

Regional High Capacity Transit System Plan

To watch the video of this presentation, visit www.oregonmetro.gov/index.cfm?go/by.web/id=29020#thinktank



Big issues in transportation

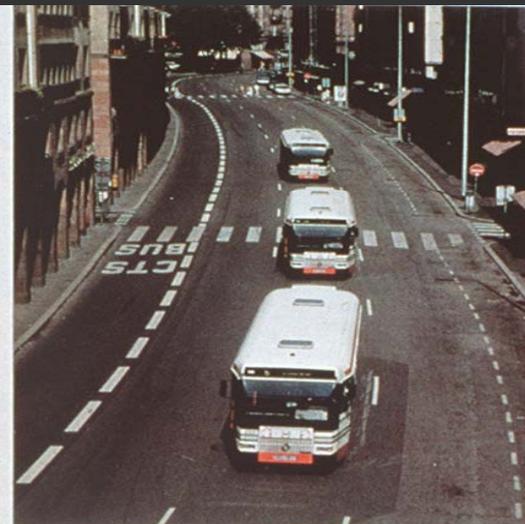


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What we already know...

Transit can
move
people
more
efficiently.



240 Persons travel
to work:

-- in 177 Cars

-- in 3 Busses

-- in 1 Tram

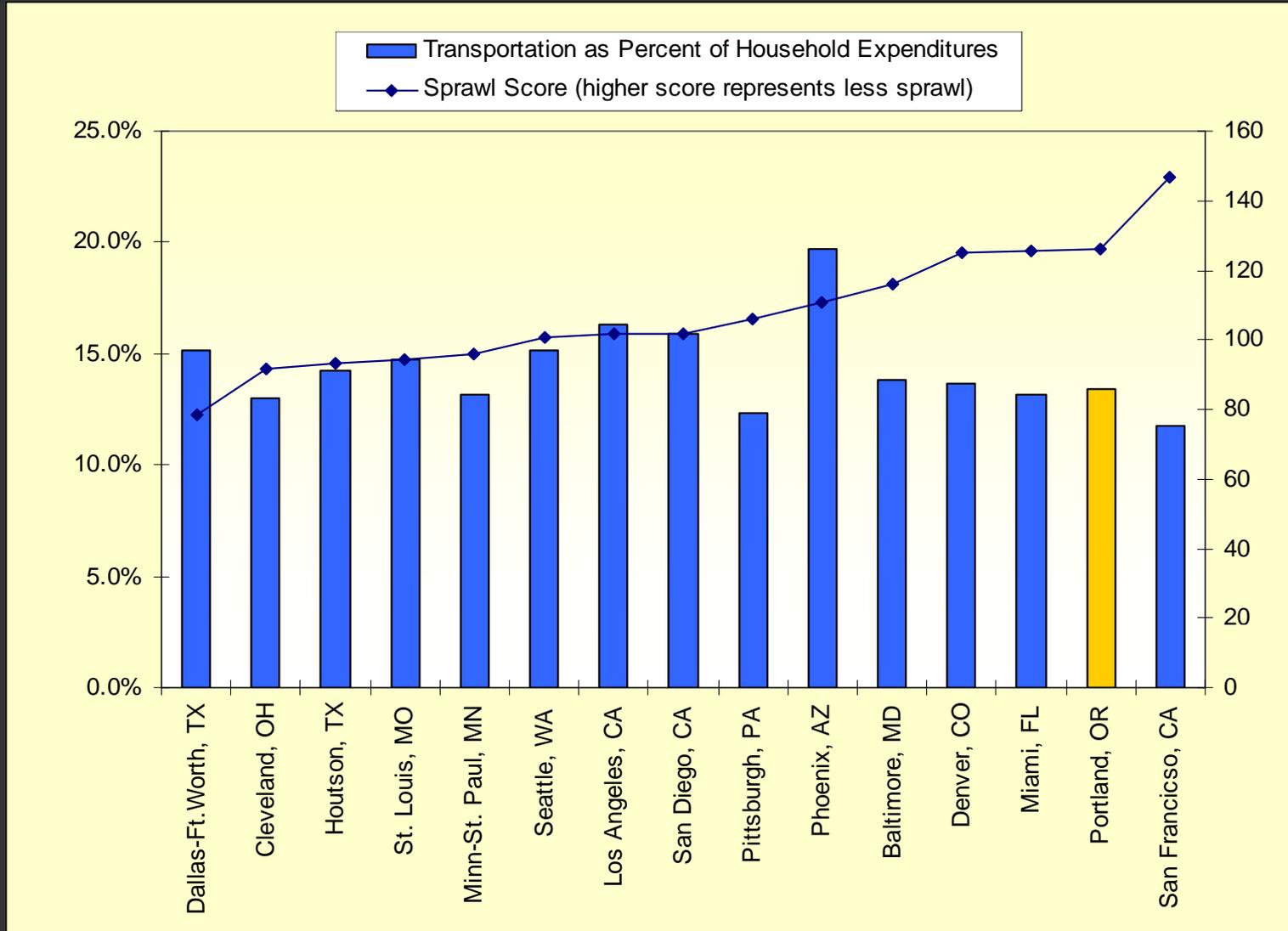


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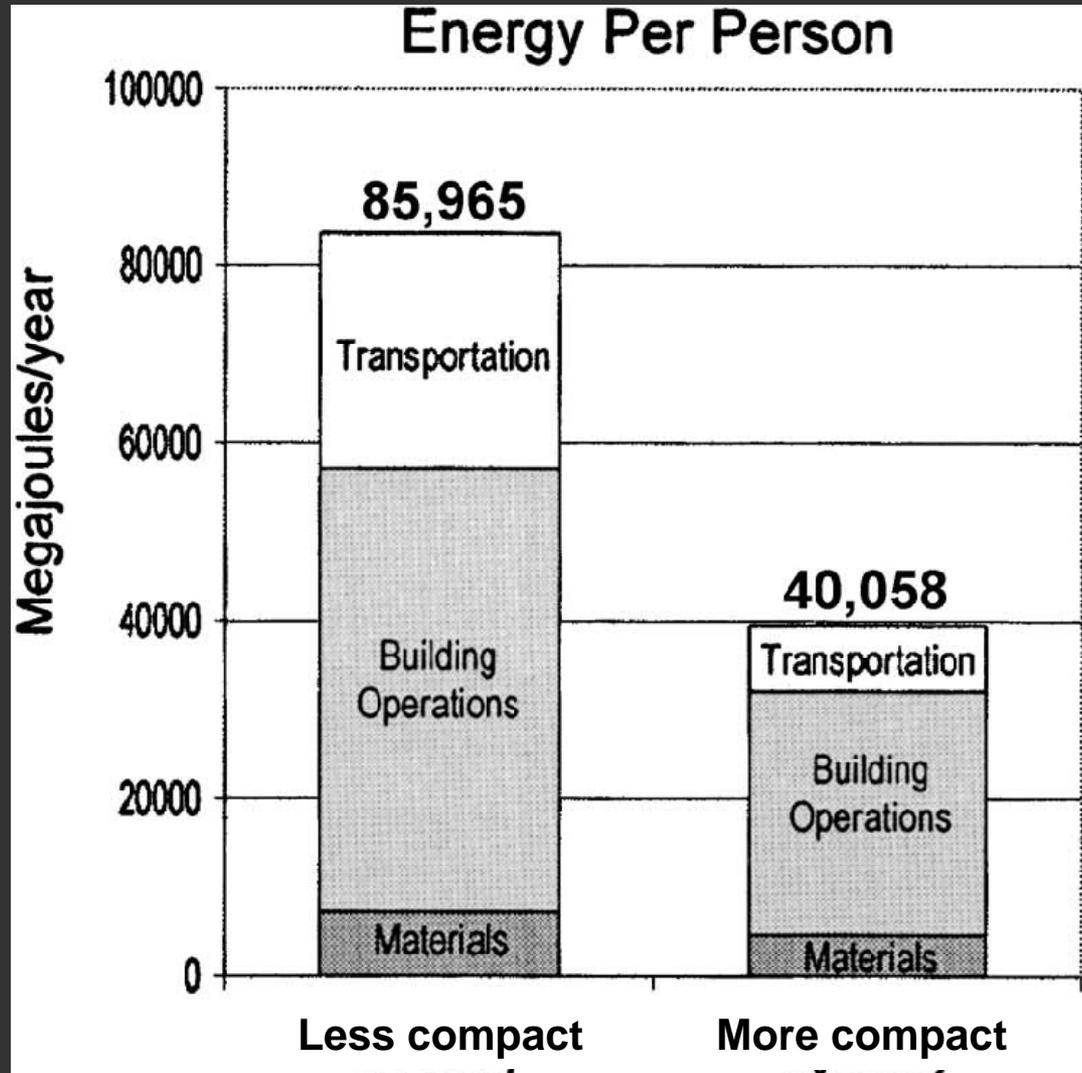
What we already know...

