

CO2 Reduction through Better Urban Design: Portland's Story

Metro Councilor Rex Burkholder

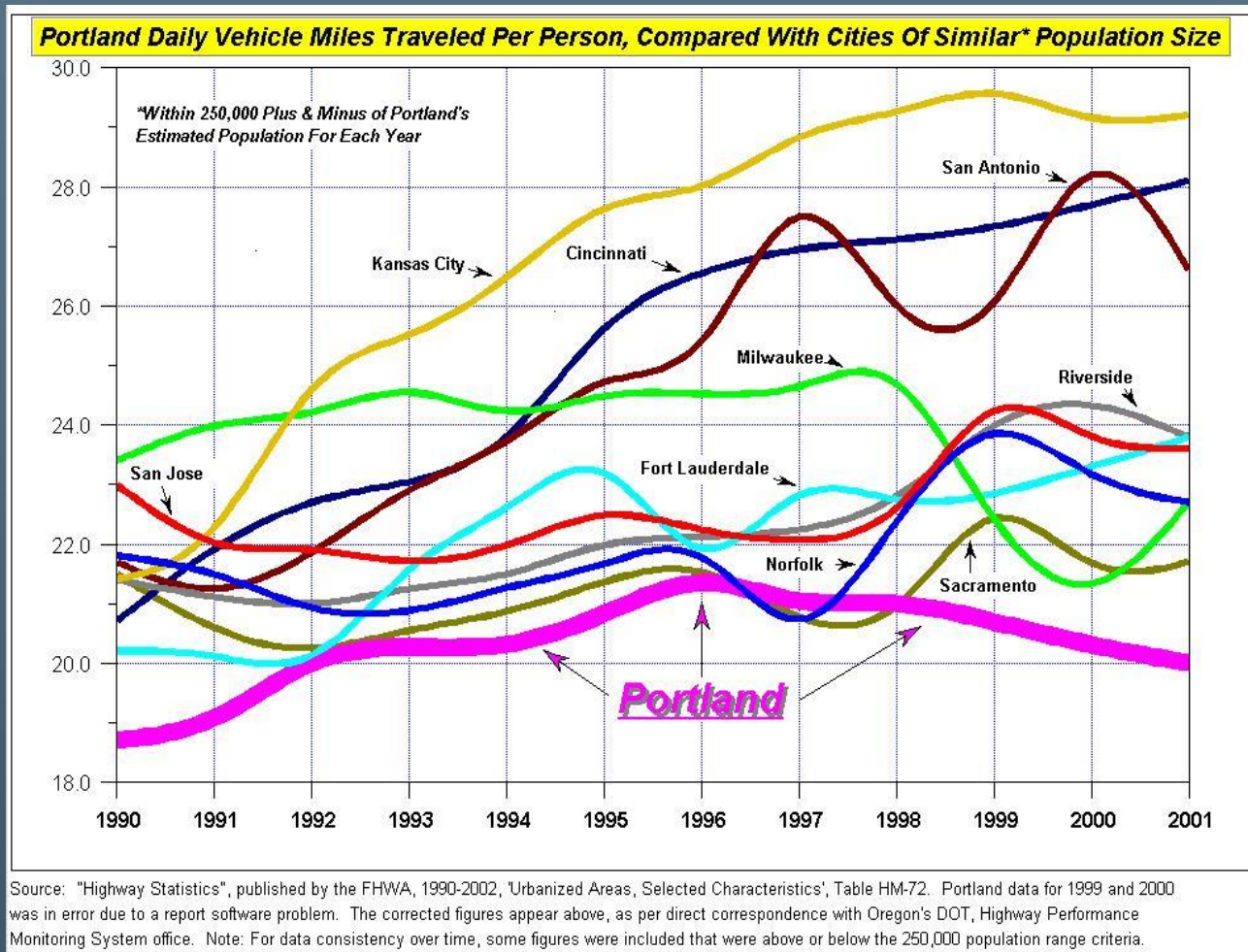
August 22, 2007

Pacific Grove, CA



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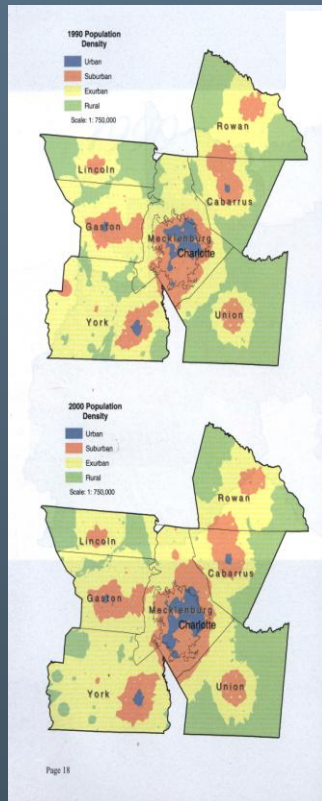
Portland area residents drive less...



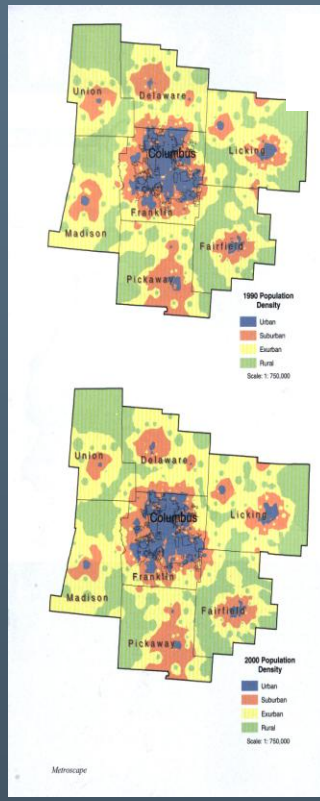
While per capita vehicle miles traveled is increasing nationally at an average of 2.3% per year, VMT/capita in the Portland area is declining thanks to reliable transit service, smart land-use planning, and outreach programs.

...and live in higher densities.

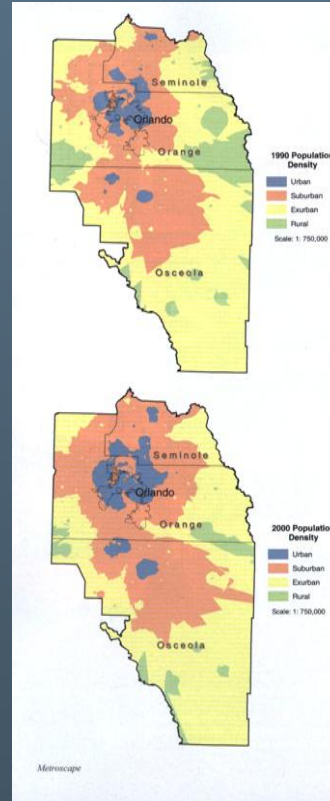
Charlotte



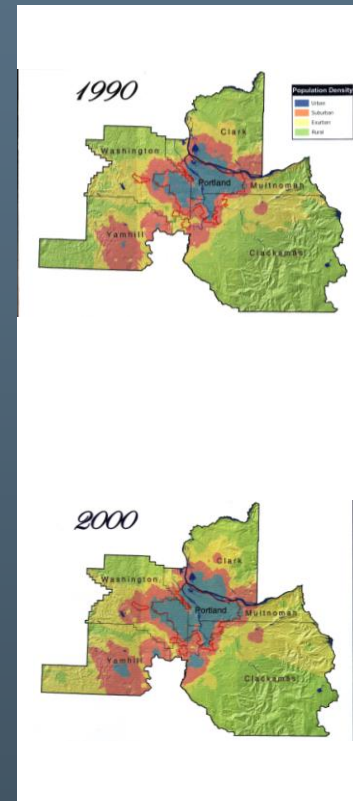
Columbus



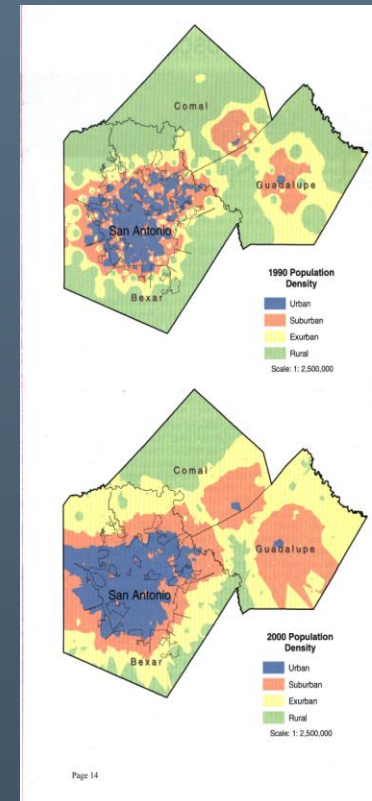
Orlando



Portland



San Antonio



Compared to similarly-sized metropolitan areas, the Portland region has a larger **urbanized** area and more **rural** land, with fewer **suburbs** and **exurbs**.

