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# Driving to 2030



*Demographic change, urban form,  
and future VMT growth in the US*

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# Urban Institute

The nonprofit Urban Institute is dedicated to elevating the debate on social and economic policy. For nearly five decades, Urban scholars have conducted research and offered evidence-based solutions that improve lives and strengthen communities across a rapidly urbanizing world. Their objective research helps expand opportunities for all, reduce hardship among the most vulnerable, and strengthen the effectiveness of the public sector.

# Key takeaways

## Growth and aging

- Growth in population will increase VMT
- Aging of the population will moderate the increase

## Demographic change at the sub-national level

- Different rates of growth in different parts of the US
- Older adults growing everywhere, younger adults widely varied

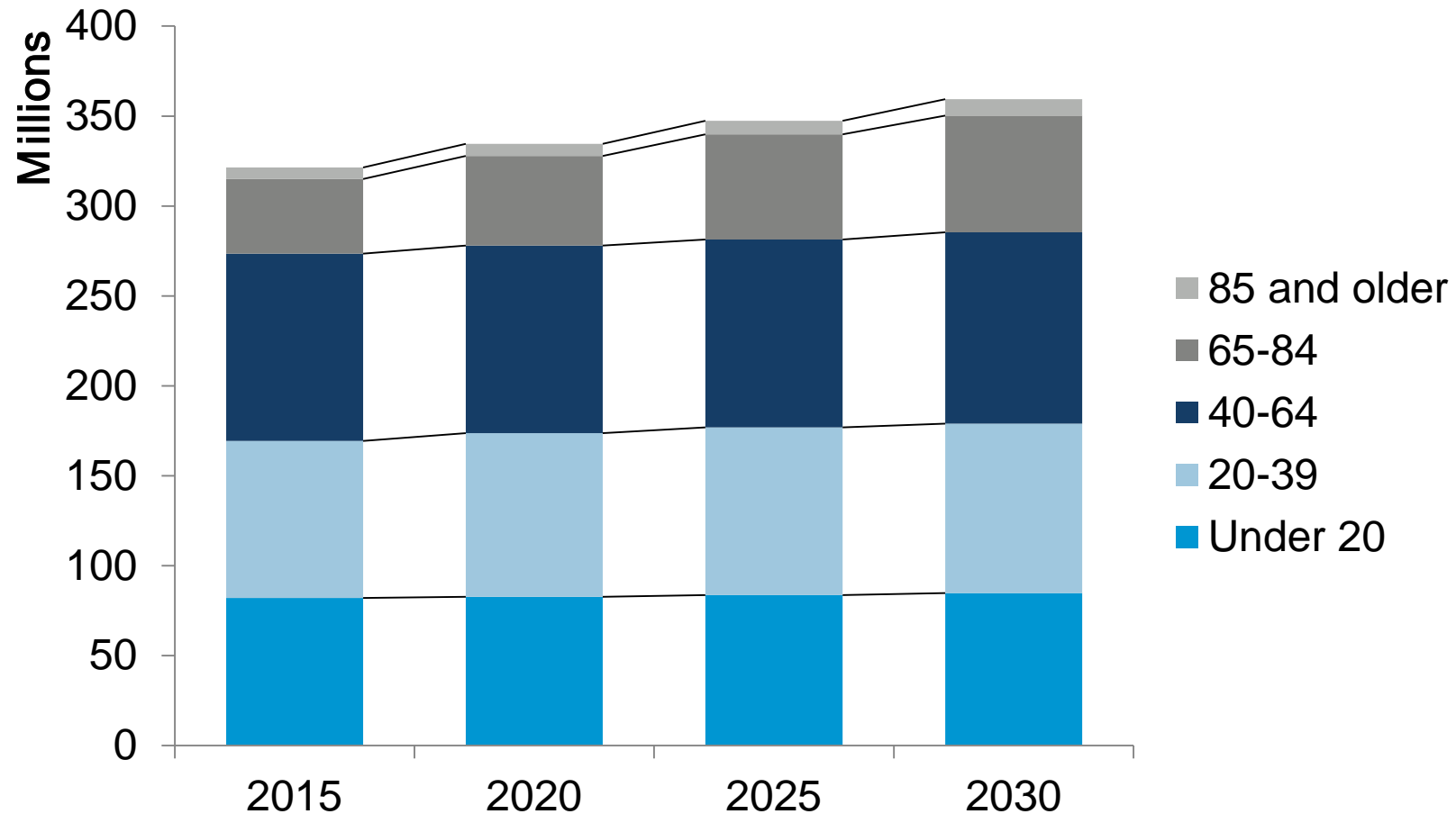
## Land use and VMT growth

- Fast growth projected in low-density, high-VMT commuting zones
- Market pressures and policy could align to reduce VMT in low-density commuting zones

We're growing, but we're  
getting older.

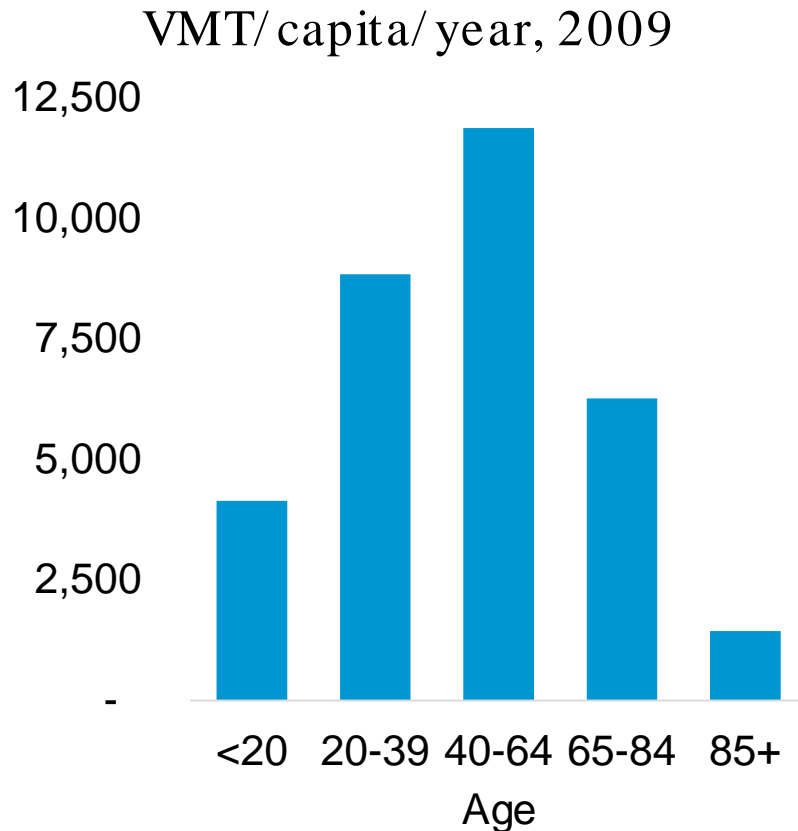
Which trend wins?