Transportation costs in compact places are less.



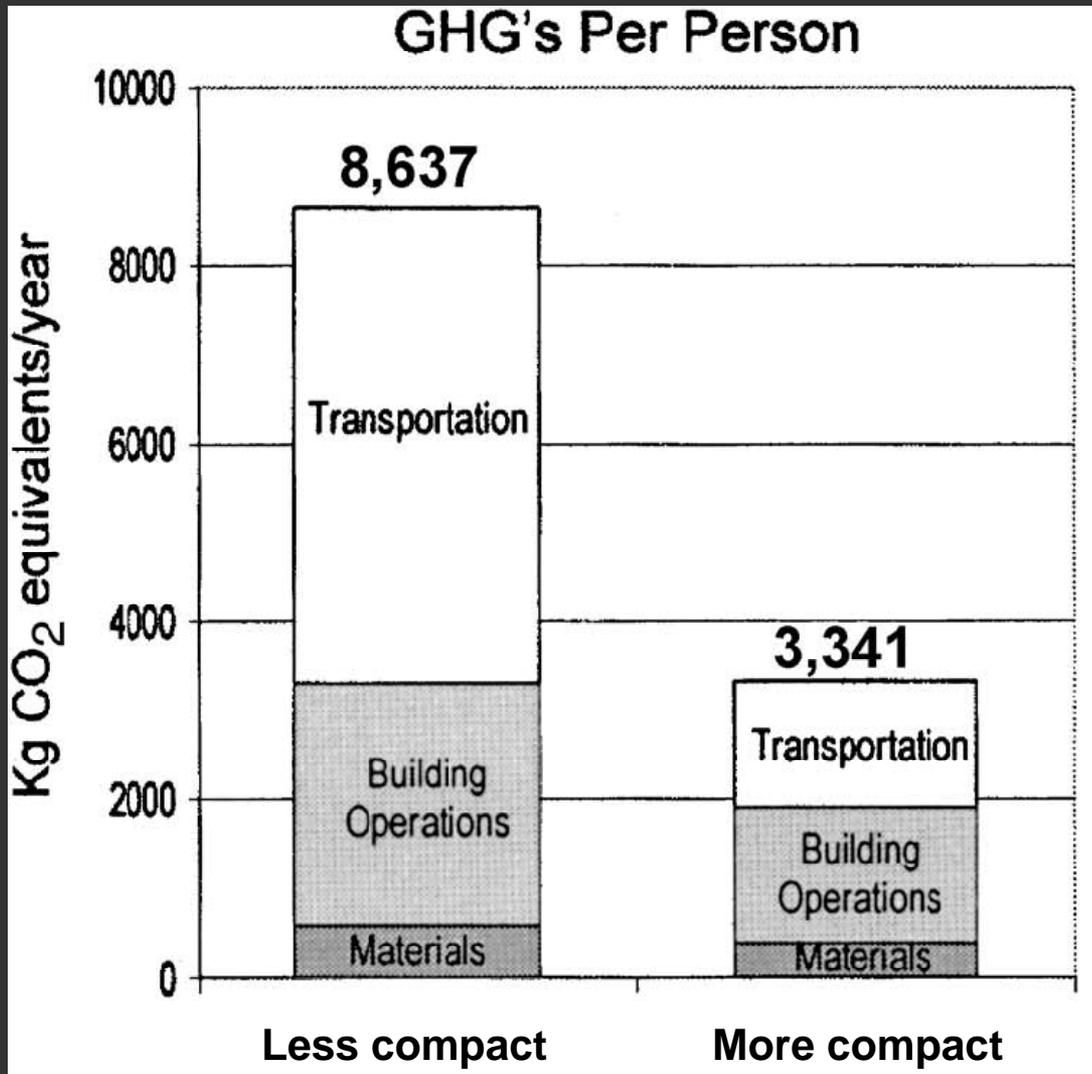
What we already know...

Compact places also use less energy.



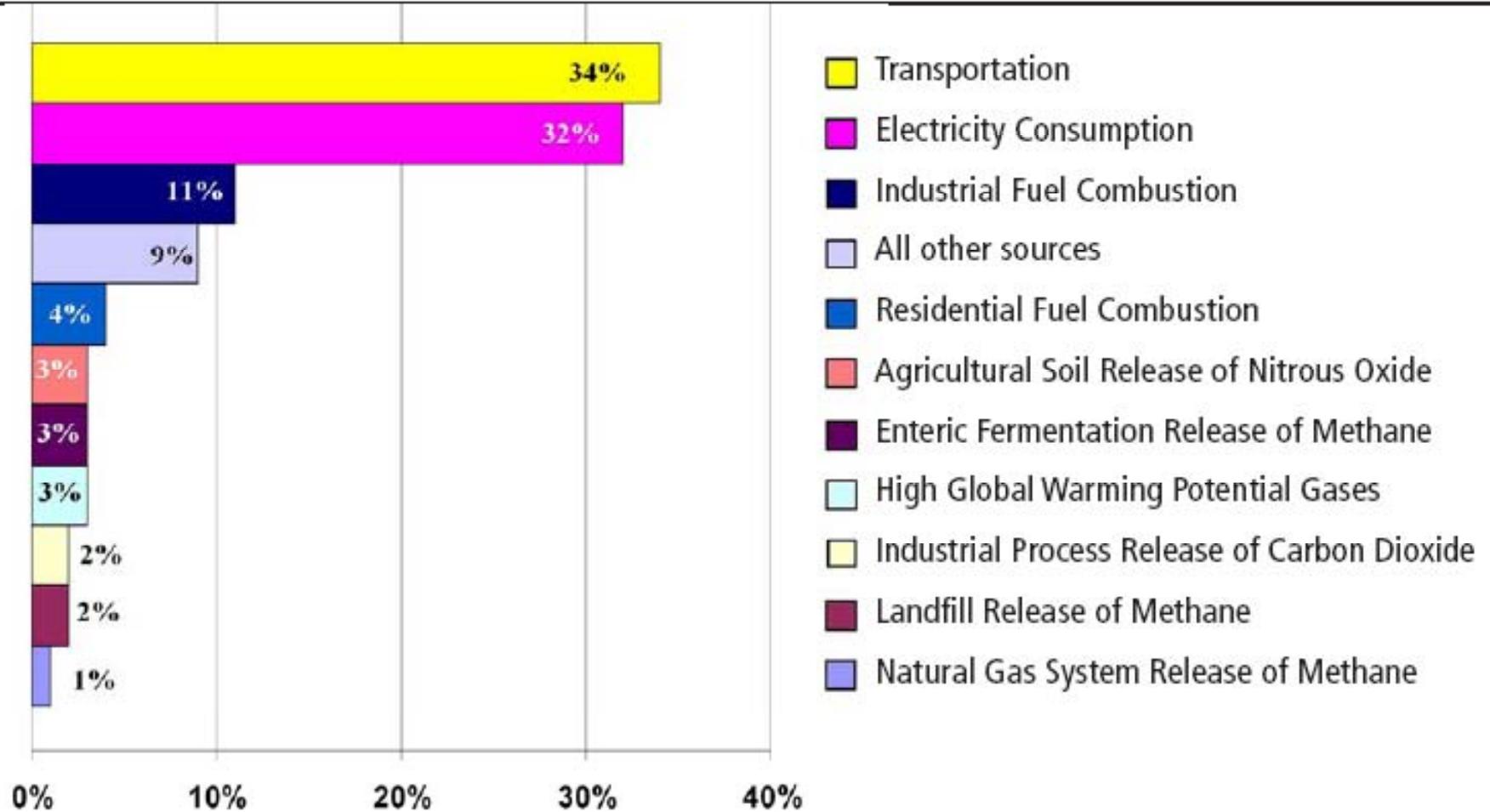
What we already know...

Compact places are greener.



