

# Maryland's Forests: Past, Present and Future

**Peter Claggett**

**Research Geographer, U.S. Geological Survey  
Coordinator, CBP Land Use Workgroup**

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Crowne Plaza- Greenbelt, Maryland**

# “Forests” vs “Tree Canopy”

Difference based on understory conditions (e.g., soils, herbs, and shrubs)

## CBP Land Use Mapping Definitions:

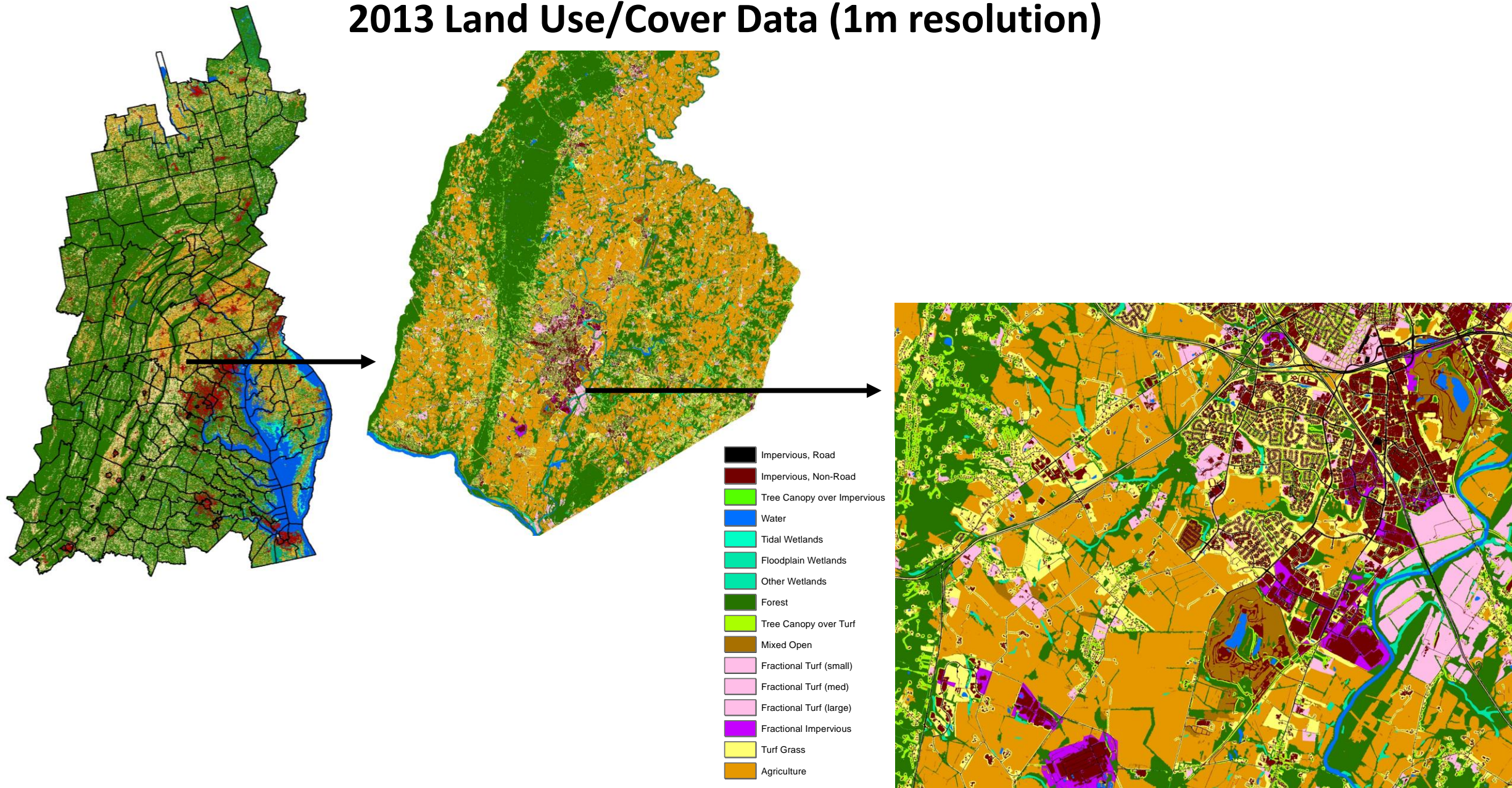
**“Tree Canopy over Impervious Surfaces”** = Tree canopy over roads and non-road impervious surfaces.

**“Tree Canopy over Turf Grass”** = Tree canopy within 30 feet’ to 80 feet’ of non-road impervious surfaces where the understory is assumed to be turf grass or otherwise altered through compaction, removal of surface organic material, and/or fertilization.

**“Forest”** = All standing trees and areas of tree harvest farther than 30-80 feet from buildings and forming contiguous patches at least one acre in extent. These areas are presumed to have a minimally disturbed understory.