Regional Population Growth Allocated By Density Category 1990-2000

	Charlotte	Columbus	Orlando	San Antonio	Portland
Urban 3000+ persons/sq mile	7%	31%	64%	63%	88%
Suburban 1000 to 3000 persons/sq mile	50%	45%	23%	8%	9%
Exurban 300 to 1000 persons/sq mile	45%	18%	12%	12%	1%
Rural 0 to 300 persons/sq mile	-1%	7%	2%	17%	3%

In the past two decades, a strong majority of the Portland area's population growth has taken place in urban areas.

As a result, Portland's GHG emissions are falling.

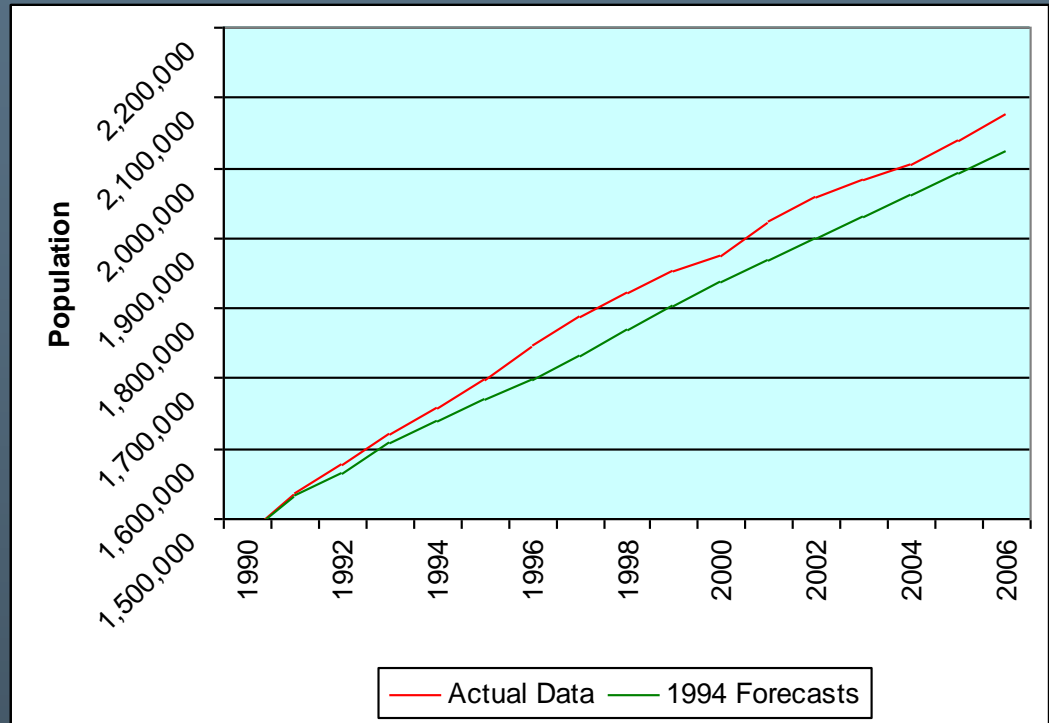
Multnomah County Per Capita Greenhouse Gas Emissions							
Metric tons CO2 equivalent							
	1990	1995	2000	2001	2002	2003	2004
Residential	3.34	3.10	3.27	3.16	3.08	2.99	3.06
Commercial	3.56	3.58	3.85	3.74	3.58	3.55	3.70
Industrial	2.62	2.57	2.63	2.39	2.09	1.95	1.93
Transportation	6.50	5.96	5.64	5.52	5.87	5.79	5.55
Waste	0.46	0.41	0.25	0.27	0.28	0.32	0.18
TOTAL	16.48	15.62	15.64	15.07	14.89	14.60	14.42
% change from 1990		-5.2%	-5.1%	-8.5%	-9.7%	-11.4%	-12.5%

Portland Office of Sustainable Development, 2005 Progress Report on the City of Portland and Multnomah County Local Action Plan of Global Warming

Metro has not yet conducted a region-wide GHG inventory, but the region's most urban county lowered per capita GHG emissions by 12.5% since 1990.

Forecasts vs. Results

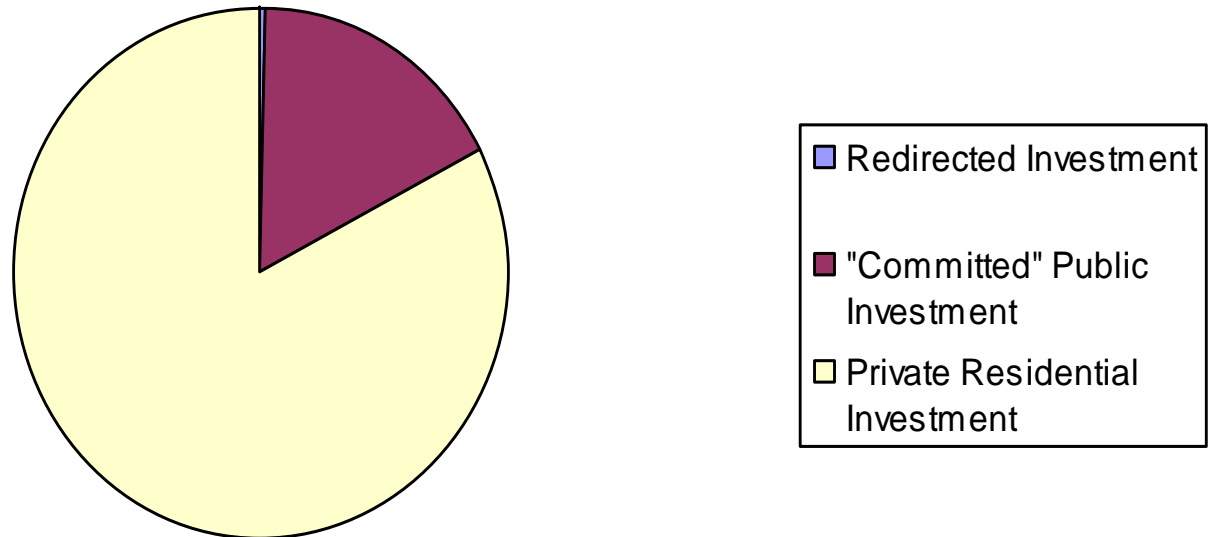
- Metro's 1994 projections for the 2006 population of the 5-county Portland MSA were within 2.5% of actual values.
- 1999 projections for the total VMT in the Portland urbanized area were within 7% of actual values.
- Current VMT models are only 3% off of actual values.



The accuracy of these projections helps Metro anticipate and make allowances for growth, make investments on an appropriate scale, and target development in the right areas.