# US population growing 38M from 2015-2030; 70% of the growth will be in the 65+ population



Source: U.S. Census 2014 National Population Projections

## VMT per capita peaks in middle age, but senior driving is growing

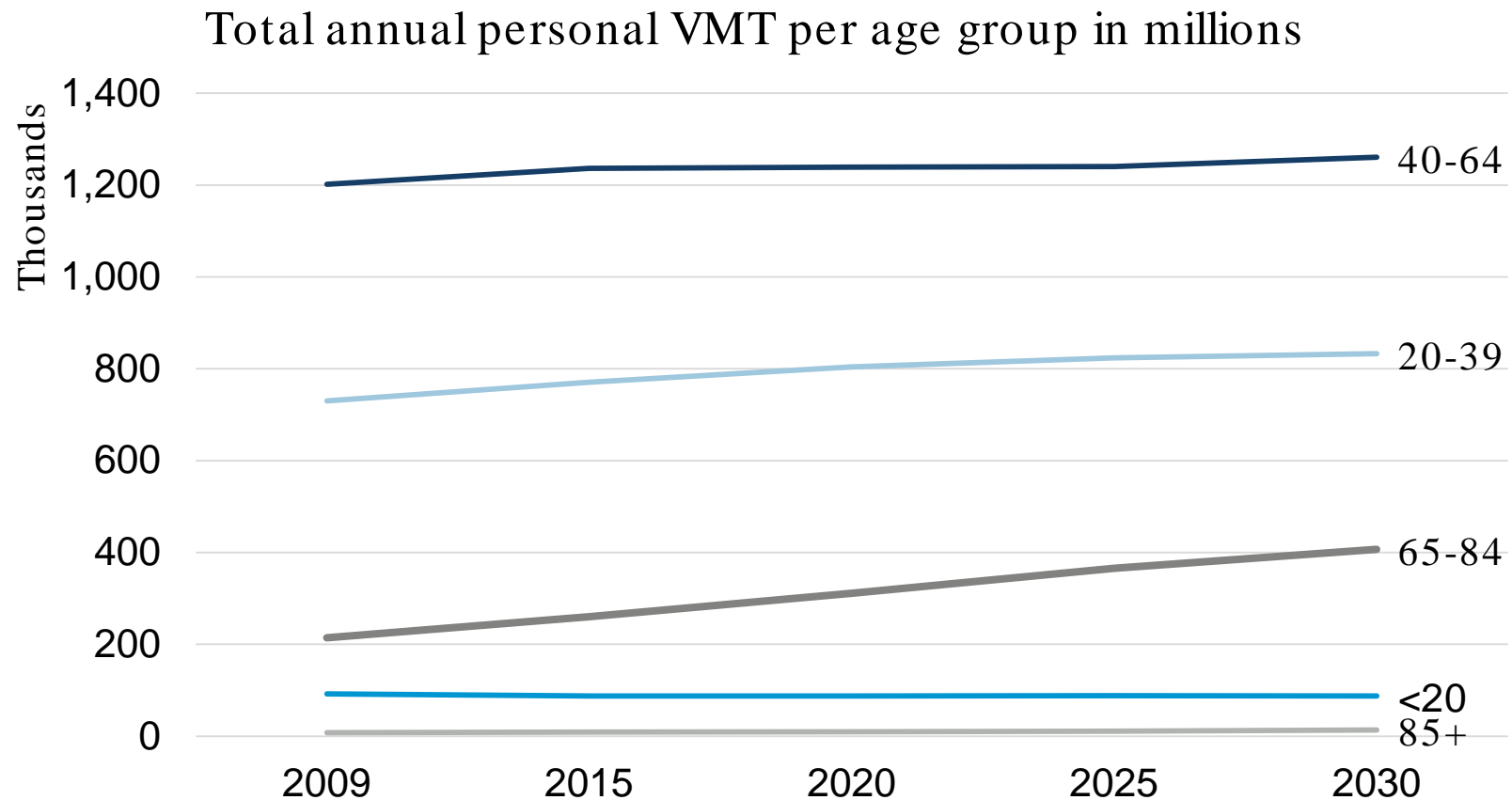


### Senior driving growing significantly

- 84 percent of Americans 65 and older held a driver's license in 2010 compared to barely half in the early 1970s.
- Drivers over 65 increased trips by 20 percent and increased miles travelled 33 from 1990 to 2009.
- Health, assets, and mortgage debt provide incentive and ability to extend working years

Source: 2009 NHTS Table: VMT by age and gender <http://nhts.ornl.gov/tables09/FatCat.aspx>.