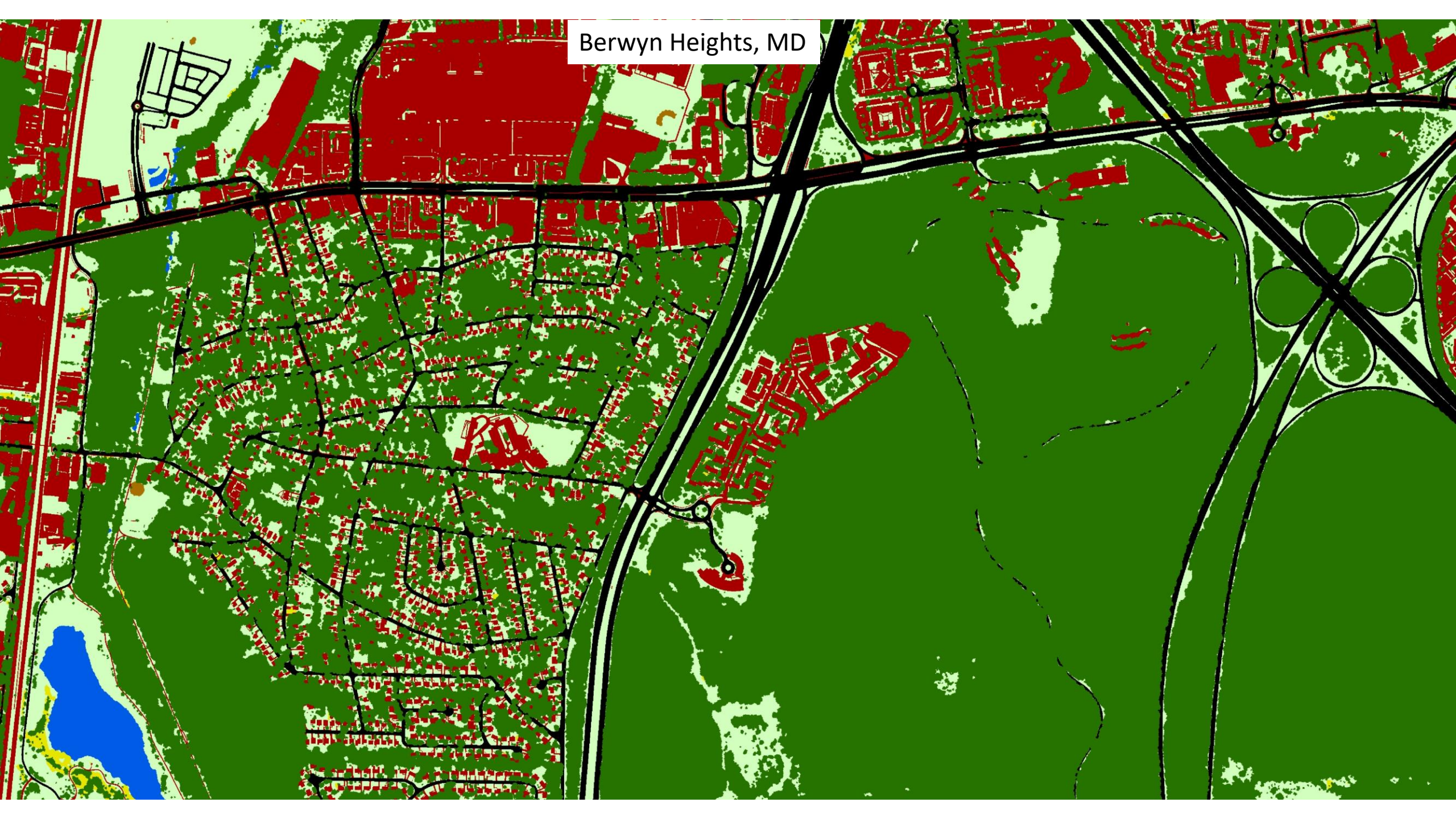


# 2013 Land Use/Cover Data (1m resolution)



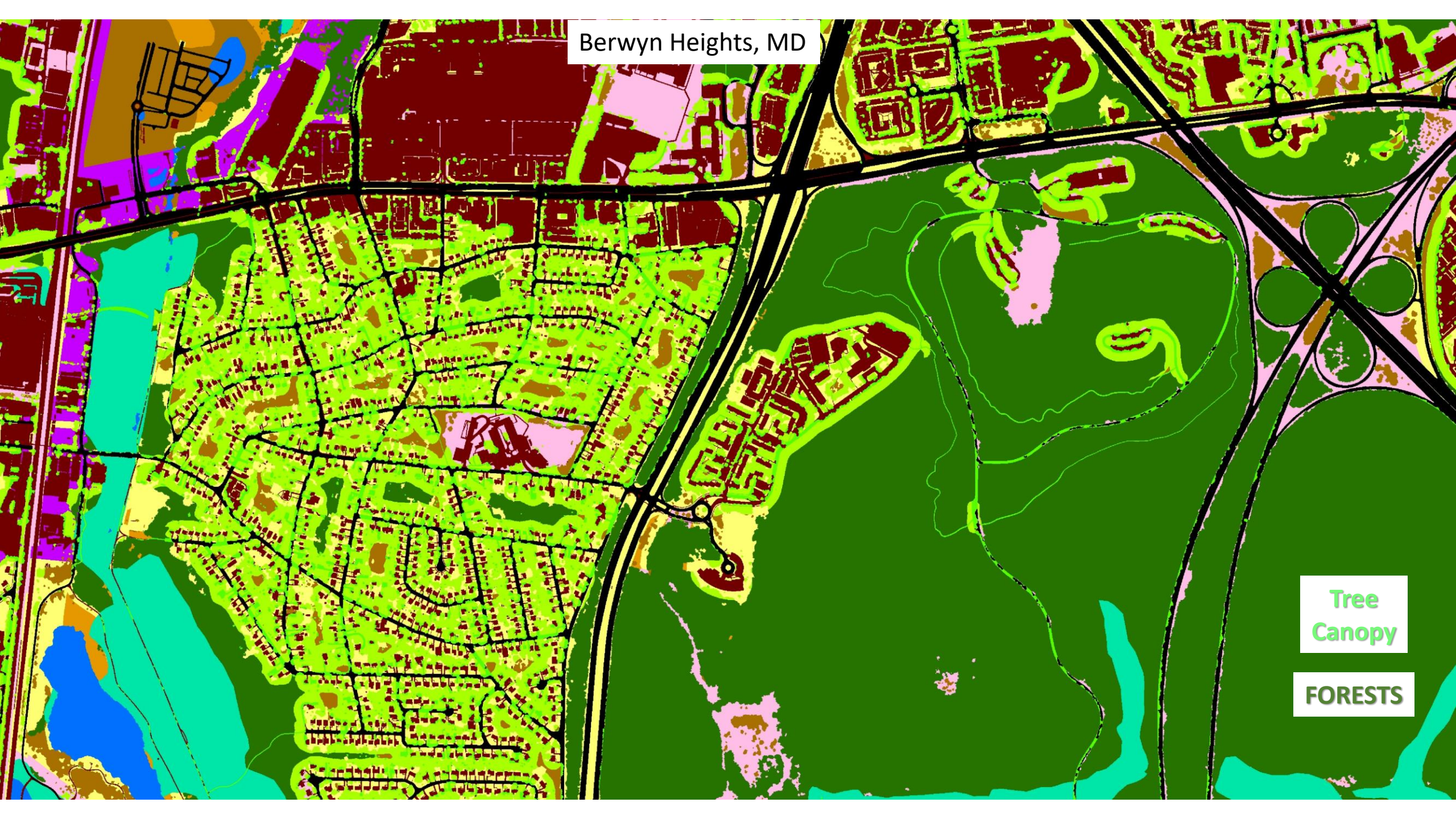


Berwyn Heights, MD





Berwyn Heights, MD

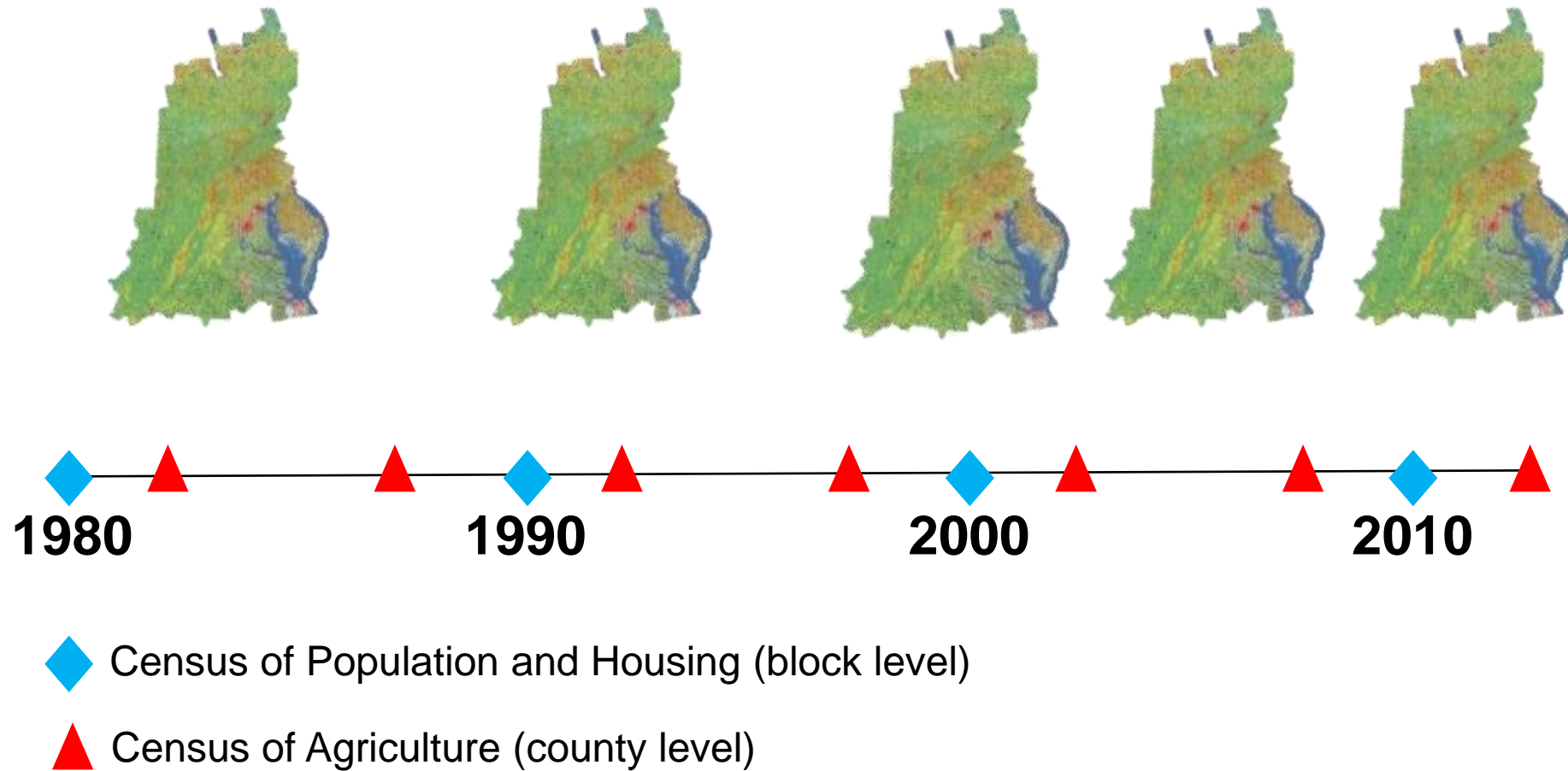


Tree  