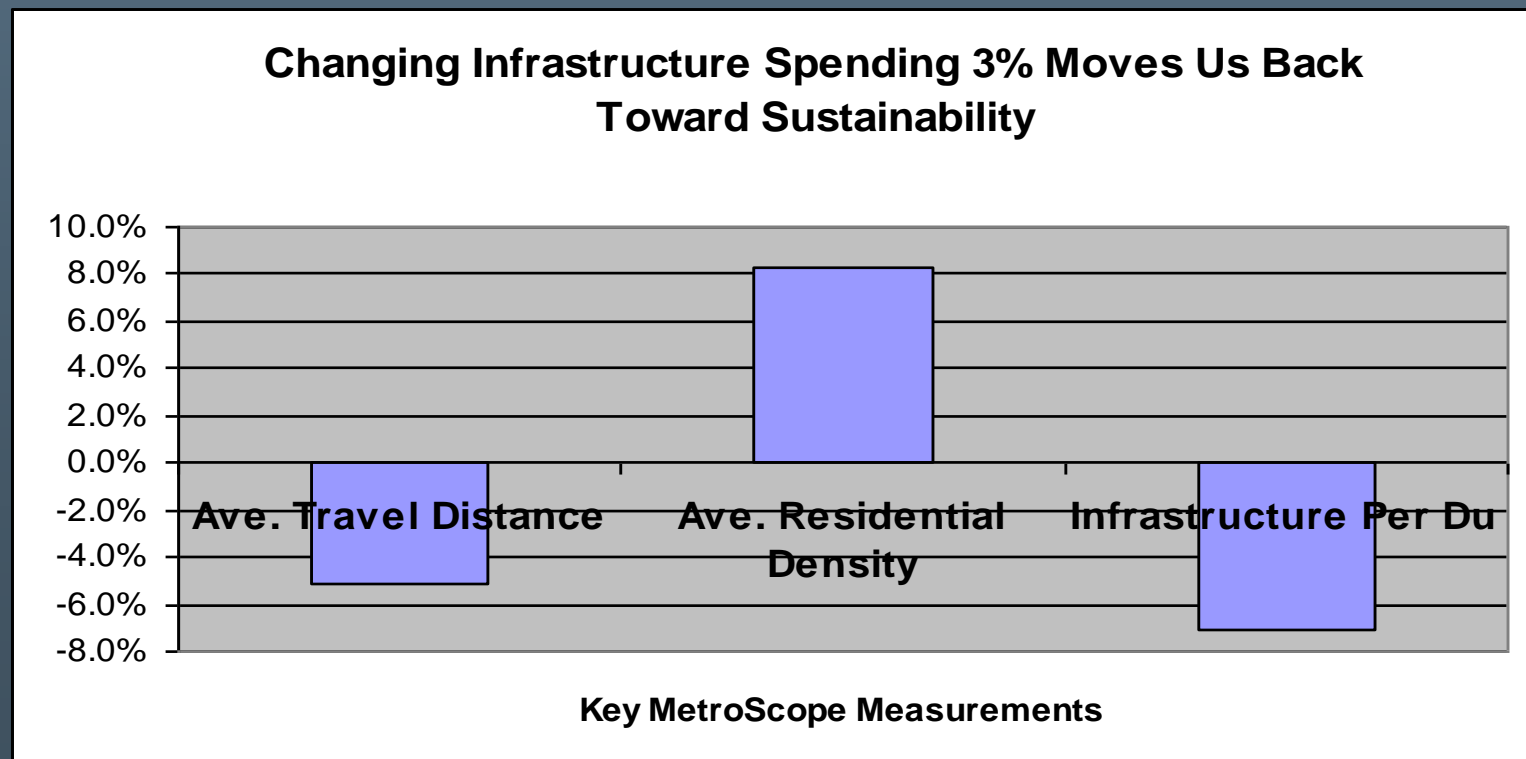
What Happens When We Redirect a Small Share of the \$44 Billion in Public Infrastructure Investment?

Economic Region Real Estate Investment 2000 - 2035
Amounts to \$260 Billion - MetroScope



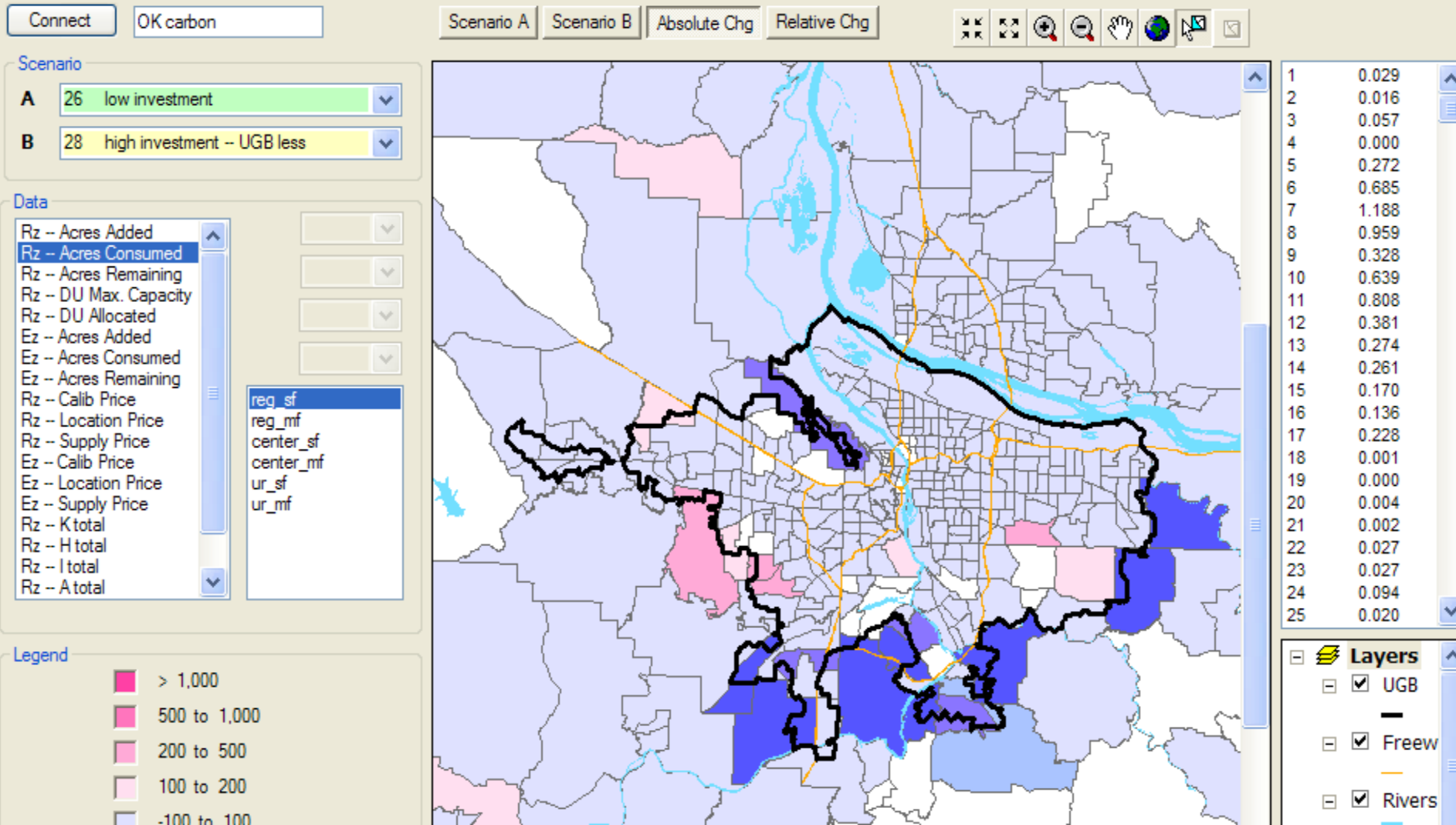
Reframing History – What Can Be Achieved by Spending a Tiny Sliver of Committed Public \$ a Little Smarter?

- **MetroScope Question – What Does \$1.5 billion spent differently and a bit tighter Urban Growth Boundary give us?**



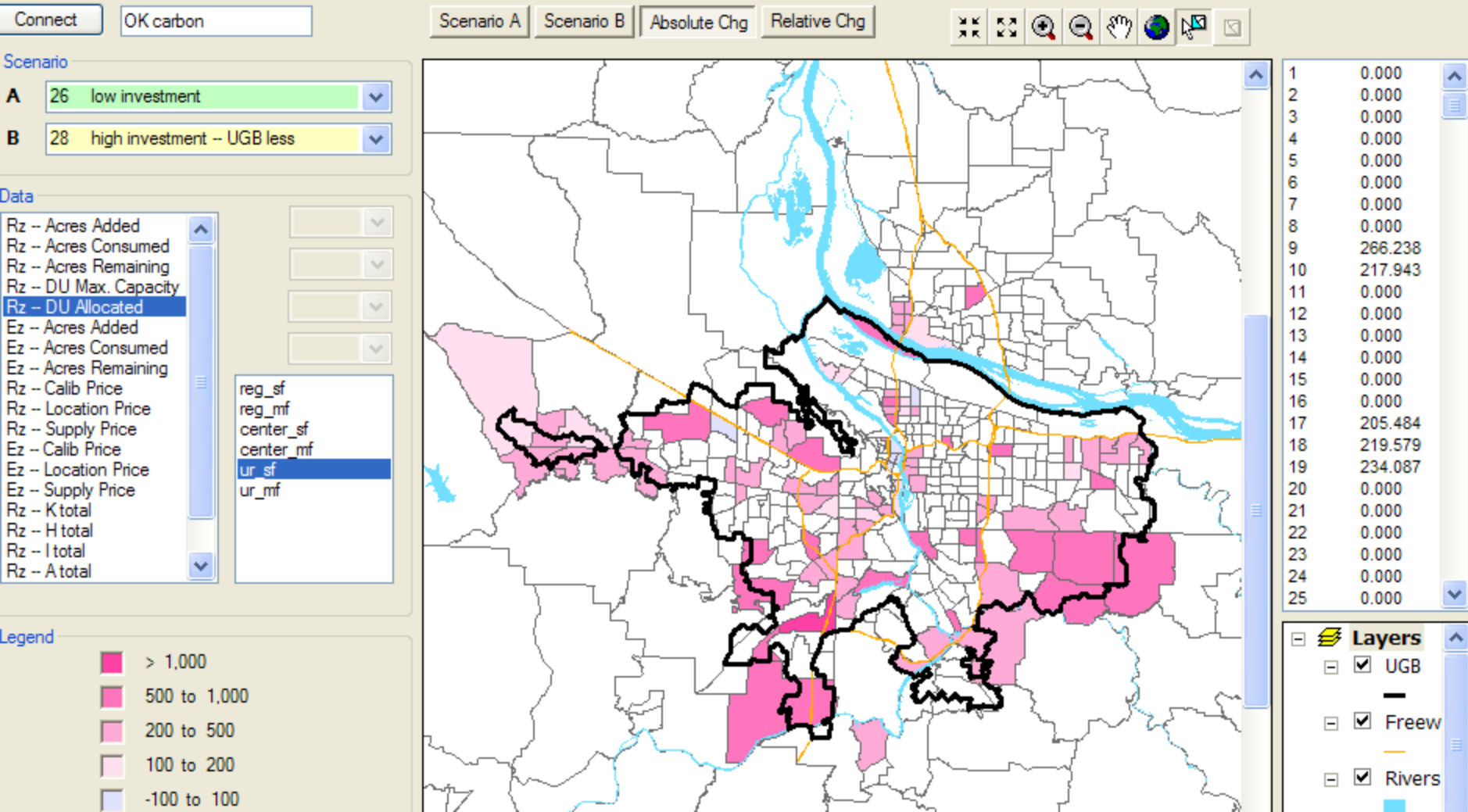
Redirecting 3% of Public Investment and A Tighter UGB Reduces Land Consumption