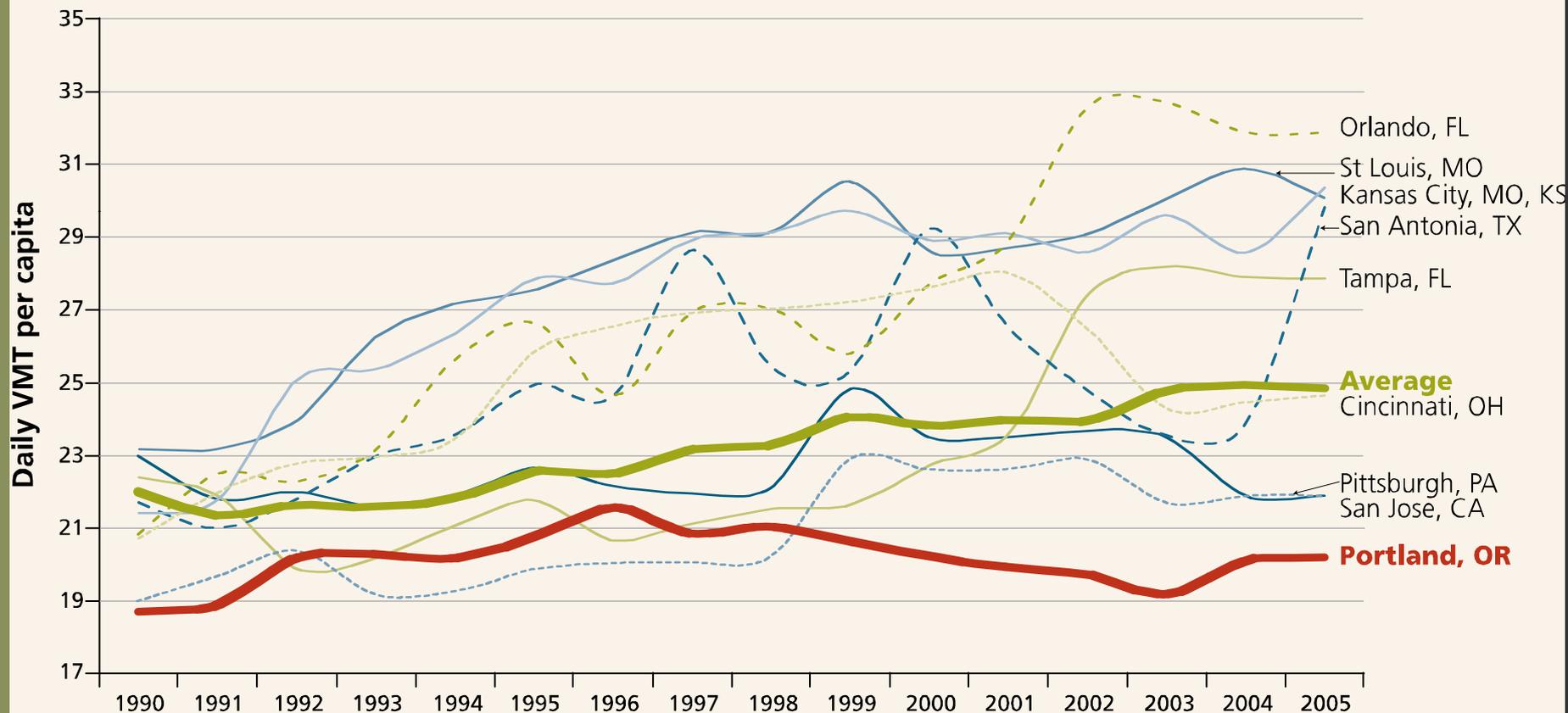
Transportation is the primary cause of GHG emissions.

Figure 3: Major Sources of Greenhouse Gas Emissions in Oregon (2004)



Portland area residents drive less

Portland region per capita daily vehicle miles traveled (VMT), compared to metropolitan areas with similar populations

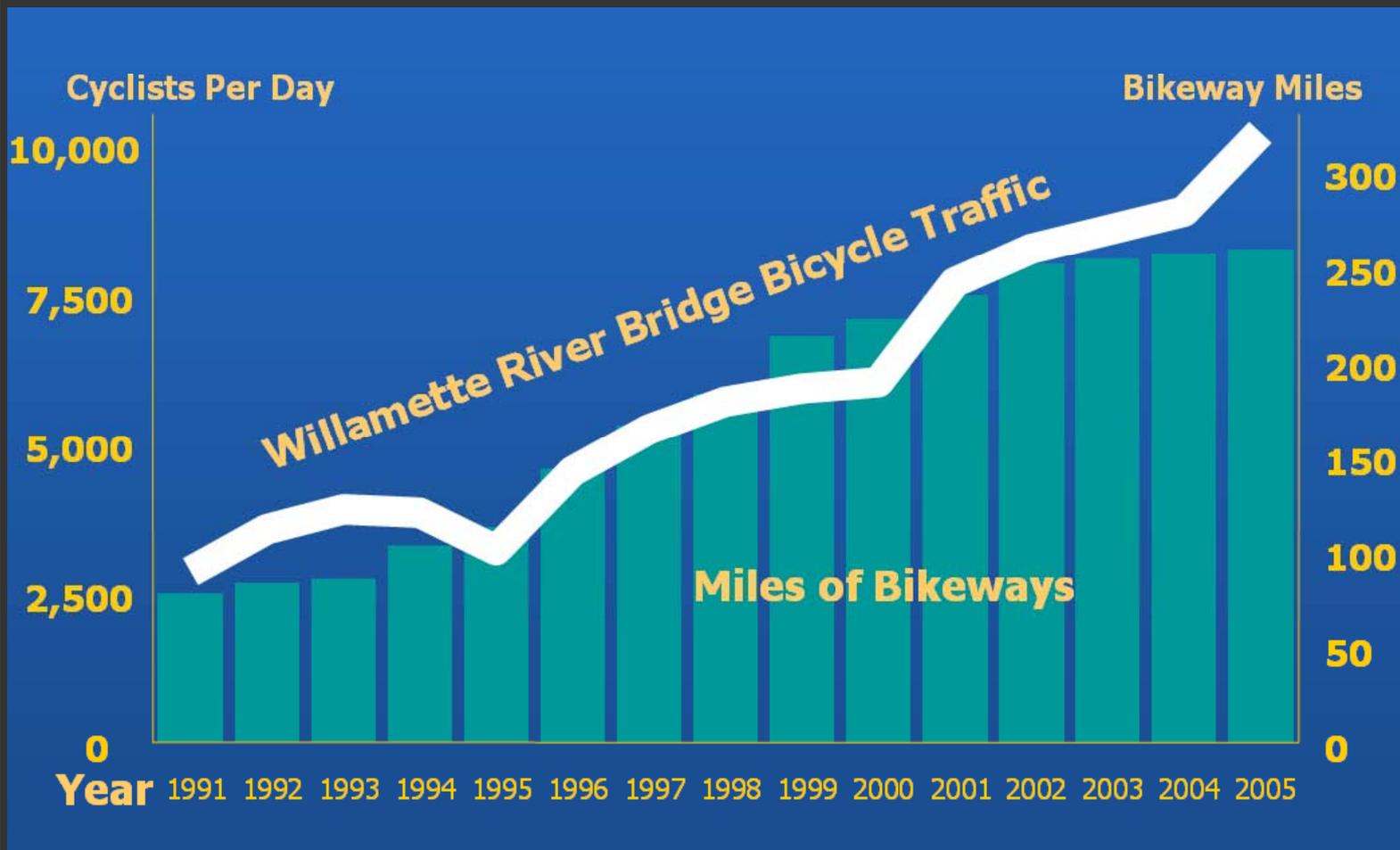


All cities shown are within +/- 600,000 of Portland's 2005 population.

The average shown is for the 25 U.S. urban areas with the exception of Portland, that have 2005 populations of over one million and less than three million.

Source: U.S. Federal Highway Administration, *Highway Statistics*, Table IM-72, "Urban Areas – Selected Characteristics," 1990 – 2005.

