

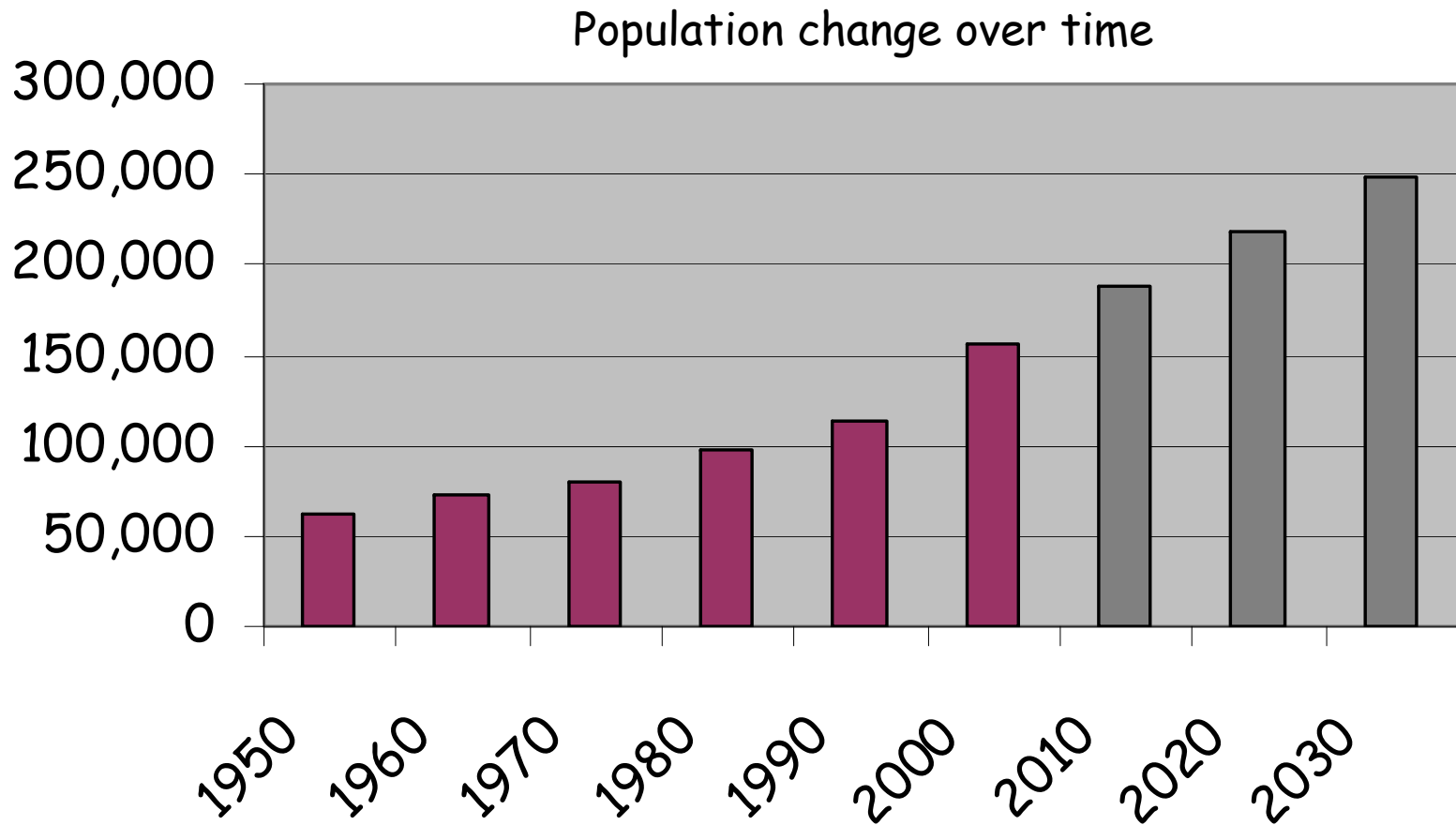
Growth Scenarios for Sussex  
Communities using *CommunityViz*<sup>®</sup>,  
an ArcGIS Tool for Land Use  
Planning