Canopy

FORESTS





# Backcast 2013 Land Use to 1985



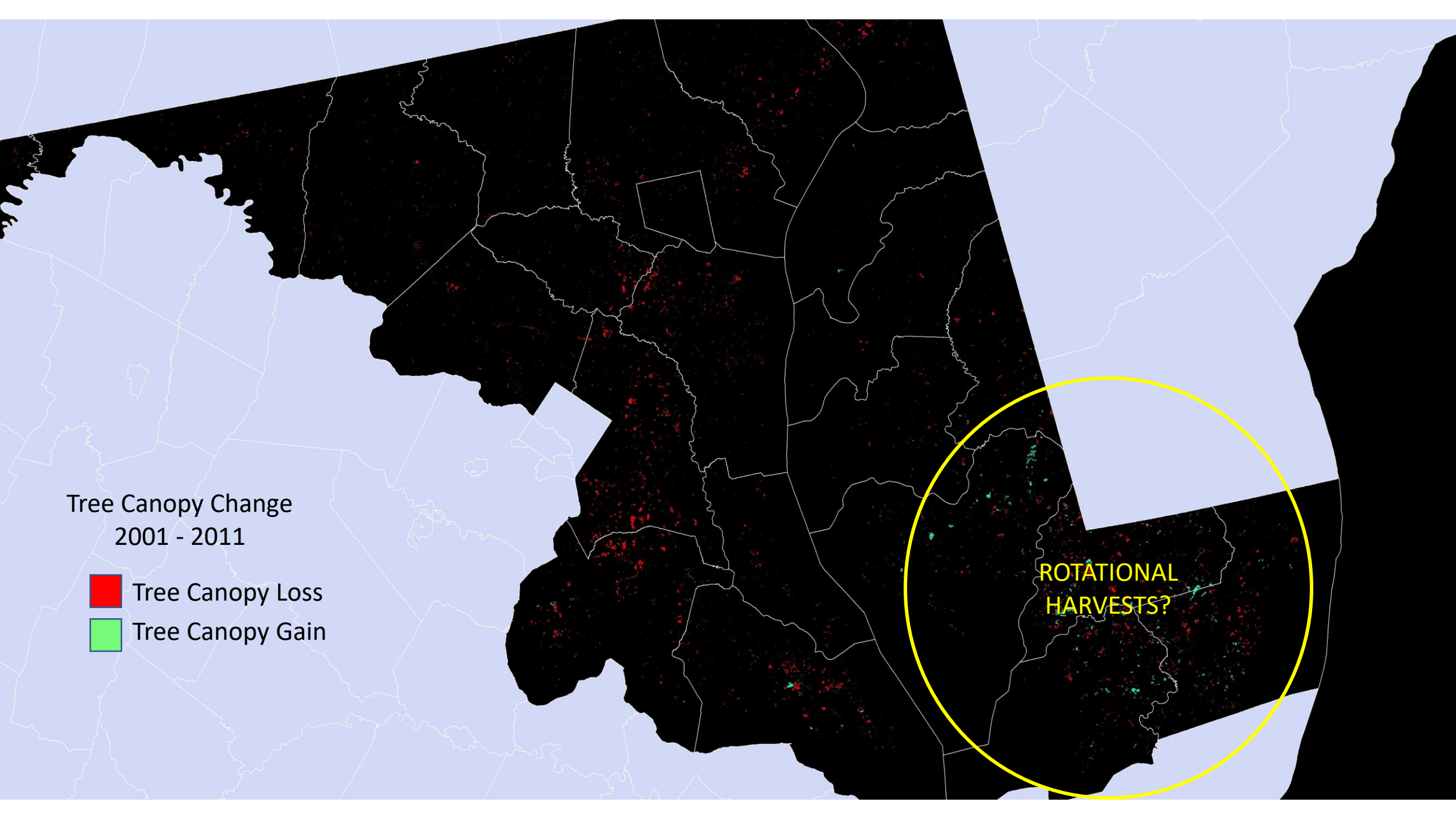
Irani, F. M., & Claggett, P. (2010). Chesapeake Bay Watershed Land Cover Data Series. *US Geological Survey Data Series*, 505.