# If average VMT/capita by age remains at 2009 level, total personal VMT grows ~10% from 2015-2030



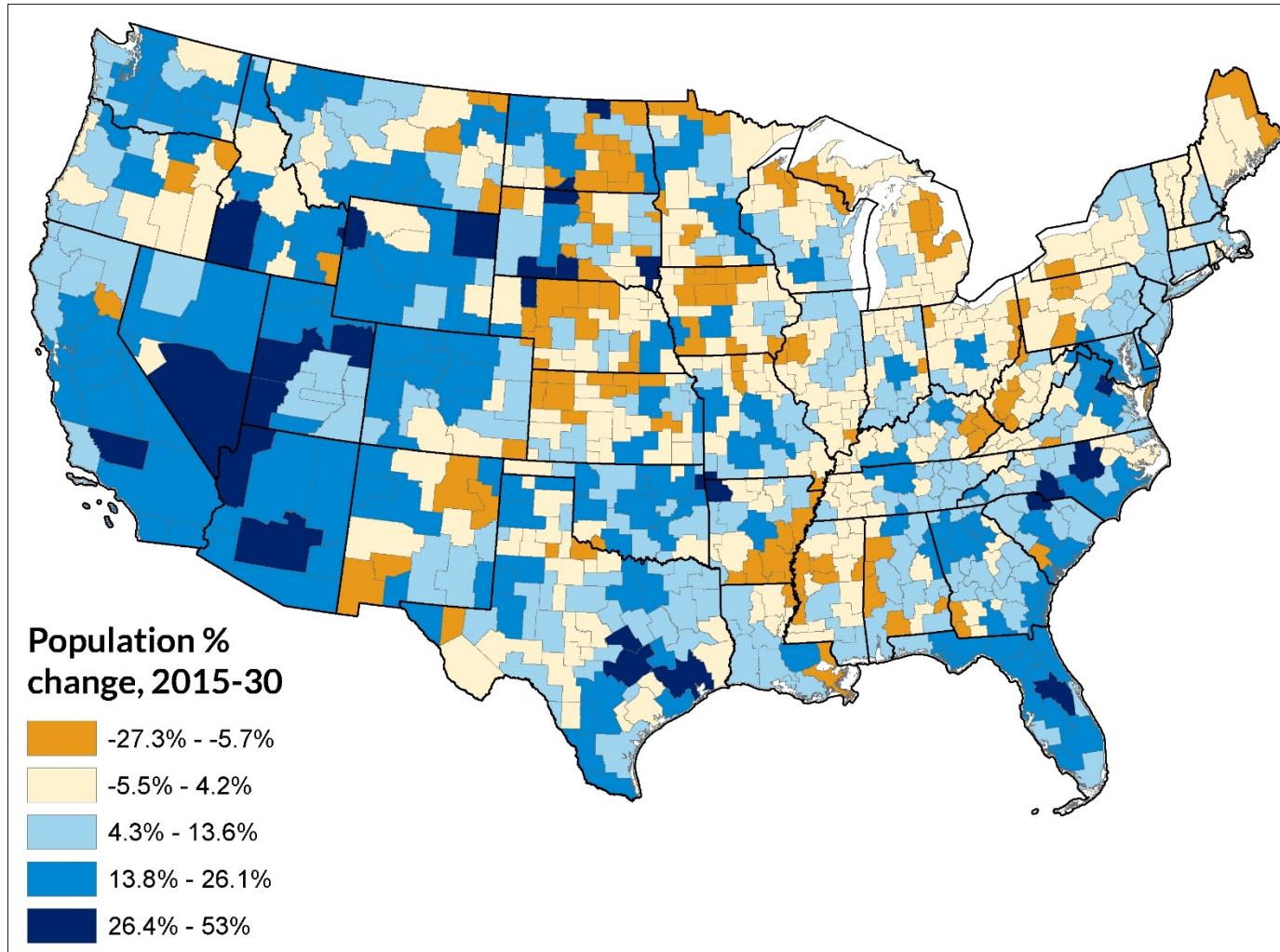
Source: U.S. Census 2014 National Population Projections; 2009 NHTS Table: VMT by age and gender <http://nhts.ornl.gov/tables09/FatCat.aspx>; 2009 intercensal population estimates. Excludes non-household travel.