by

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July 28, 2007

# Growth is here

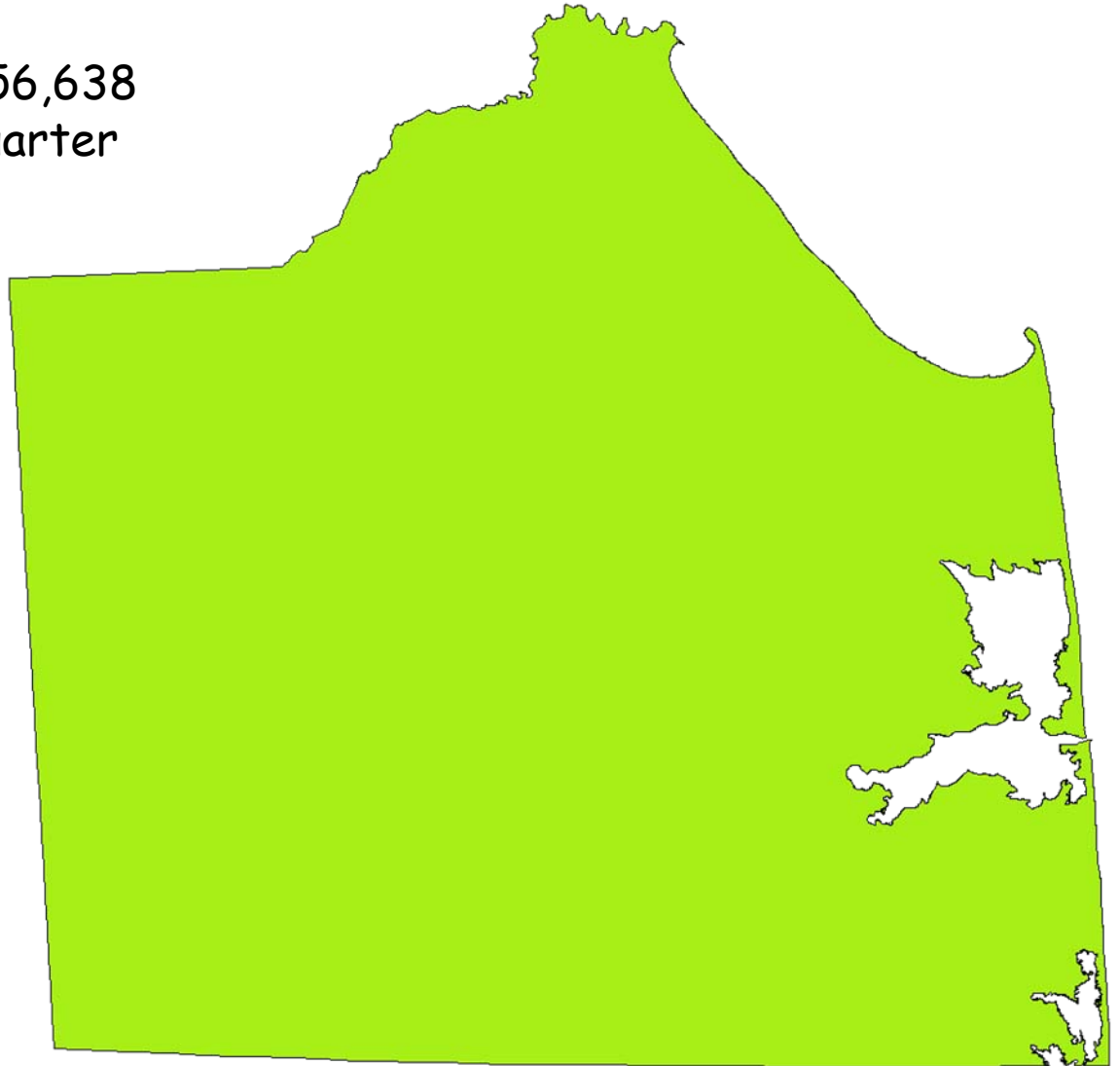


# Sussex County has 606,785 acres

At a population size of 156,638  
our density is only one quarter  
person per acre.



Or, each person has 3.78  
acres of open space.



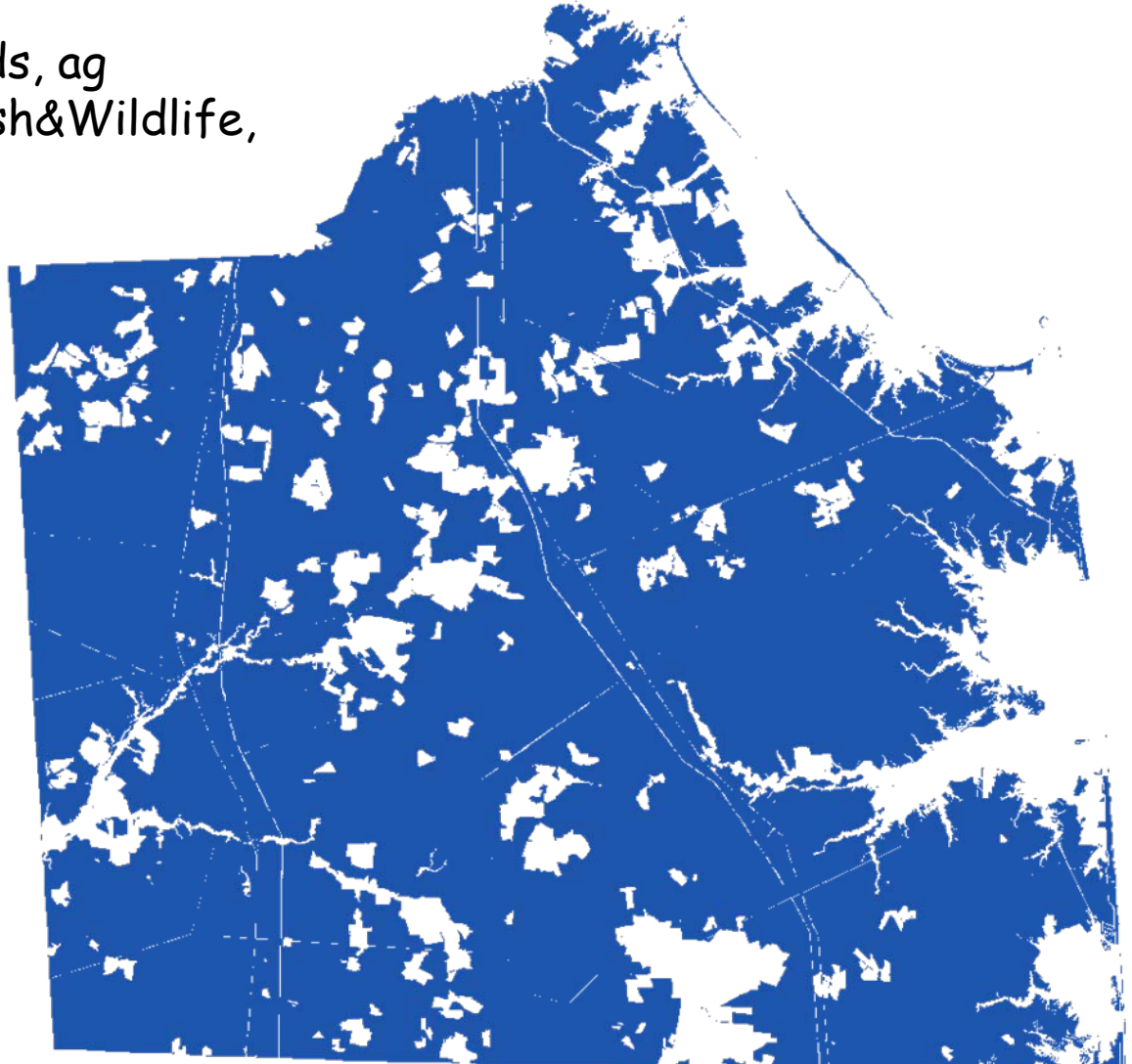
# But not all the land is 'available'

Some 'land' is water, roads, ag easement, ag district, Fish&Wildlife, or protected.

After removing those areas we have 492,514 acres. A density of about 1/3<sup>th</sup> a person per acre.

