

# PRESTO

Its not just the economy, stupid

Gerrit-Jan Knaap  
Inforum Outlook Conference  
December 10, 2015  
College Park, MD

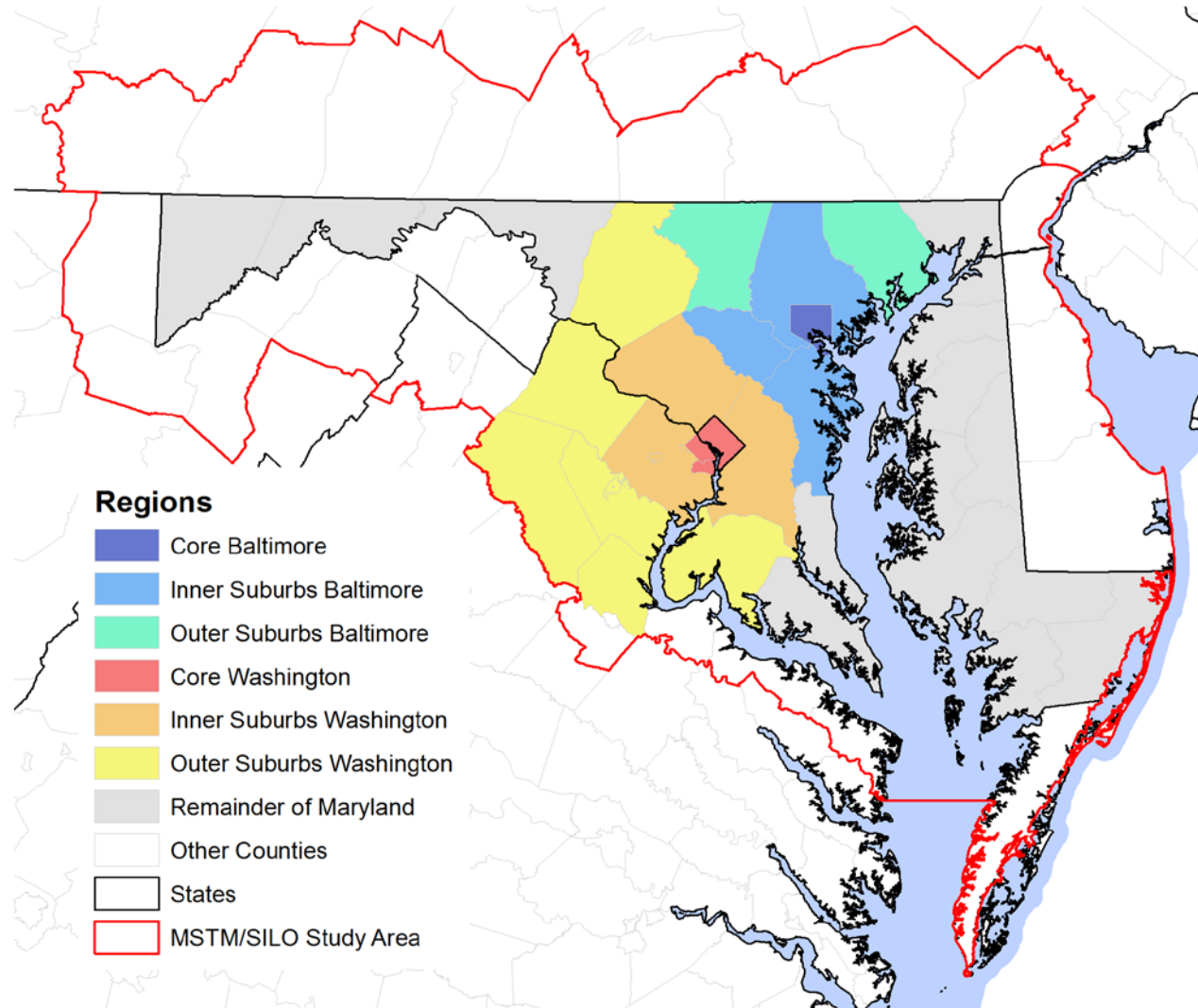


# PRESTO



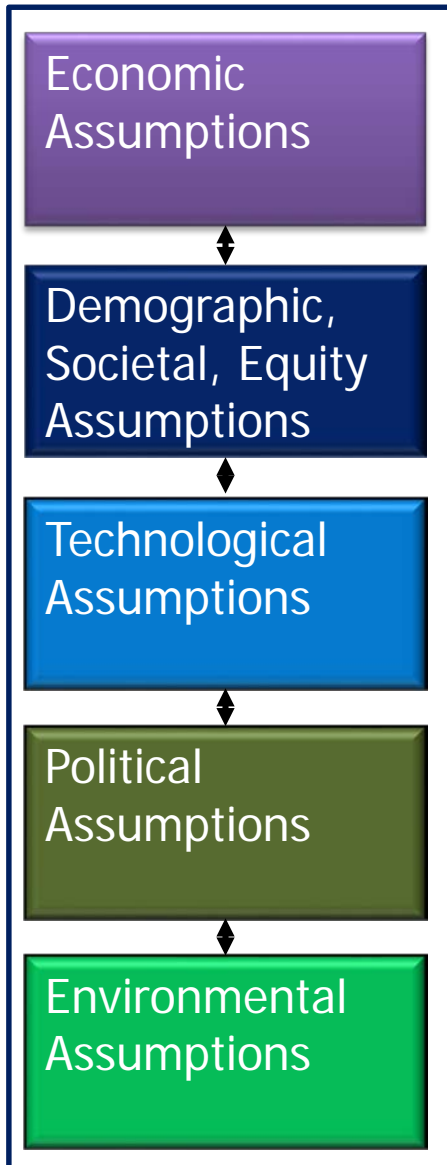
- PRESTO is an **integrated modeling** project designed to identify policies that lead to a more sustainable **Baltimore-Washington region**.
- Funders include:
  - The Town Creek Foundation,
  - The Socio-Environmental Synthesis Center,
  - European Union, and
  - Various grants from state and federal agencies.

