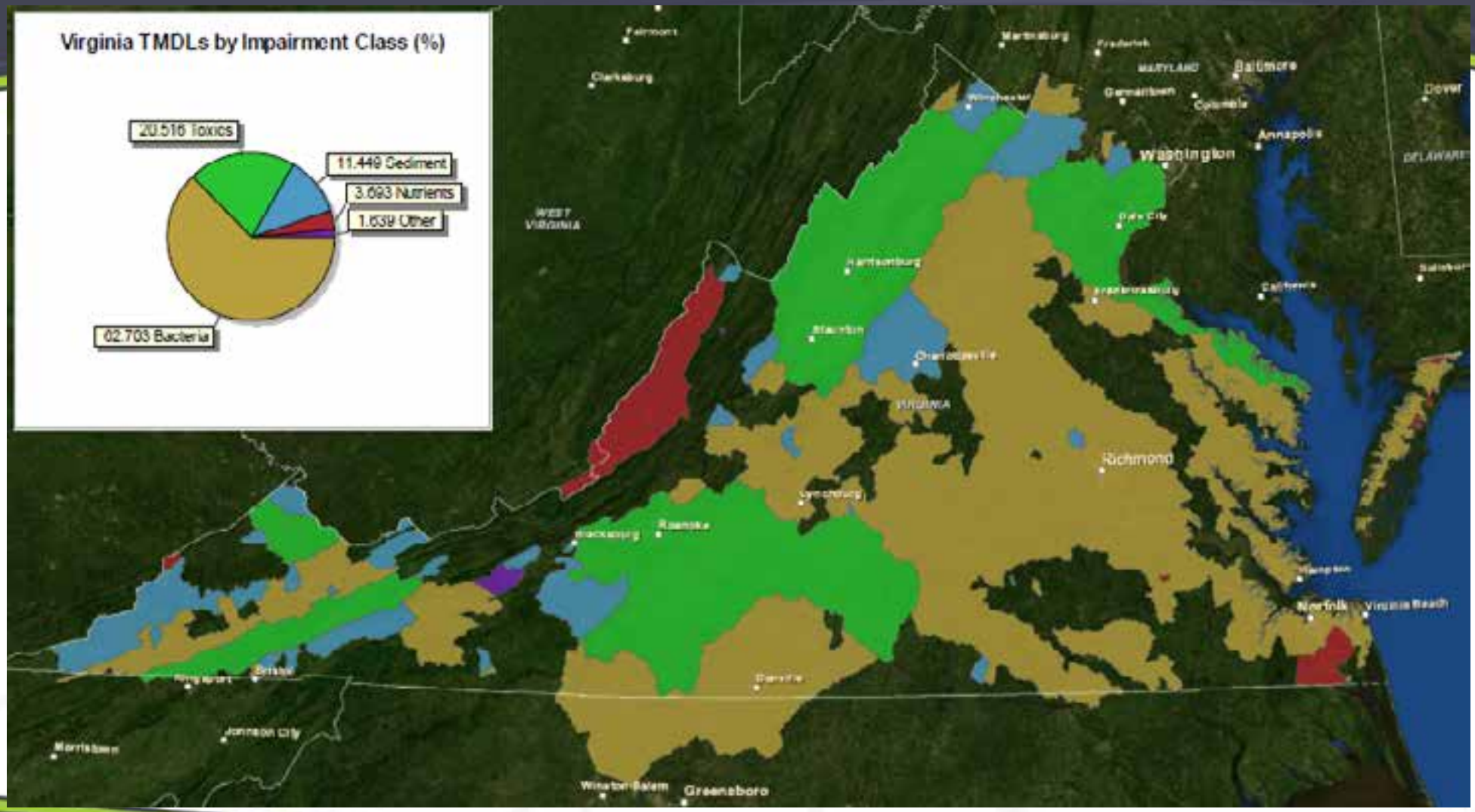
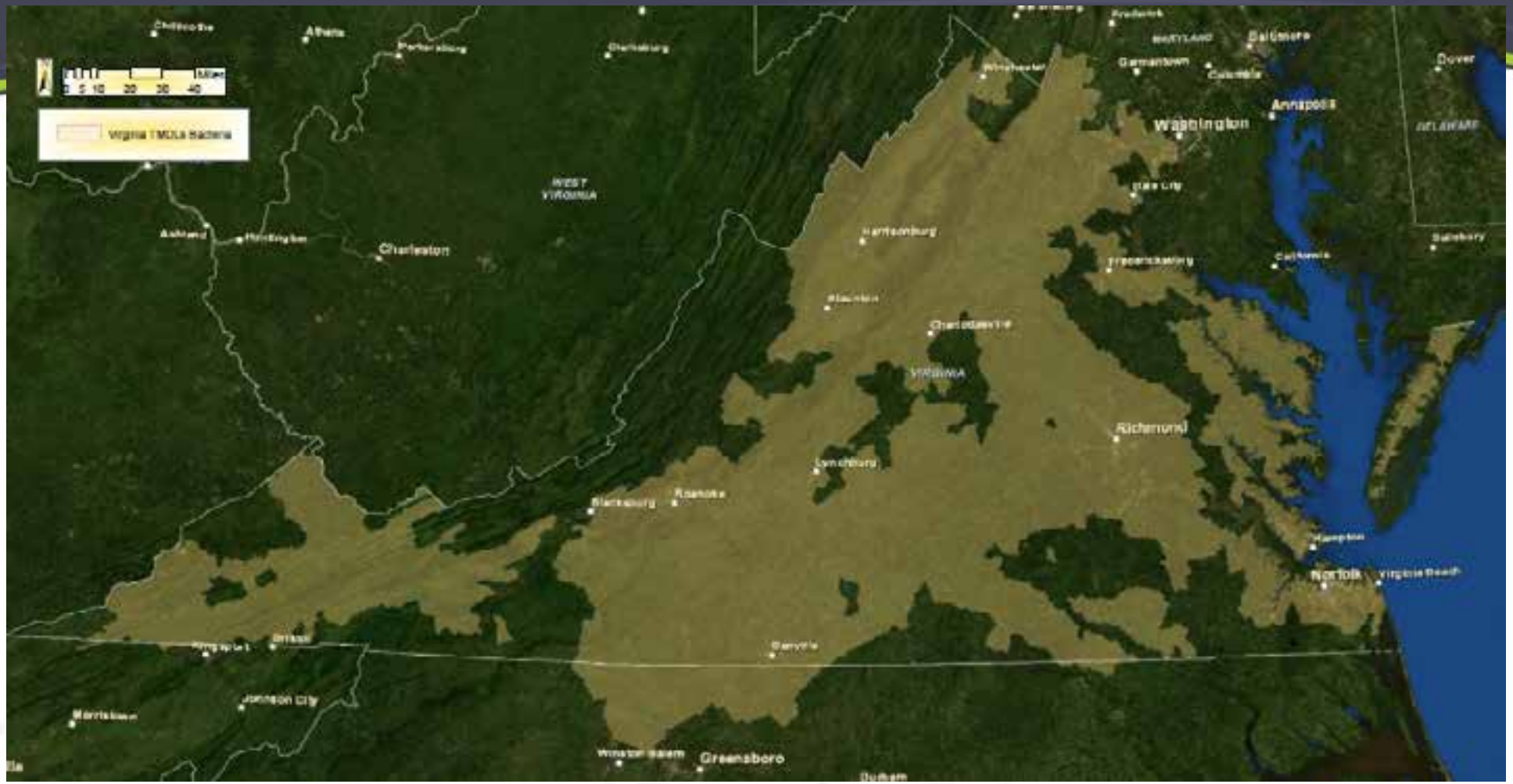