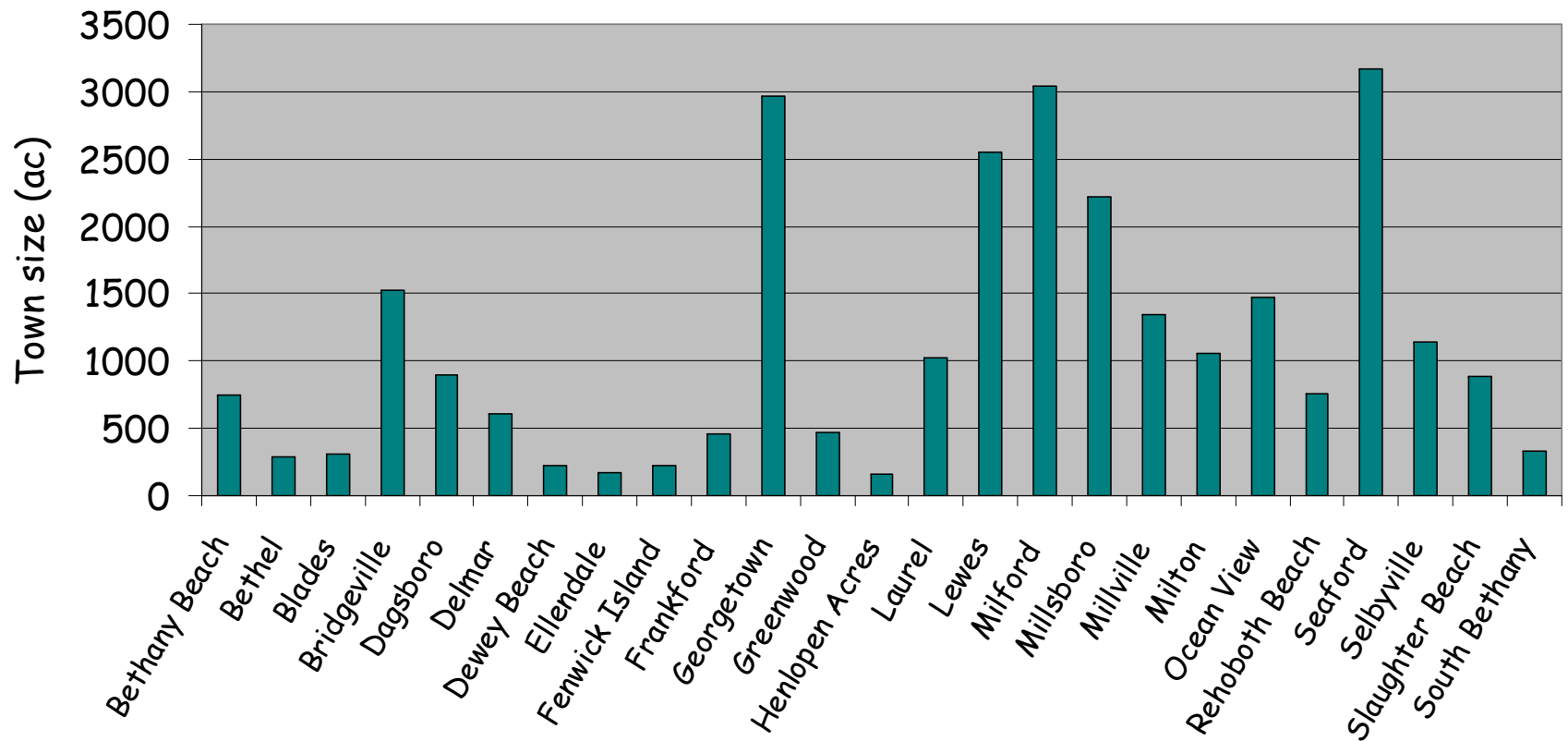


Or, each person has 3.14 acres of open space.

