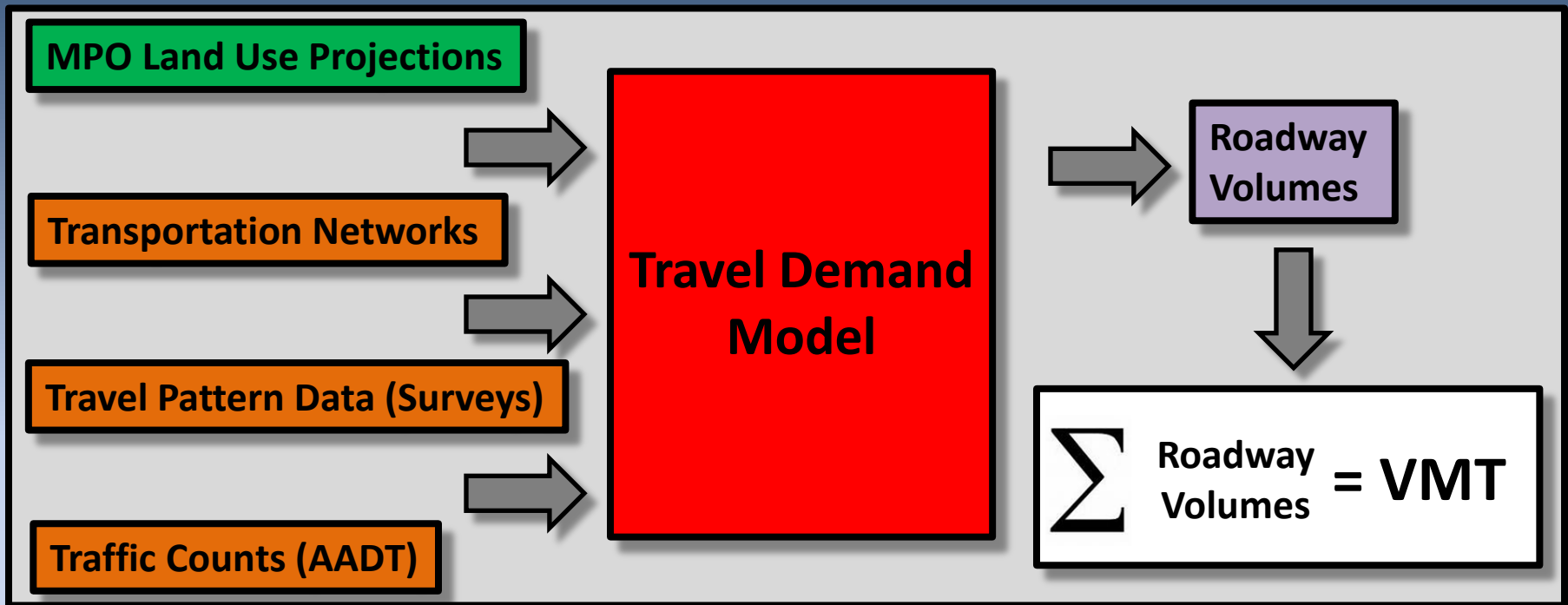


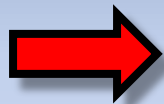
# Background on VMT Projections



WILMAPCO Air Quality Subcommittee  
March 13, 2014

# DNREC AQS: “*Why Does VMT Grow Faster than Population ?*”

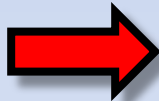
Some Indications for Delaware:



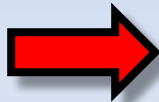
1) Relative Location of **Existing and Future:**

-- *Dwelling Units*

-- *Jobs*



2) Relative Growth of **Longer Distance VMT.**



3) Relative Growth in **Certain “Modeled” Counties.**

# Study Process:

## **1) Coding/Quality Check of ALL Model Inputs:**

*TAZ Data -- Existing and MPO Projections*

*Roadway Network Coding -- Speeds, Lanes, Capacities*

*Model Equations (from U of D Monthly Survey):*

Trip Generation Rates

Trip Length Frequencies (Time and Distance of Travel)

Mode Shares (Auto vs. Transit, NO BIKE/PED)

Assignment Calibration (2012 Traffic Summary AADT)

## **2) Review 2012 – 2040 VMT Trends:**

*County (over Time)*

*County – to – County*

## **3) Identify Indicators / Variables Affecting VMT in (Any) Model.**

A 3D map of Delaware, USA, showing the relative location of existing and future dwellings. The map is viewed from an elevated perspective, showing the state's coastline and major water bodies. The land area is colored in shades of green and brown, representing vegetation and terrain. The water bodies are dark blue. The map is overlaid with a grid of blue and red rectangular blocks, representing the locations of dwellings. The red blocks represent future dwellings, and the blue blocks represent existing dwellings. The blocks are distributed across the state, with a higher concentration in the coastal areas and the Delaware River valley. The blocks are oriented in a way that shows their relative positions to each other and to the state's boundaries.