# The Baltimore-Washington Modeling Region

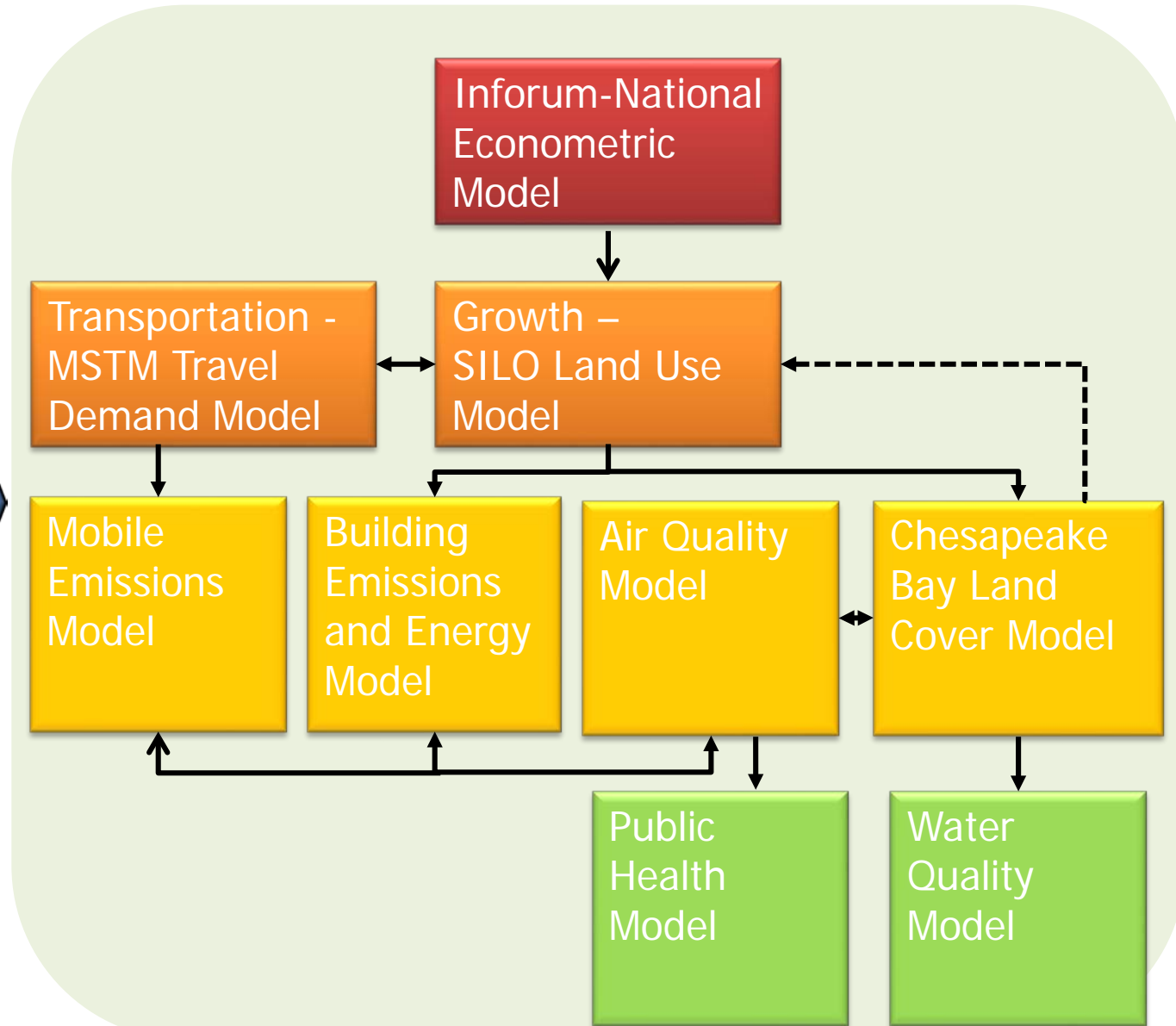


# The PRESTO Modeling Framework

## Scenario Drivers



## Scenario Models



# Alternative Growth Forecasts

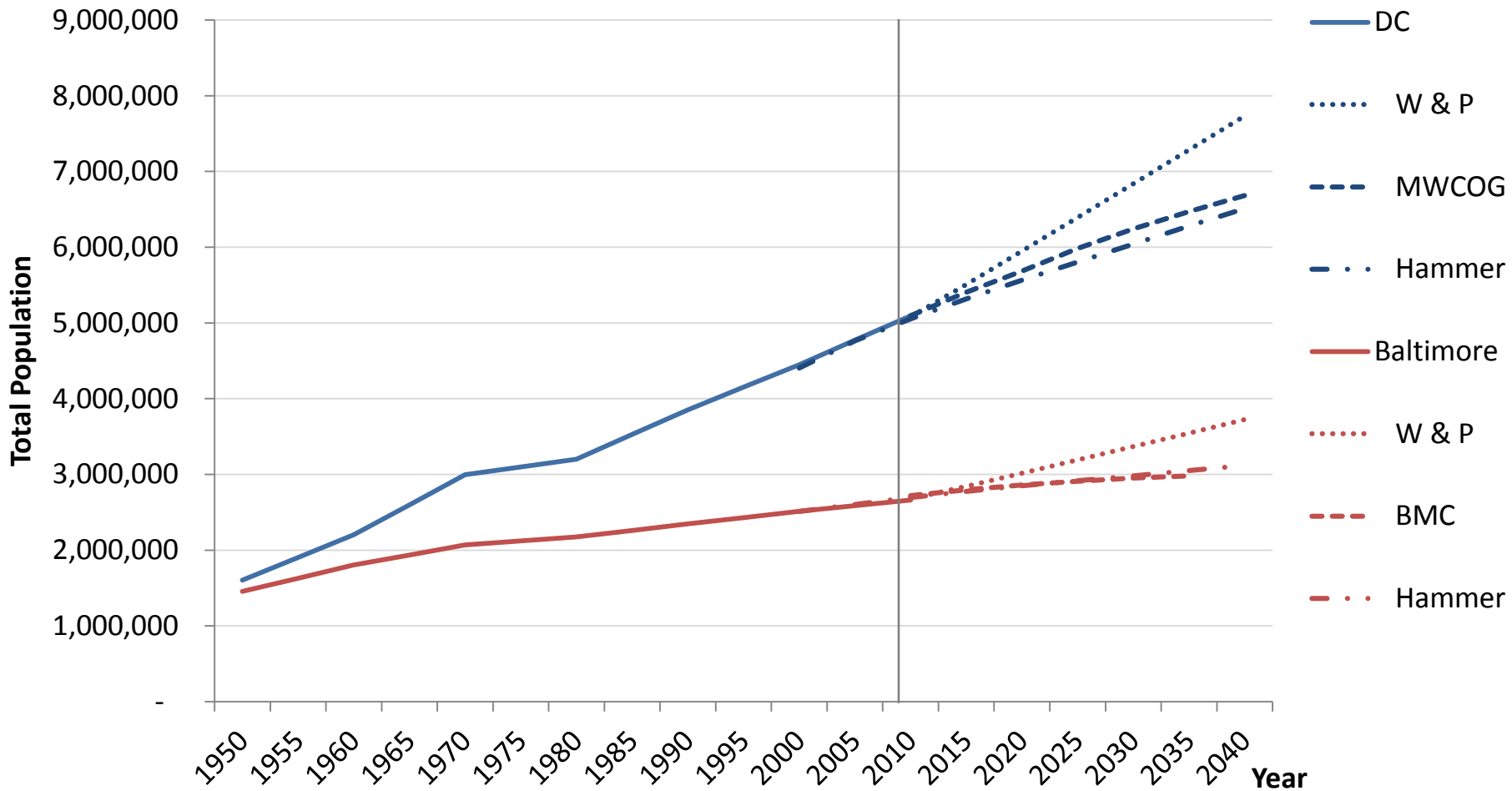
- Metropolitan Area Council of Governments
- Baltimore Metropolitan Council
- Woods and Pool
- Tommy Hammer/Inforum