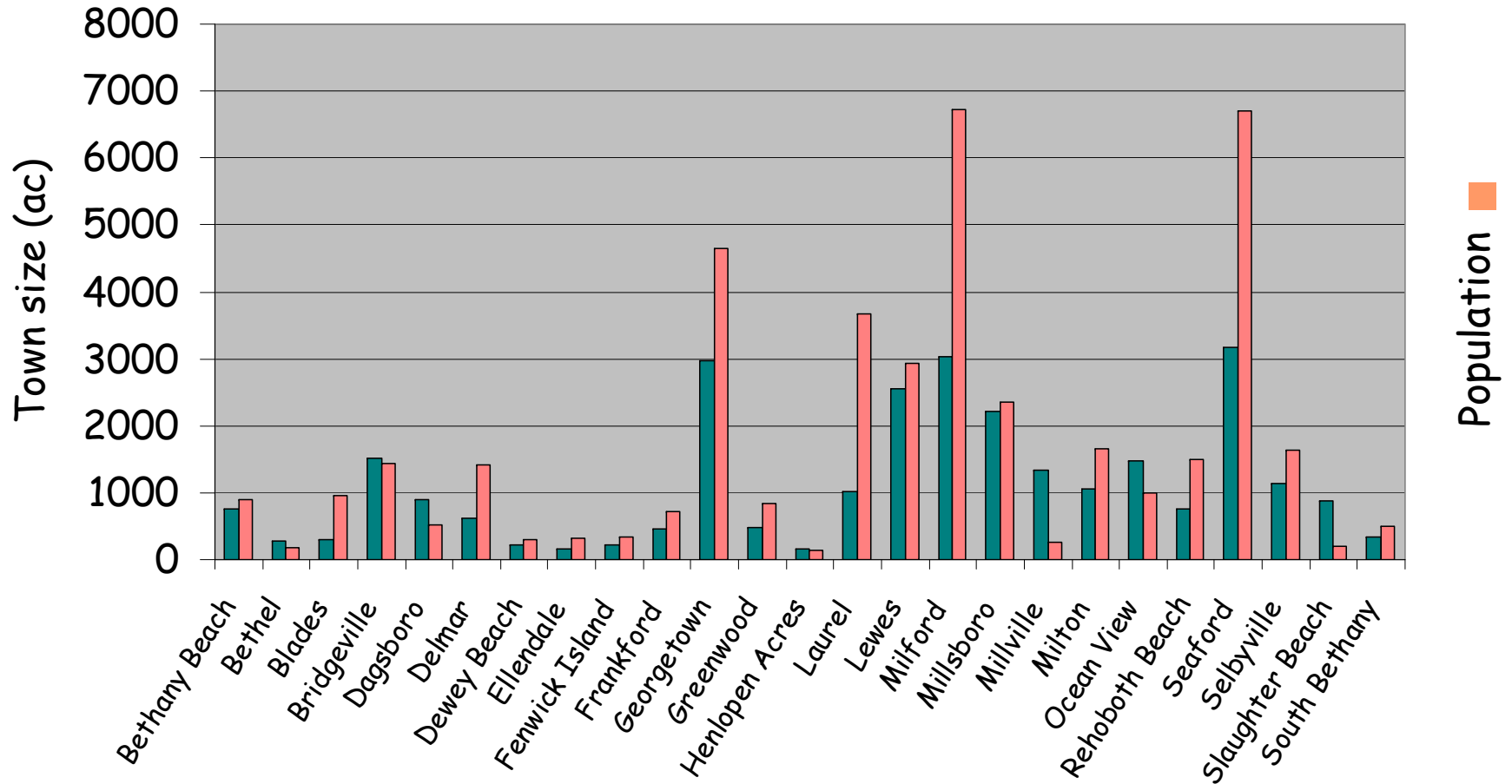


# Towns cover about 28 thousand acres

About 6% of our available land base



# About 27% of our population lives in town

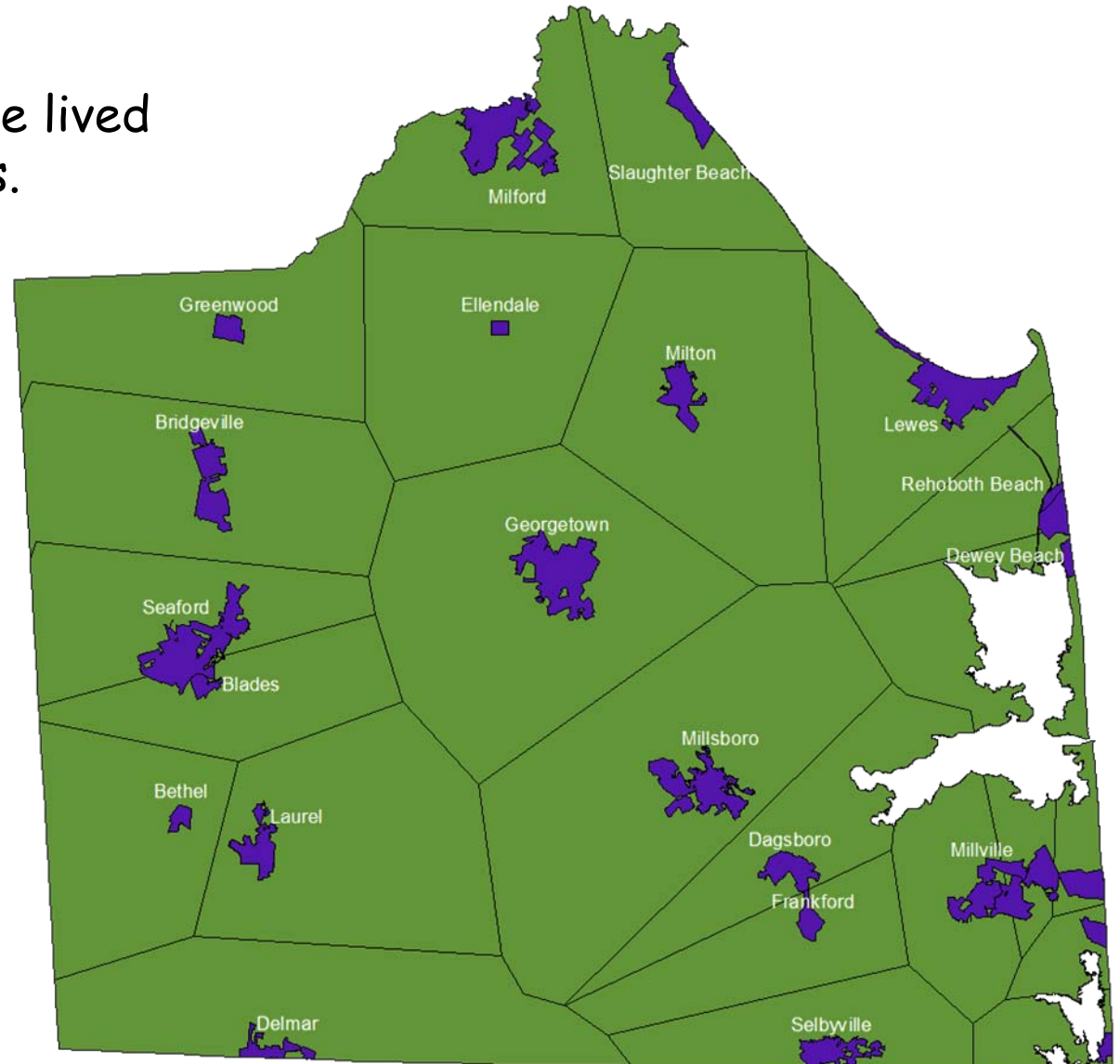


# About 73% of people live in the 'country'

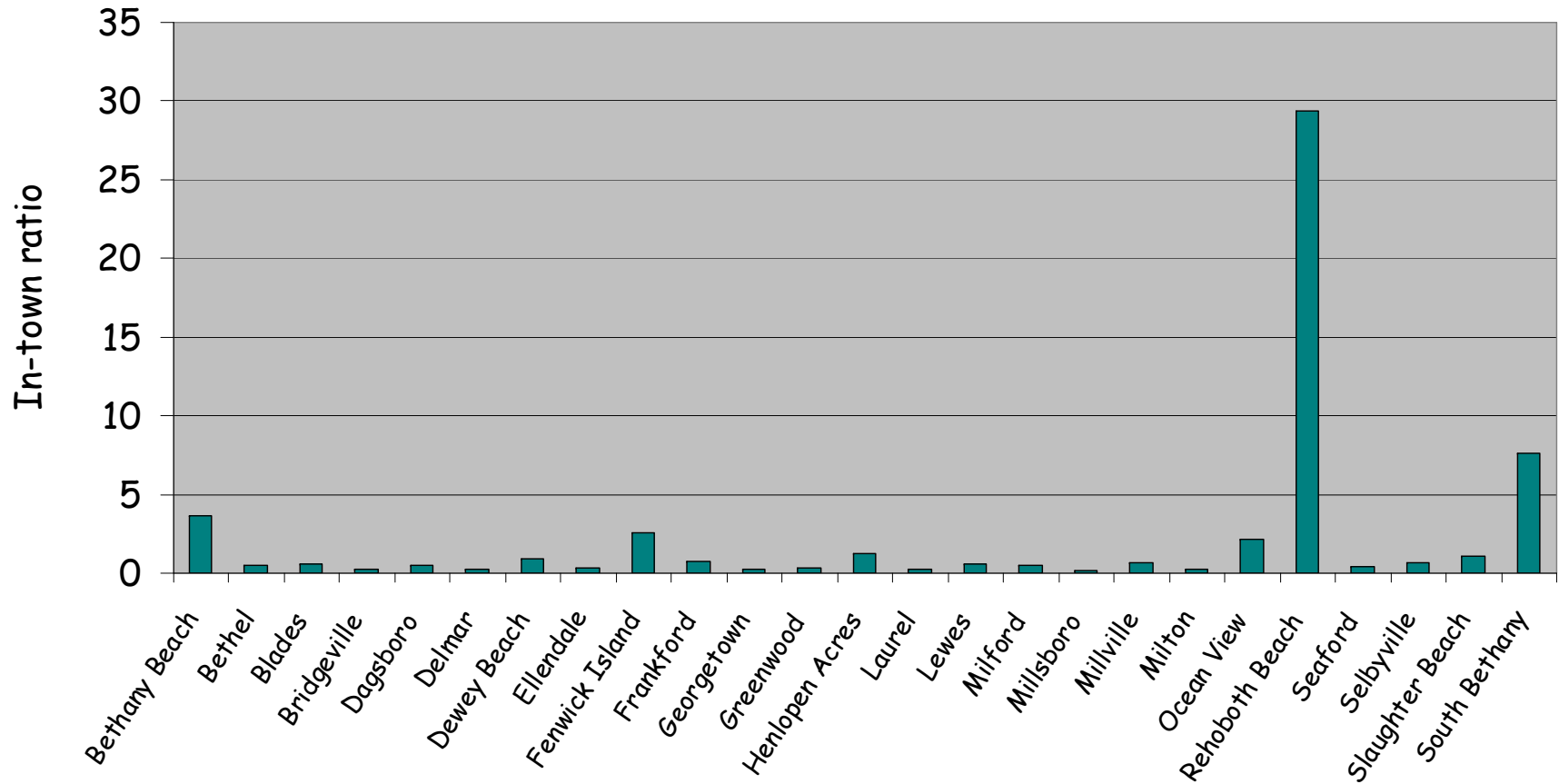
In 2000, 114,789 people lived on about 492,514 acres.