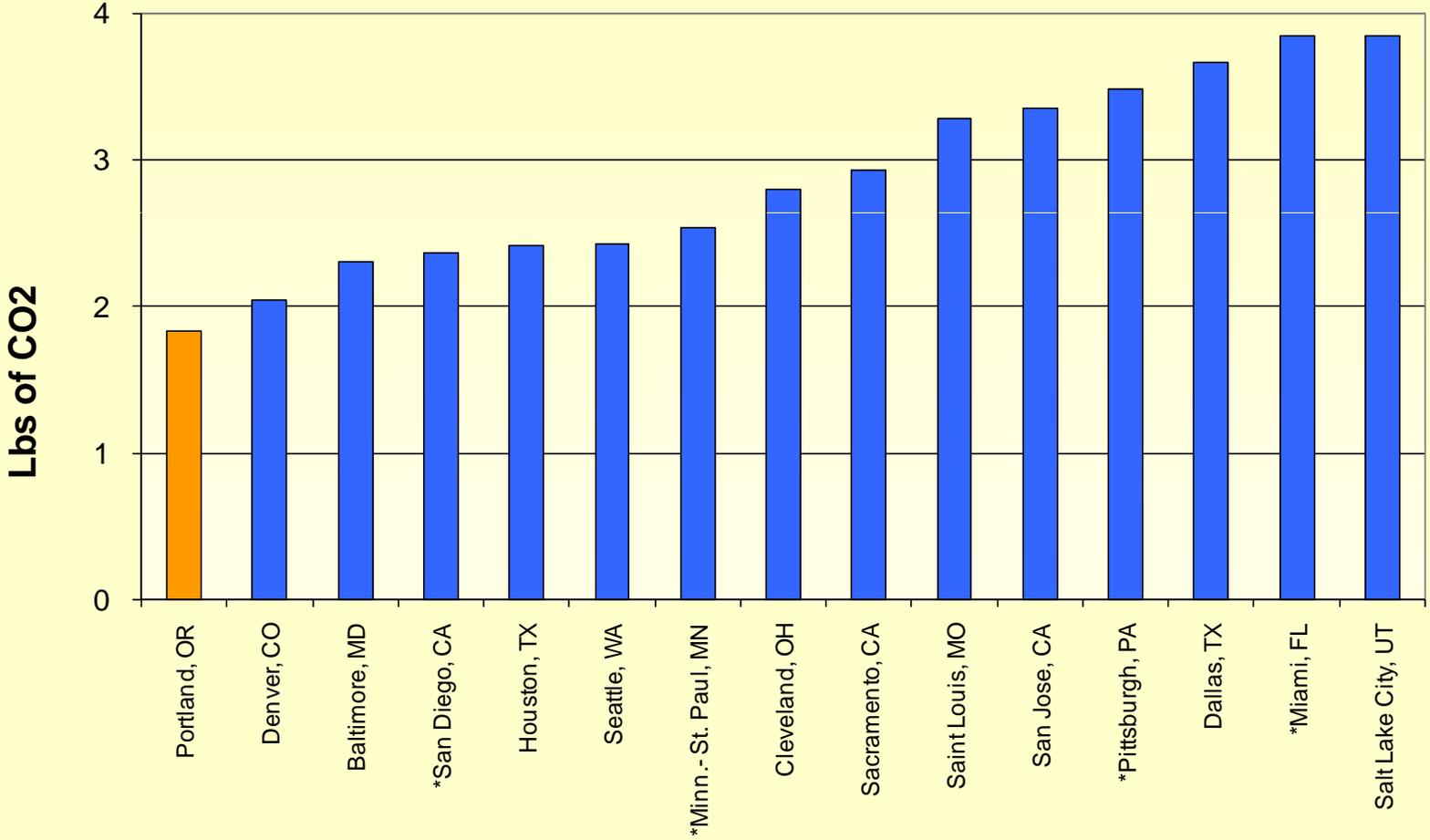
... bike more...



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Carbon dioxide emissions per boarding

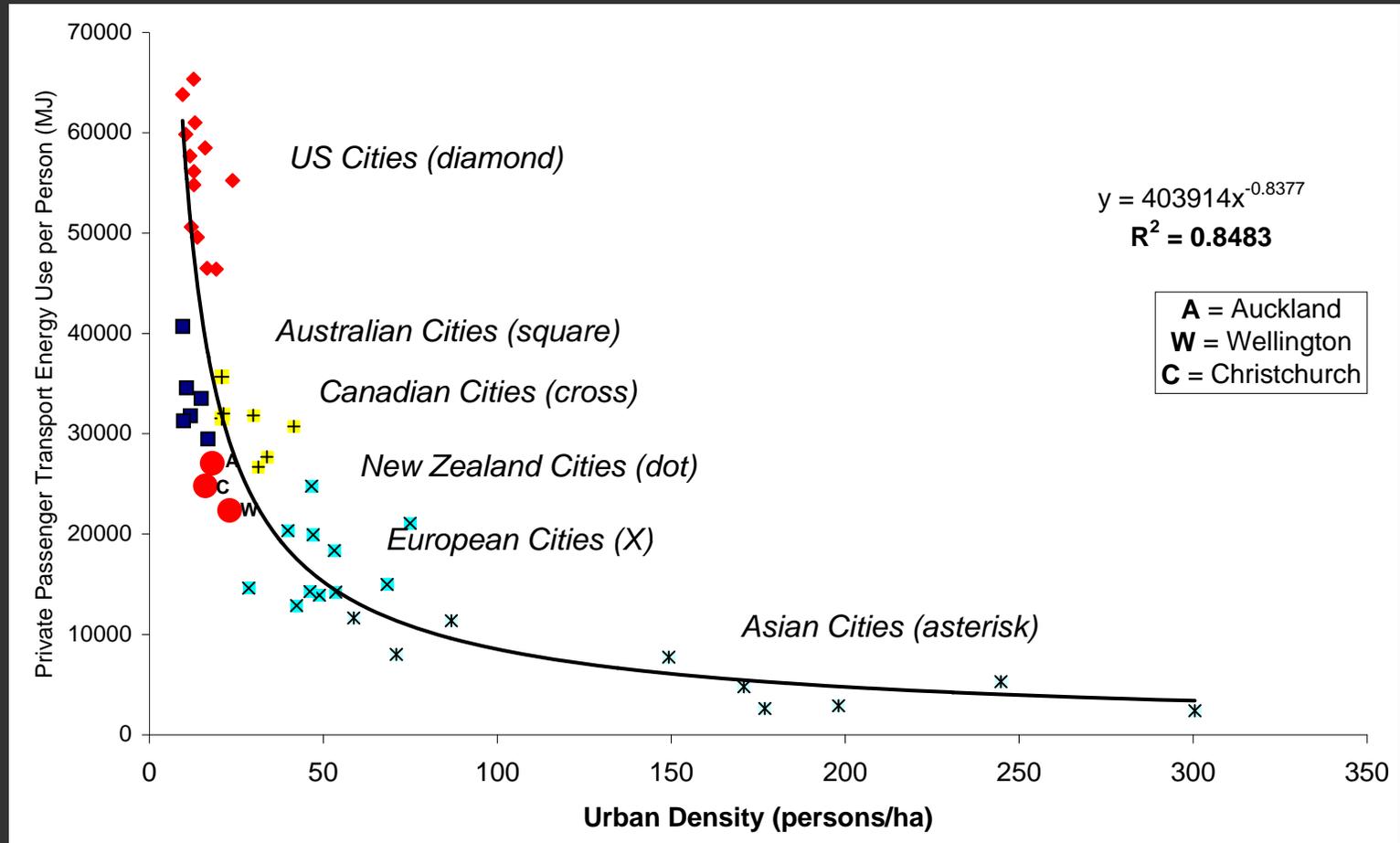


Note: Assumes national average of 1.34 lbs of CO2 emissions per kWh of electricity consumption. Regional power supplies vary significantly.

* Excludes energy consumption and corresponding trips for one or more modes provided by transit agency.

What we already know...