# Growth Certain; Growth Rate Uncertain



## Total Population by Metro Area: Baltimore-Washington Region

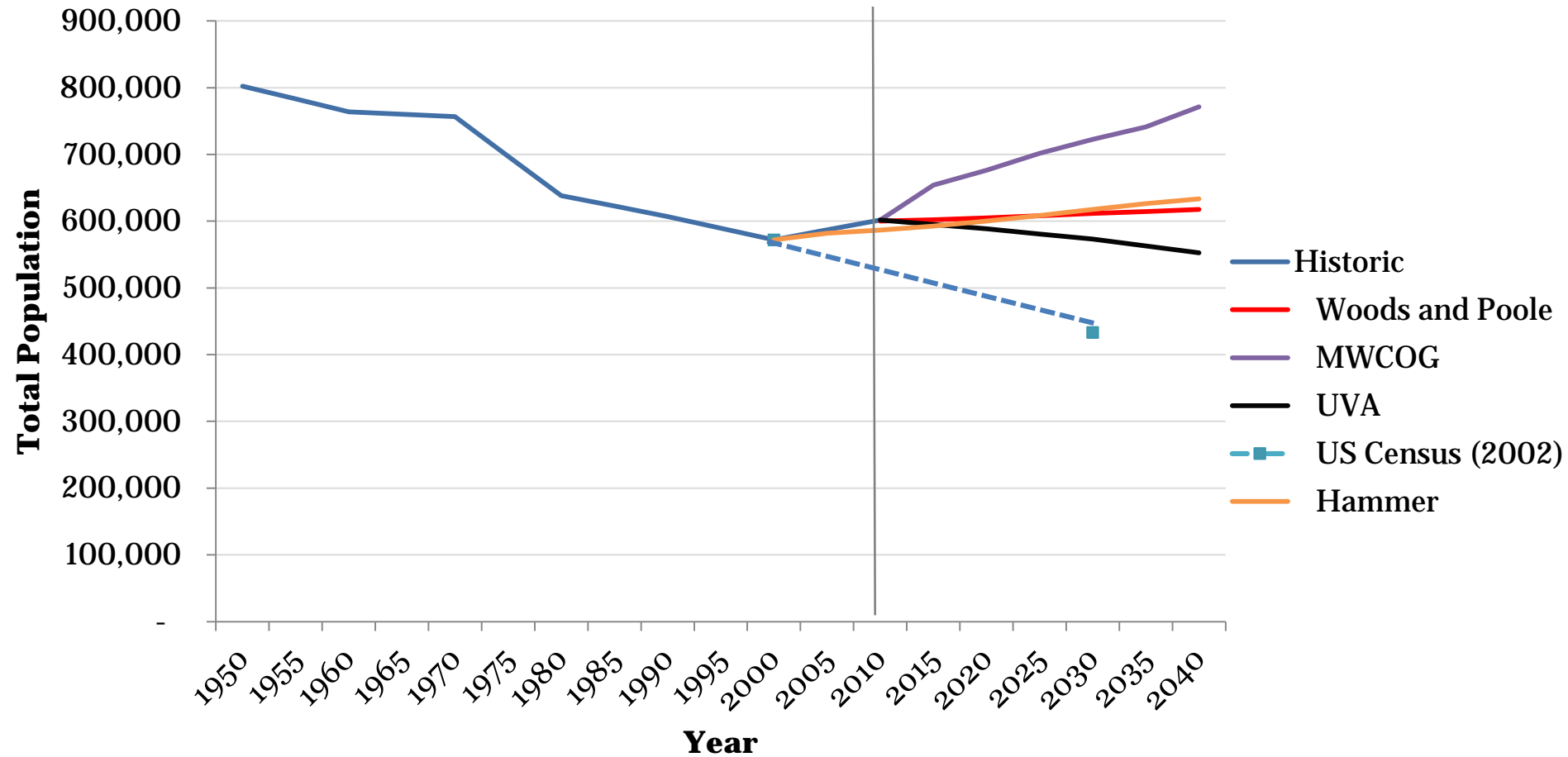


Woods and Poole, MWCOG, BMC, Hammer

# Forecasts Disagree on Growth in Core, Particularly Washington DC



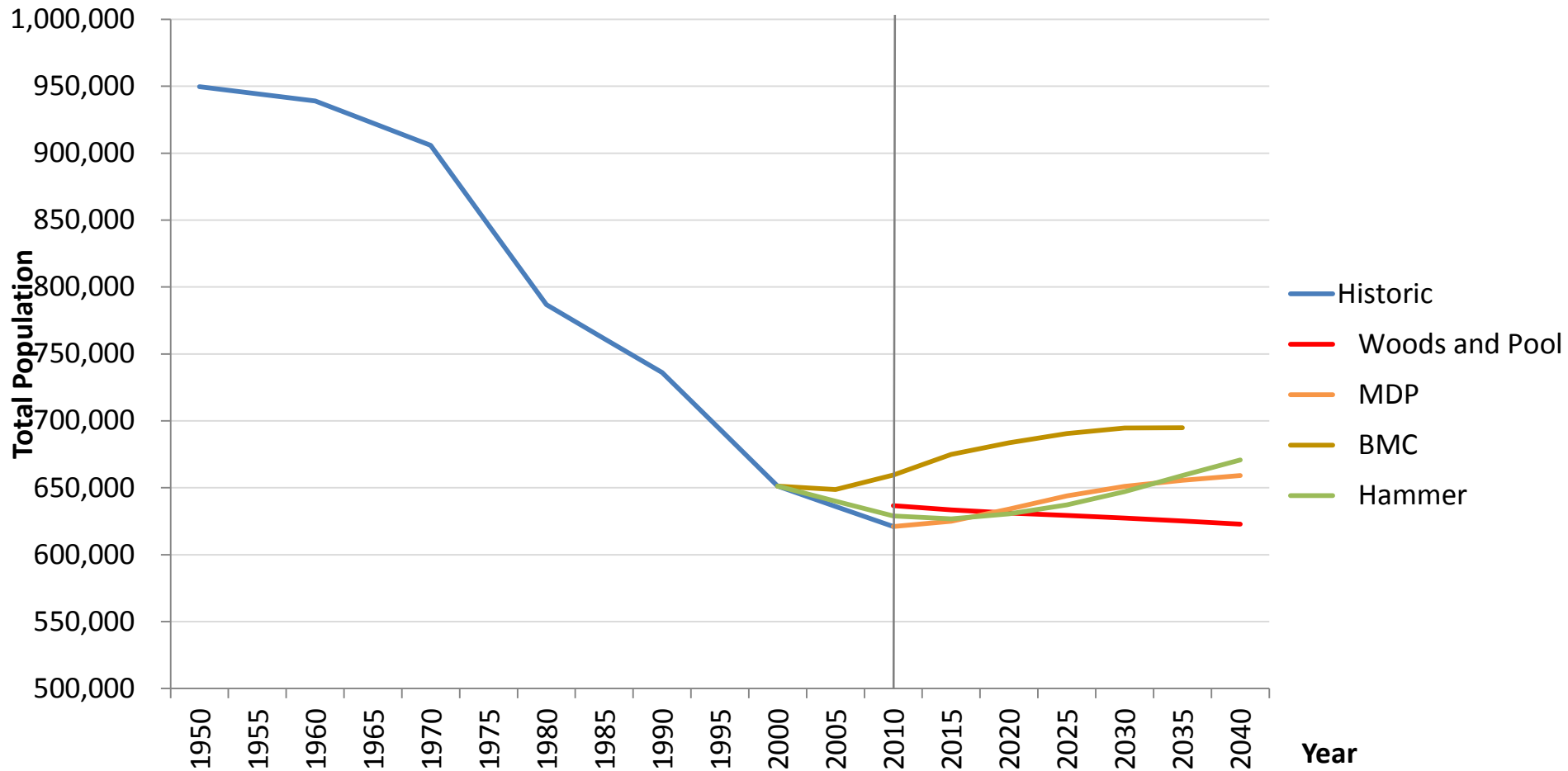
## Total Population: Washington DC



# Forecast Disagree Less on Growth in Baltimore



## Total Population: Baltimore City



Woods and Poole, MDP, BMC, Hammer

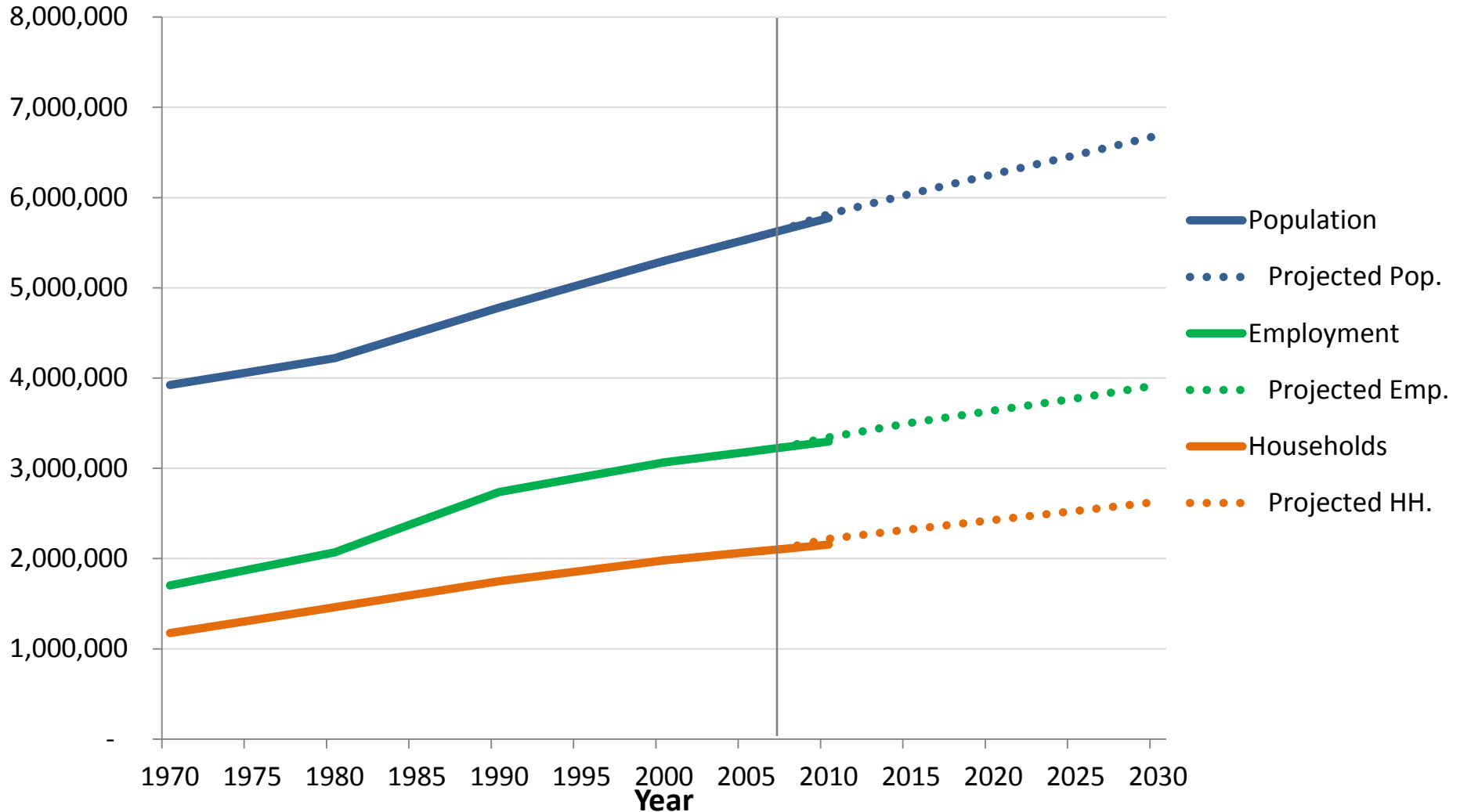


# The Baseline Scenario

Based on the Constrained Long-Range Plans developed by the Baltimore and Washington Metropolitan Planning Organizations and other government-sanctioned forecasts.



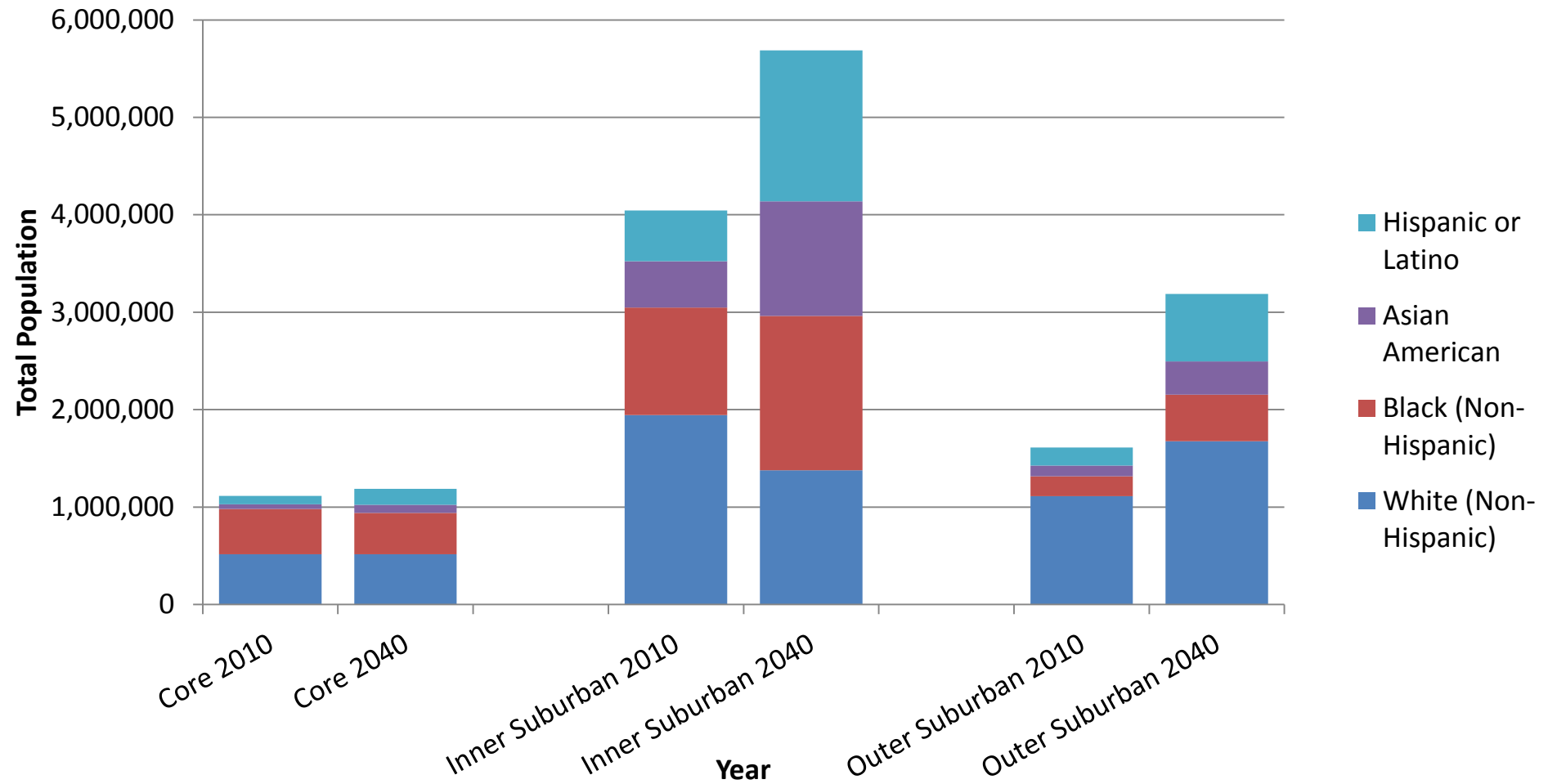
# PRESTO Baseline Projects Steady Job, Household, Population Growth