In 2010, we are projected to have 187,510 people living in Sussex County. What will be the impact of that many people?

Do we want to 'guide' that growth?

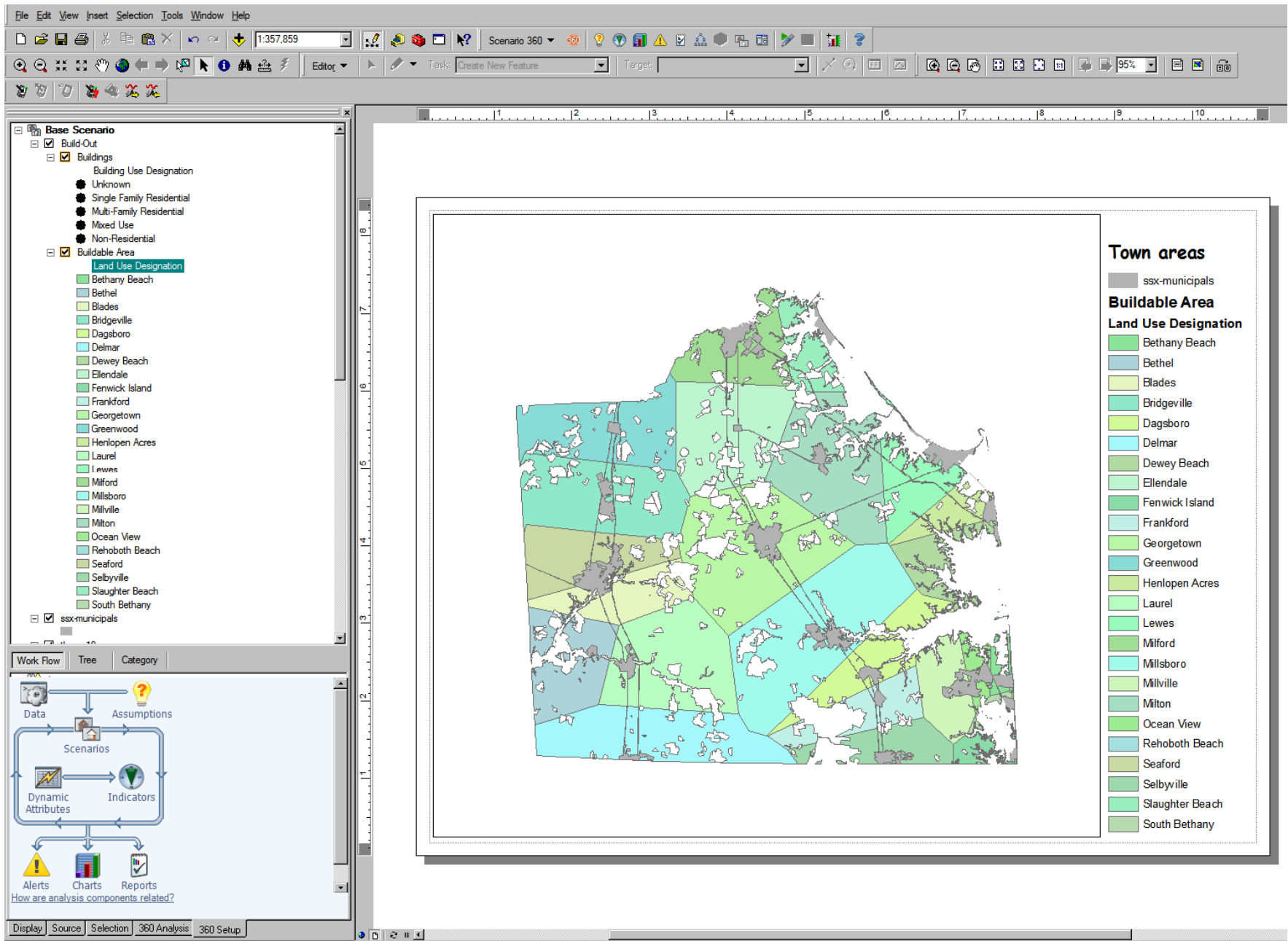


# Town-areas differ in concentration of people





# Community Viz<sup>®</sup> - a tool to model growth



# Community Viz® - assumptions

**Assumptions - shotgun**

Assumptions in shotgun

Filter Assumptions By

Category  Type

Name	Category
Family size	Gen
Water consumption	Gen
Kids per family	Gen
CI Assumption - Annual Household Energy Use	Com
CI Assumption - Passenger Car Fuel Efficiency	Com
CI Assumption - Auto Emissions - CO2	Com
CI Assumption - Household Vehicle Trips per Day	Com
CI Assumption - Daily Household Water Use	Com
CI Assumption - Floor Area per Employee	Com
CI Assumption - Auto Emissions - NOx	Com
CI Assumption - Average Vehicle Trip Length	Com
CI Assumption - Auto Emissions - CO	Com
CI Assumption - Persons per Household	Com
CI Assumption - Annual Commercial Energy Use	Com
CI Assumption - Percent School Kids	Com
Traffic	Com