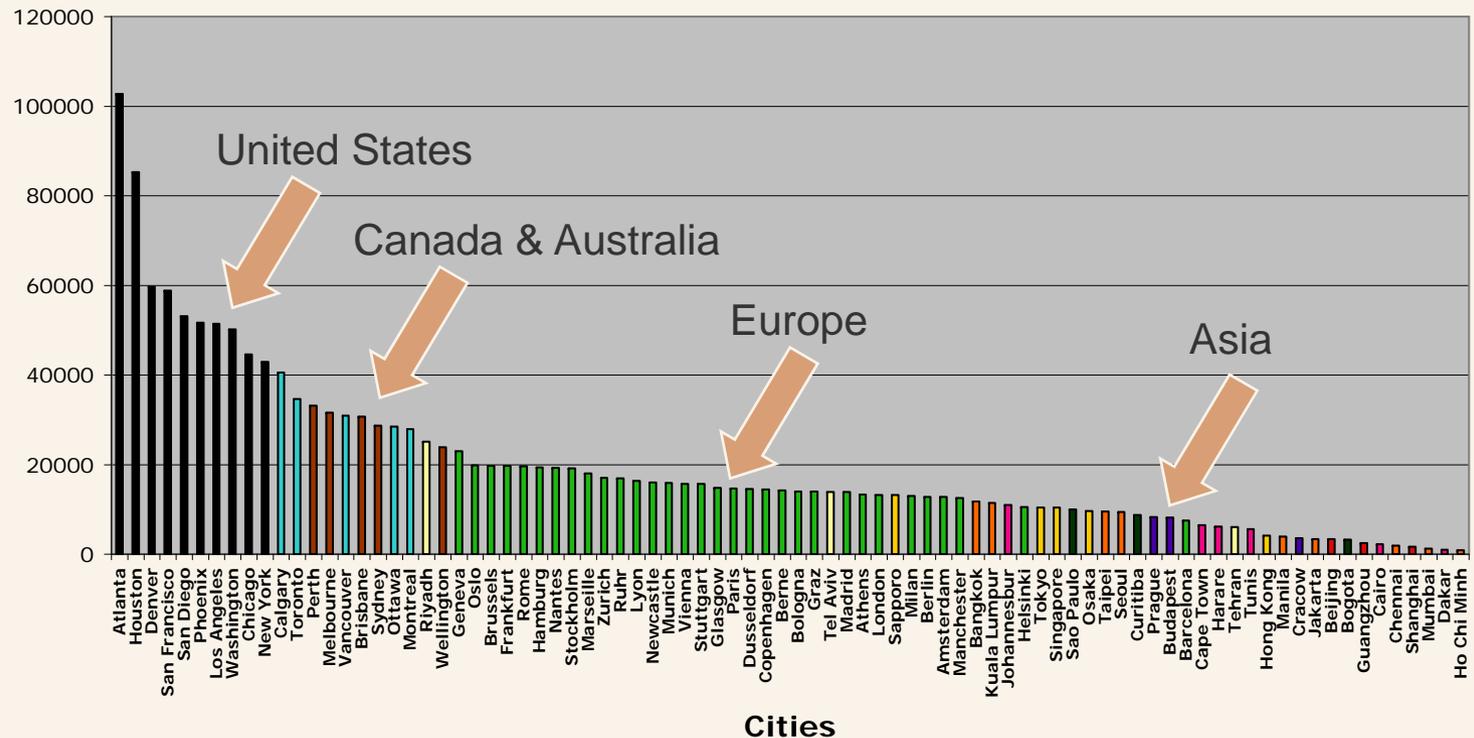
Private transport energy use decreases as density increases.



What we already know...

- American cities, which are more sprawling, consume more energy than dense cities.
- Private transport energy use decreases as density increases.

Private Passenger Transport Energy Use per Person, 1995



Five “What ifs?”

1. Leader of the green economic boom
2. Peak oil and \$7 gas
3. CO₂ taxes and restrictions
4. Warming climate / climate change (the next “dust bowl”)
5. Decline of auto-oriented communities



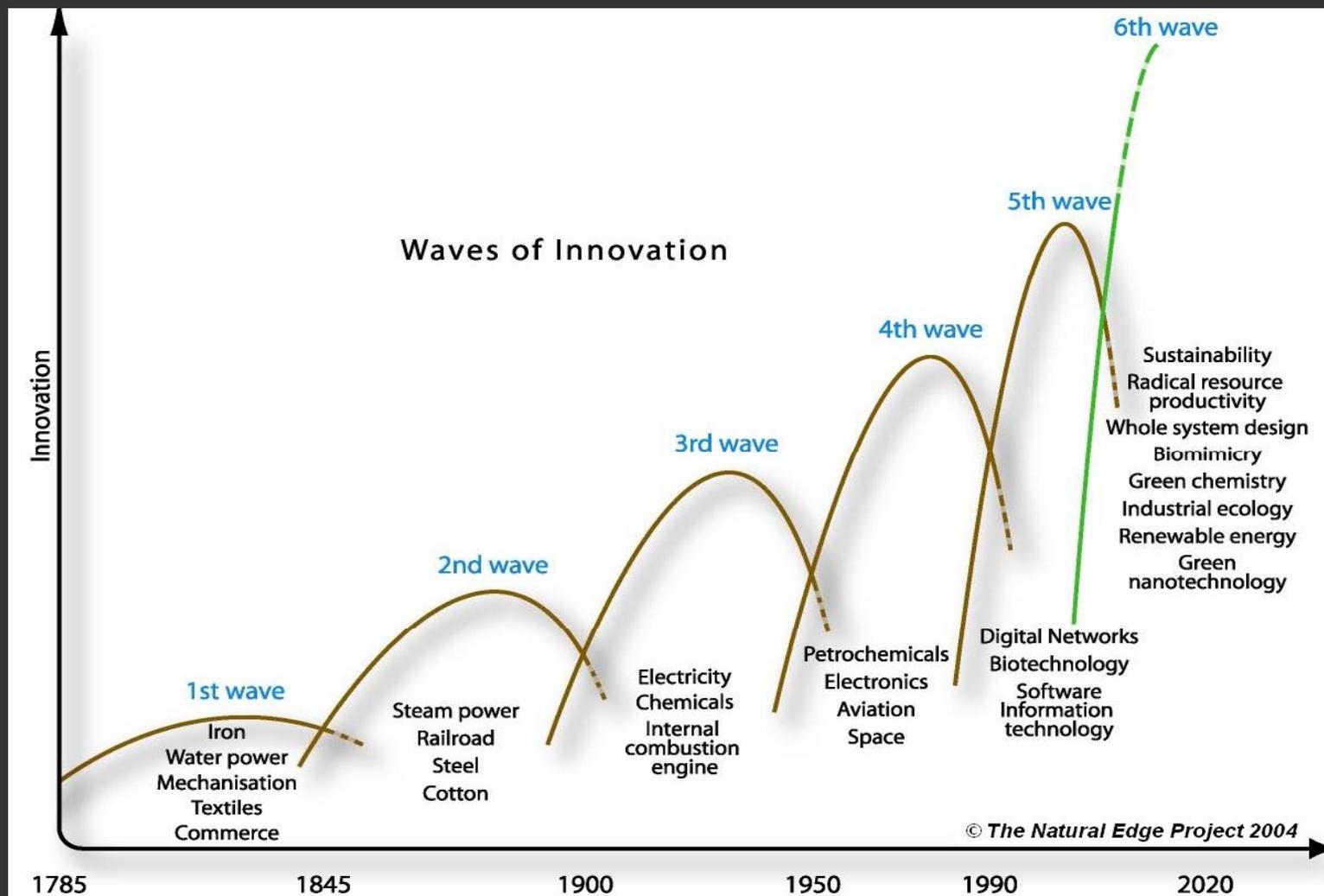
1. *Leader of the green economic boom?*

The metro region is currently a leader in green and sustainable development.

Portland was ranked the 2008 top eco-friendly big city in the U.S. by SustainLane



Next wave of innovation...