Some areas will grow faster  
than others

Widespread growth in older adults but  
varied growth of the younger adults

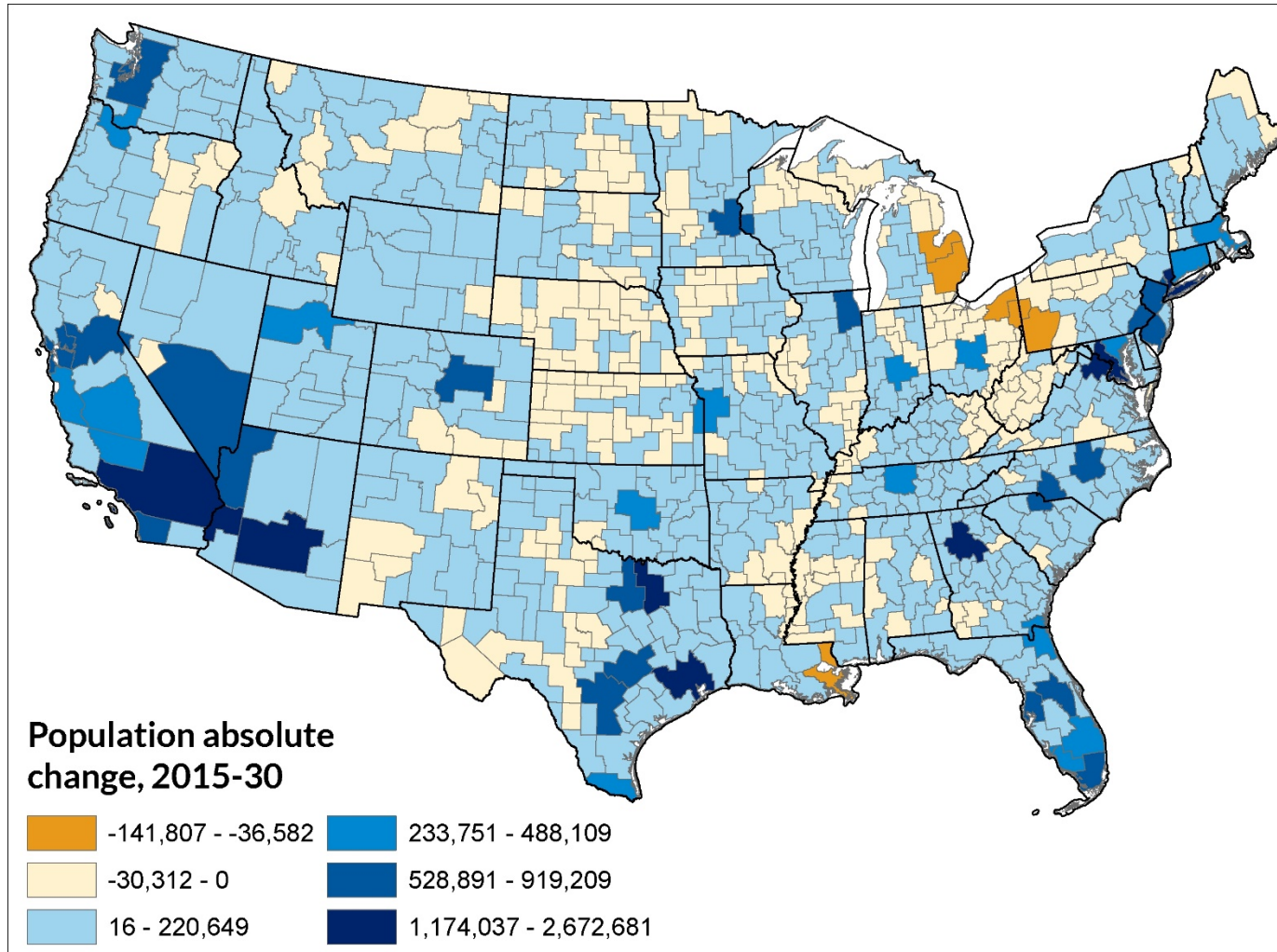


# Variation in growth rates, with Midwest & rural loss, gains in coastal areas, Sunbelt and the Rockies



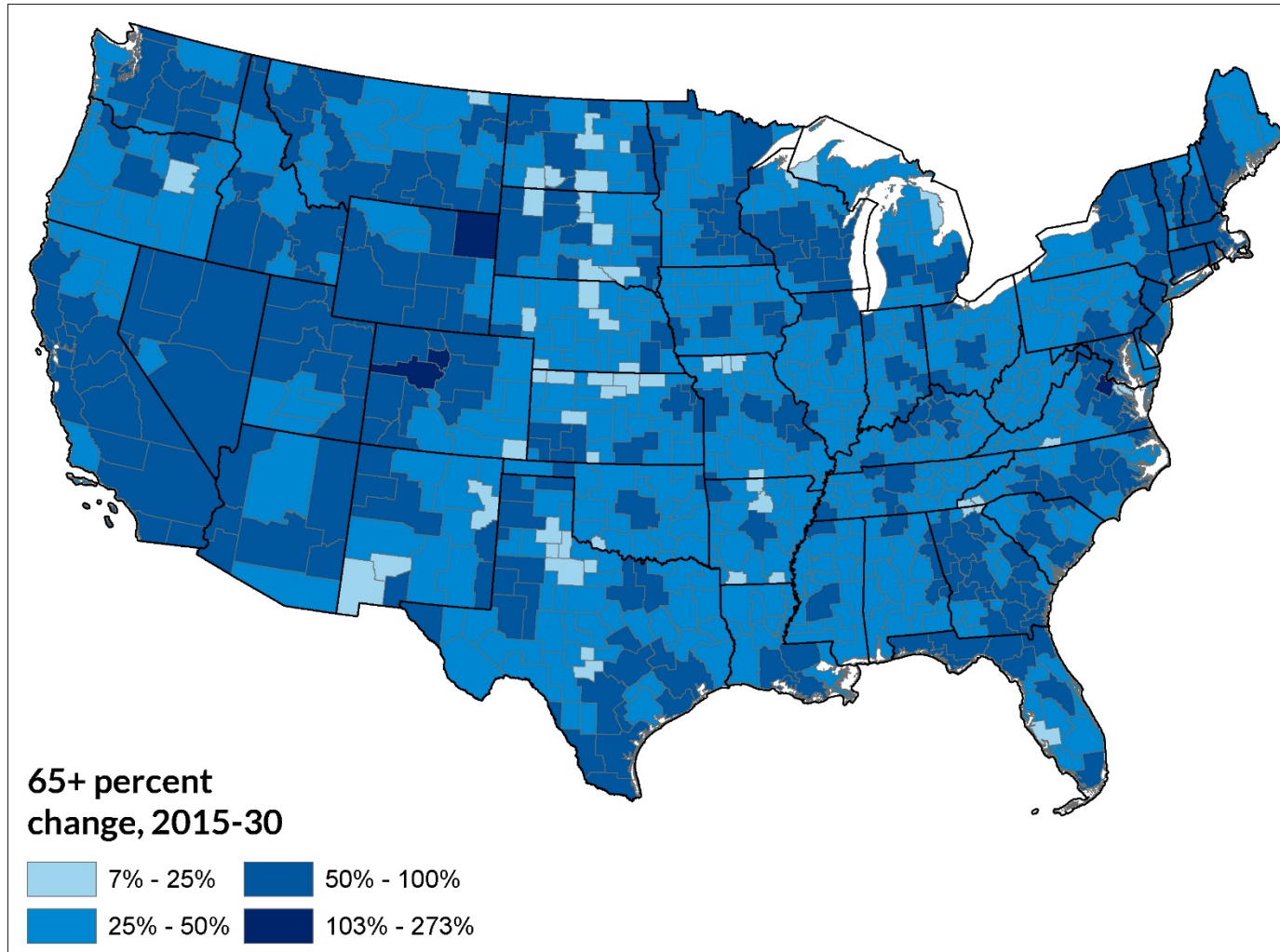
Source: Mapping America's Futures, 8/2015  
vintage, all average scenario