16 items

**Assumptions**

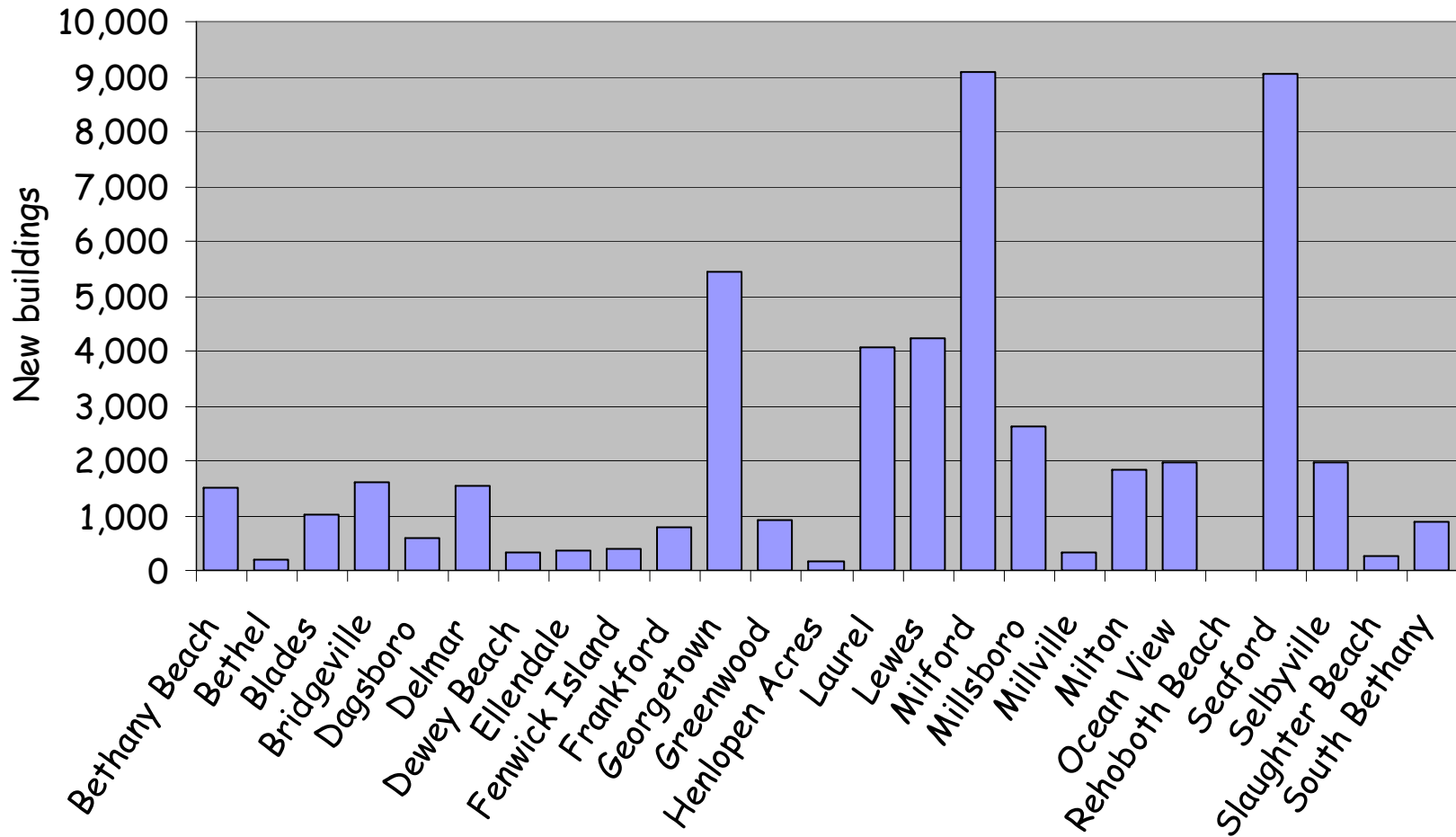
Graphical | Tabular

Scenario

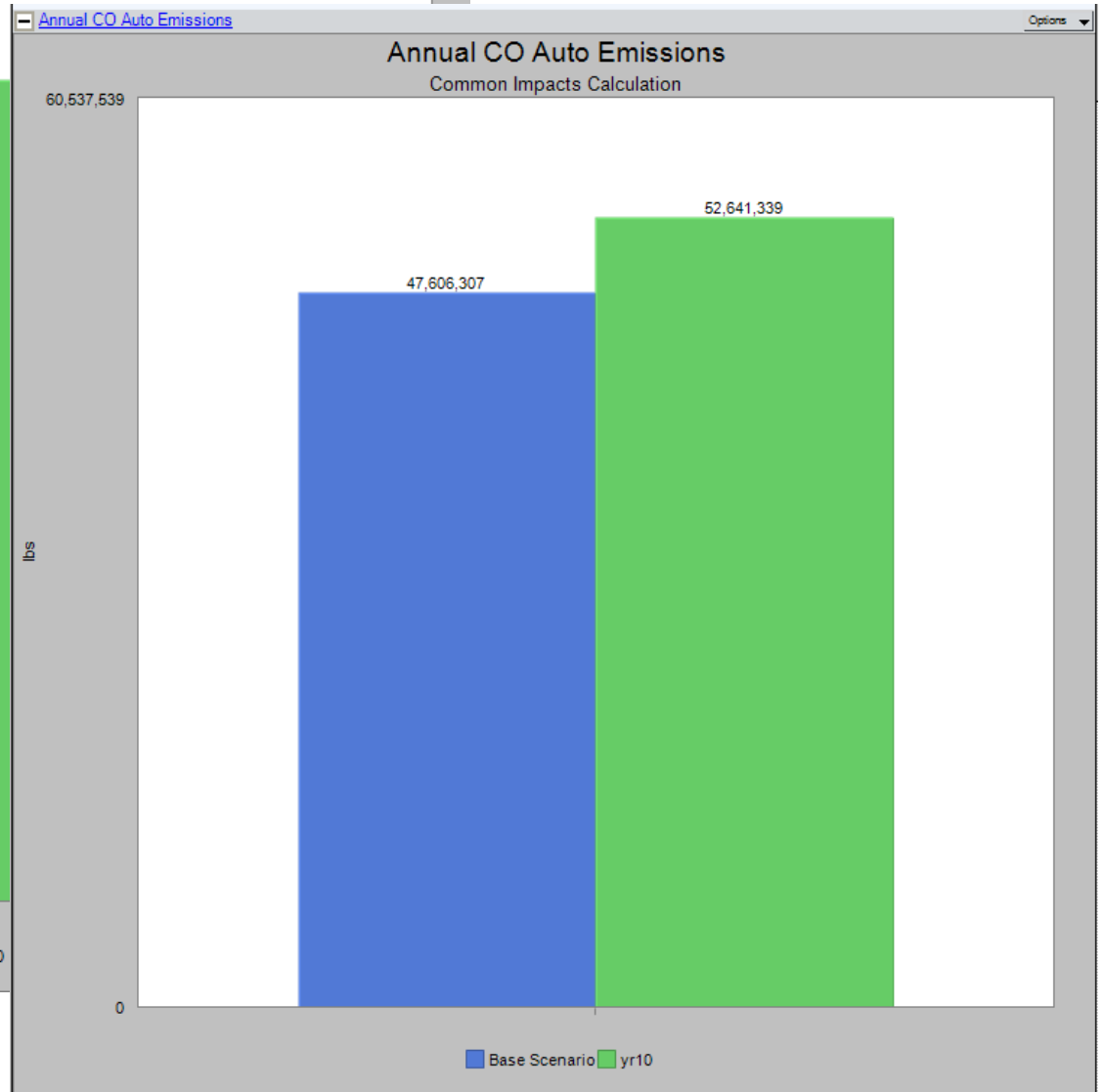
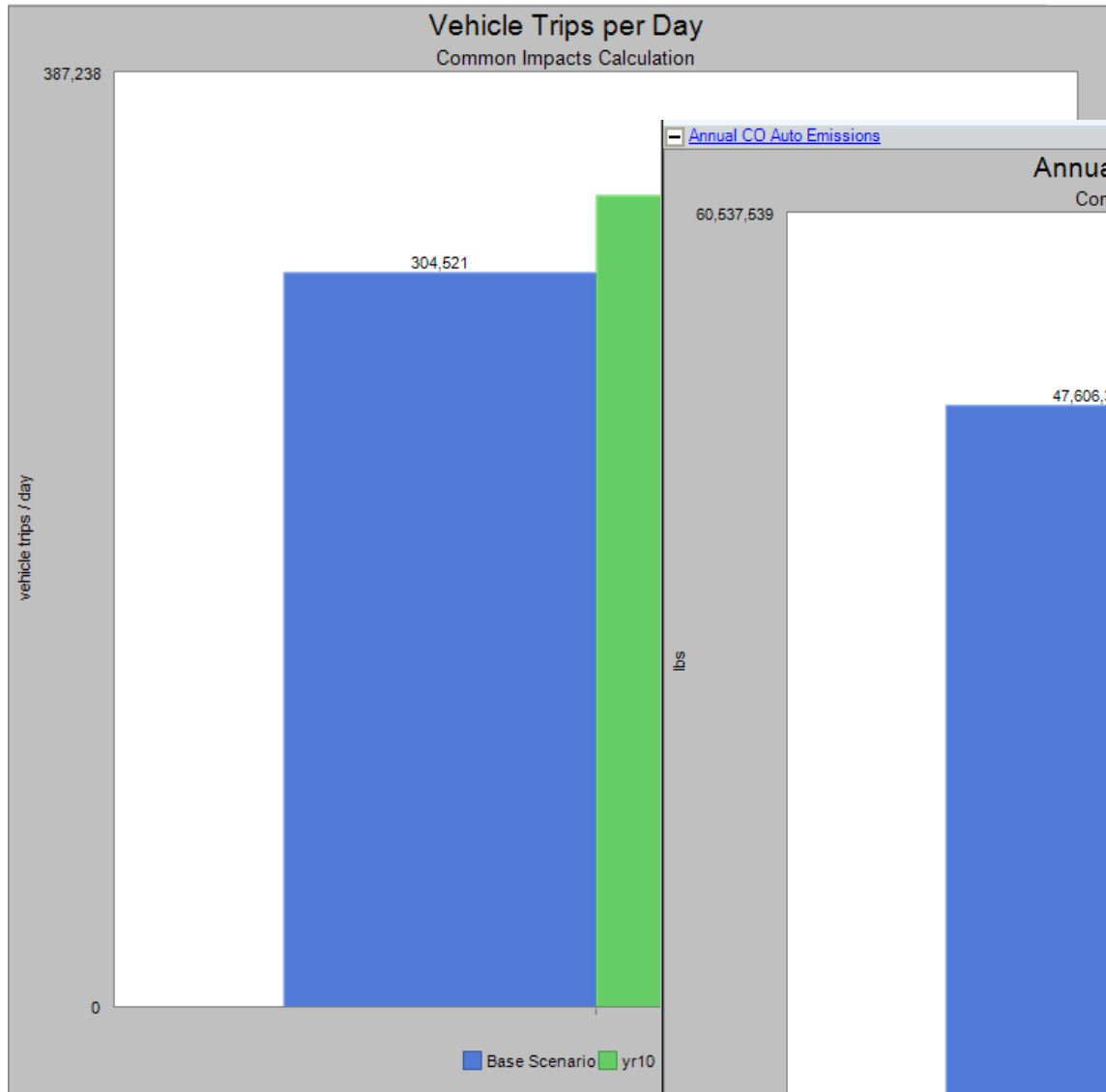
Family size	1	2.5	12	2.5
Water consumption	100	150	200	150
Kids per family	0	1.5	8	2.5
CI Assumption - Annual Household Energy Use	0	101	200	101 million btu / household / year
CI Assumption - Passenger Car Fuel Efficiency	0	24	50	24.0 miles / gallon
CI Assumption - Auto Emissions - CO2	0	19.70	50	19.70 lbs / gallon
CI Assumption - Household Vehicle Trips per Day	0	5.95	15	5.95 household vehicle trips / day
CI Assumption - Daily Household Water Use	0	391	1000	391 gallons / household / day
CI Assumption - Floor Area per Employee	0	823	2000	823 square feet / employee
CI Assumption - Auto Emissions - NOx	0	29.89	50	29.89 grams / gallon
CI Assumption - Average Vehicle Trip Length	0	9.78	20	9.78 miles
CI Assumption - Auto Emissions - CO	0	476.76	600	476.76 grams / gallon
CI Assumption - Persons per Household	0	2.56	10	2.56 persons / household
CI Assumption - Annual Commercial Energy Use	0	85.1	200	85.1 thousand btu / sq foot
CI Assumption - Percent School Kids	0	18.9	100	18.9 percent of population
Traffic	0	50	200	50 miles/day