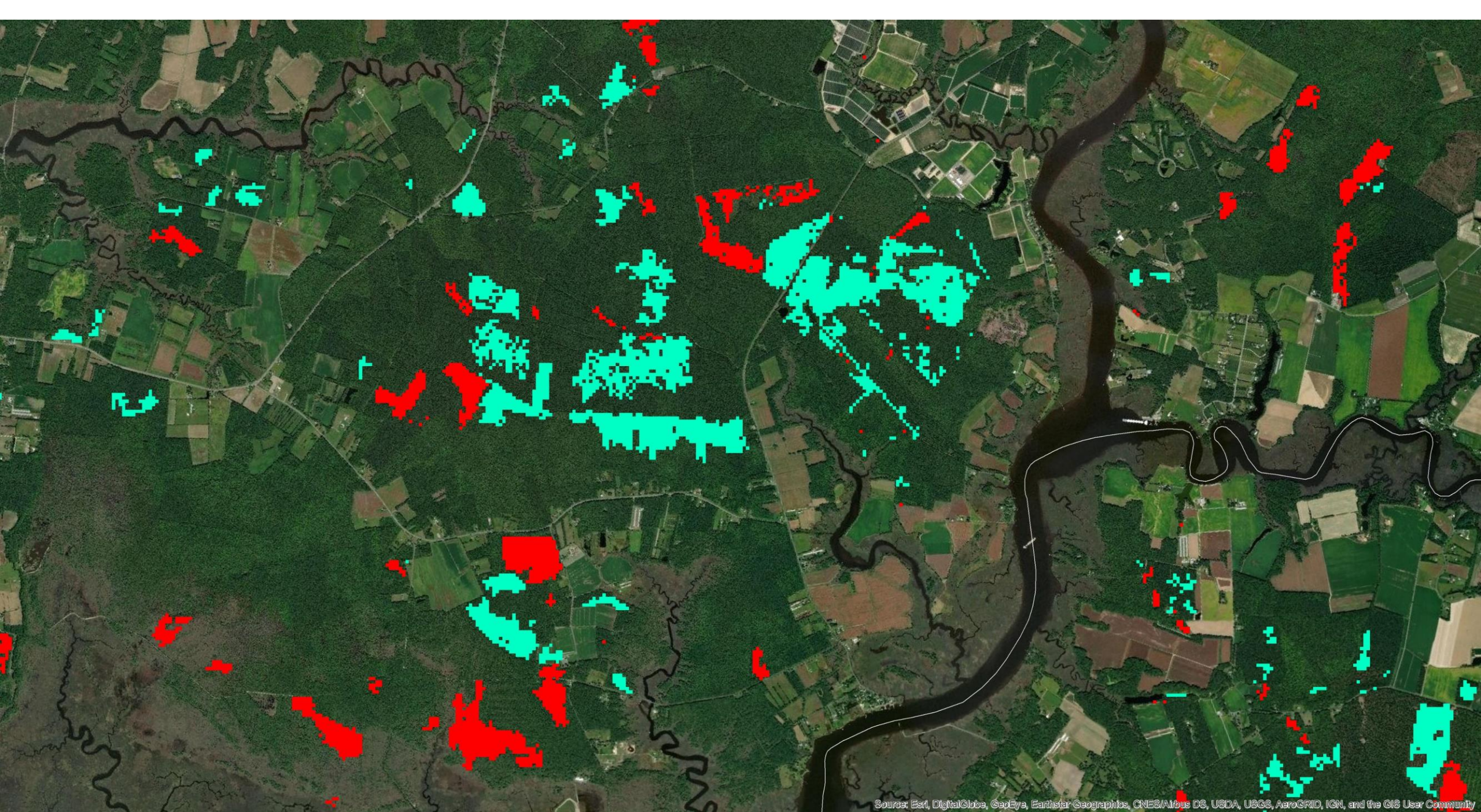
Tree Canopy Change  
2001 - 2011

-  Tree Canopy Loss
-  Tree Canopy Gain

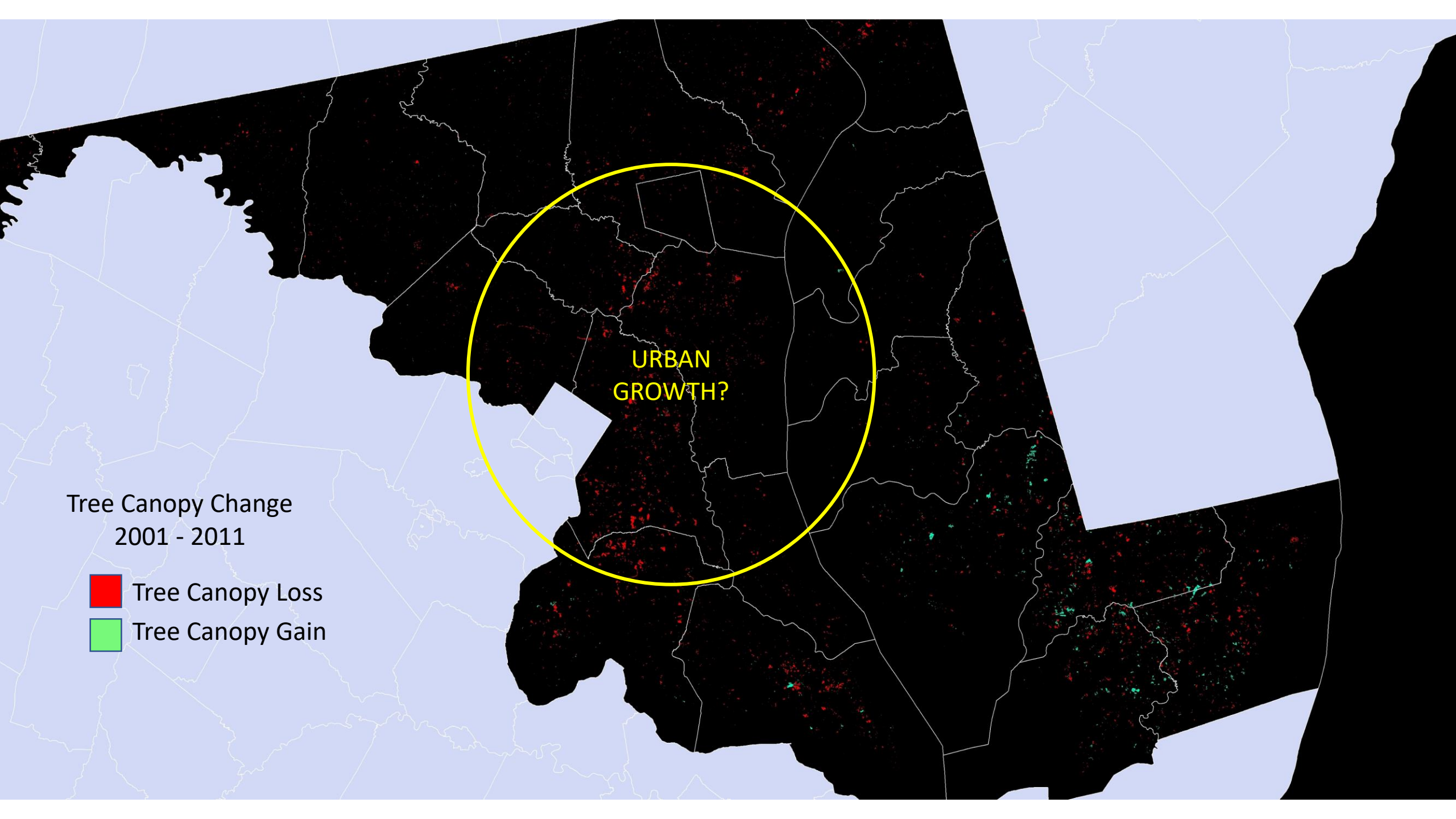
ROTATIONAL  
HARVESTS?