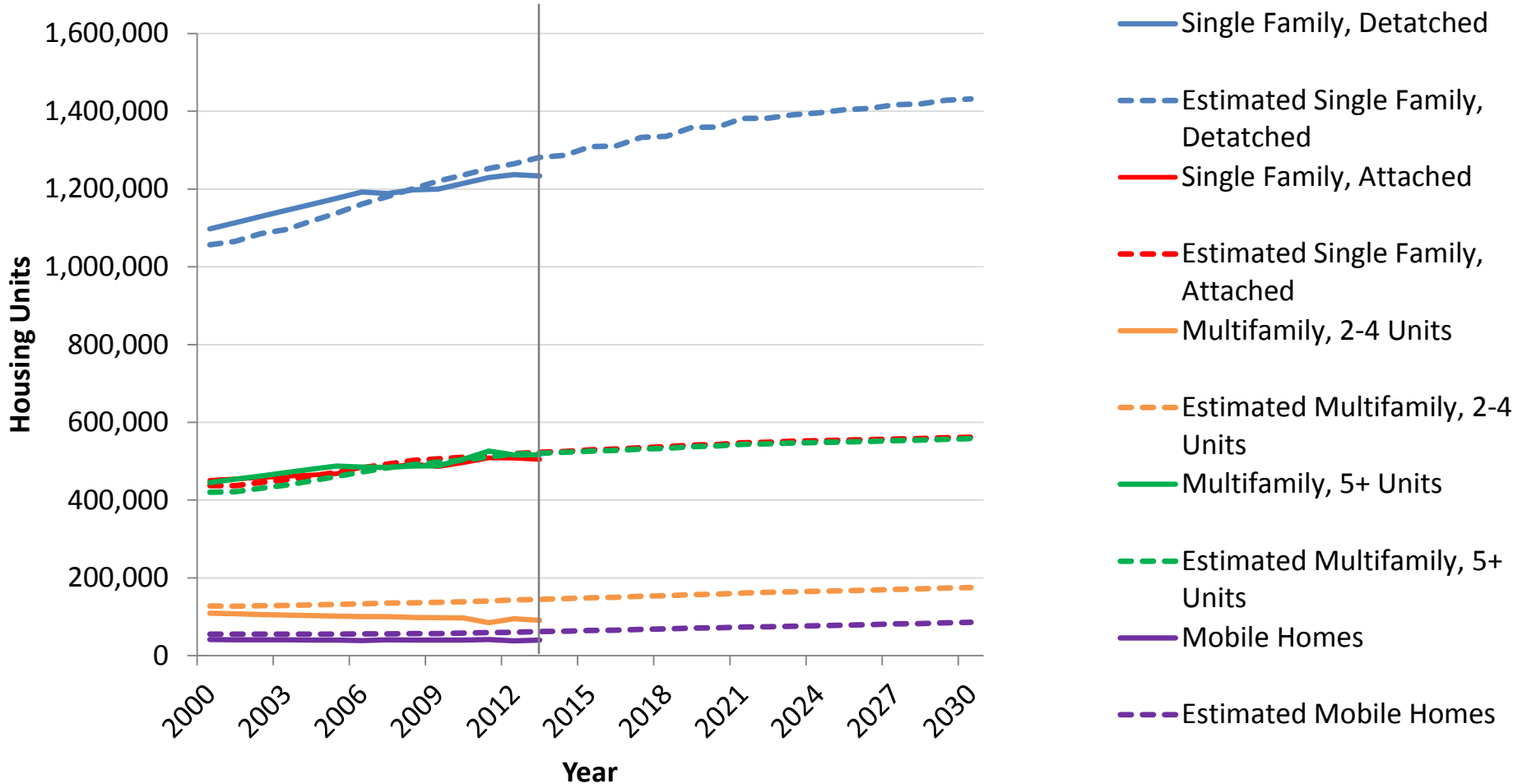
# Welcome the Multicultural Suburbs



**Total Population by Race & Sub-Region: Baltimore-Washington Region**

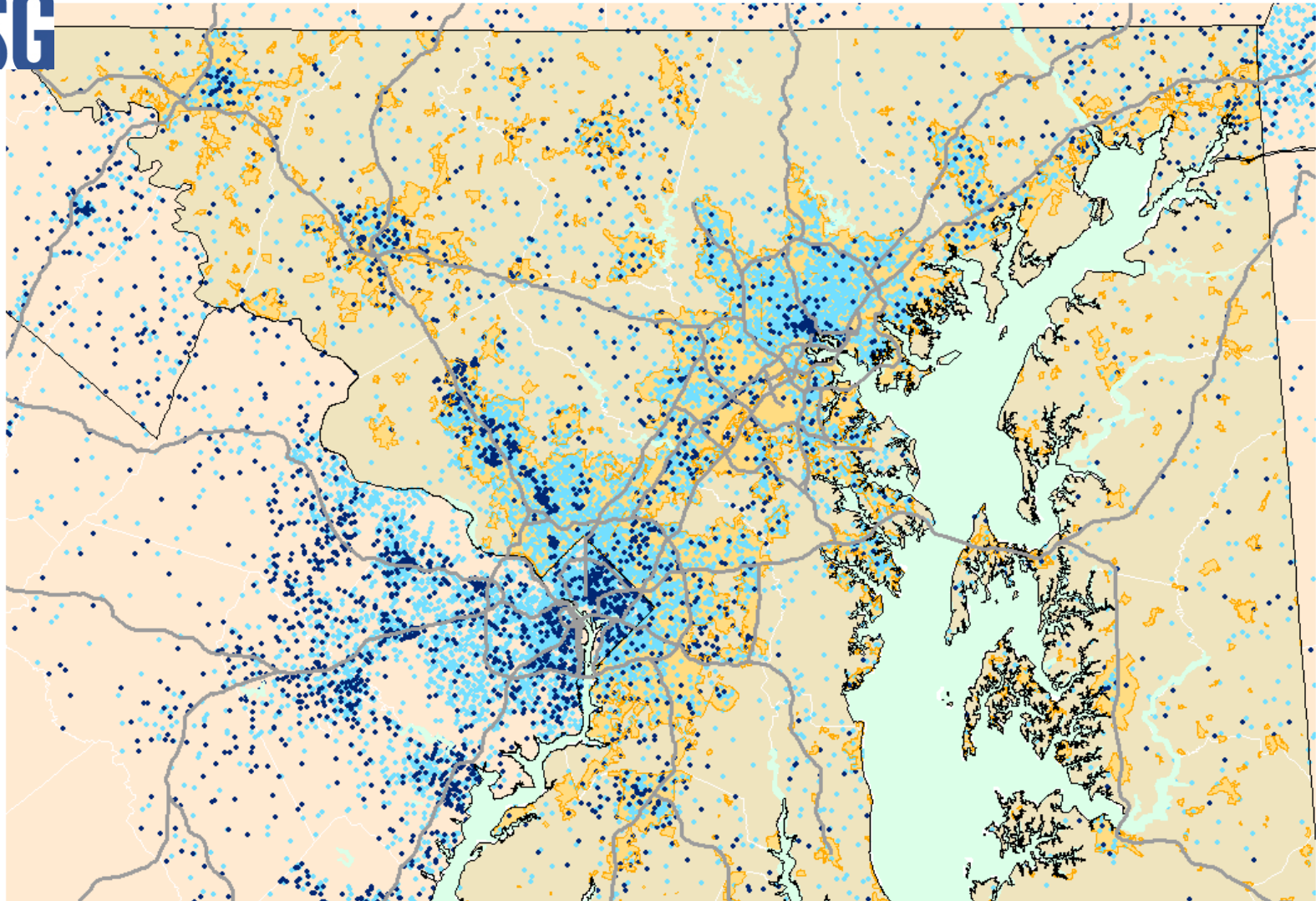


# Single Family Homes Remain Dominant



Source: SILO Model

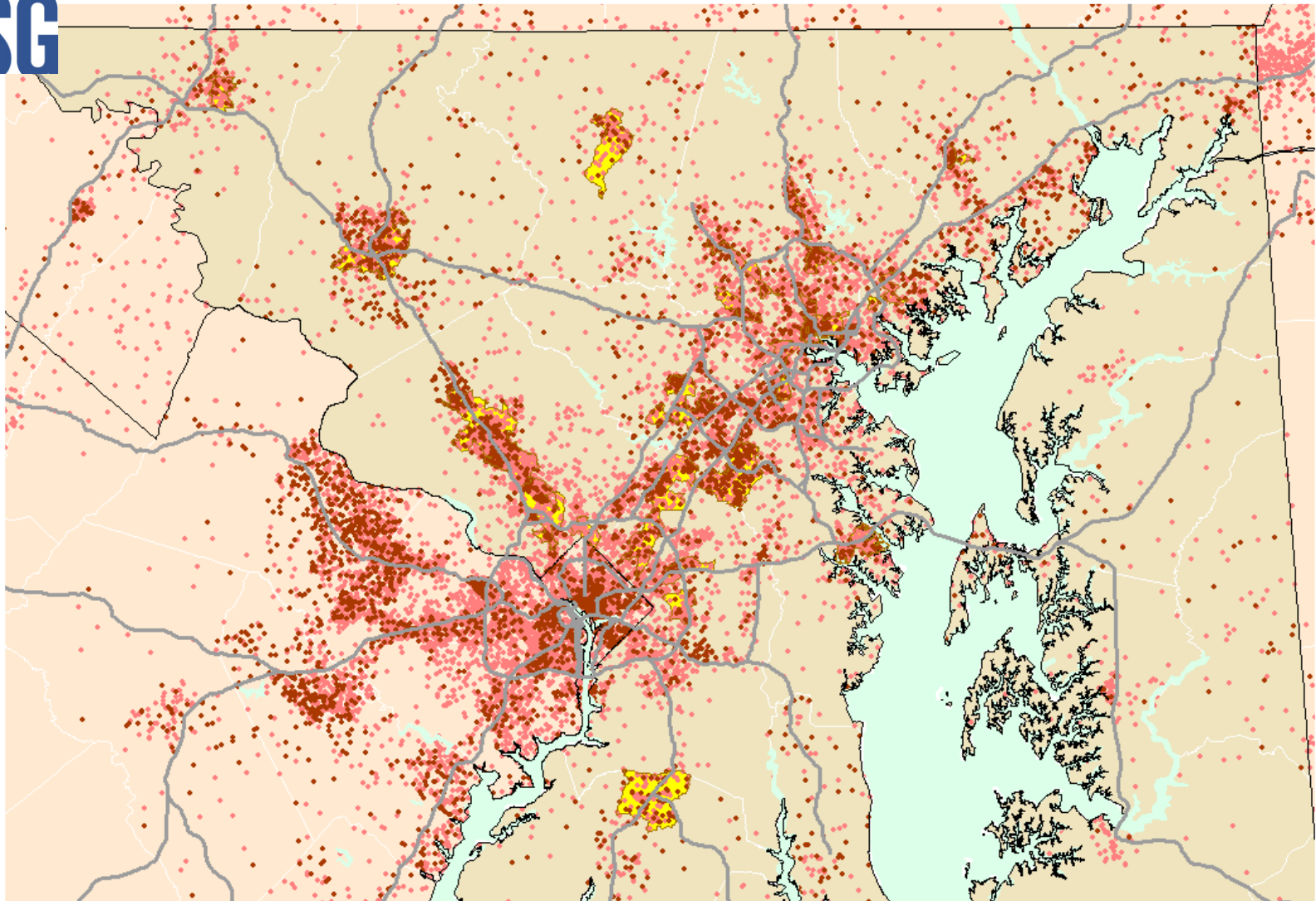
# New Households Locate Primarily Within Priority Funding Areas