# A few big metropolitan areas expect 1-2.5M new residents between 2015 and 2030



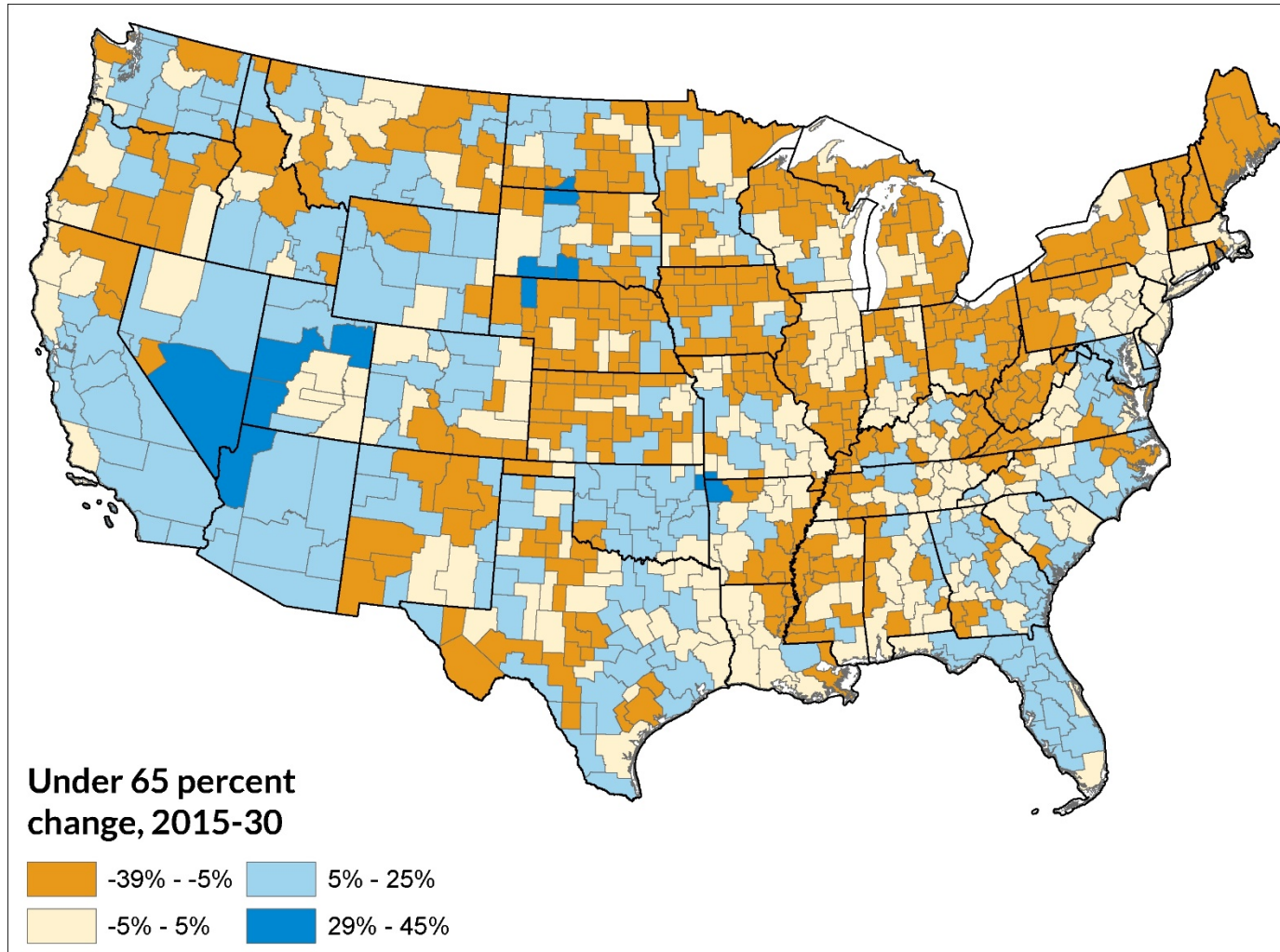
Source: Mapping America's Futures, 8/2015  
vintage, all average scenario

# Senior population will rise everywhere 2015-30, often by over 50%, sometimes more than doubling



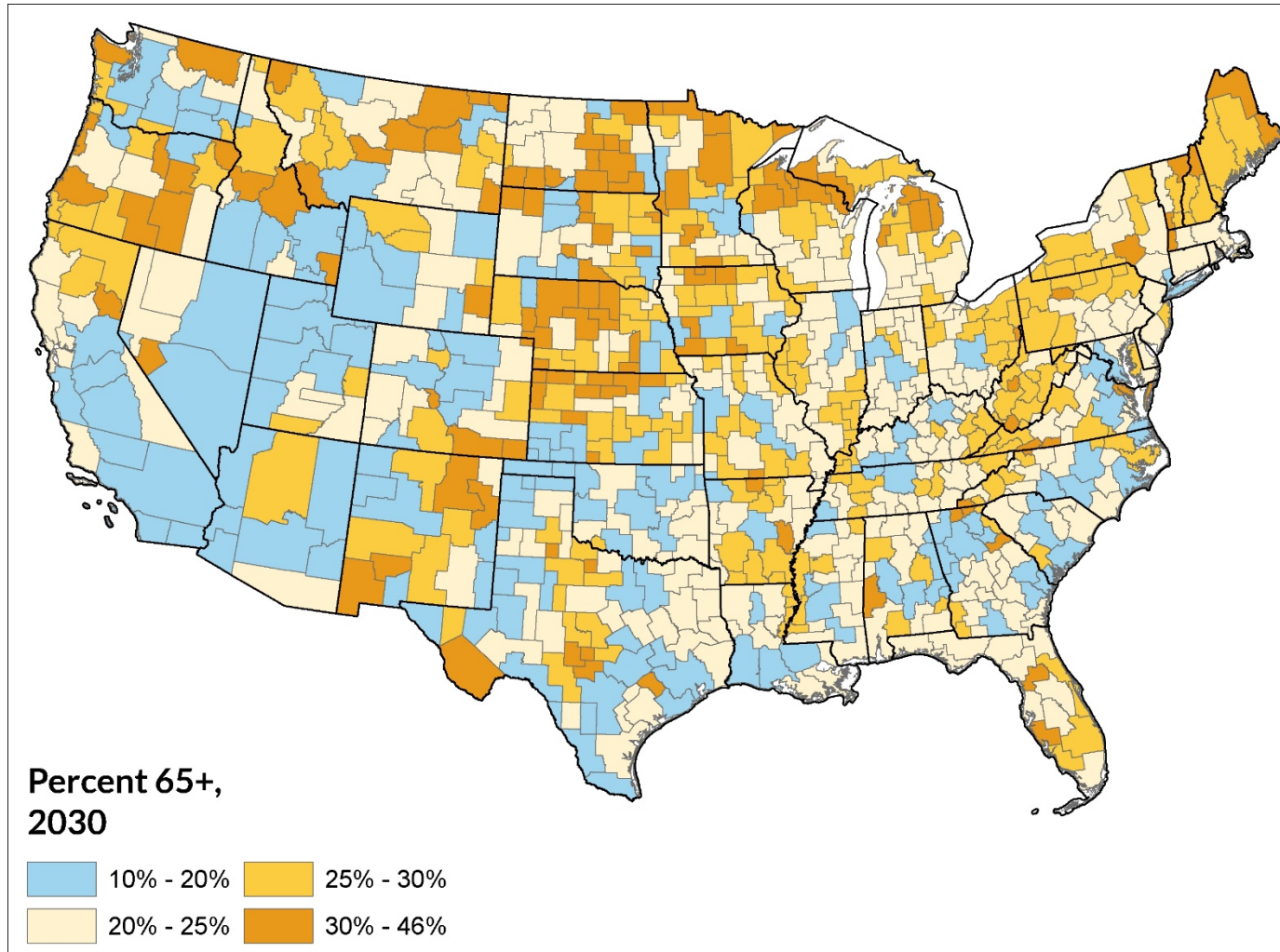
Source: Mapping America's Futures, 8/2015 vintage, all average scenario

# But under-65 population will decline or grow very little in large swaths of the US



Source: Mapping America's Futures, 8/2015  
vintage, all average scenario

# Resulting in great diversity in the percent seniors by the year 2030



Source: Mapping America's Futures, 8/2015  
vintage, all average scenario

What about land use trends?