MetroScope Viewer 05



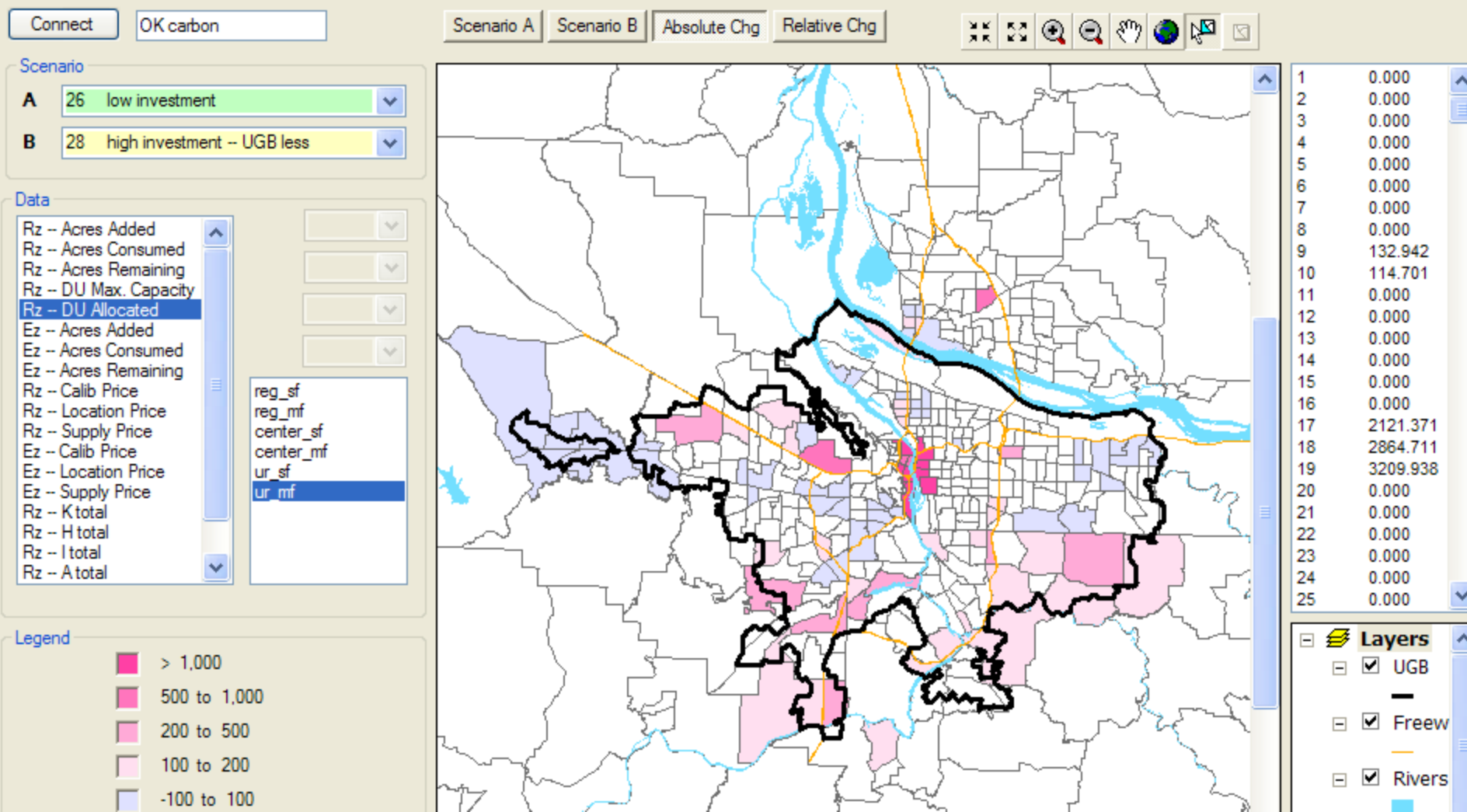
Single Family Demand is Redirected to Moderate to High Density Single Family Areas

MetroScope Viewer 05



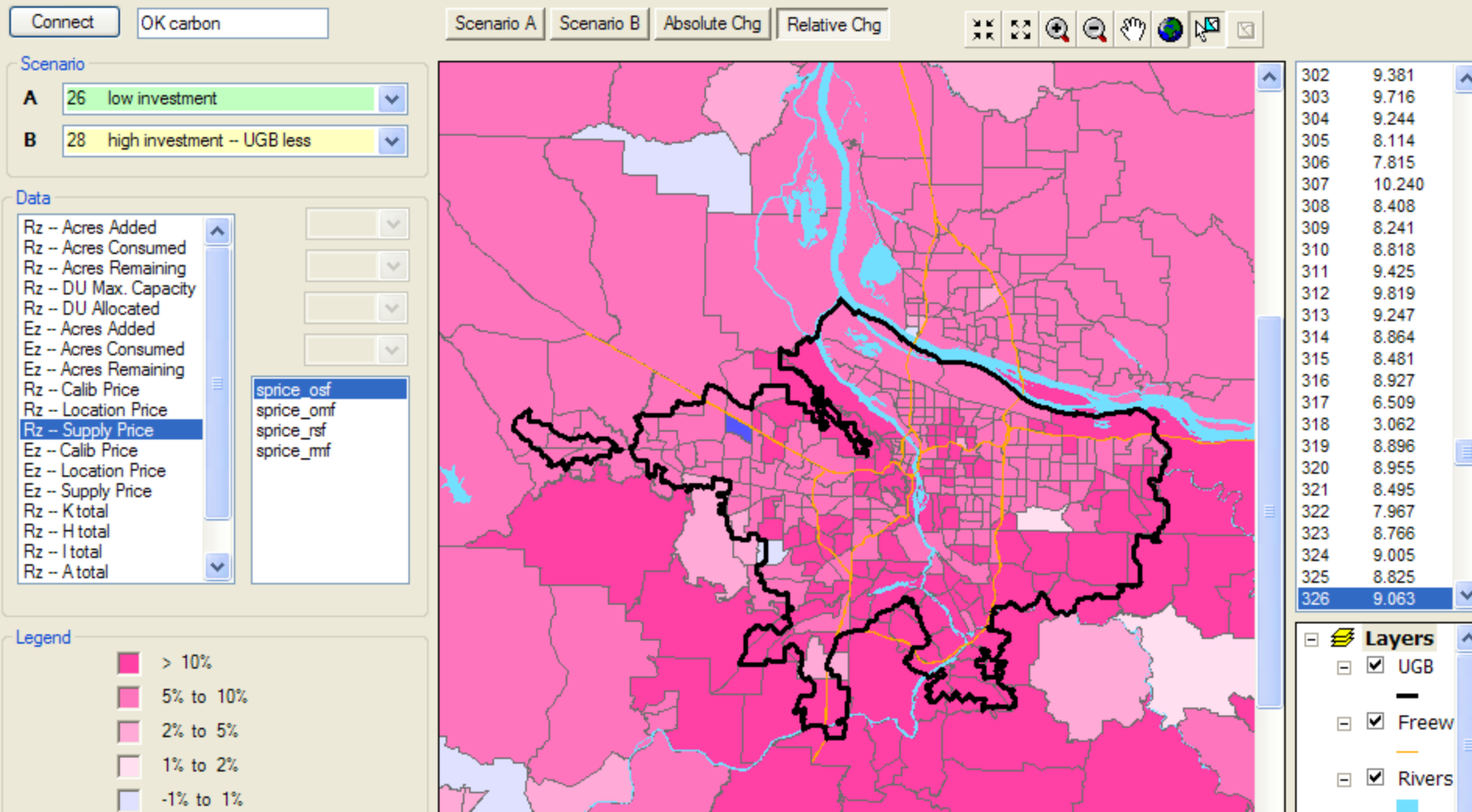
Output of High Density Multi-Family Increases Greatly in Centrally Located High Access Locations.