- 1 Dot = 300 Households in 2007
- 1 Dot = 300 New Households in 2030
- Priority Funding Area



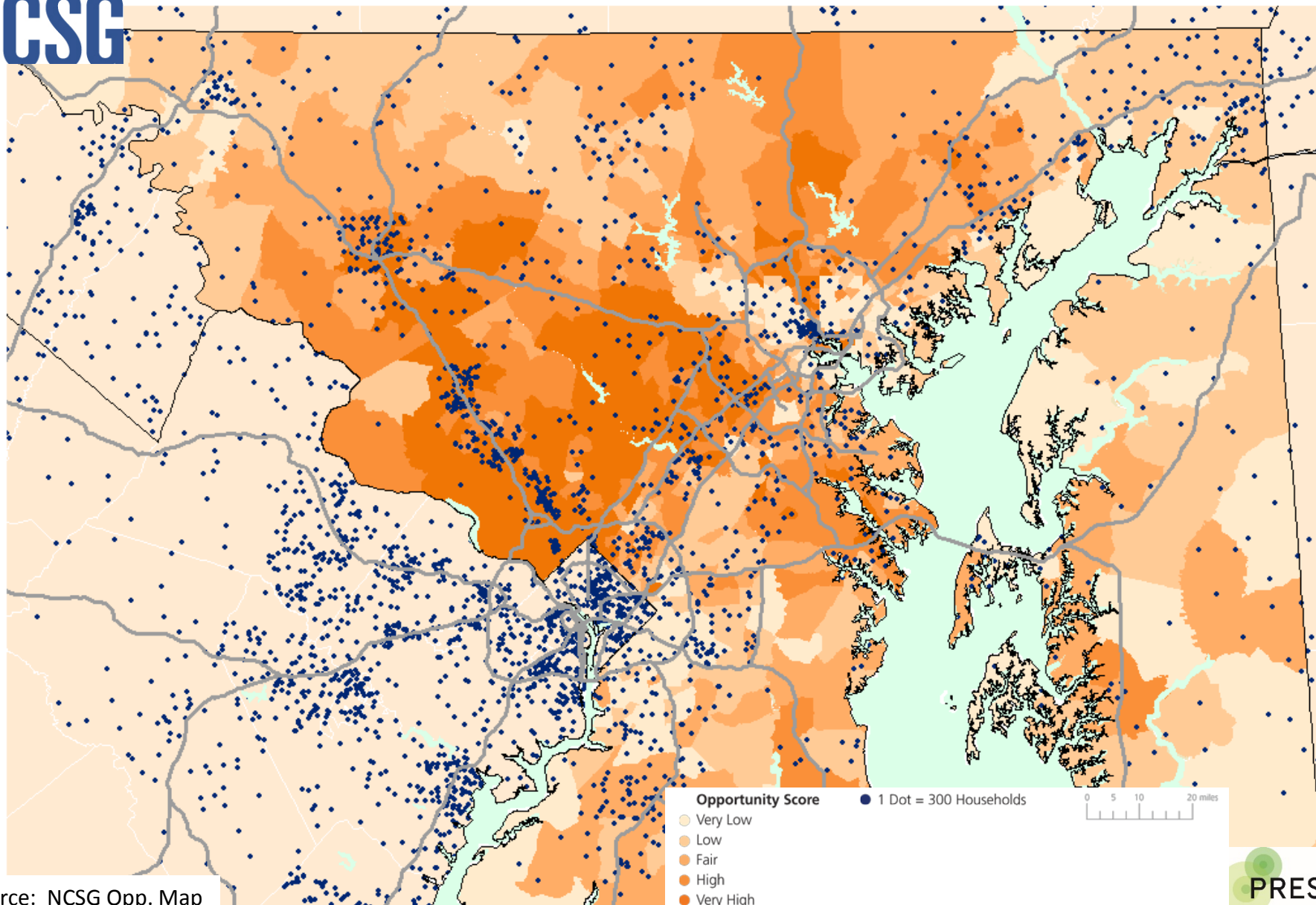
# Employment Grows In and Near Job Centers



- 1 Dot = 300 Employment in 2007
- 1 Dot = 300 New New Employment in 2030
- Employment Centers



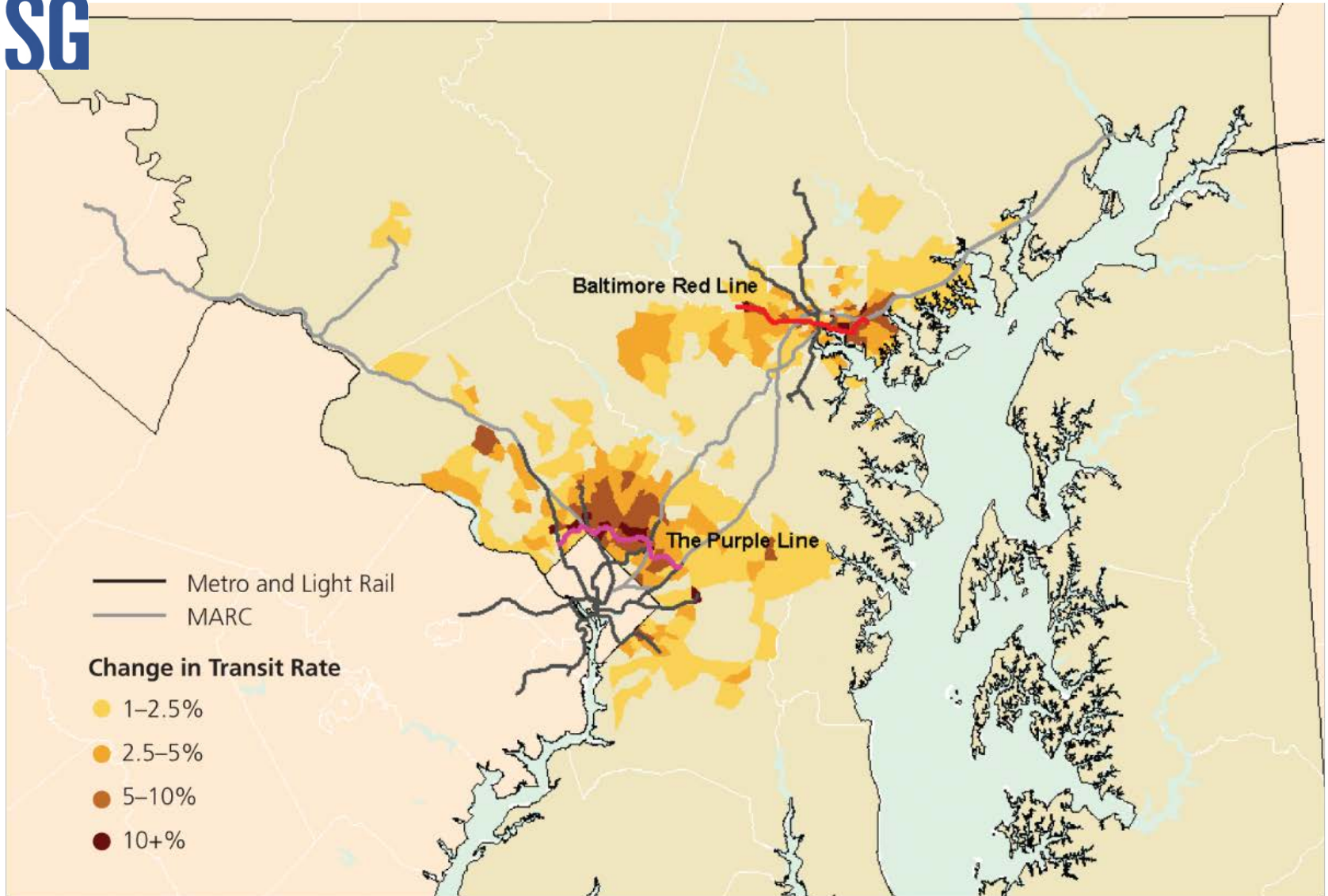
# Growth Occurs in All Areas of Opportunity