# How urban form matters for VMT

## Density

- Metropolitan areas with higher population and employment per developed hectare have lower VMT/capita
- Density may also contribute to other VMT-reducing aspects of urban form (diversity, design)

## Diversity

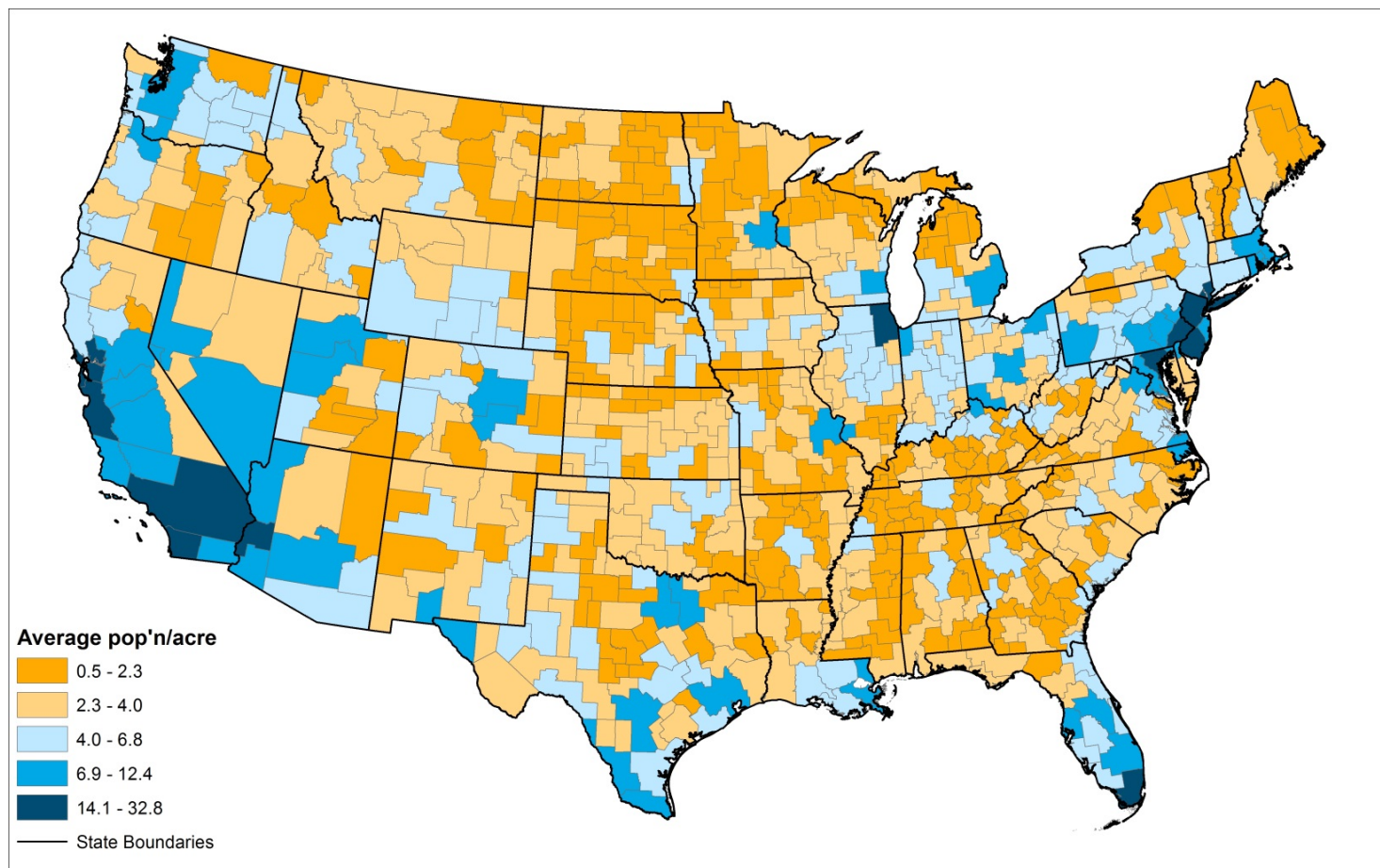
- Mixed use generates fewer trips, reduces VMT

## Design

- Small blocks reduce VMT

# Most fast-growth areas are low density.

*Average population density per acre of populated blocks with non-zero land area only, 2010*