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Case study: Silicon Valley



Case study: Puget Sound

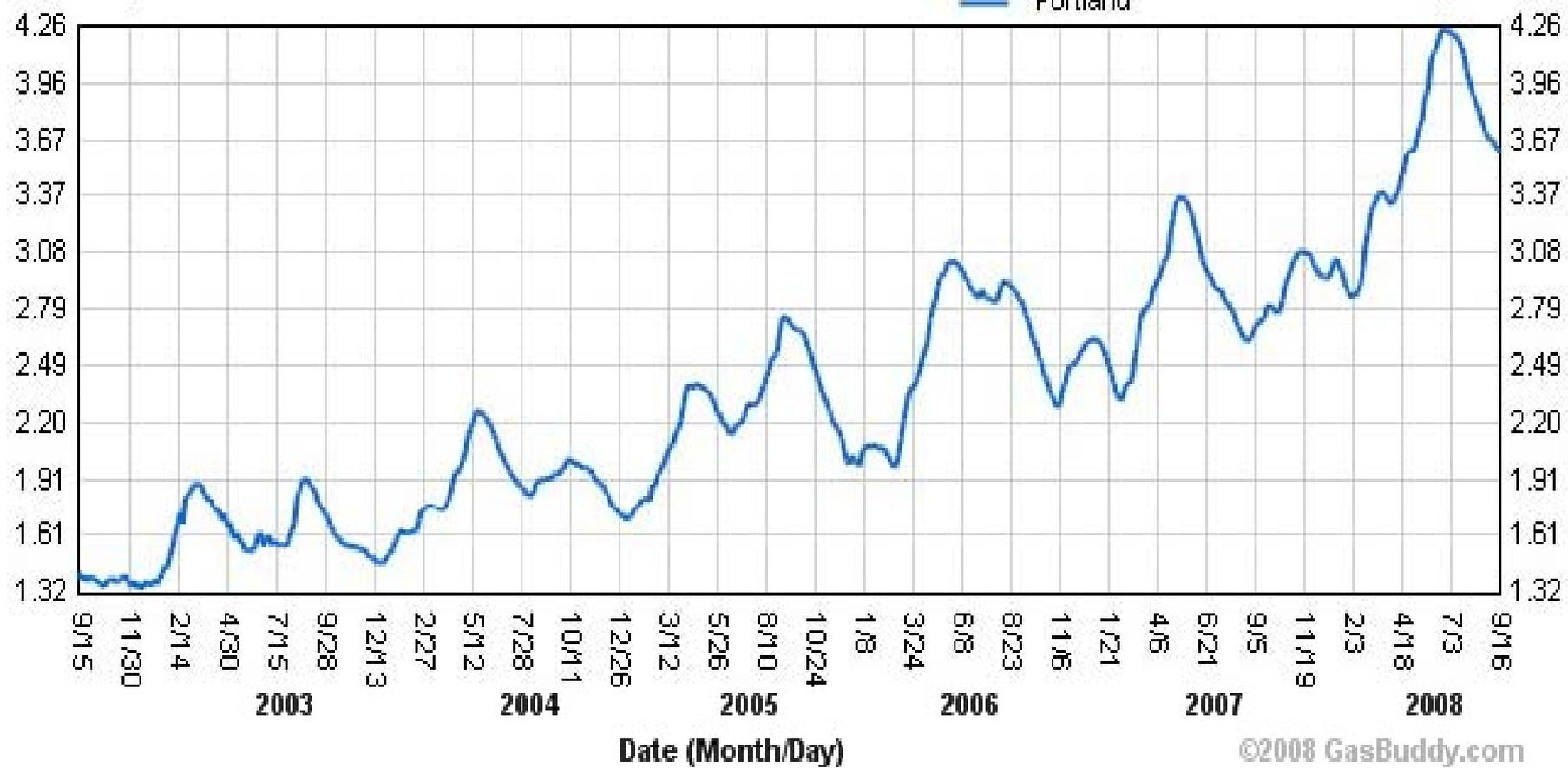


Rising gas prices...

72 Month Average Retail Price Chart

Regular Gas Price (US \$/G)

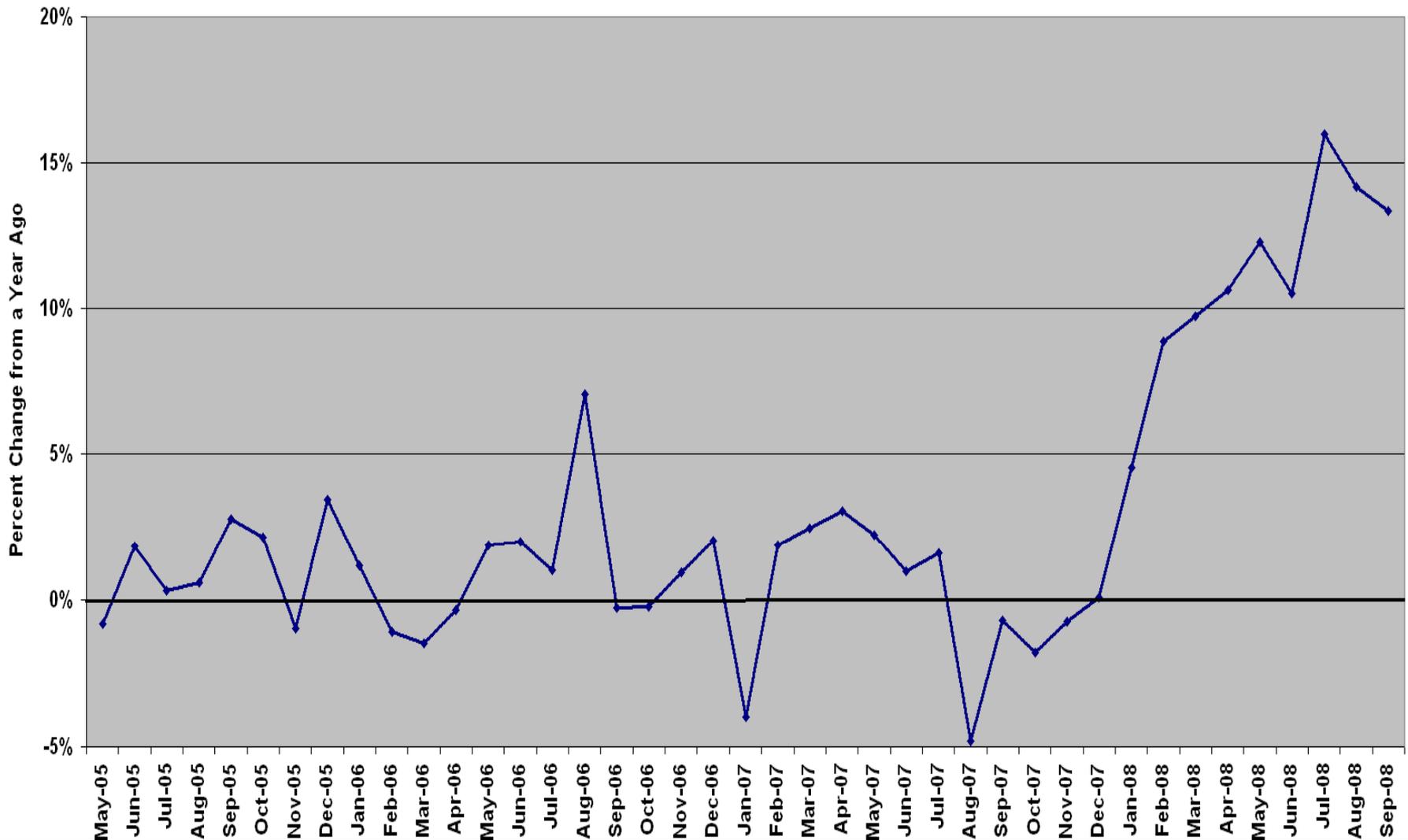
Regular Gas Price (US \$/G)



©2008 GasBuddy.com

lead to an increase in ridership.

Monthly Peak Ridership Change
TriMet Systemwide



3. *CO₂ taxes and regulation*

Government can enact CO₂ taxes and regulations.



Cap and trade

Western Climate Initiative

Cap and trade: Government sets limit for emissions and market sets the price.

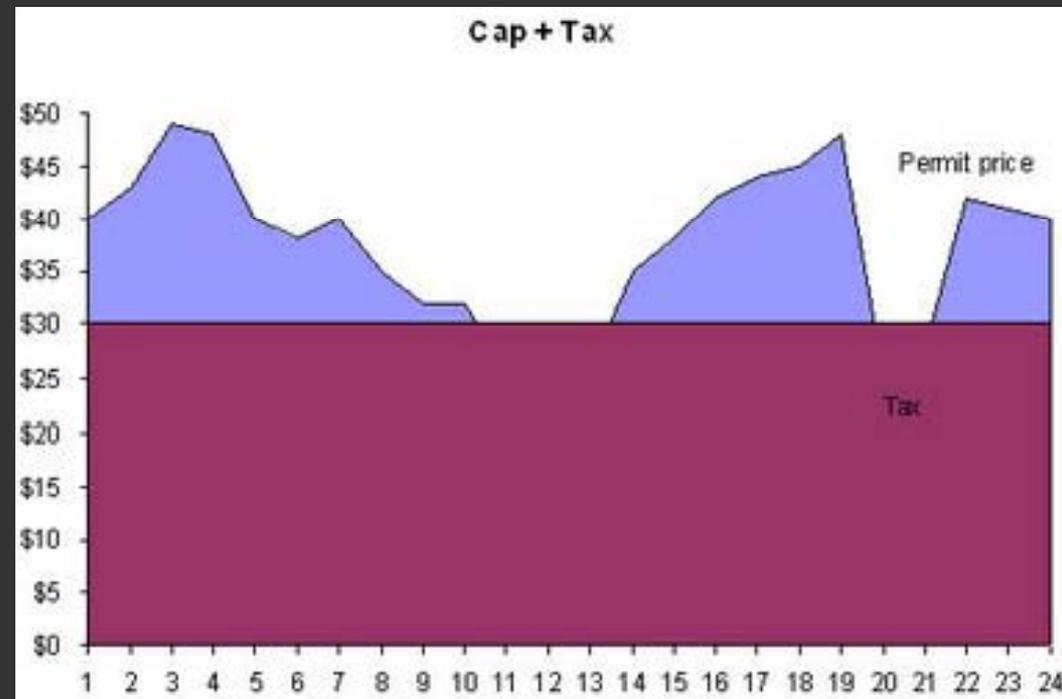


Case study: British Columbia Carbon Tax



Cap and tax

- Local or regional carbon tax could complement and enhance effectiveness of WCI, or future federal cap and trade system.
- Regional tax could act as a 'floor' on the price of carbon permits, providing a consistent incentive for investment in alternatives.