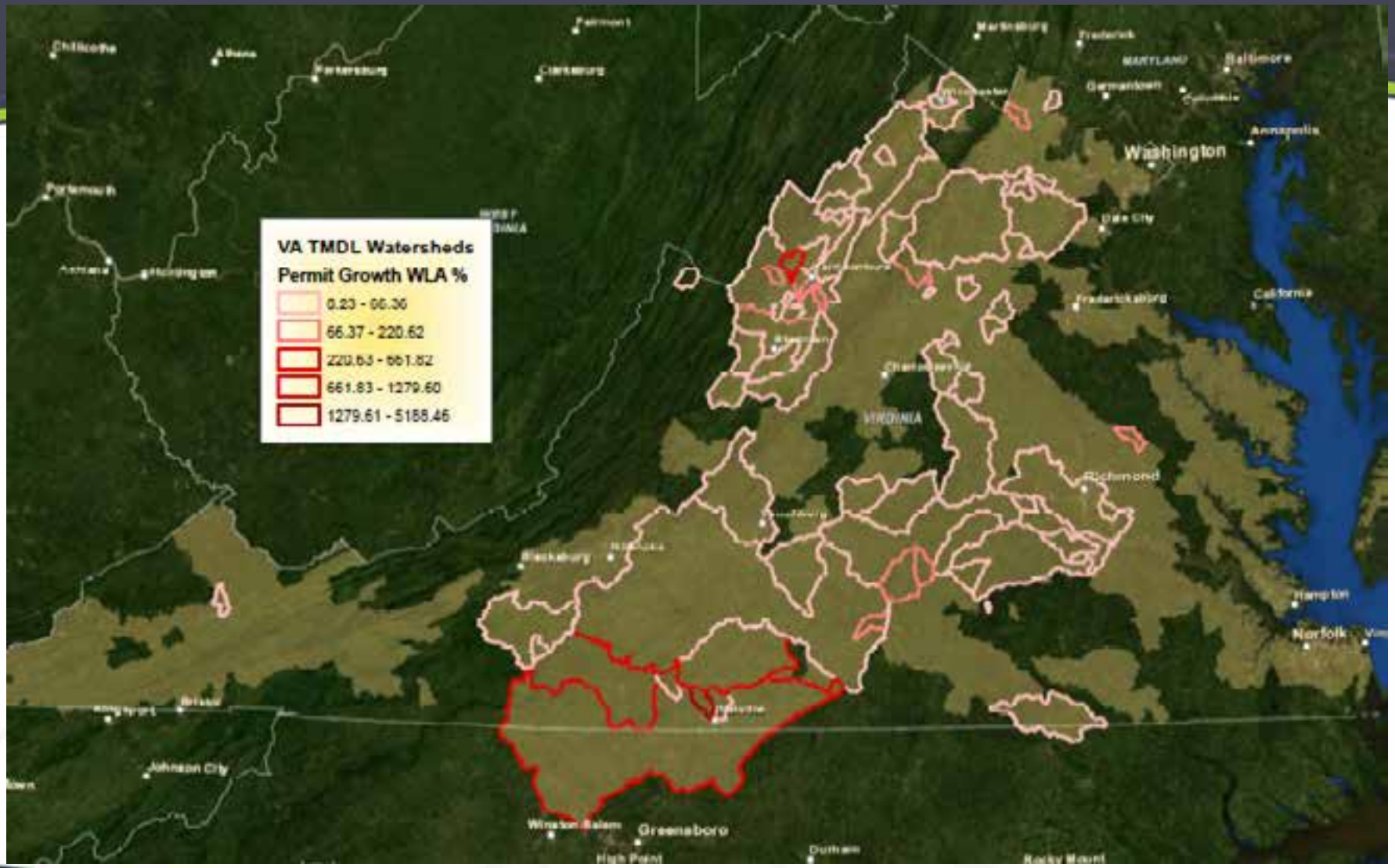
Tracking Impairments