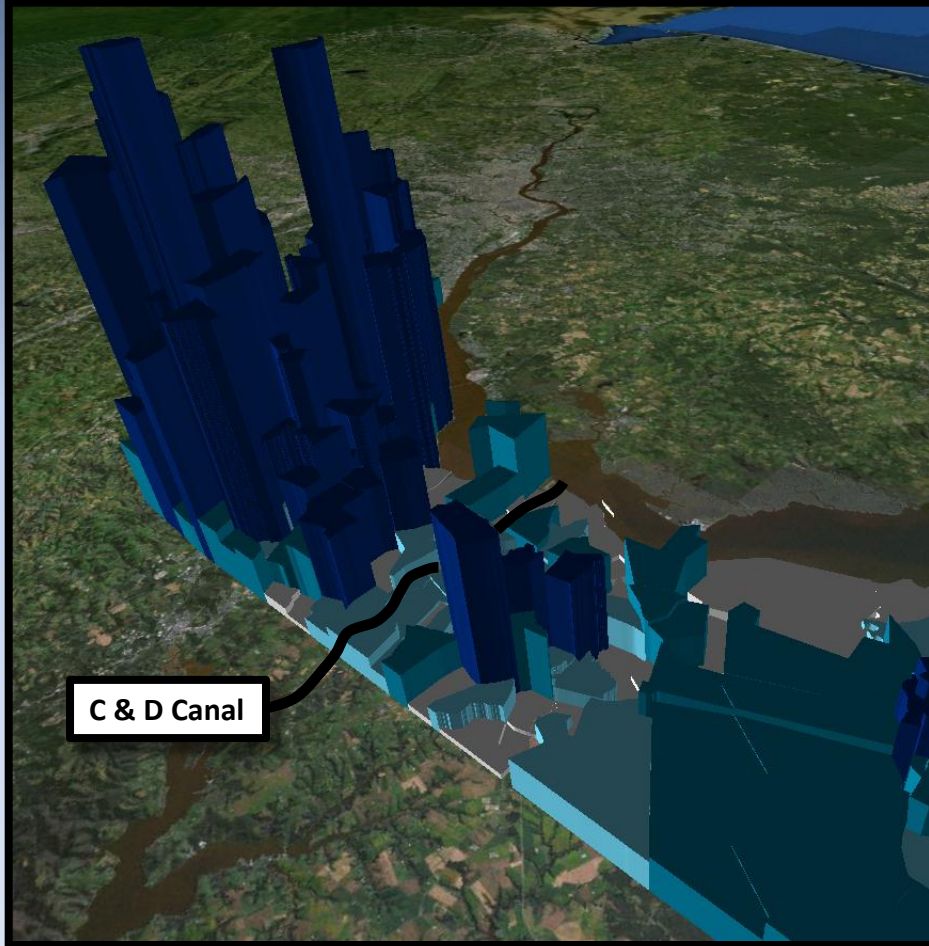
**1) Relative Location of:**  
**2013 Existing Dwellings**  
**2040 Future Dwellings**

**Sources:**

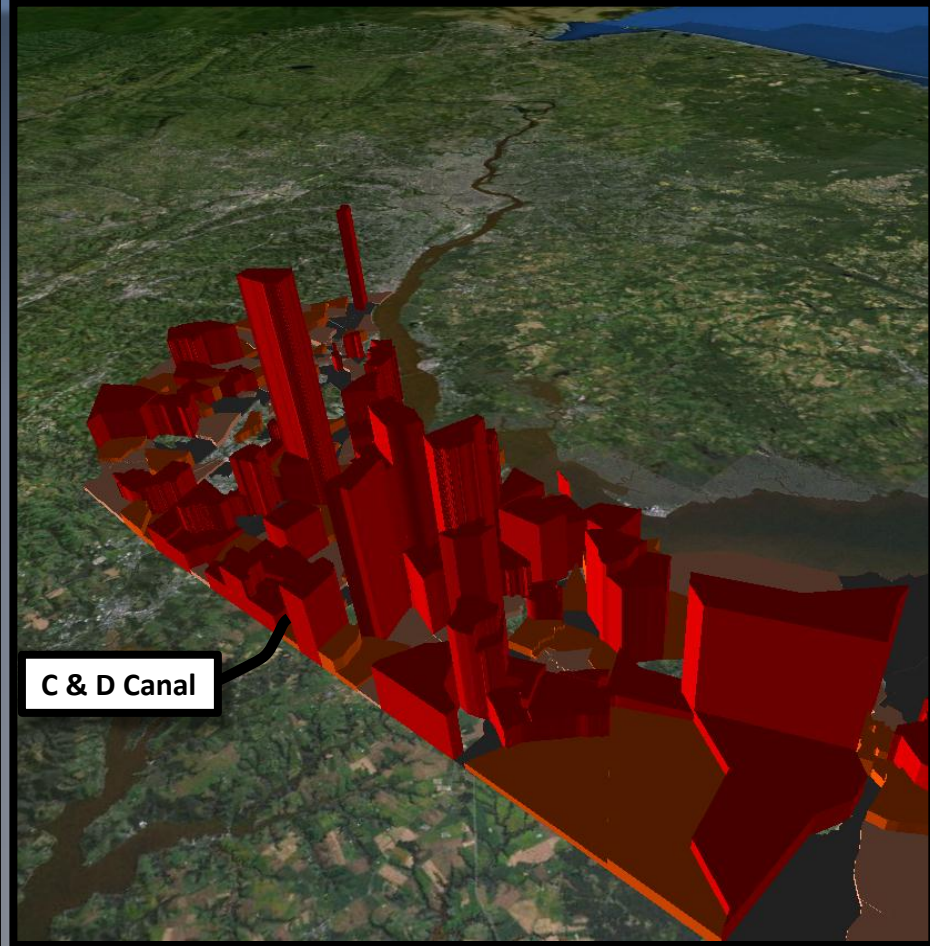
Delaware Population Consortium  
MPO Data Subcommittees