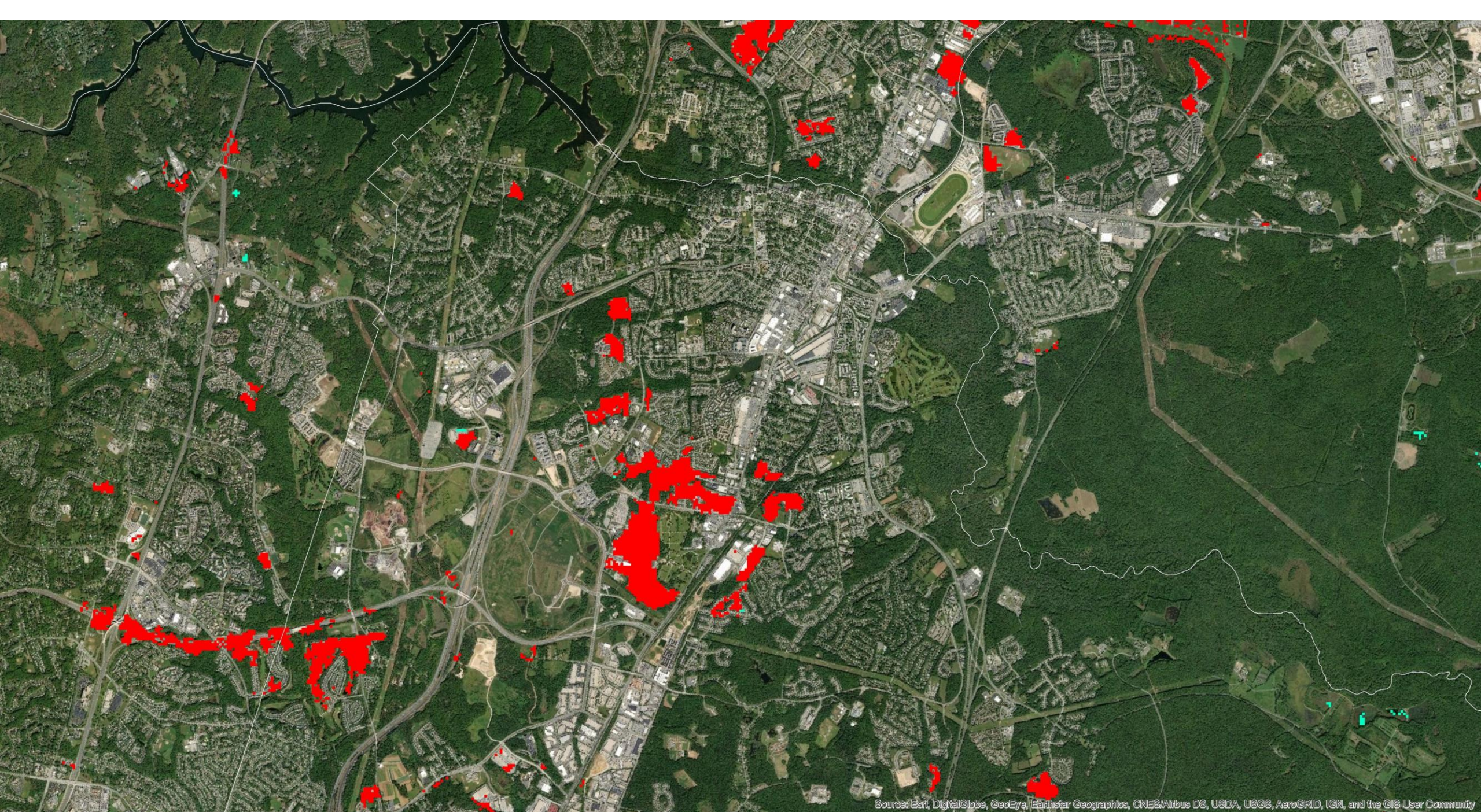


Tree Canopy Change  
2001 - 2011

- Tree Canopy Loss
- Tree Canopy Gain

URBAN  
GROWTH?

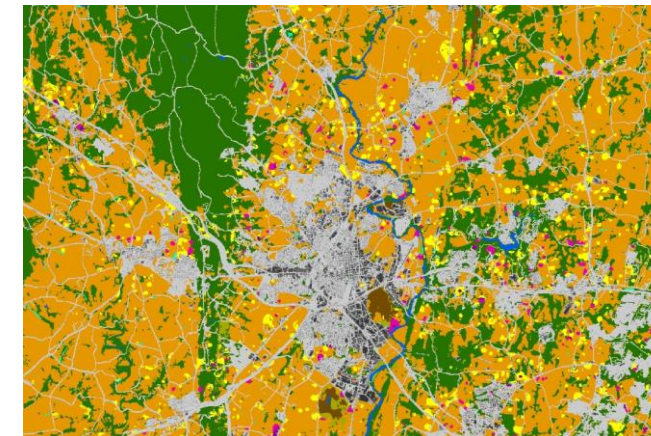
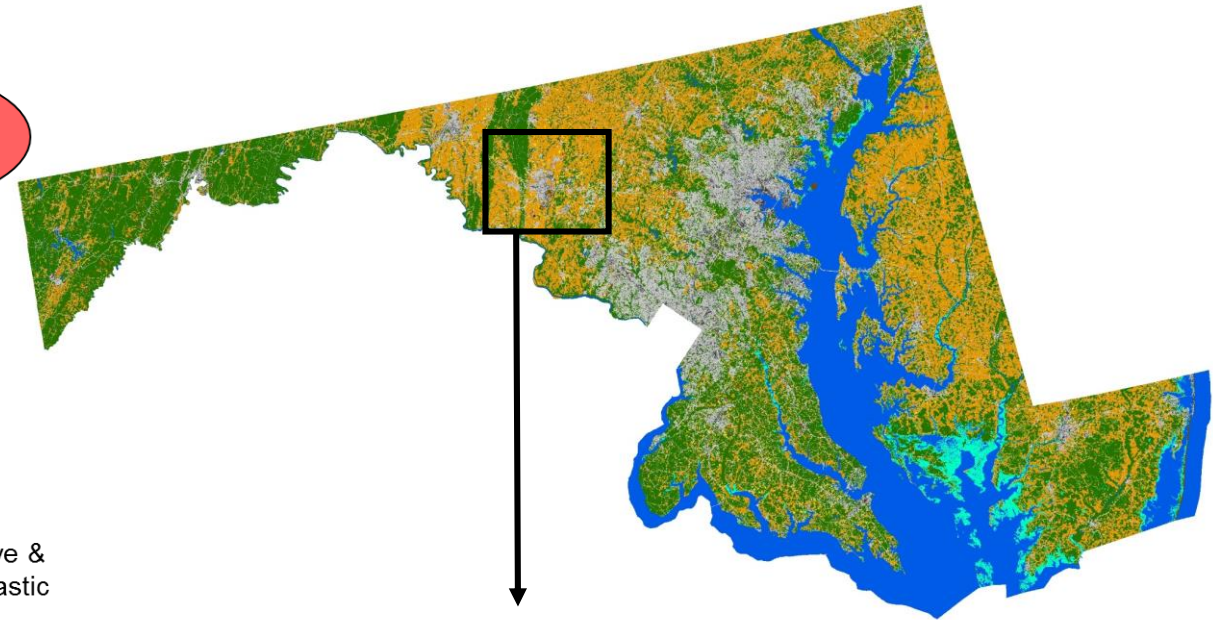
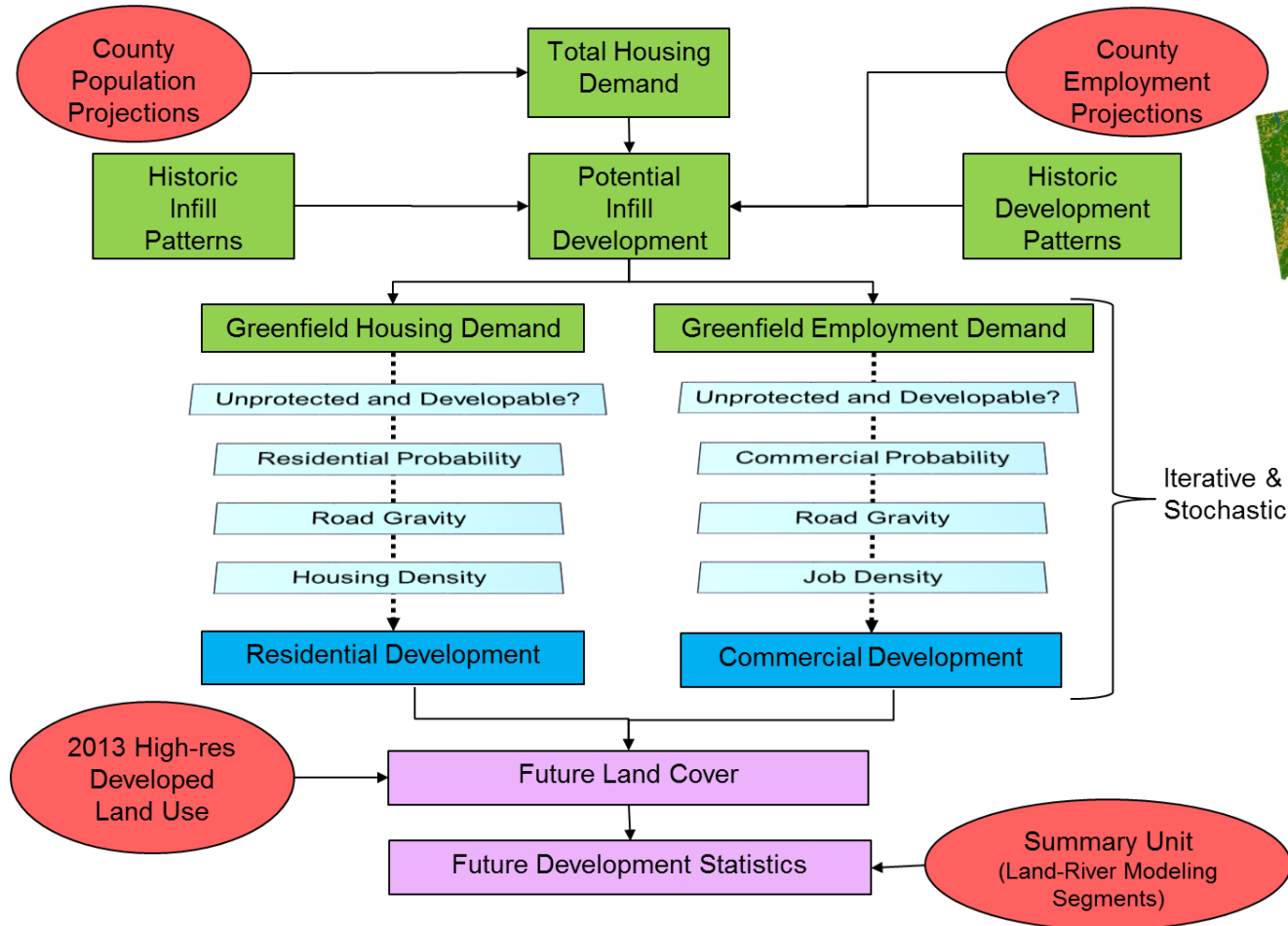