MetroScope Viewer 05



There Is Still No Free Lunch – Single Family Housing Prices are Up 5 – 15% by 2035 Over Trend Policies.

MetroScope Viewer 05



But, All Benefit from Compact Development

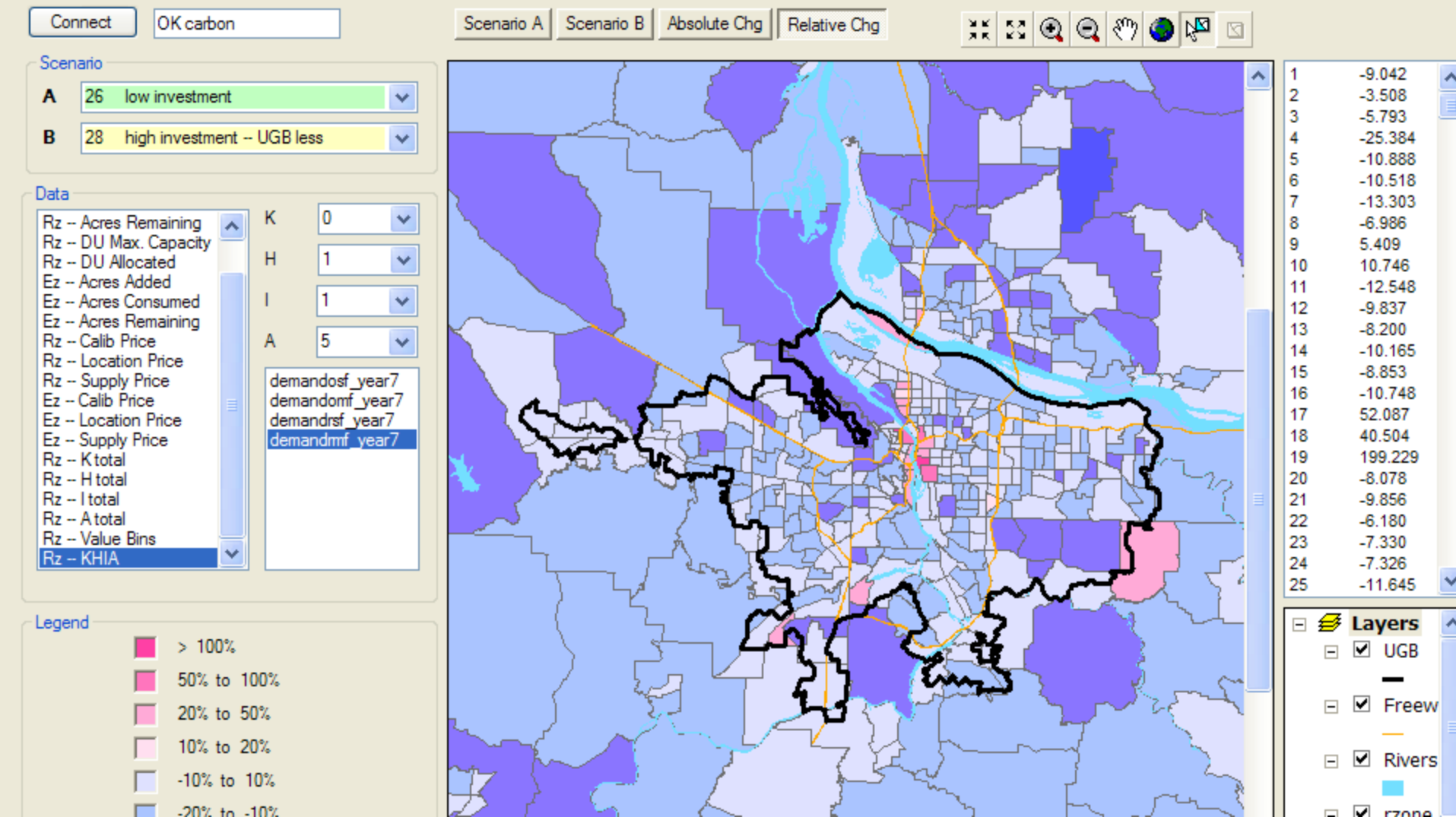
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TIFF (LZW) decompressor
are needed to see this picture.



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Lowest Income, 1 Person, Elderly in Apartments are Housed Closer in with Access to More Services Compared to Trend.

MetroScope Viewer 05



Policies and programs that have made a difference in the Portland Metropolitan region



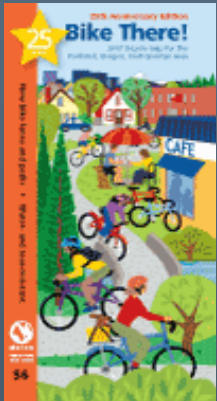
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Metro's Regional Transit Options Program

Metro has several outreach programs to reduce driving.



Metro's Bike There! map informs cyclists of the best routes around the region.



CarpoolMatchNW.org is a free online service that matches commuters up with others who share the same routes.

Drive less. Save more.

Drive less. Save more. is a website providing transit and travel options information, promoting efficient driving, and helping users calculate the real cost of driving.



Metro arranges vanpools for groups of 10-15 commuters and covers 50% of monthly costs.

Transit Oriented Development (TOD) Investment Program



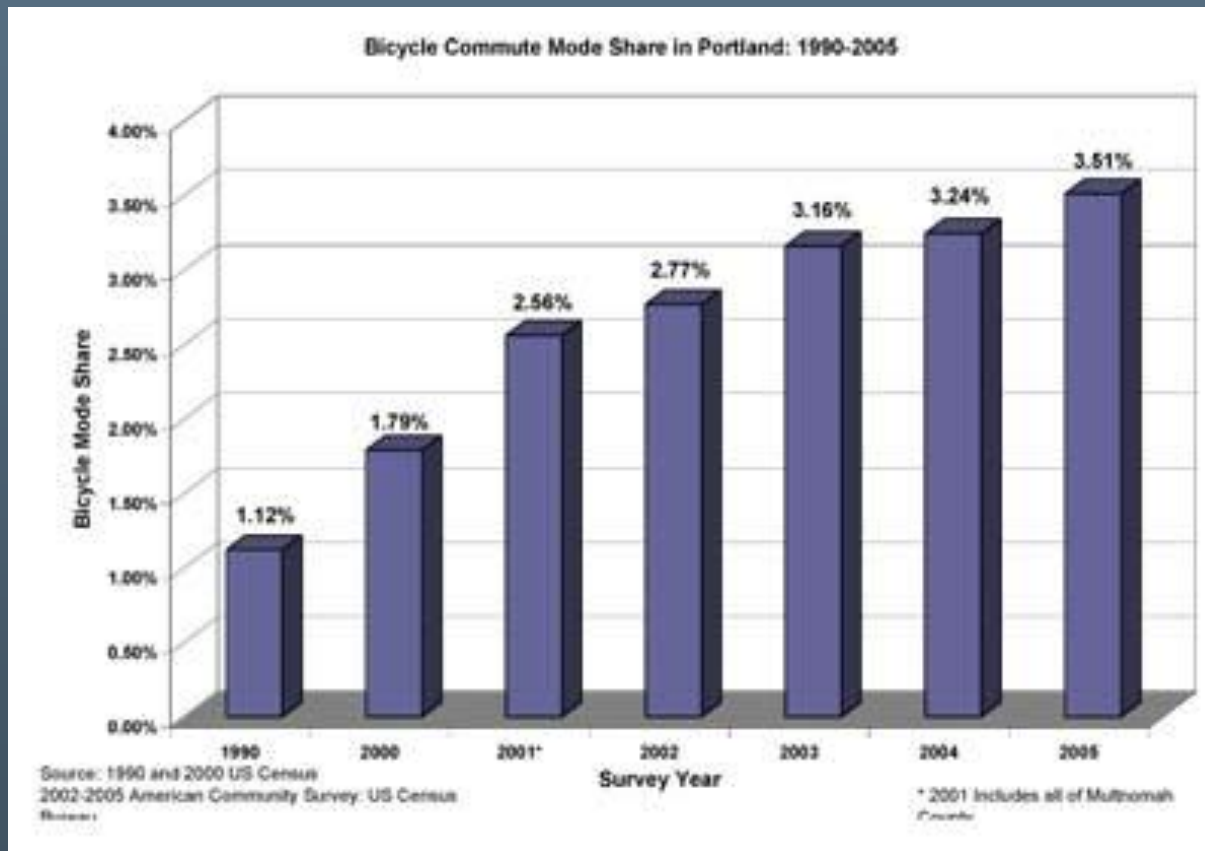
Metro promotes TOD by:

- Investing in proportion with projected increases in transit ridership
- Providing easements and land write-downs
- Funding “cost premiums”



In a recent survey of residents of the Merrick (above left), a new TOD development, 68% of residents said they have been driving less since they moved in, while 70% said that they now take more transit and 47% reported walking more.