Source: NCSG Opp. Map

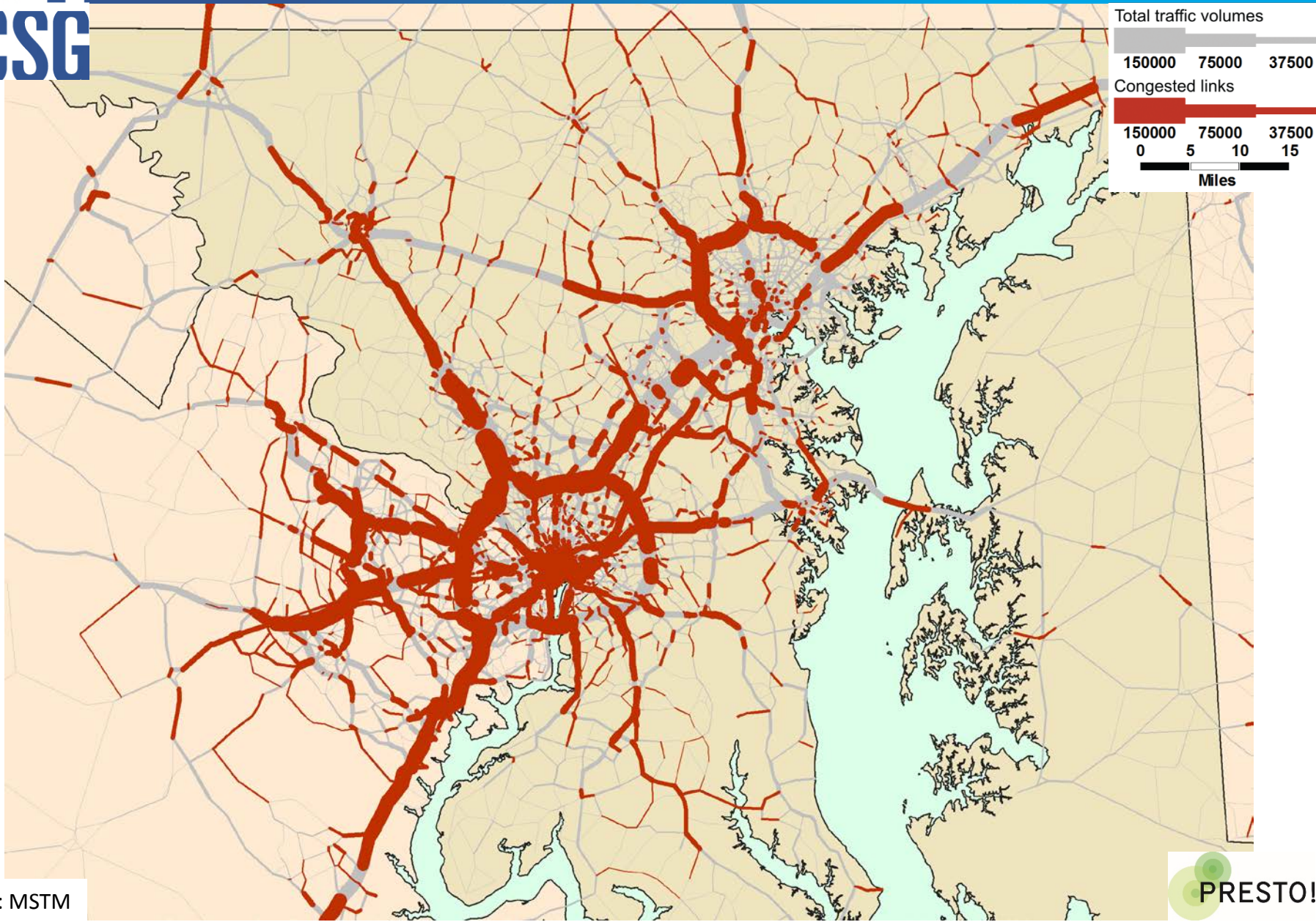


# Transit Use Increases Near Red and Purple Lines





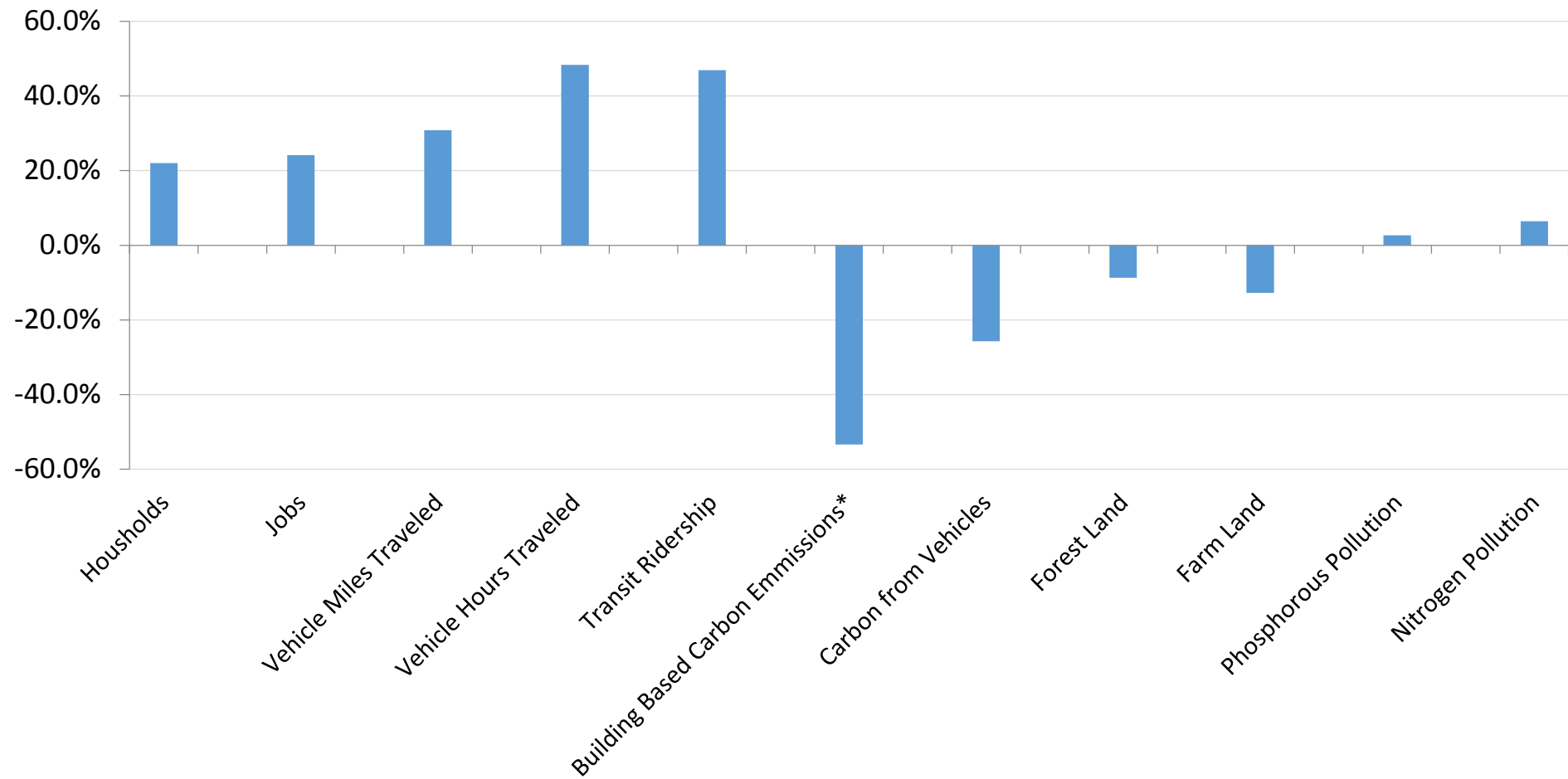
# Congestion Worsens Almost Everywhere



# Base Line Indicators



## Baseline Scenario Indicators



# Alternative Scenarios

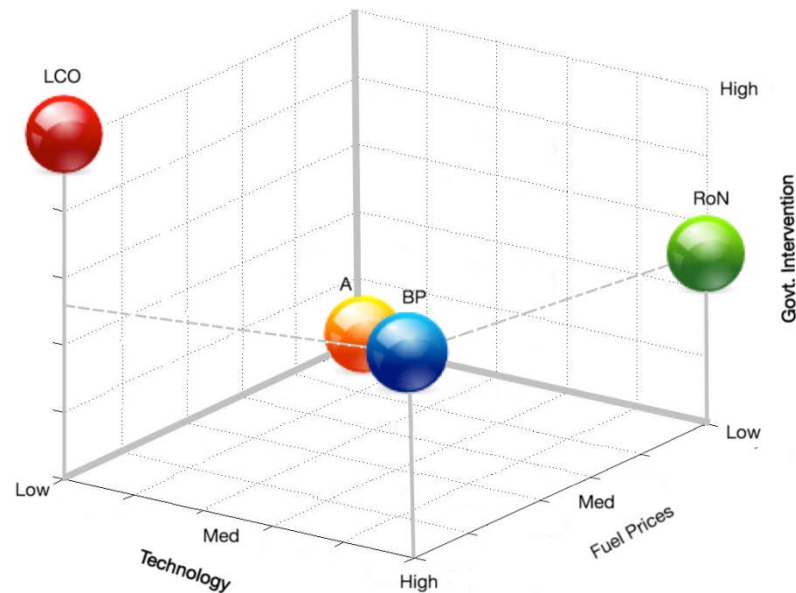
Developed with Scientific Advisory  
Groups



# The Four Scenarios



	Fossil Fuel Prices	Tech. Impact	Gov. Inter.
<b>Last Call at the Oasis</b>	High	Low	High
<b>Blue Planet</b>	High	High	Medium
<b>Ashes and Diamonds</b>	Low	Low	Low
<b>Revenge of the Nerds</b>	Low	High	Medium