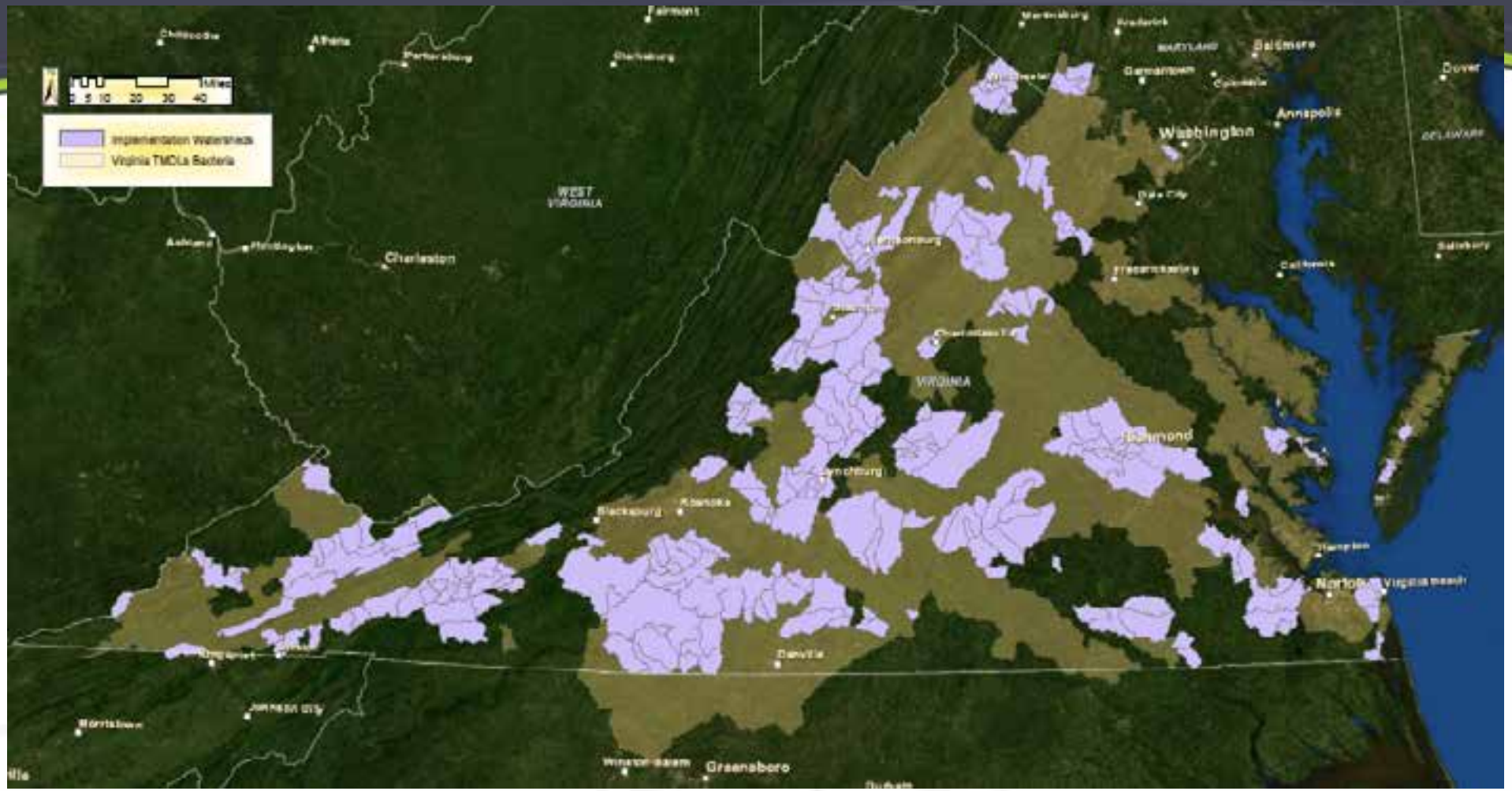
Virginia TMDLs Bacteria



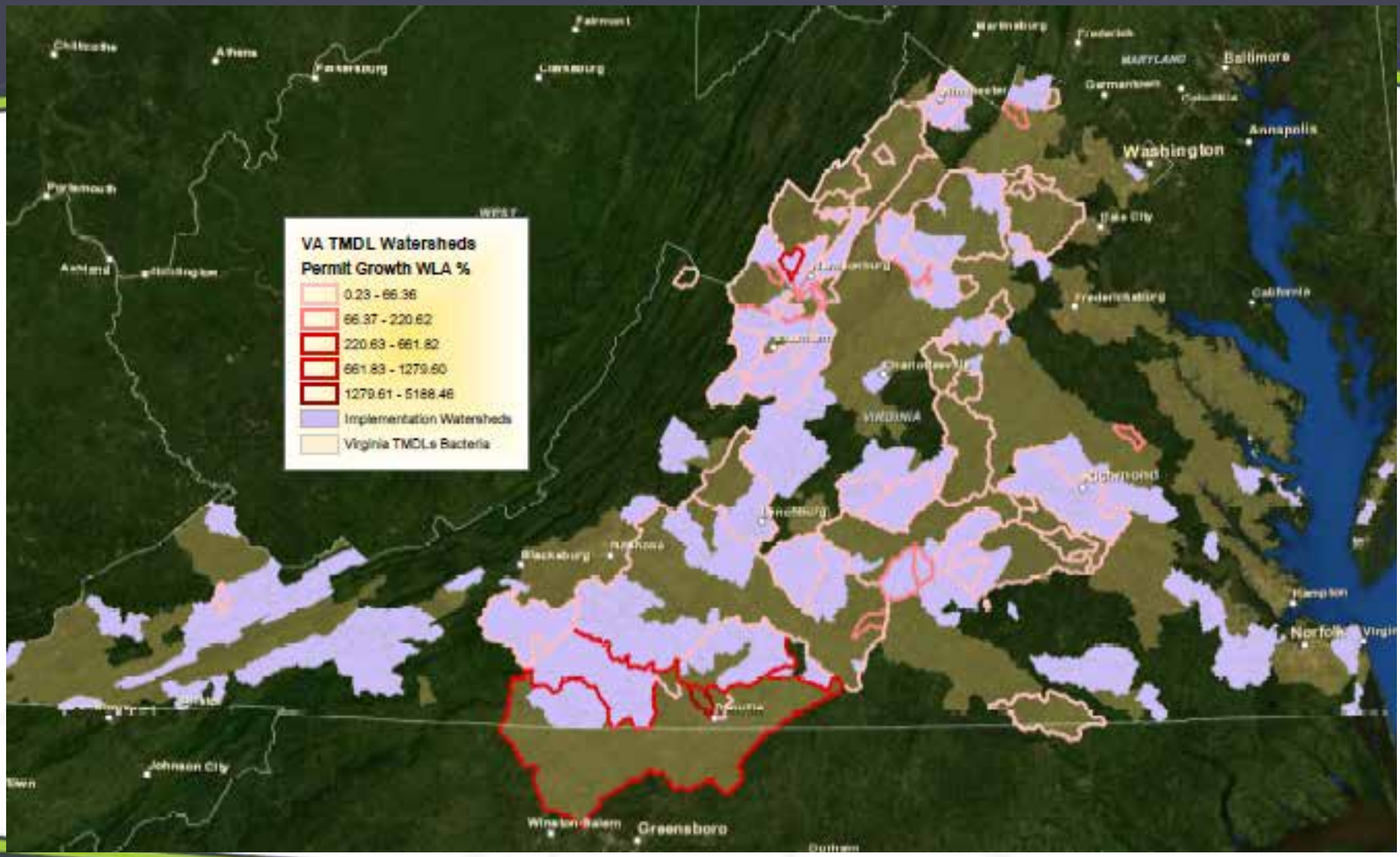
Tracking Permit Growth



Tracking Implementation Plans 2000-2014



Integrating Data Collection between Programs



Questions / Comments