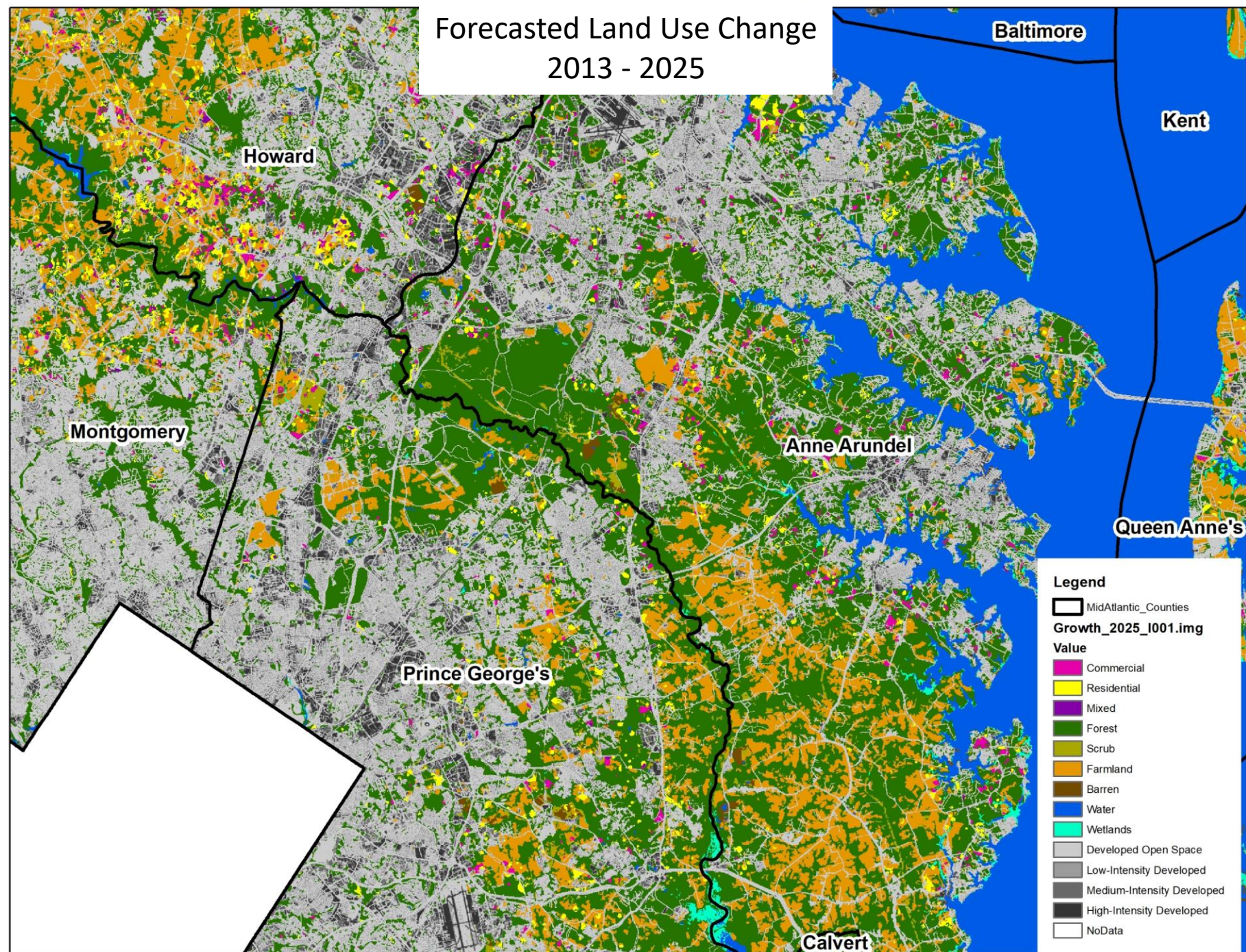
# Partnership's Chesapeake Bay Land Change Model