# New Castle County

2013 Existing Dwellings

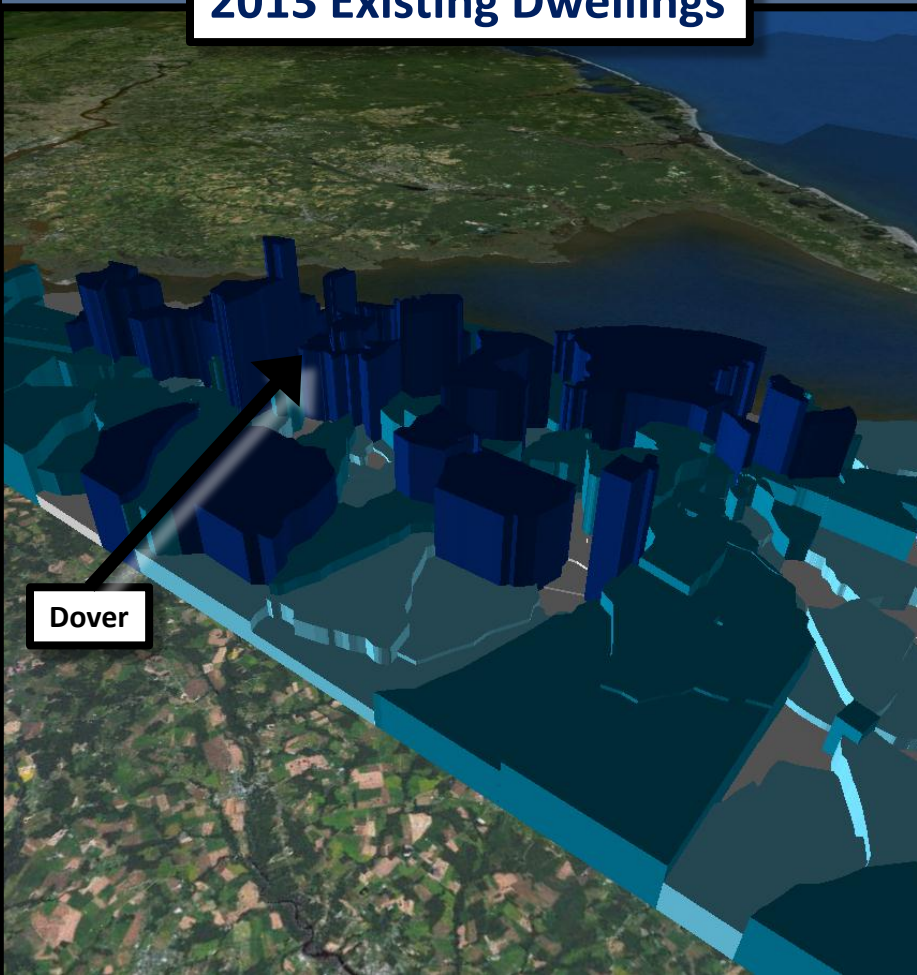


2040 Future Dwellings

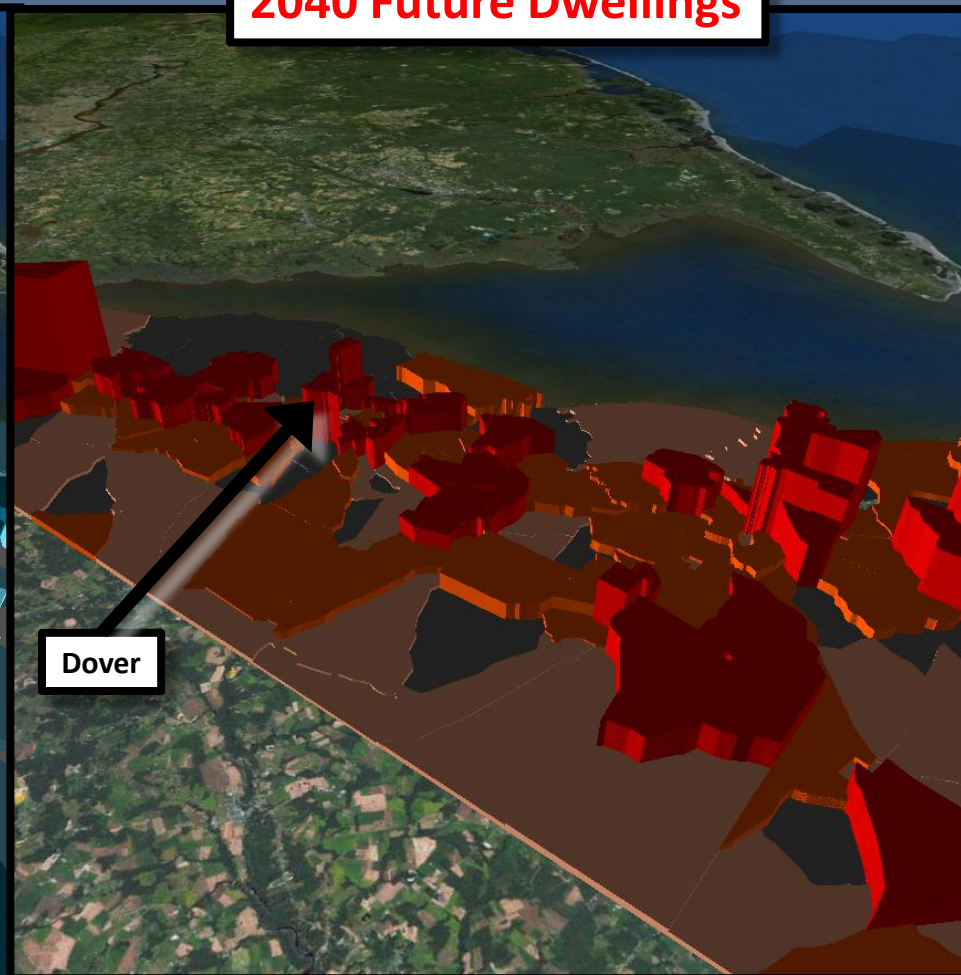