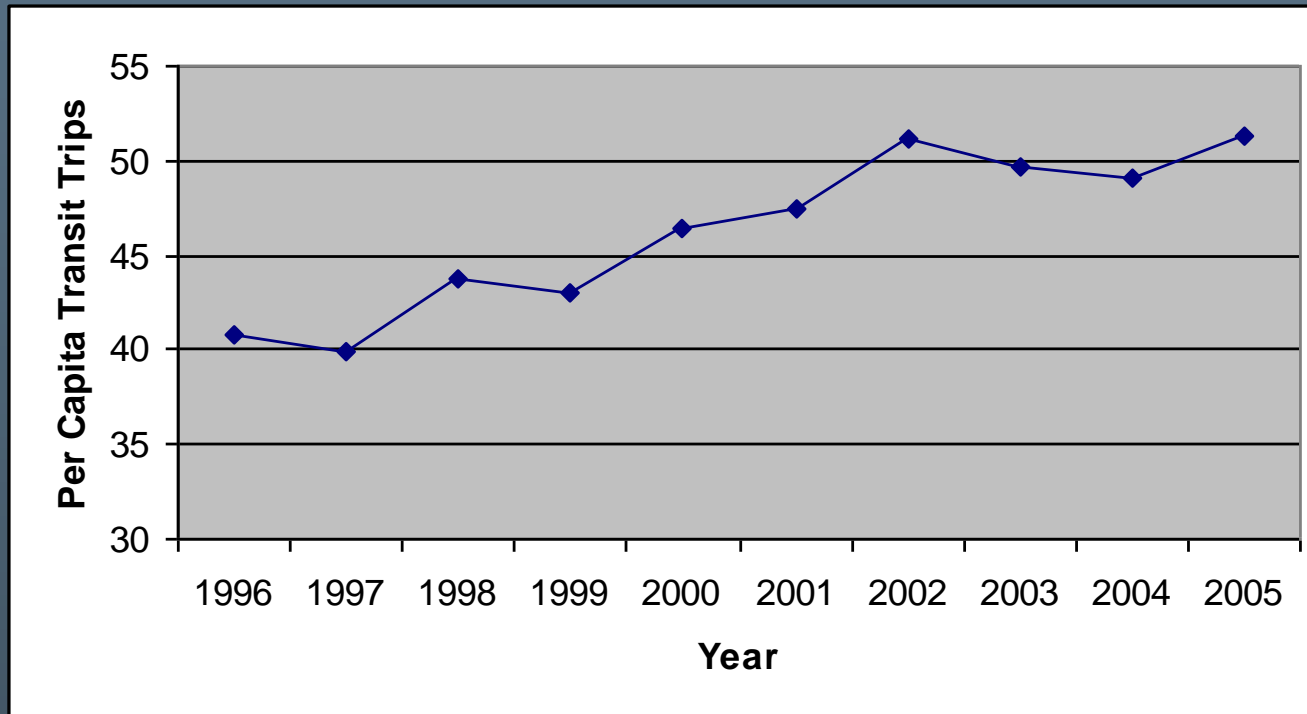
Overall, Portland area residents are biking more...



Bicycles' mode share almost doubled between 2000 and 2005.

...and riding more transit.

Per Capita Transit Trips, 1996-2005



Source: National Transit Database, www.ntdprogram.gov

There are only 6 U.S. metropolitan areas with more per capita transit ridership than Portland, and all have substantially higher populations.

Creating Regional Centers

Metro has several programs to help businesses, neighborhood leaders, planners and policy makers create vibrant, mixed-use regional centers:

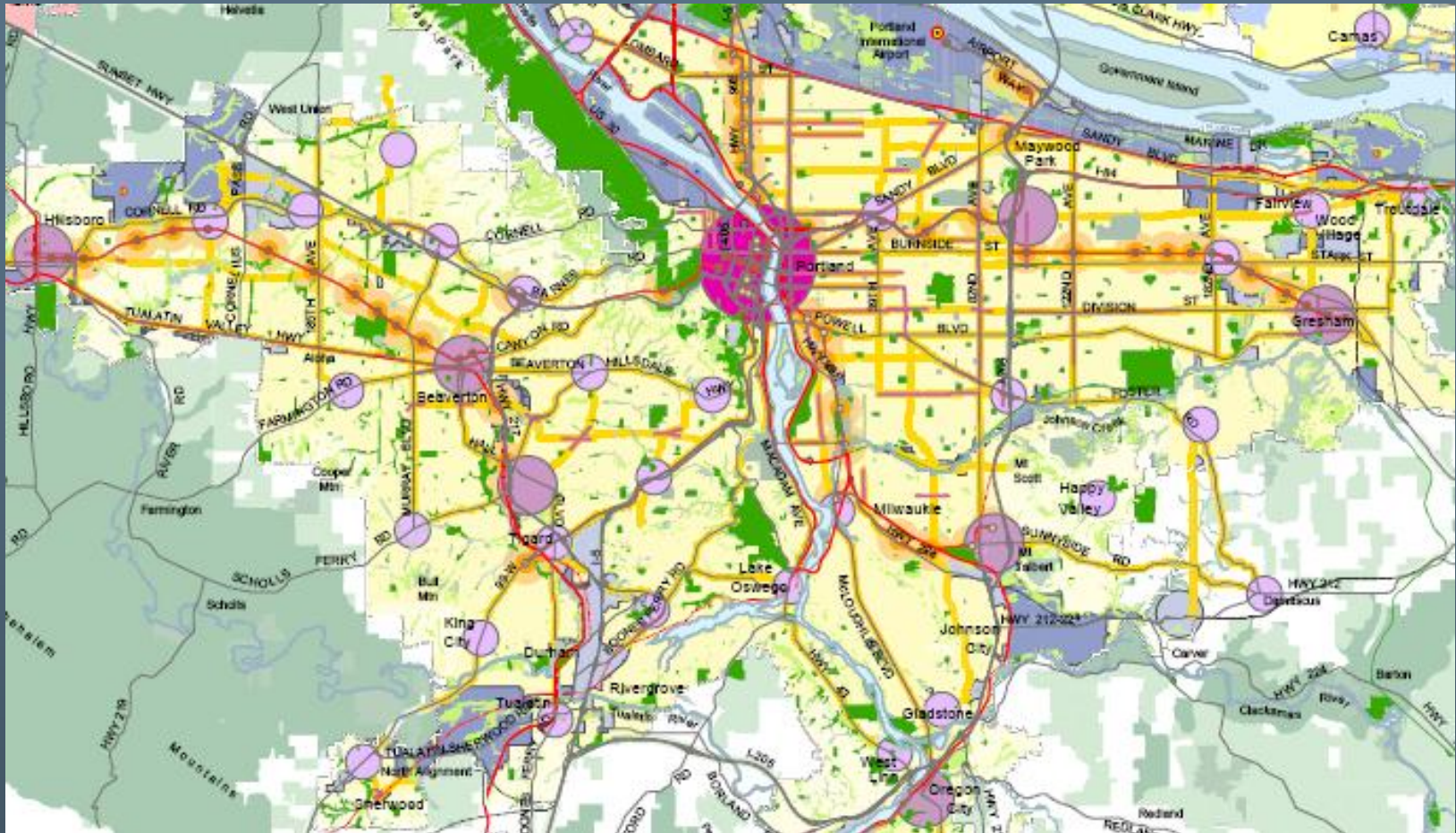
Get Centered!, an outreach campaign to help developers, architects and officials spur development in centers.

The **Main Streets Handbook**, a technical guide to help local officials and planners create walkable main streets that are attractive to businesses and customers alike.

Metro has organized two official visits to Vancouver, BC, so that Portland area planners and policy makers can learn what made that city so successful in reducing sprawl.