# New dwellings in 2010 = 51,127

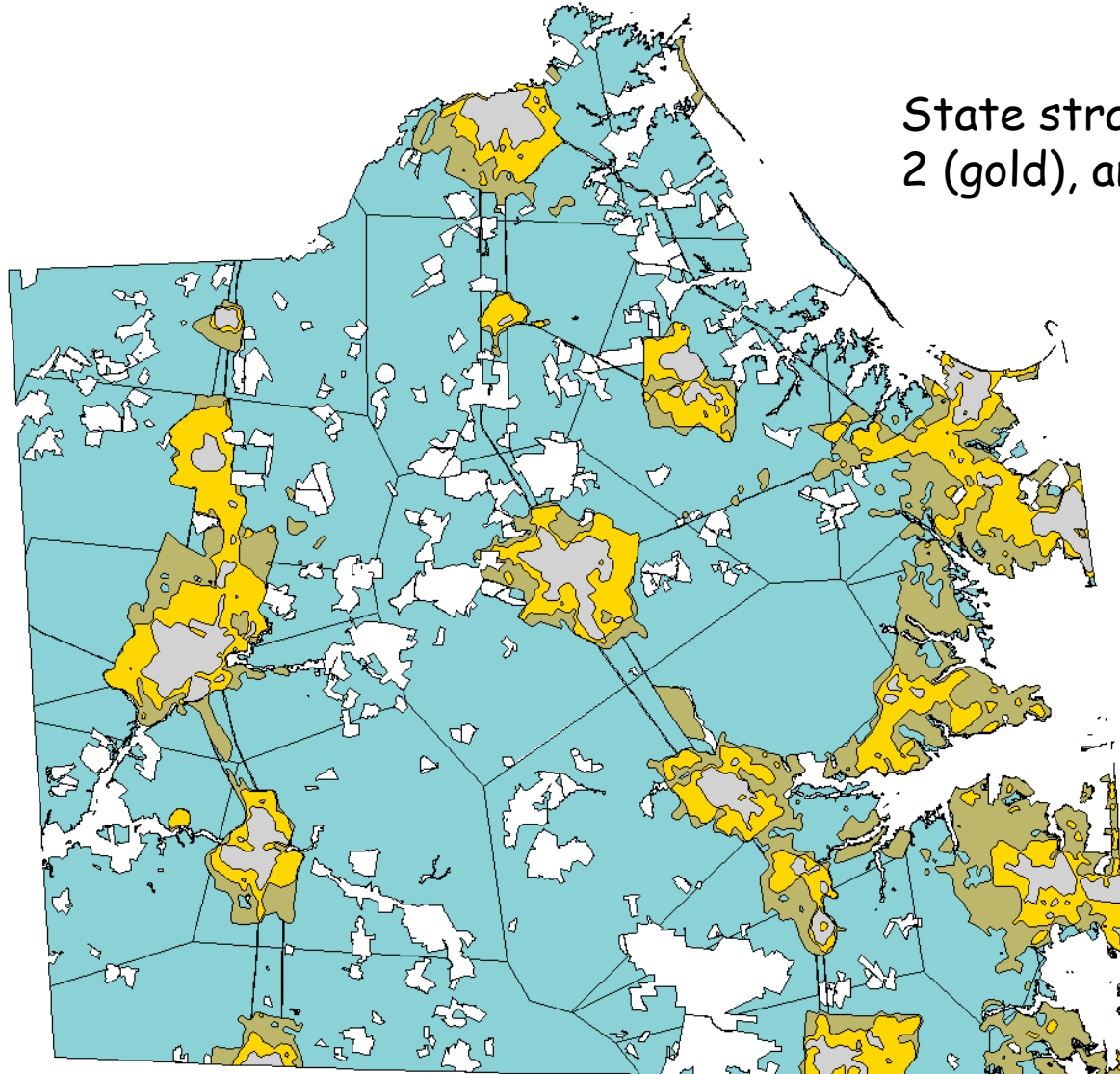
100,516 homes currently



# Some results of increased population

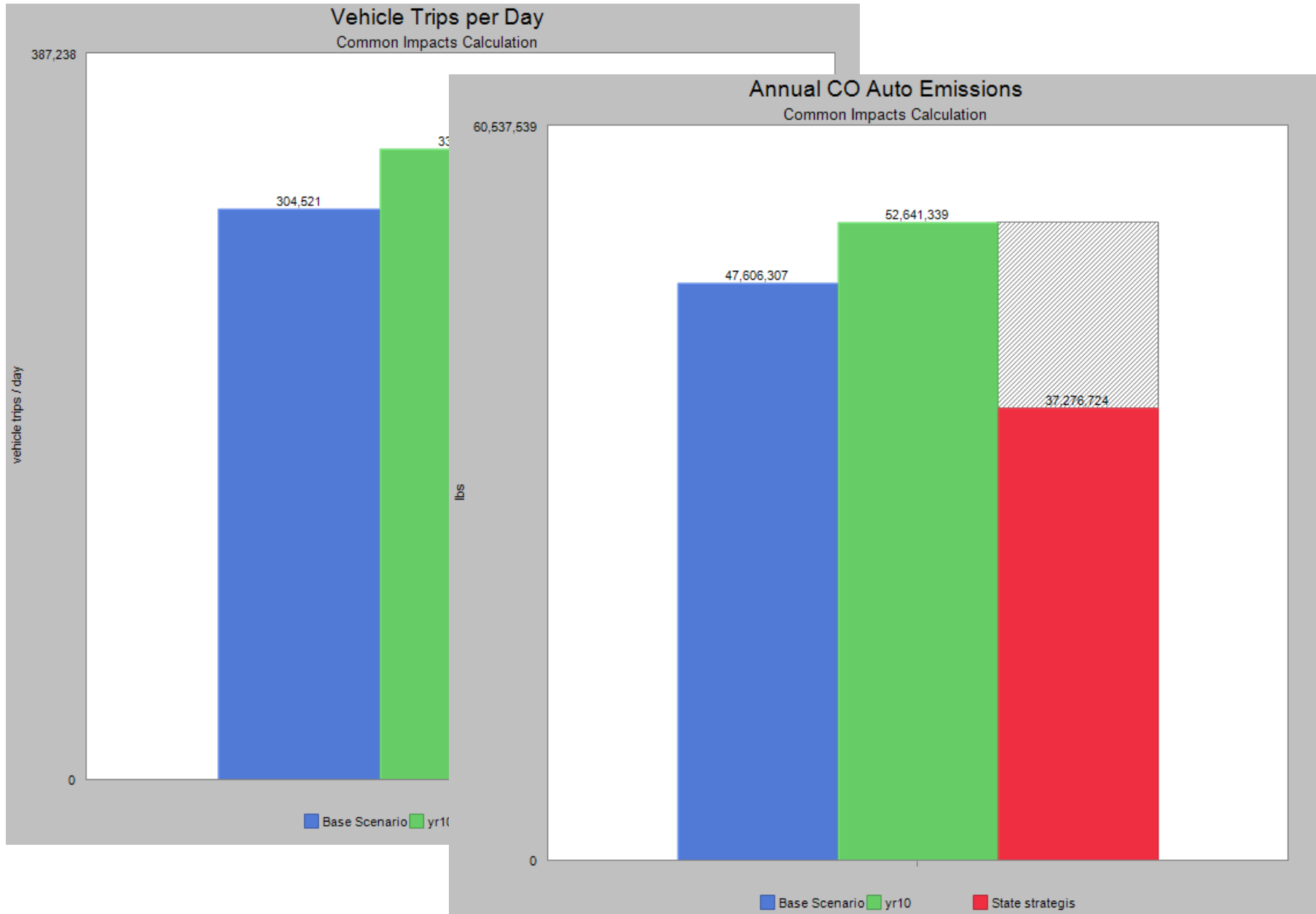


# Directing population increase



State strategy zones 1 (gray),  
2 (gold), and 3 (greenish).

# Some results of directed population increase



# Additional possible scenario - Green Infrastructure

- Green Infrastructure includes working agriculture and forest lands, groundwater recharge areas, etc.
- Population densities are directed towards existing towns.
- Green Infrastructure recommendation is about 165,000 acres of working lands in the county.

# Questions ... to start

- What is an acceptable level of population density within towns?
- What happens to existing AR lands outside the Green Infrastructure?
- Can market forces create demand for purchase of development rights from Green Infrastructure?