Chesapeake Bay Land Change Model v3a



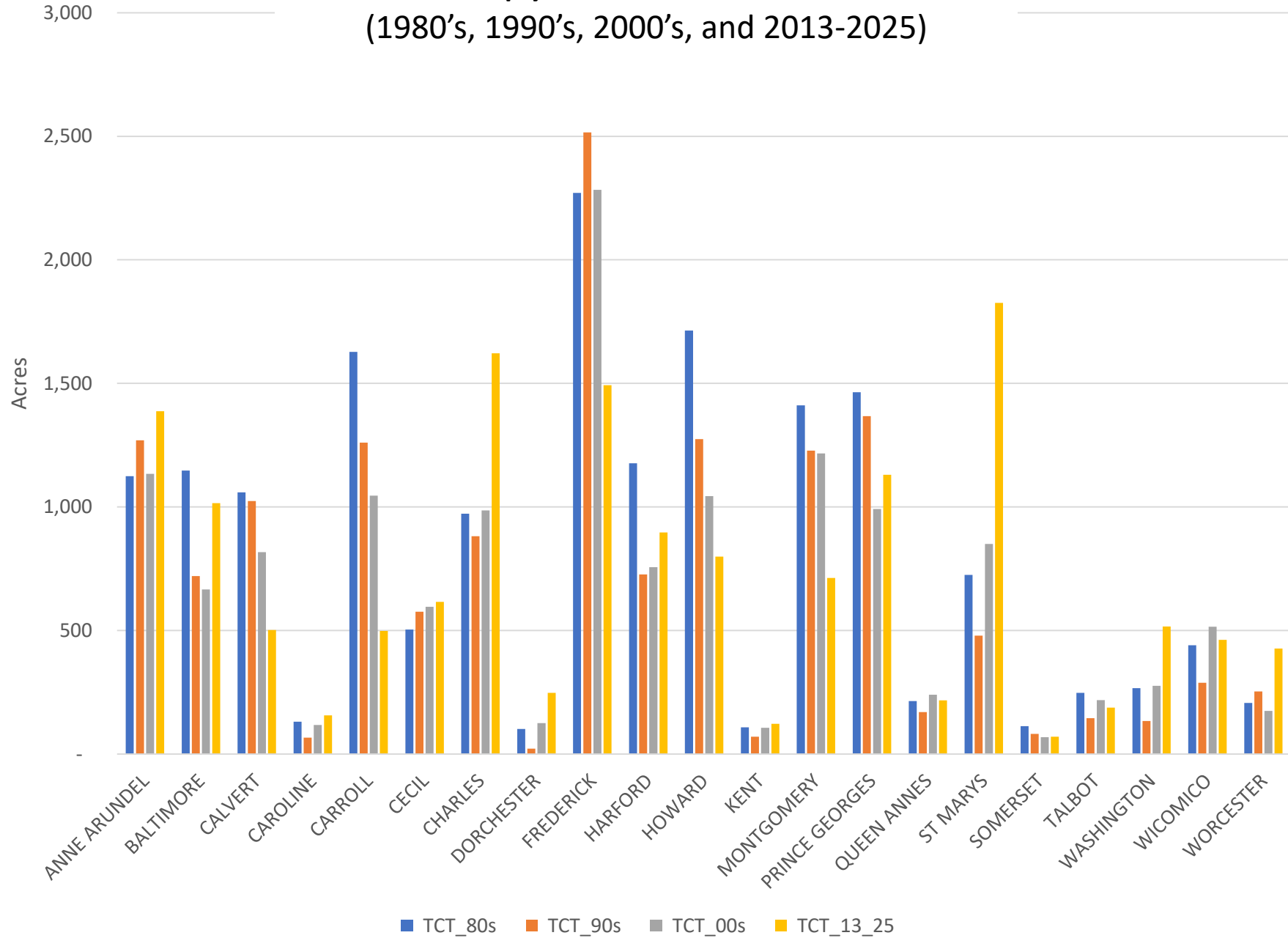


# Forecasted Land Use Change 2013 - 2025





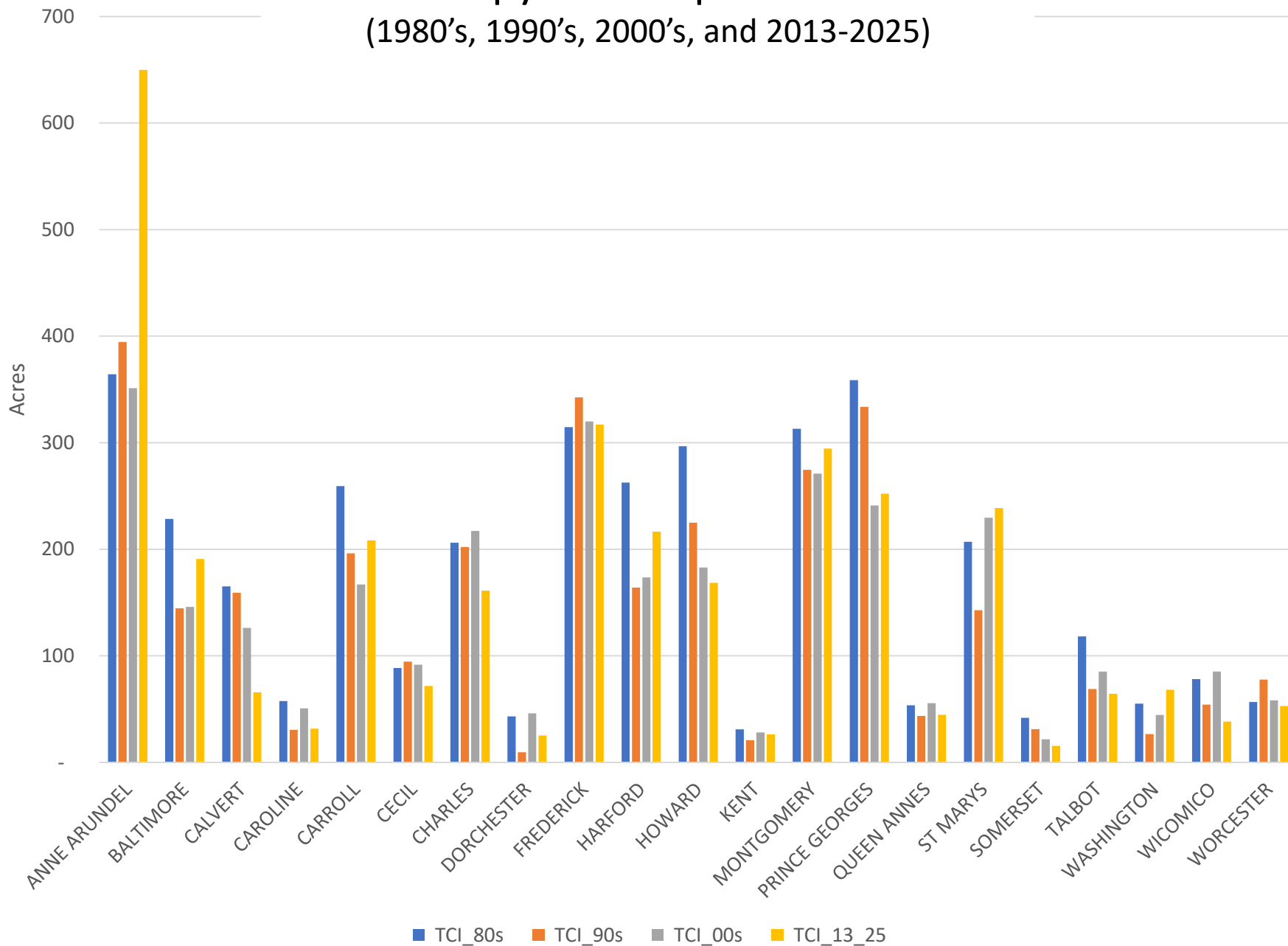
# “Tree Canopy over Turf Grass” Trends (1980’s, 1990’s, 2000’s, and 2013-2025)