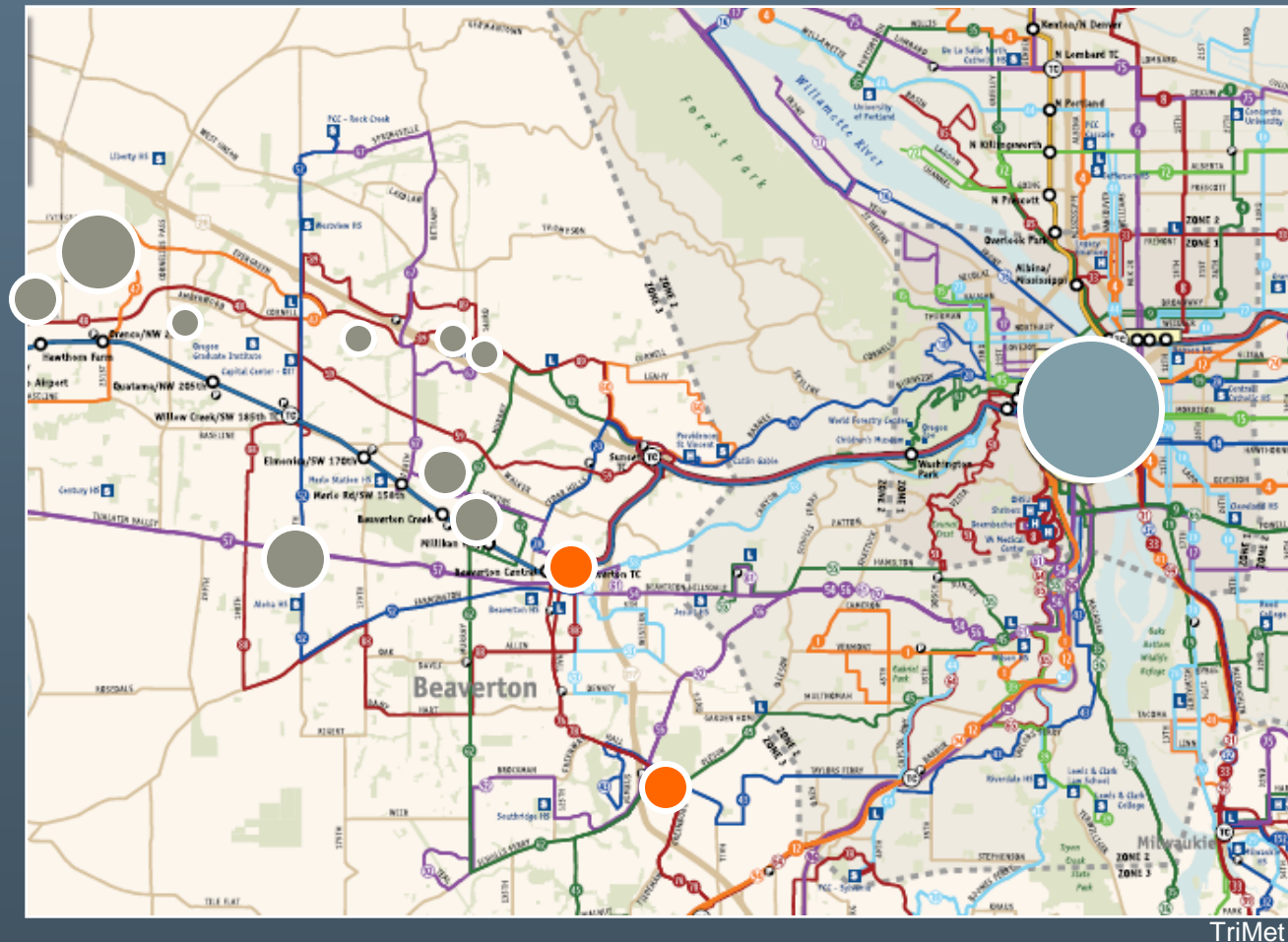


Looking Ahead to 2040



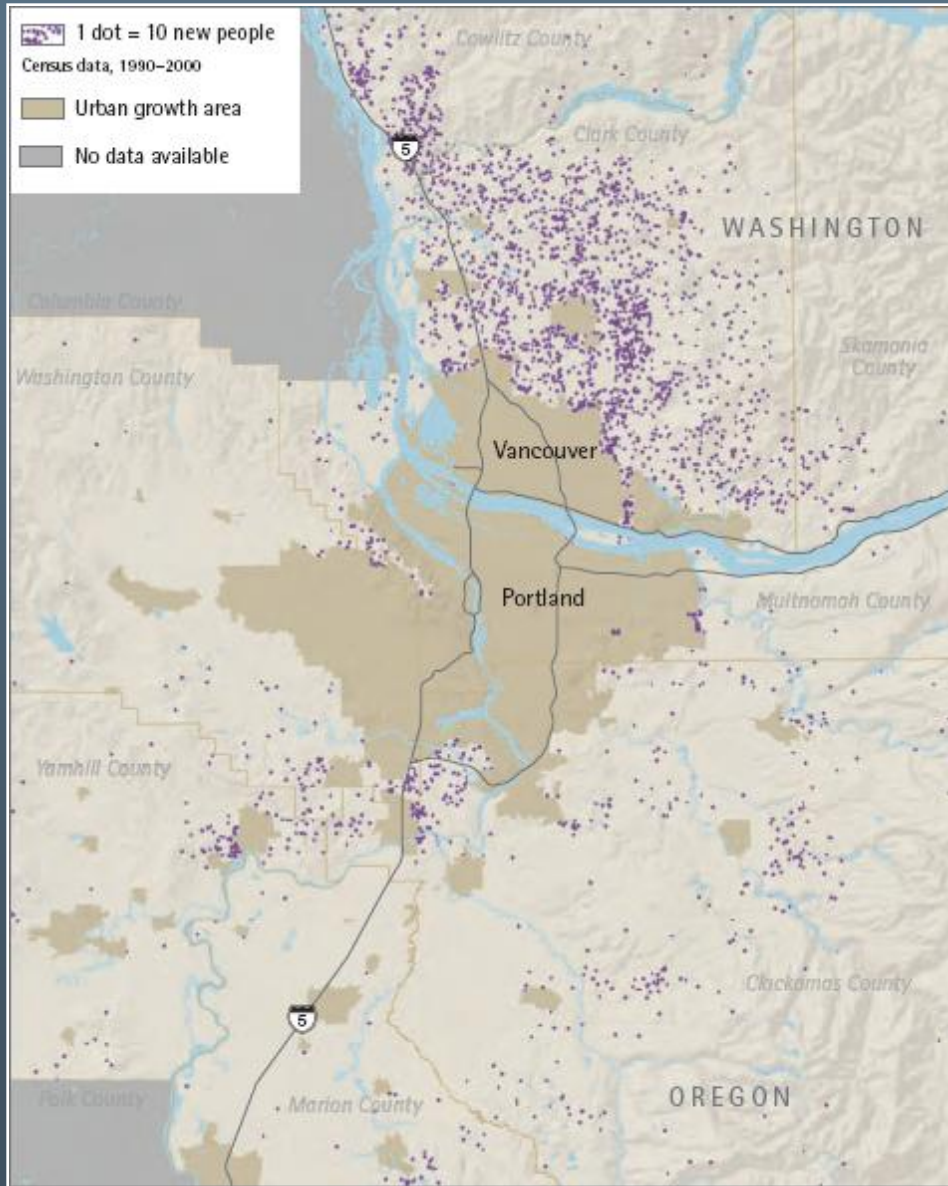
Metro's 2040 Growth Concept aims to foster efficient urban form and preserve rural land by focusing growth in regional centers. Land use plans and the new Regional Transportation Plan support these overarching goals.

Challenges to the Transit System



Most TriMet lines are radial, connecting the central city with regional centers. Few lines connect regional centers with each other, or with major employers, creating barriers to transit use in Washington County.

Challenges from Beyond the UGB



Though the Portland area's growth policies have been effective at restricting sprawl within the region, areas beyond Metro's jurisdiction, such as Newberg, OR, and Clark County, WA, continue to spread out into rural land. Residents of these areas commute to the Portland area to work and play, participating in its economy and creating congestion while shirking policies that boost the economy and combat congestion.

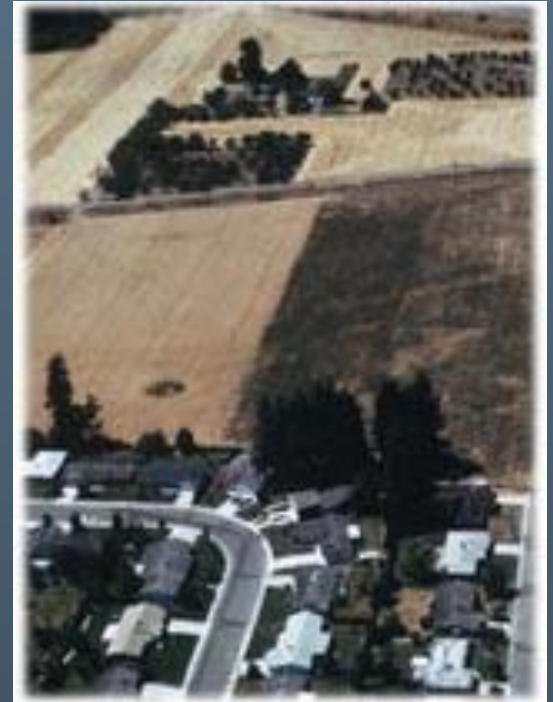
Measure 37

In 2004, Oregon voters passed Measure 37, which entitles property owners to compensation land use regulations restrict the use of the property and reduce value. The government responsible for the regulation may also choose to “remove, modify or not apply” the regulation.