Source: Sightline Institute, 2008

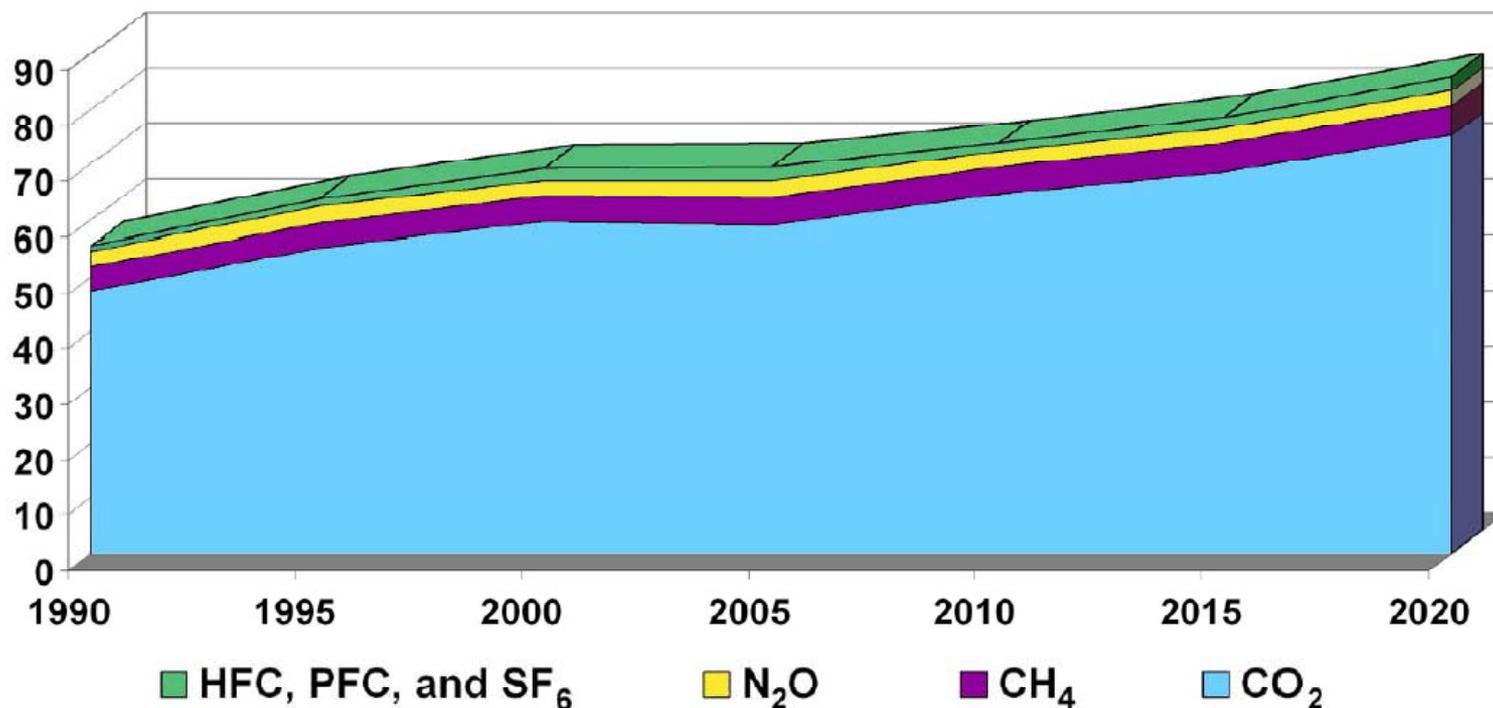


4. Changing climate?

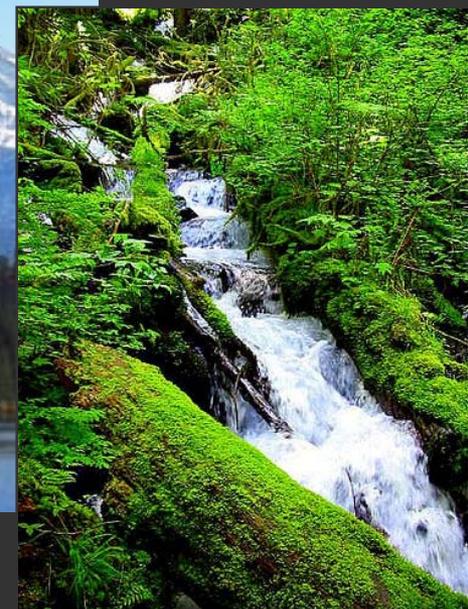


We know that the climate is undergoing unprecedented change due to human activity.

Figure 21: Projected Greenhouse Gas Emissions by Gas Through 2020 (MMTCO₂e)



- Average snowpack in Oregon has declined 30 percent.
- Spring runoff is coming earlier.

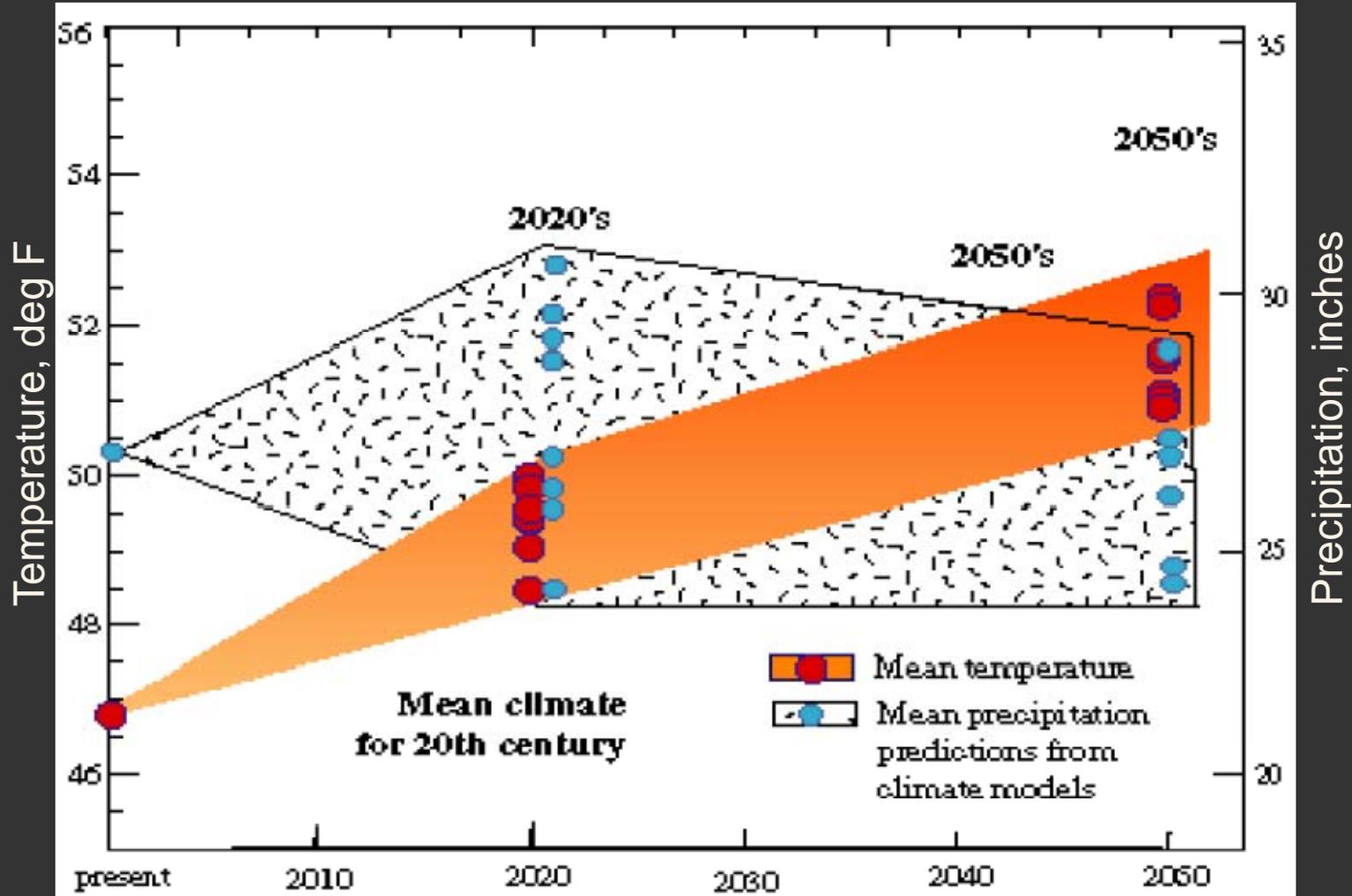


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Changes in average temperature and precipitation from seven Pacific Northwest models



- The “dust bowl” era or the Vanport flood are appropriate analogies.
- 47 percent of the population in affected area of the dustbowl migrated.
- The Vanport flood left 18,000 homeless.