# Kent County

2013 Existing Dwellings

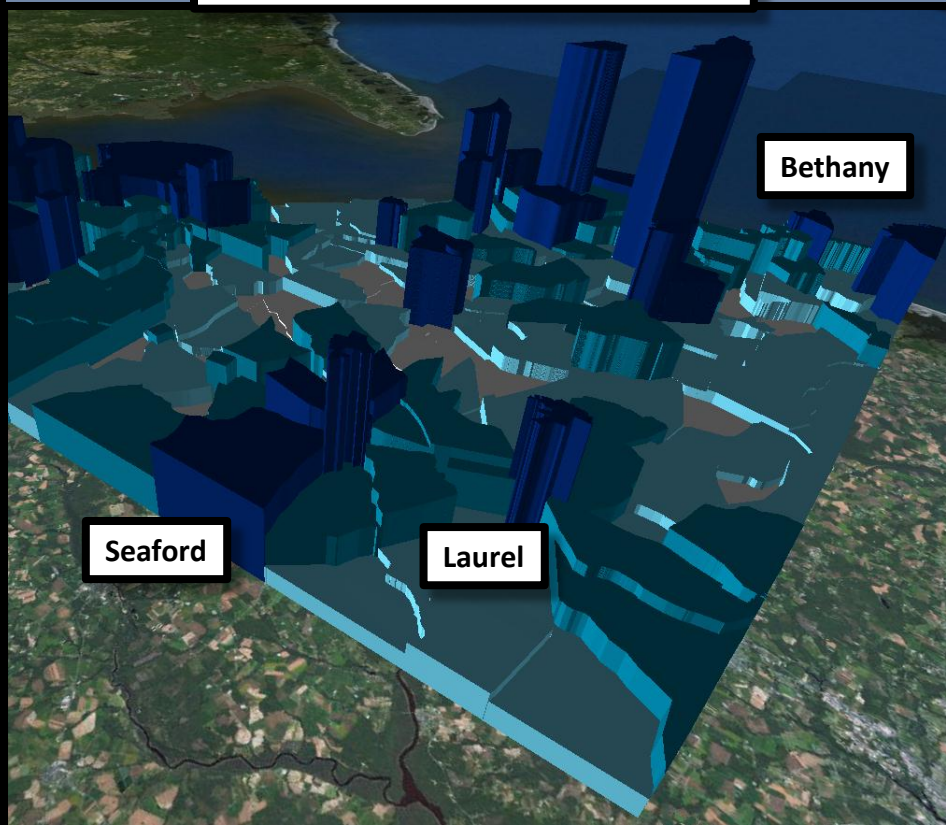


2040 Future Dwellings

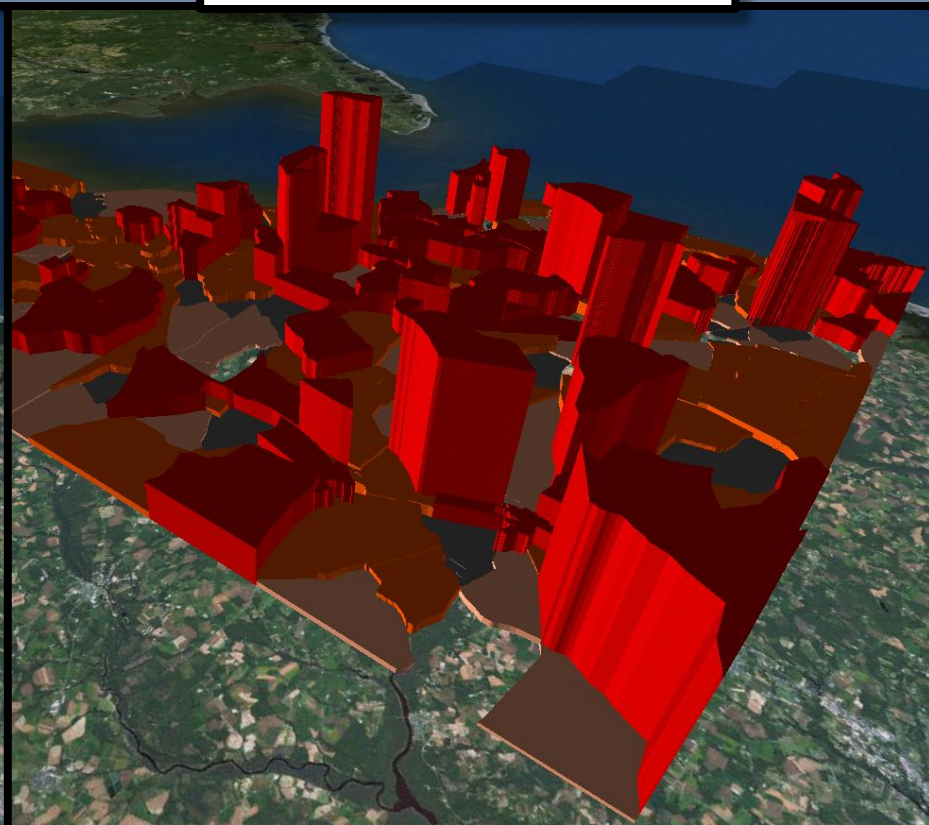