# “Tree Canopy over Impervious” Trends

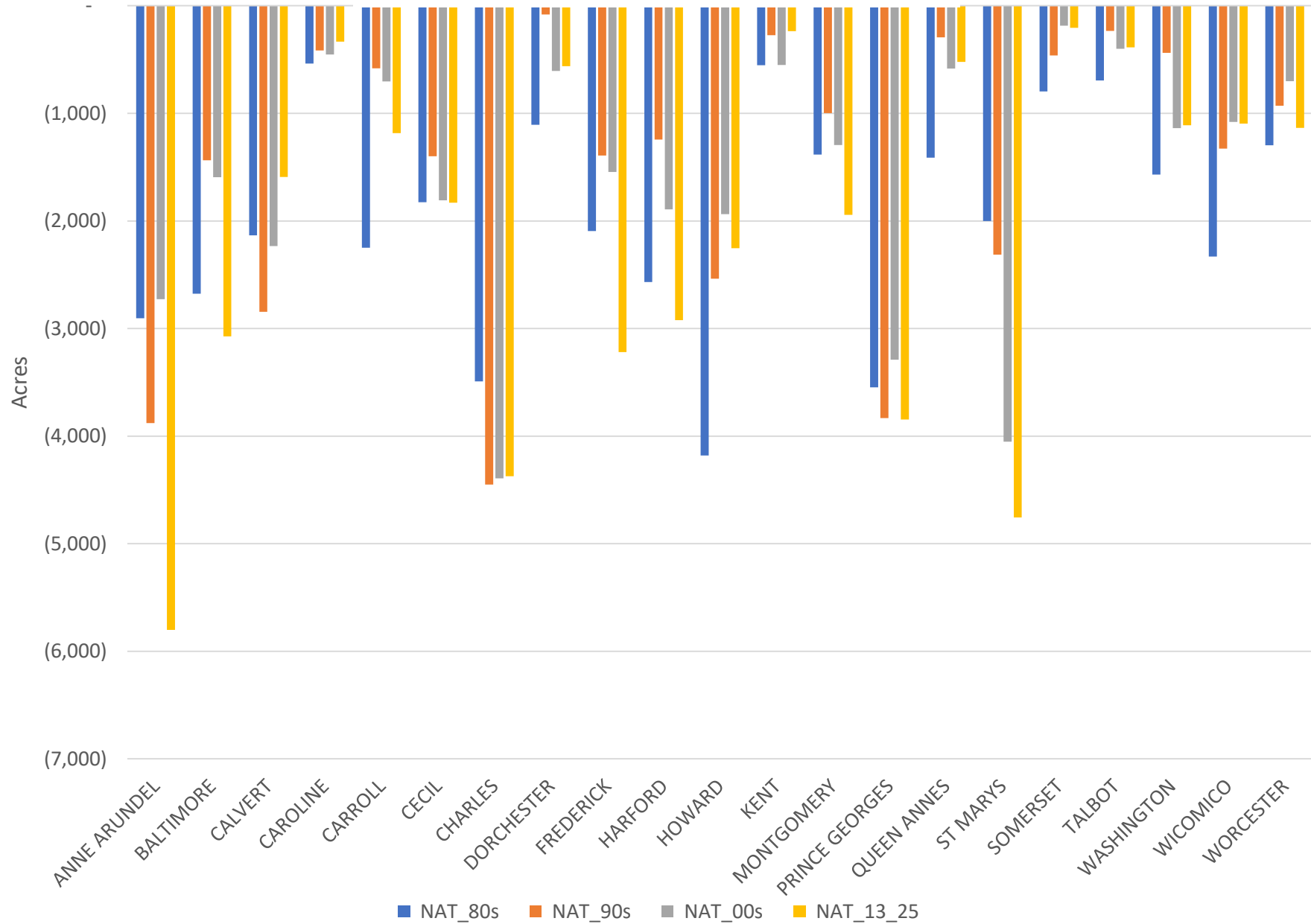
(1980’s, 1990’s, 2000’s, and 2013-2025)



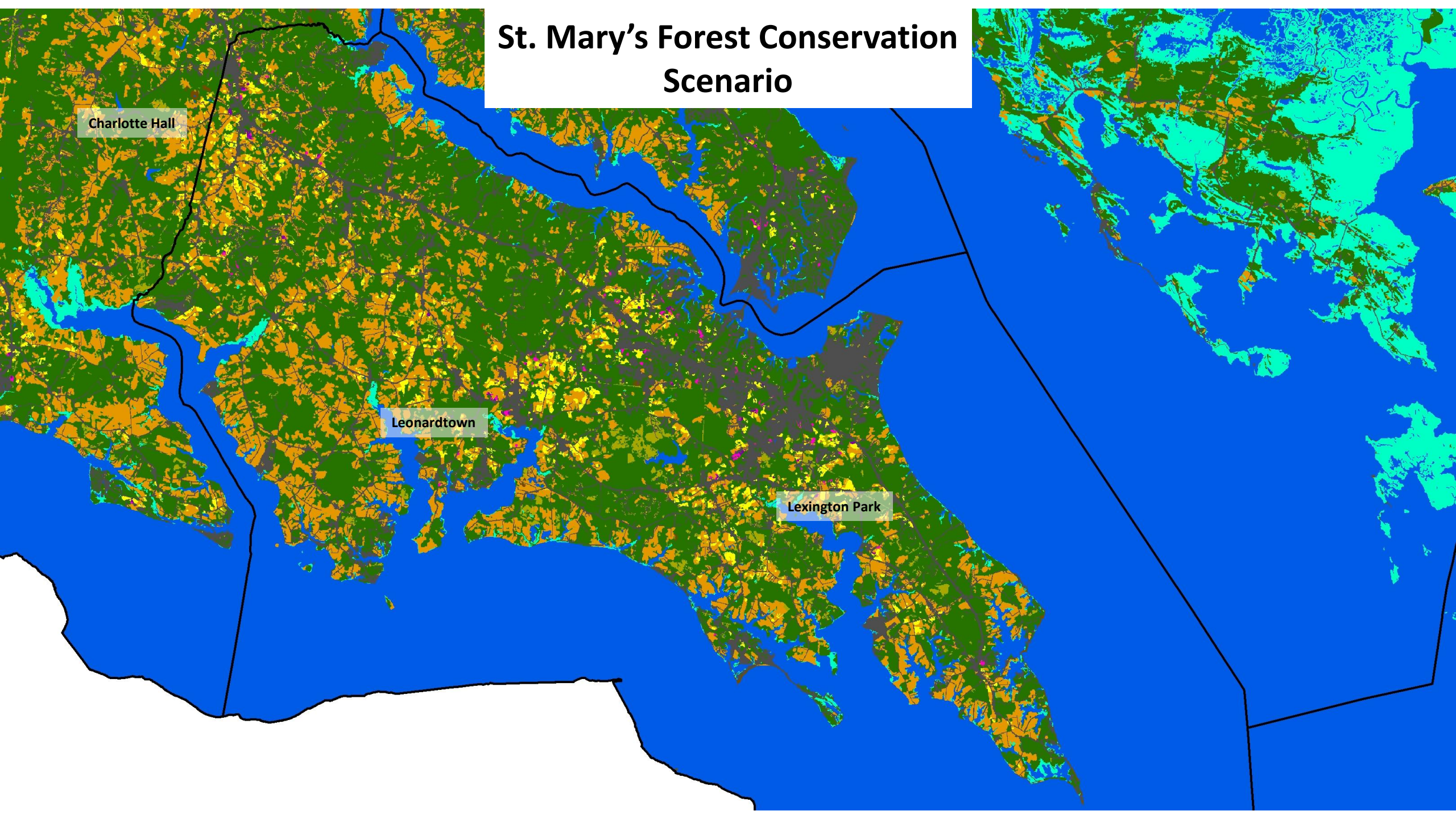


# "Forest" Trends

(1980's, 1990's, 2000's, and 2013-2025)



# St. Mary's Forest Conservation Scenario



Charlotte Hall

Leonardtown

Lexington Park



# Potential Nitrogen Reductions (lbs.) Due to Land Conservation

## St. Mary's County, Maryland

	Impervious	Pervious	Natural	Agriculture	Mixed Open	
FC vs HT	(185)	333	1,152	(1,107)	(193)	
Total Nitrogen (lbs/acre/yr)	9.8	5.9	1.8	26.0	3.5	
Difference in loads (lbs/yr)	(1,817)	1,966	2,074	(28,773)	(677)	(27,227)

	Impervious	Pervious	Natural	Agriculture	Mixed Open	
FC vs CZ	(89)	221	512	(548)	(96)	
Total Nitrogen (lbs/acre/yr)	9.8	5.9	1.8	26.0	3.5	
Difference in loads (lbs/yr)	(871)	1,304	922	(14,244)	(338)	(13,227)



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