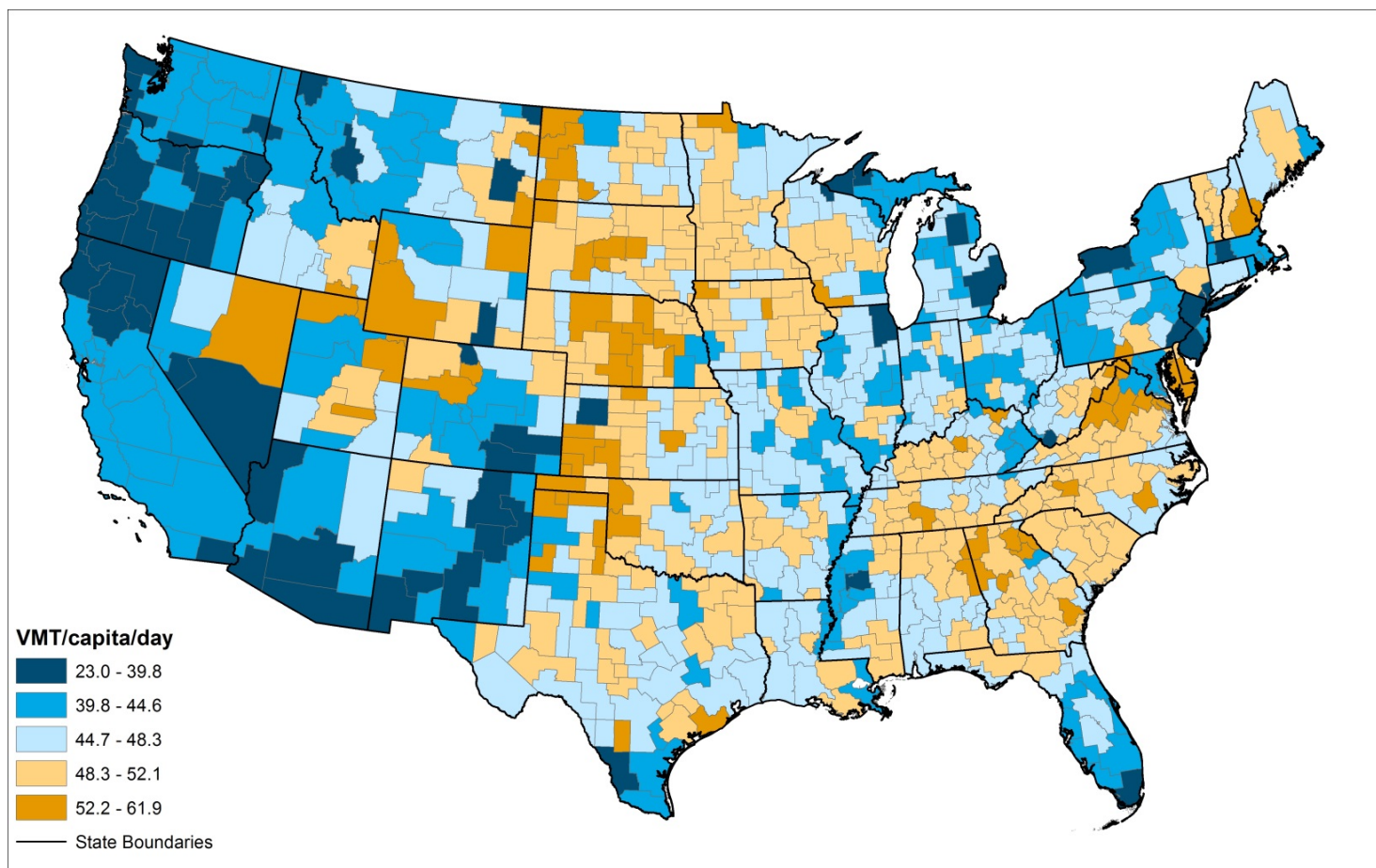


Source: U.S. Census 2010, block level data from nhgis.org.



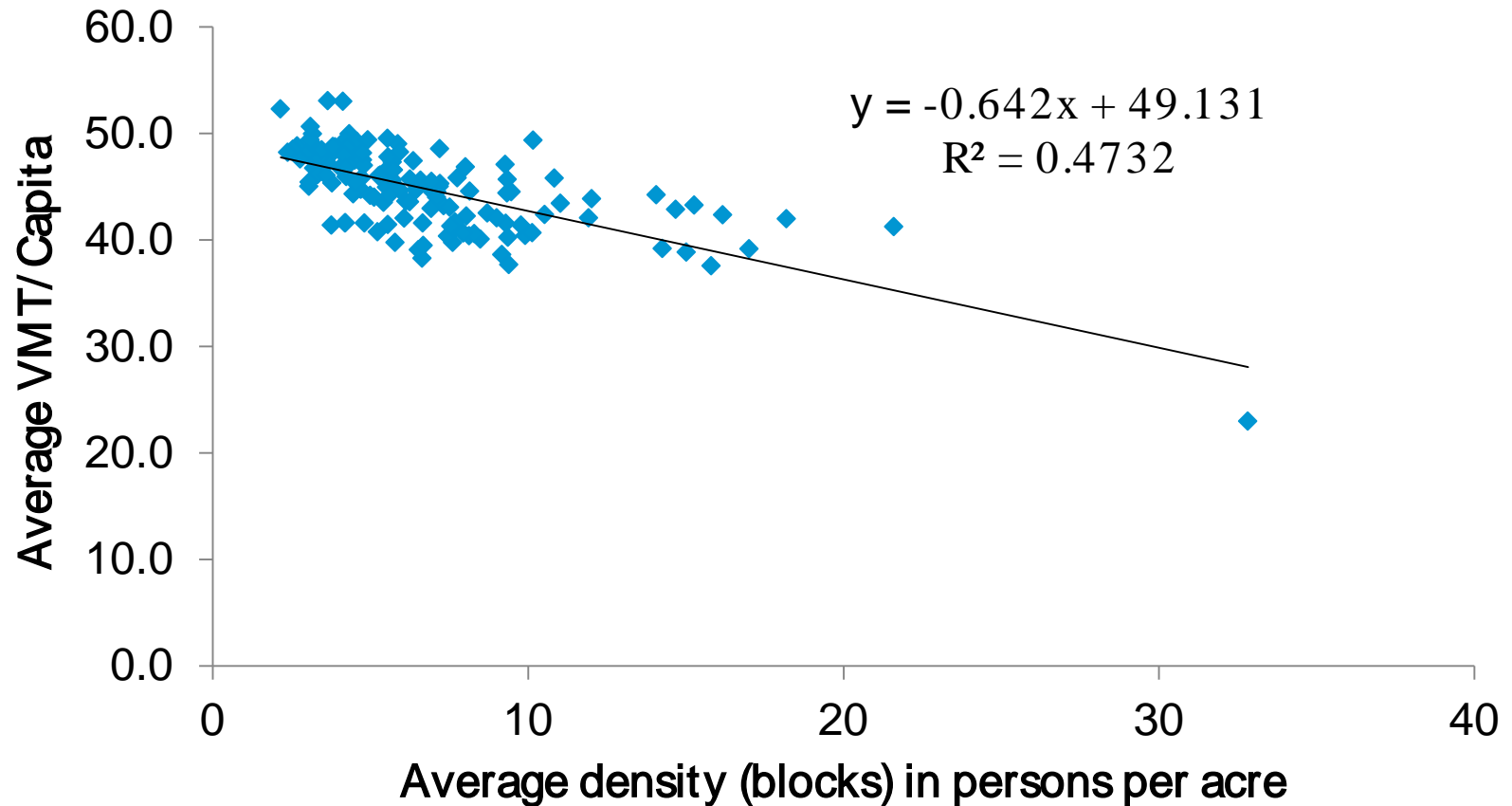
# Most fast-growth areas have high VMT/ capita.

*Vehicle miles traveled per capita per day, 2009*



Source: NHTS 2009 translation file, aggregated from tract to CZ level by R Pendall August 2015

In low-density commuting zones, people drive more.