# Sussex County

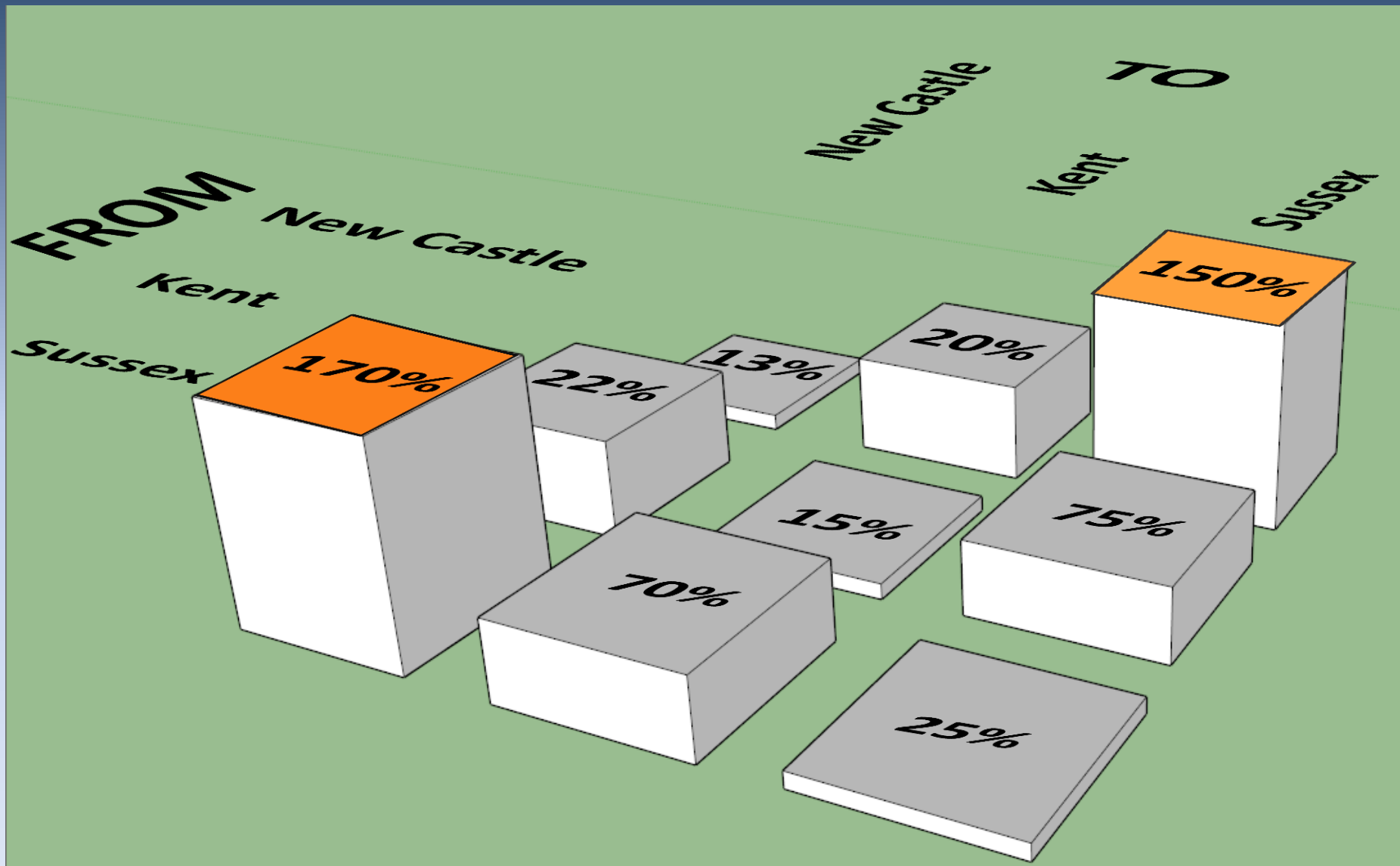
**2013 Existing Dwellings**



**2040 Future Dwellings**



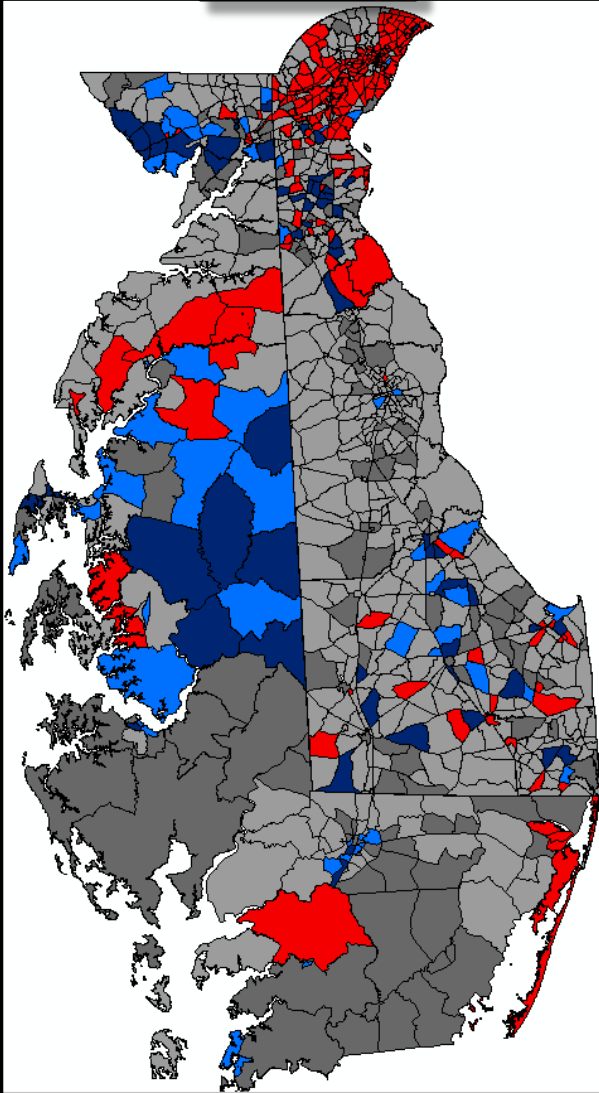