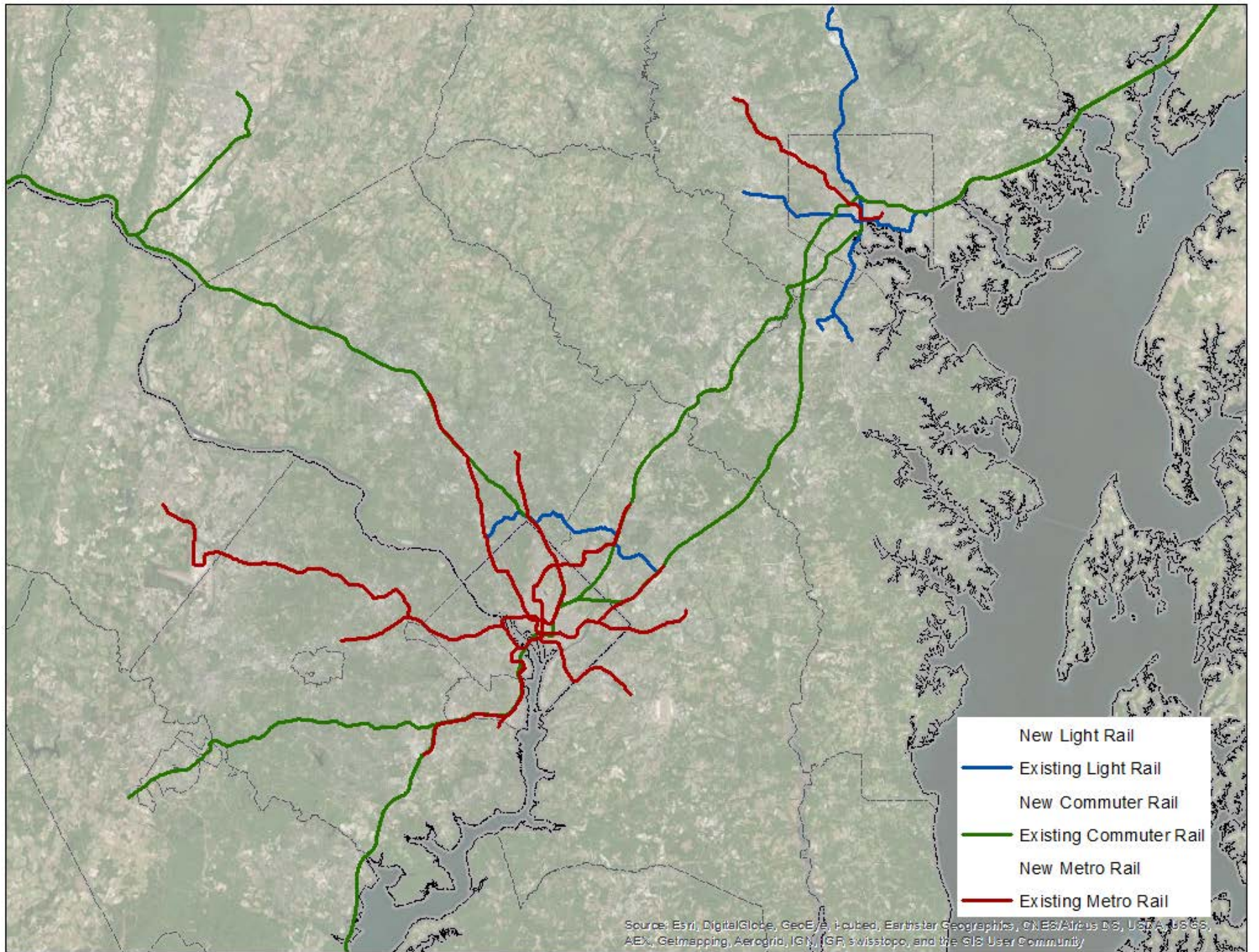


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# Key Parameter Inputs

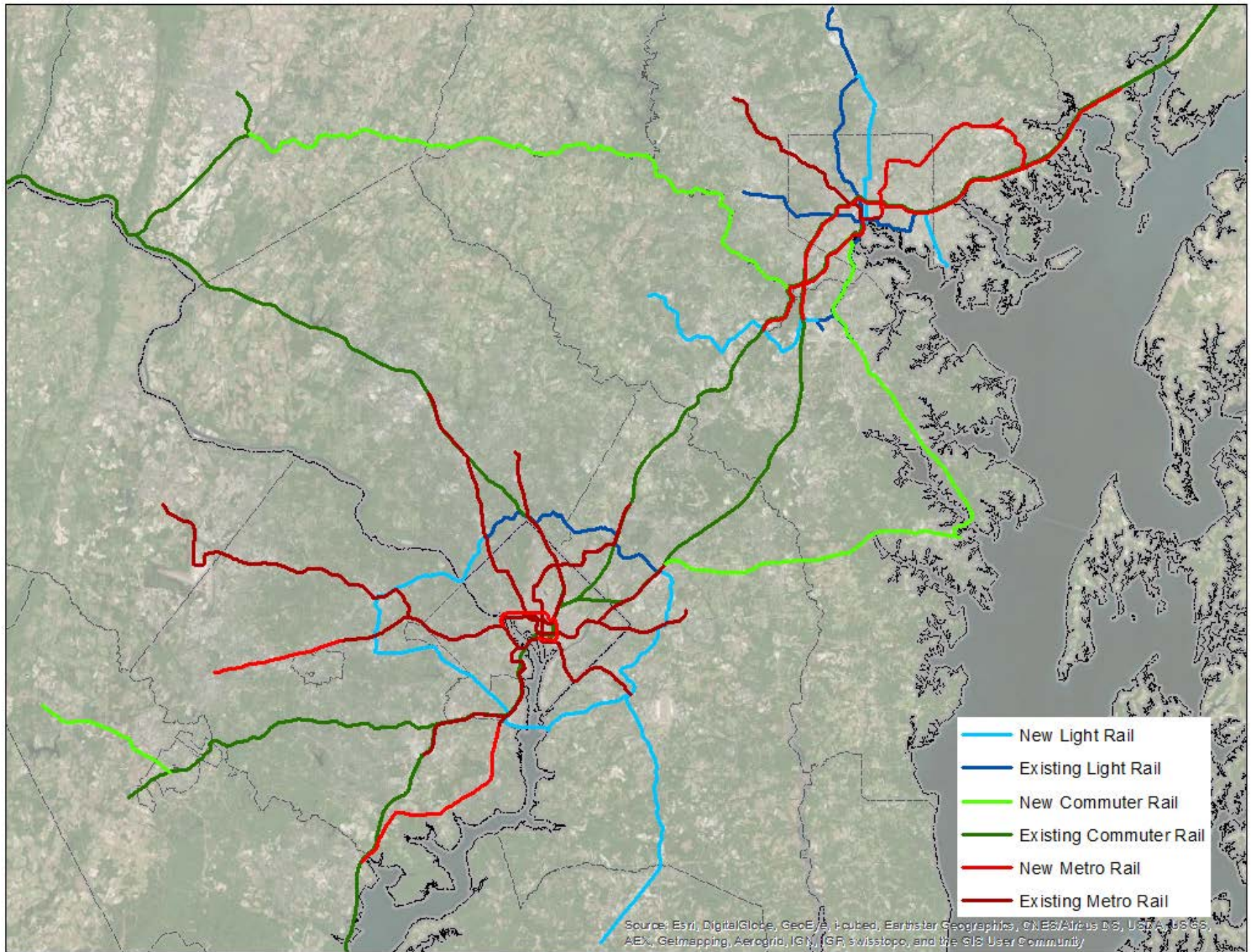


	Fuel Prices	Autonomous Vehicles Technology	Green Technology			Development Capacity				Emp. Location	Road and Rail Inf.
		Road Capacity	'Value of access'	Zero Emission Vehicle Adoption	Building Efficiency	Priority Funding Area	Transit Stops	Small + Mid Sized Towns	Green Inf.		
<b>Blue Planet</b>	1.5 base	base	base	95% of new vehicles in 2040	<i>Not yet implemented</i>	2x	4x	base	0 in tier 1,2 priority areas	2x in small towns	310 Miles New Rail Lines
<b>Revenge of the Nerds</b>	1/3 base	1.5 base	1/2 base	35% of new vehicles in 2040	<i>Not yet implemented</i>	base	base	2x	base	Pushed toward transit accessible areas	base



- New Light Rail
- Existing Light Rail
- New Commuter Rail
- Existing Commuter Rail
- New Metro Rail
- Existing Metro Rail

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Getmapping, Aerogrid, IGN, IGF, swisstopo, and the GIS User Community