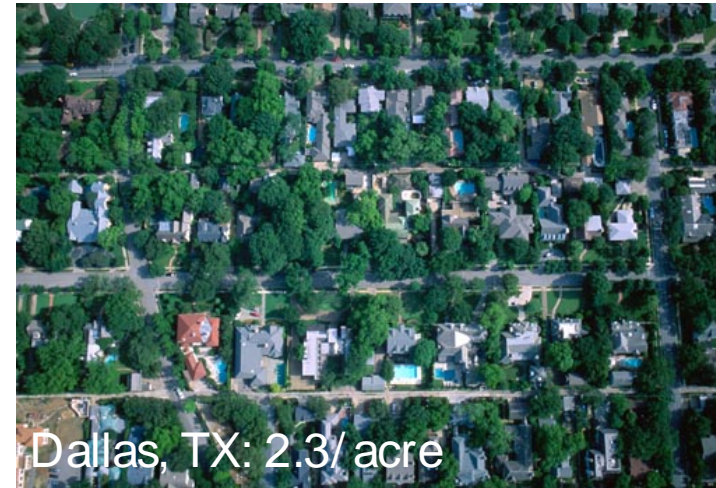
Source: NHTS 2009 translation file, aggregated from tract to CZ level by R Pendall August 2015;  
2010 Census of Population, block statistics, excludes blocks with zero population and zero land area.  
CZs with over 500,000 persons only.

# Multifamily development in mixed-use sub-centers



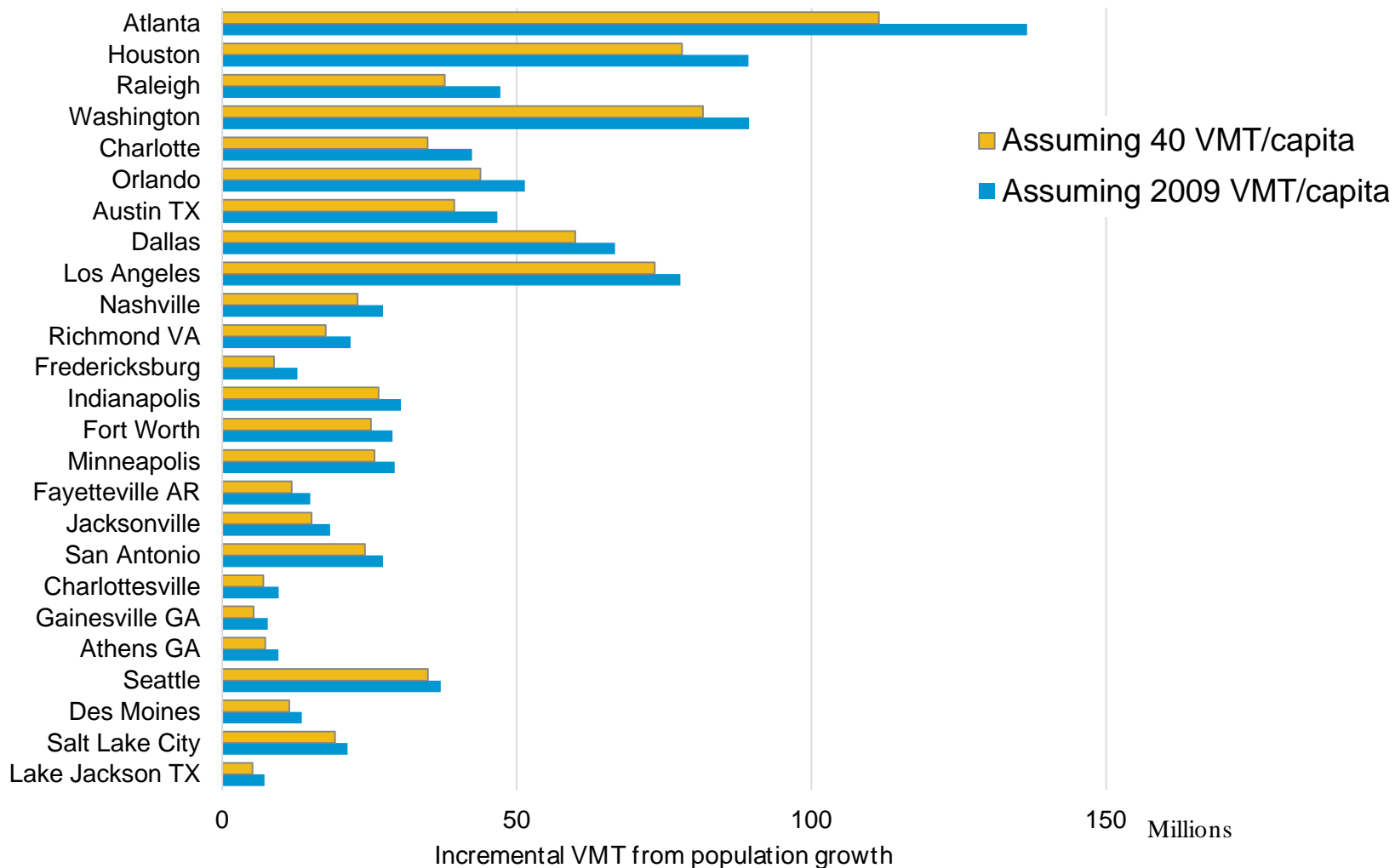
"Aerial shot of Tysons Corner, Virginia 2010" by La Citta Vita - Flickr: Tysons Corner, Virginia. Licensed under CC BY-SA 2.0 via Wikimedia Commons - [https://commons.wikimedia.org/wiki/File:Aerial\\_shot\\_of\\_Tysons\\_Corner,\\_Virginia\\_2010.jpg#/media/File:Aerial\\_shot\\_of\\_Tysons\\_Corner,\\_Virginia\\_2010.jpg](https://commons.wikimedia.org/wiki/File:Aerial_shot_of_Tysons_Corner,_Virginia_2010.jpg#/media/File:Aerial_shot_of_Tysons_Corner,_Virginia_2010.jpg)

## Smaller lots in single-family areas



Source: <http://www.lincolnst.edu/subcenters/visualizing-density/>

# Simulation: Impacts of lower VMT in 25 high-VMT, high-growth metro areas



Source: 2009 NHTS translation file (VMT/capita), 2010 US Census, 2030 Urban Institute projections, Mapping America's Futures, all-average scenario, 2014 vintage.

Thanks.

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