Who will be able to migrate?



Case study: Baton Rouge, LA

Pre-Katrina population: 225,000

- Immediately after Katrina, pop. spiked to 500,000.
- By 2007, pop. settled to approx. 275,000-325,000.



New Orleans, LA (August 2005)

Baton Rouge, LA



The Great Northern Migration

Where would one million people go in Portland
(beyond those already projected)?



5. Decline of auto-oriented communities

- Auto-dependent neighborhoods may soon be left behind in the coming economic changes.
- More than three-fourths of prospective home buyers are more inclined to live in an urban area because of fuel prices.



Urban living is back.

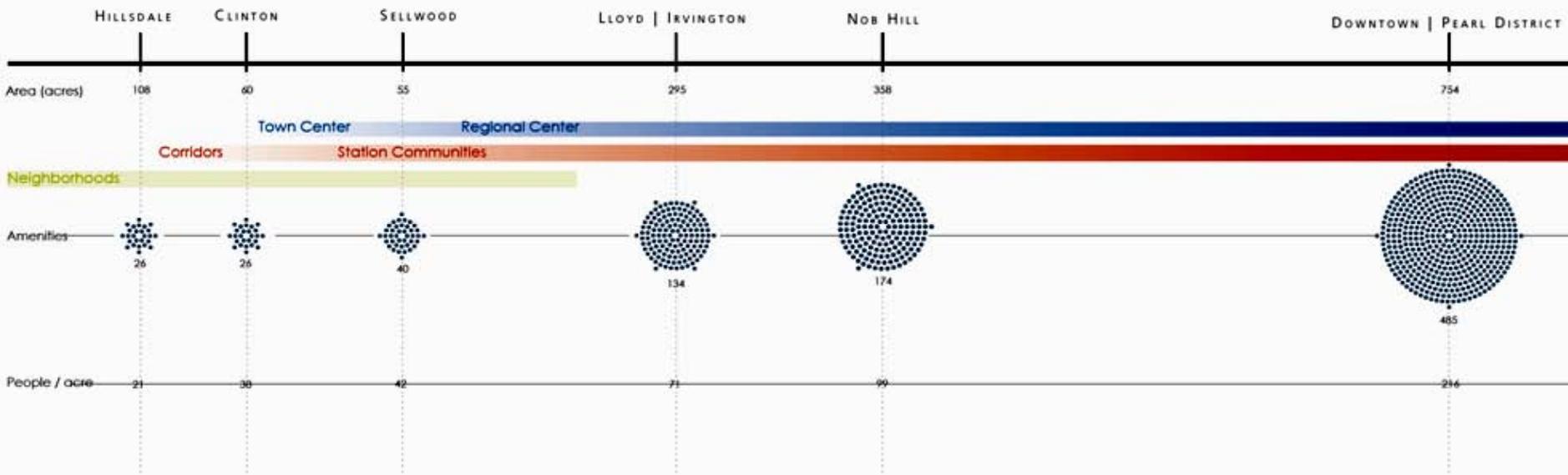


- Places become more appealing with more amenities.
- Recent study showed that property values can increase by as much as 20 percent if located in close proximity to urban amenities.



Urban living infrastructure

ACTIVITY SPECTRUM



Retrofitting auto-oriented communities

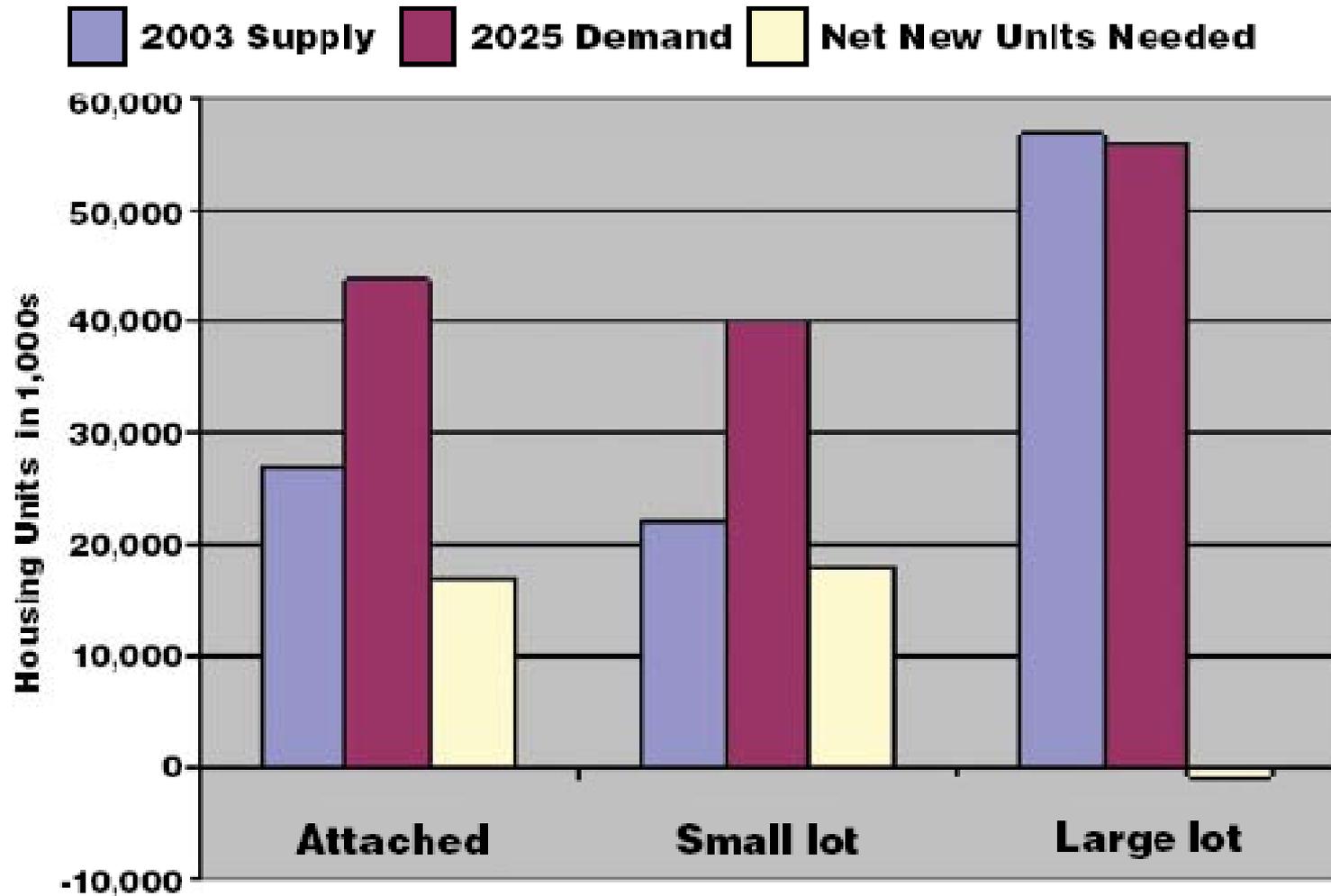


They either need to take on urban qualities or risk being left behind.



High demand for compact development

Source: Arthur Cribb Nelson, "Leadership in a New Era," *Journal of the American Planning Association*, Vol. 72, No. 4, 2006.



Developing grayfields



Developing grayfields





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