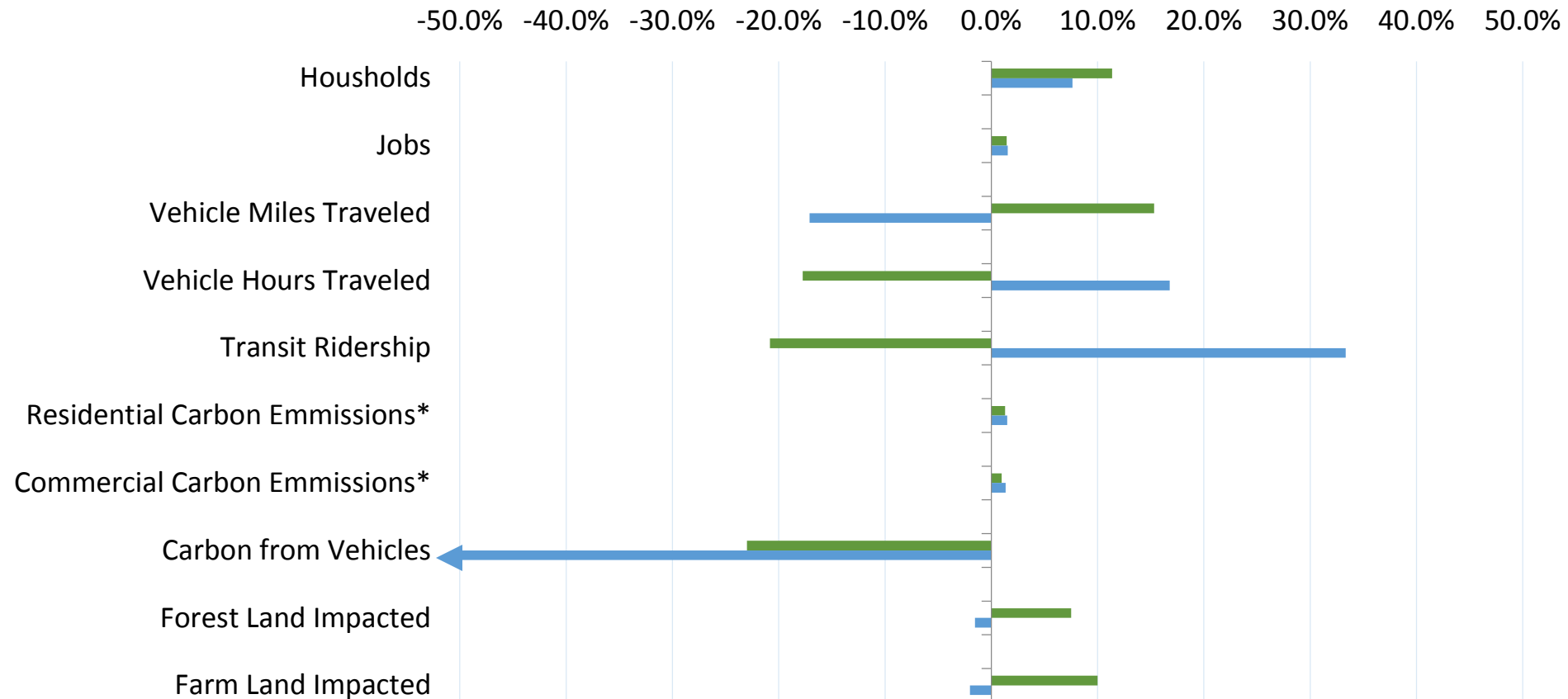


# Revenge of the Nerds and Blue Planet Indicators



## Indicator Change from Base Scenario

■ Revenge of the Nerds  
■ Blue Planet



\*Scenario specific policies yet to be modeled



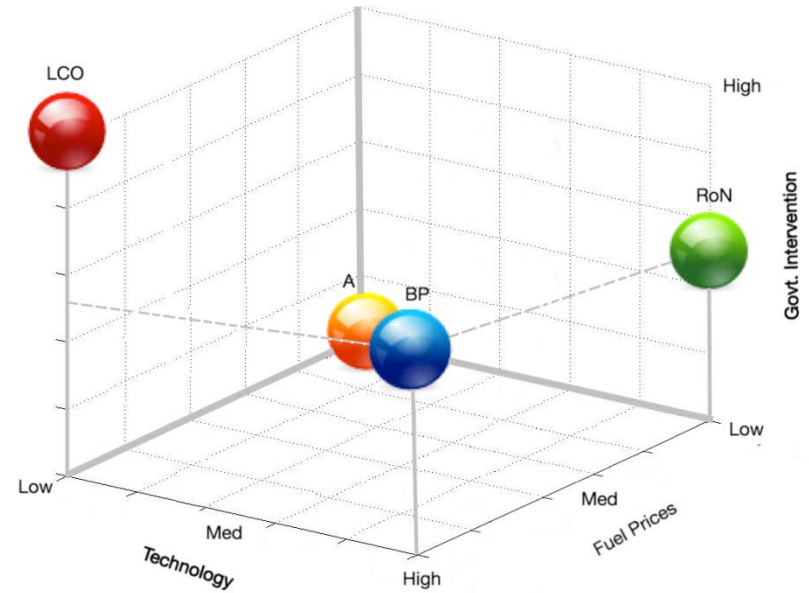
# What's on the Docket



# The Four Scenarios

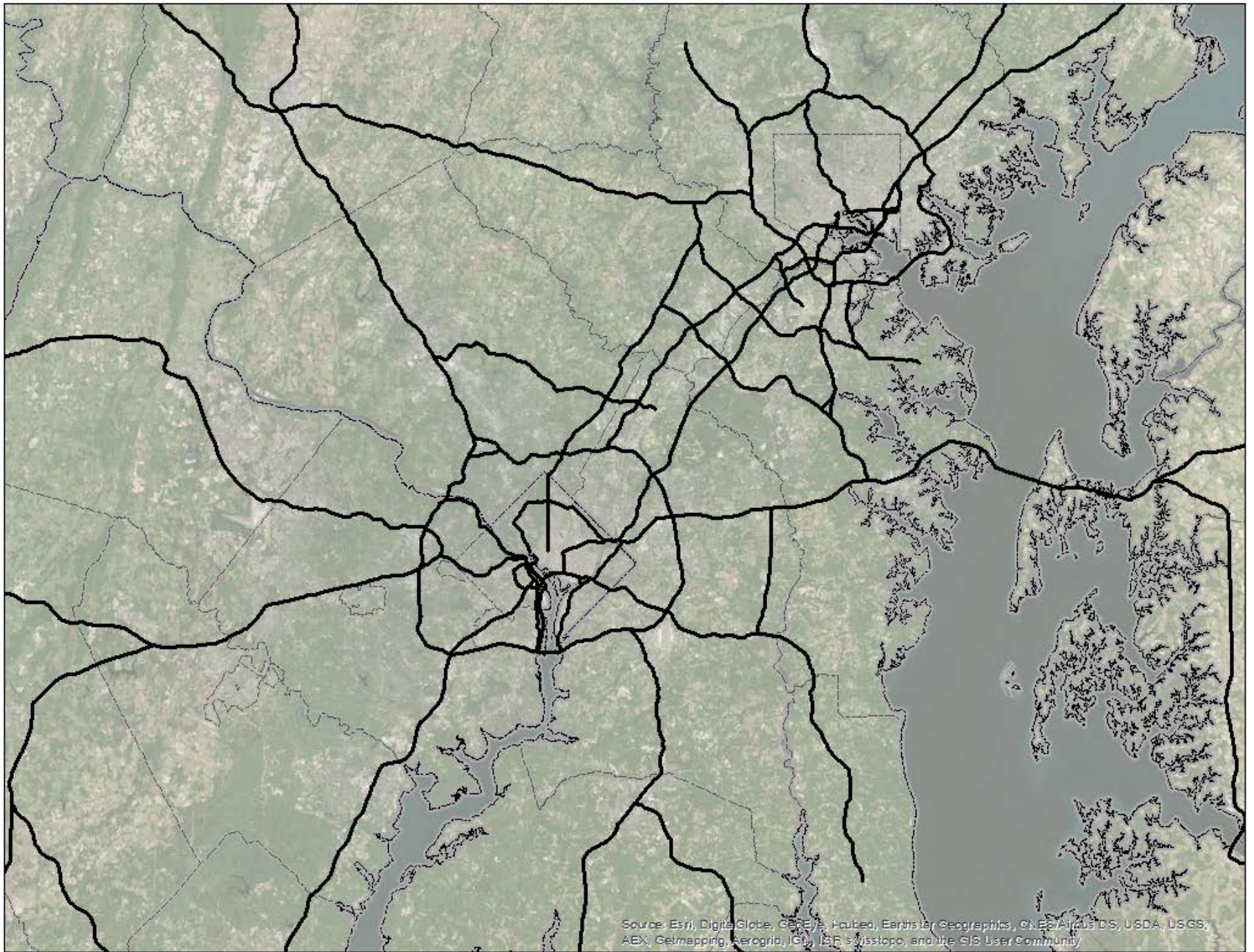


	Fossil Fuel Prices	Tech. Impact	Gov. Inter.
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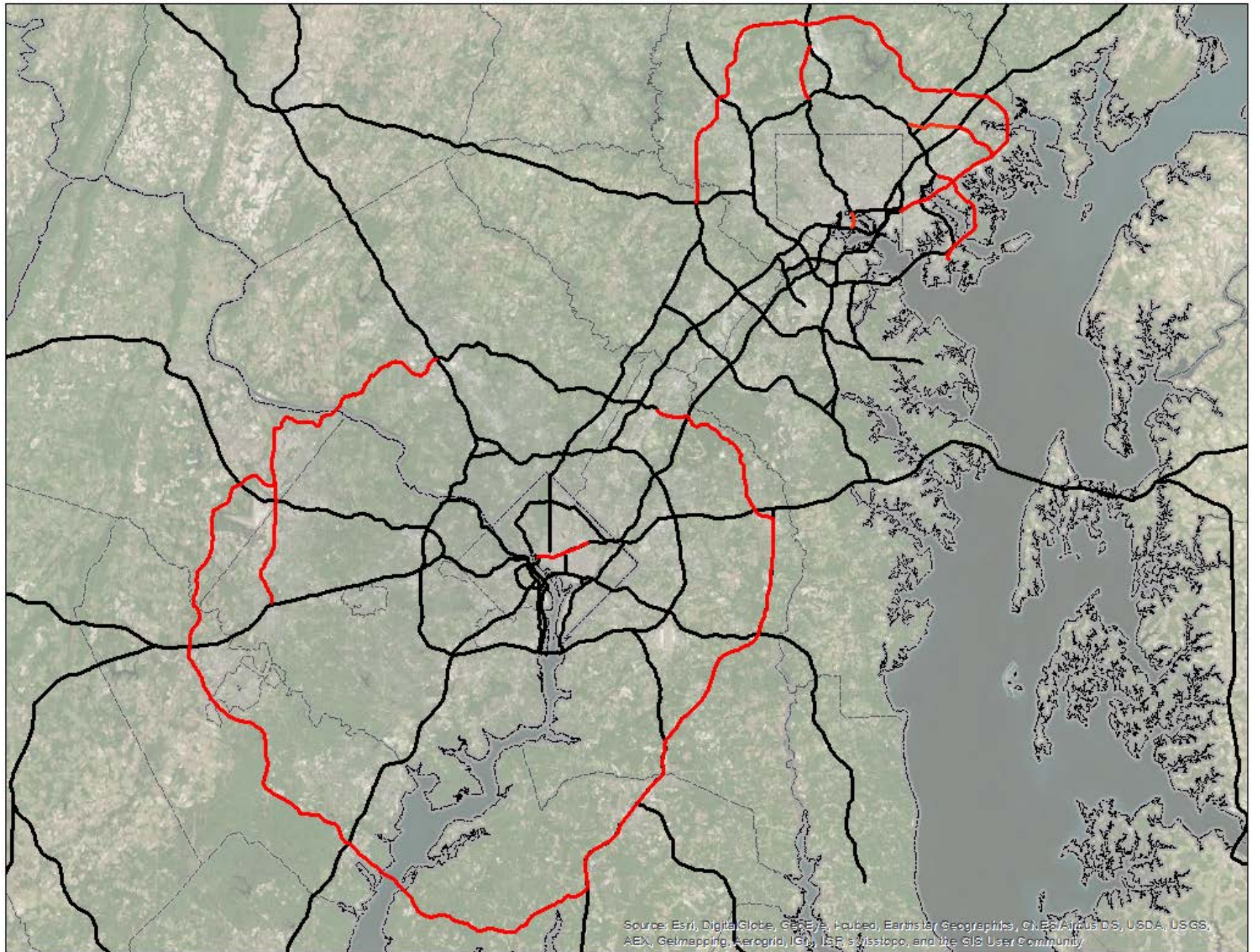


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Thank You

[www.smartgrowth.umd.edu/PReSTo.html](http://www.smartgrowth.umd.edu/PReSTo.html)