## 2) Relative Growth in Longer Distance VMT:



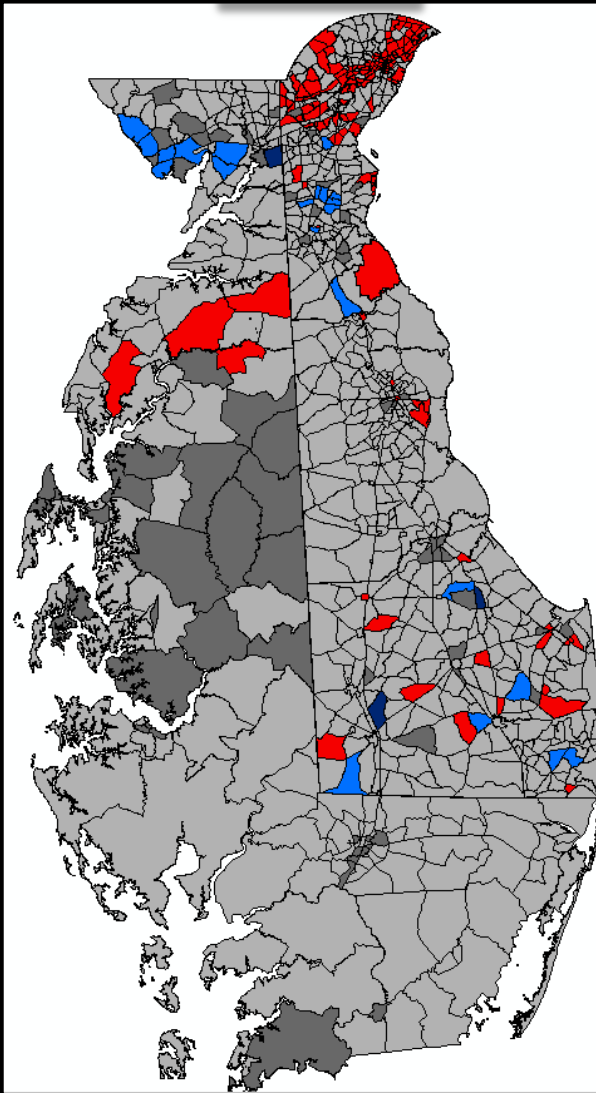
### 3) Relative Growth in Modeled Counties:

**Decrease (RED)**    Moderate Growth (GREYS)    **Higher Growth (BLUES)**

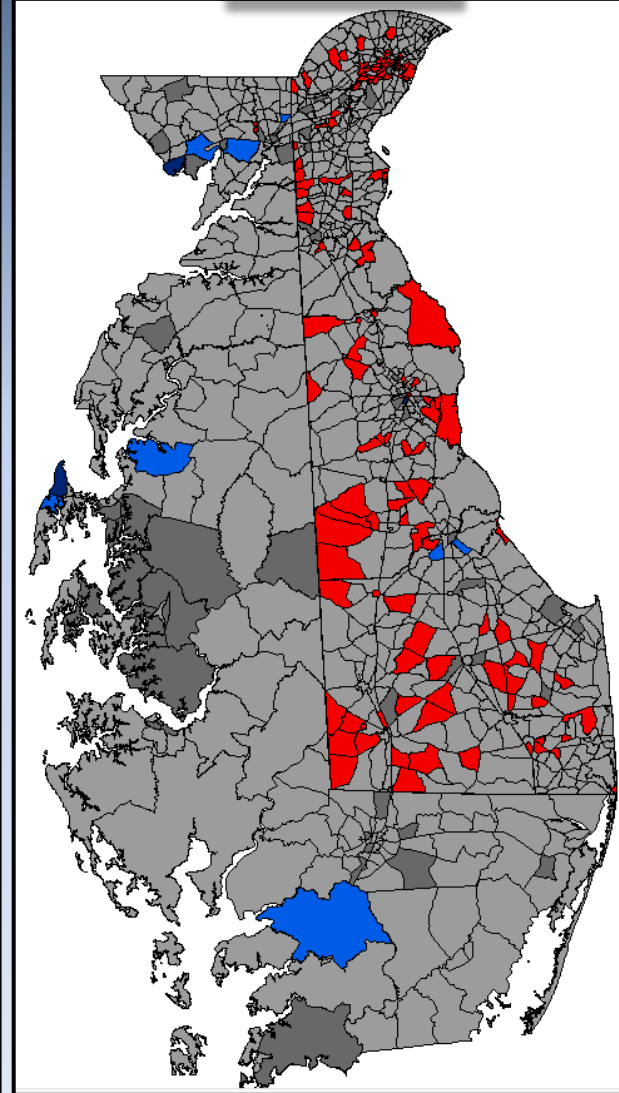
POPULATION



DWELLINGS



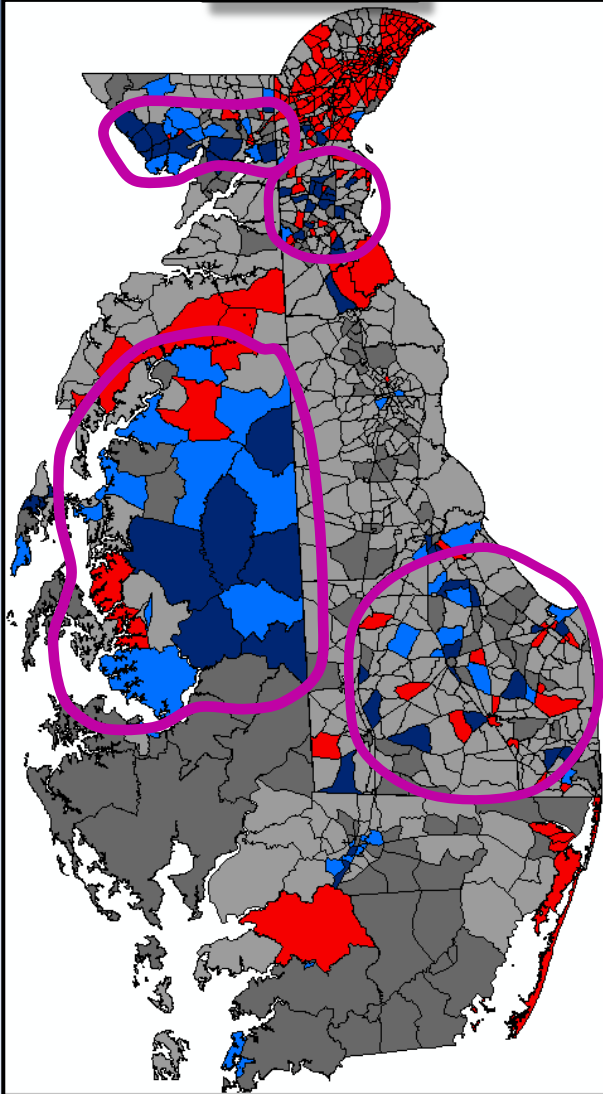
EMPLOYMENT



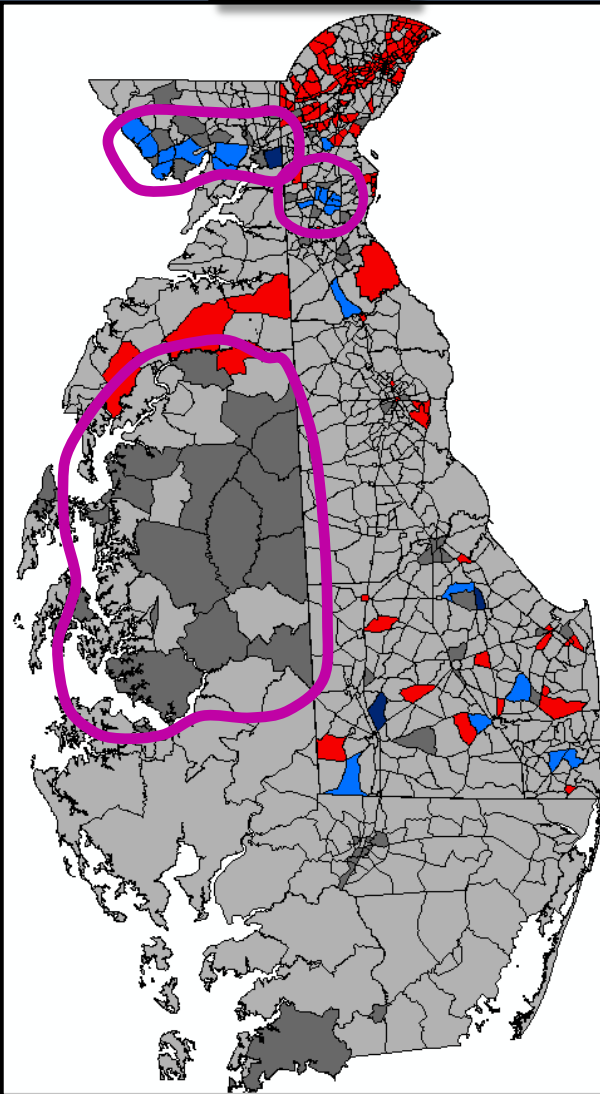
## Relative Growth in Modeled Counties:

Decrease (RED)   Moderate Growth (GREYS)   Higher Growth (BLUES)

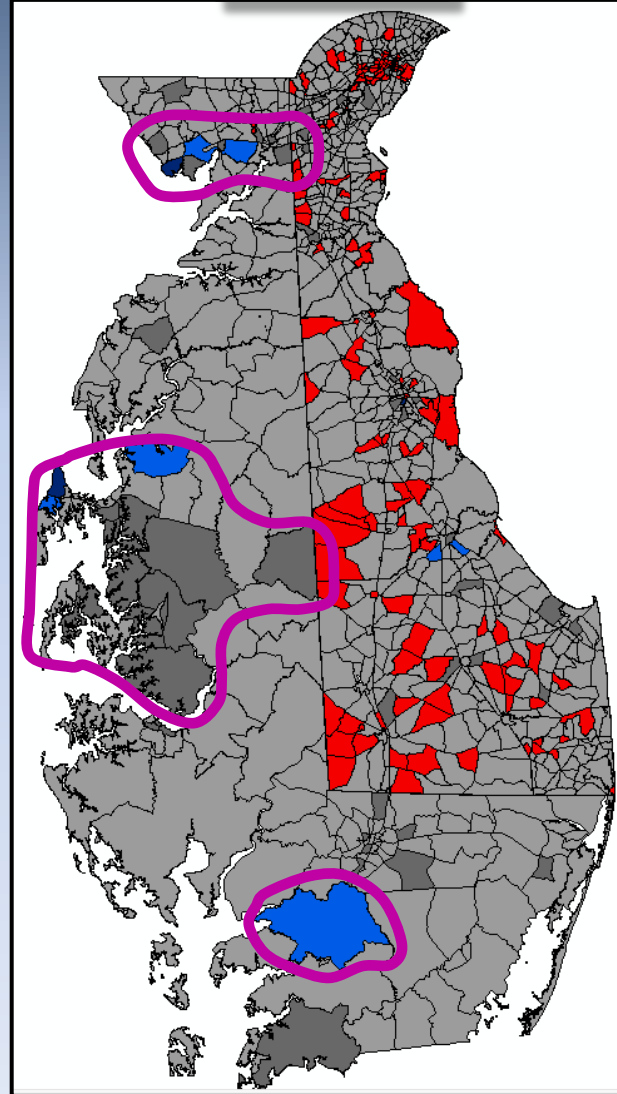
POPULATION



DWELLINGS



EMPLOYMENT



## Some Other Indicators:

### 1) “External to External” Travel:

Traffic traveling from one “edge” of the modeled area to another; traffic that “passes thru” modeled area and does not stop.

**Task:** Review and update assumptions (i.e. Bay Bridge, I-95, etc).

### 2) Trip Lengths in Maryland:

**Task:** Review and update assumptions.

### 3) Evaluate Freight and Trucks:

**Task:** Review VMT Trends.

### 4) Evaluate Other MPO VMT Trends.

### 5) Evaluate Aging Population.

### 5) Evaluate VMT without MD Counties:

**Task:** Drop Peninsula Model for AQS purposes – return to “individual county models” with fixed assumptions.