Claims filed so far:

- 7,562 claims
- 750,000 acres of land
- \$20 billion in compensation

In almost every case, governments have chosen to waive regulations rather than compensate claimants.

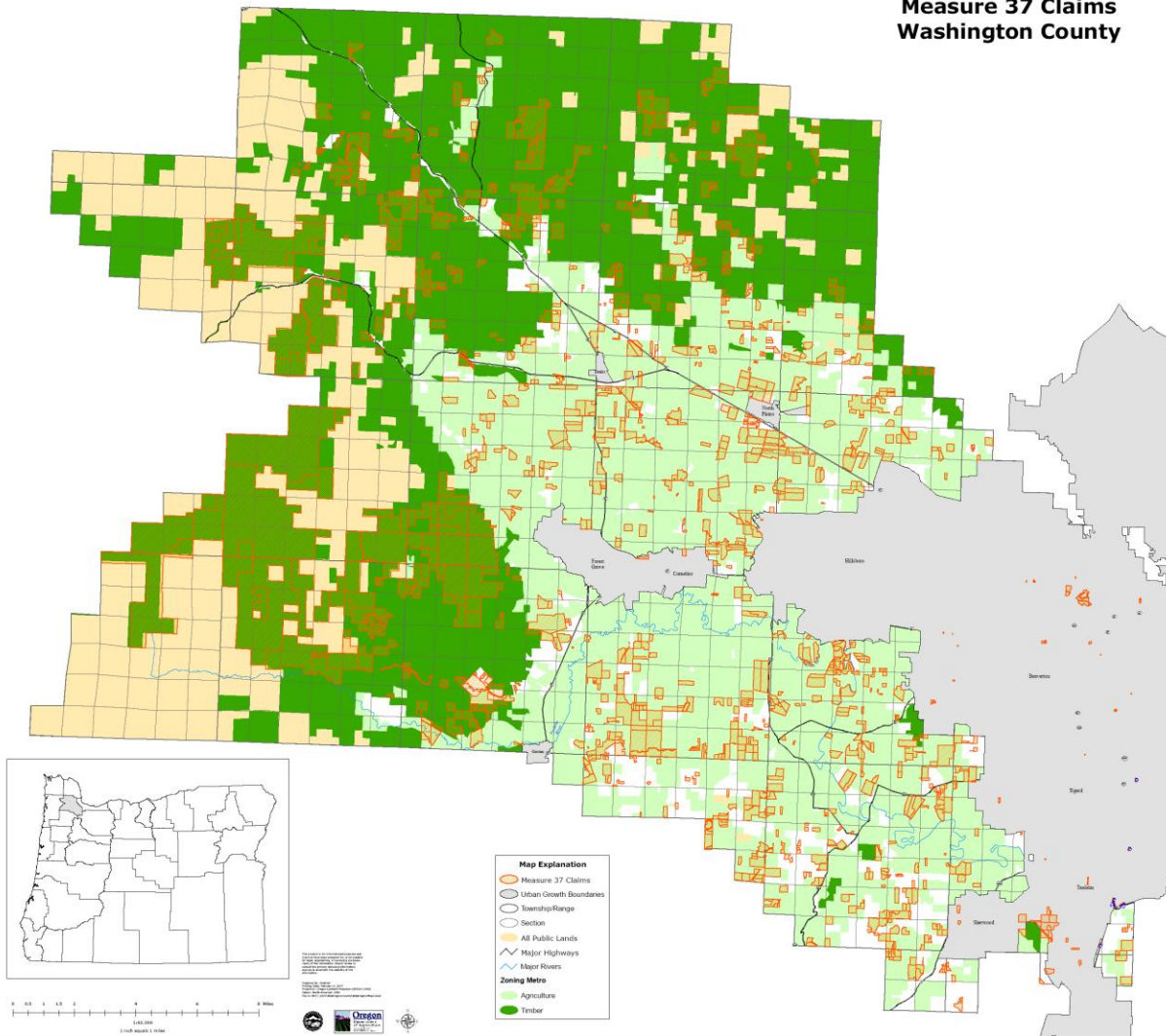


1000 Friends of Oregon

Washington County

Measure 37 Claims
Washington County

In Washington County, as in the rest of the Portland area, most **Measure 37 claims** cluster around the UGB. Claims are concentrated on valuable resource lands; either **forest** or **farmland**. Most claims seek to subdivide land and create more housing.



Measure 37

Portland Metro Area Measure 37 Claim Density

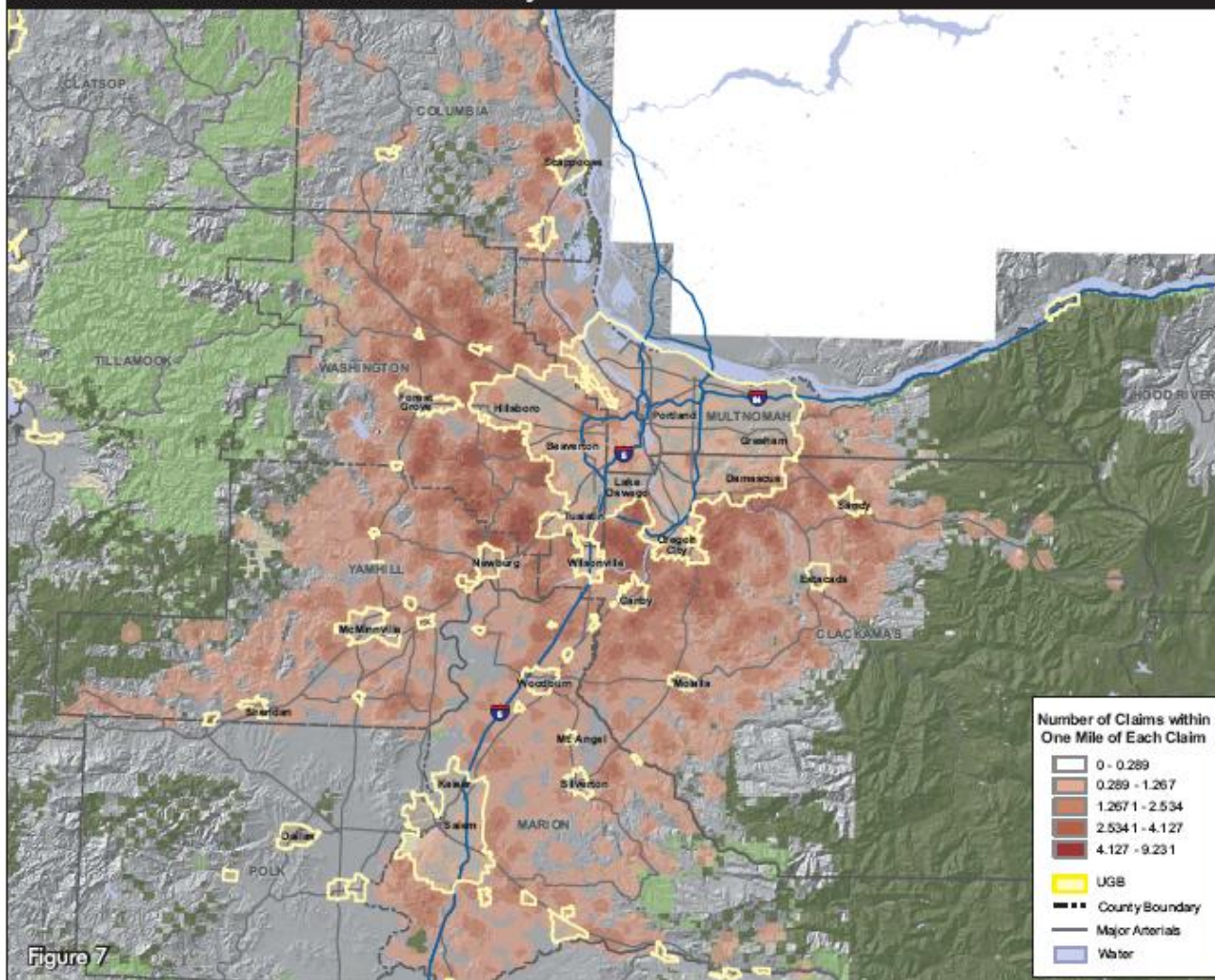
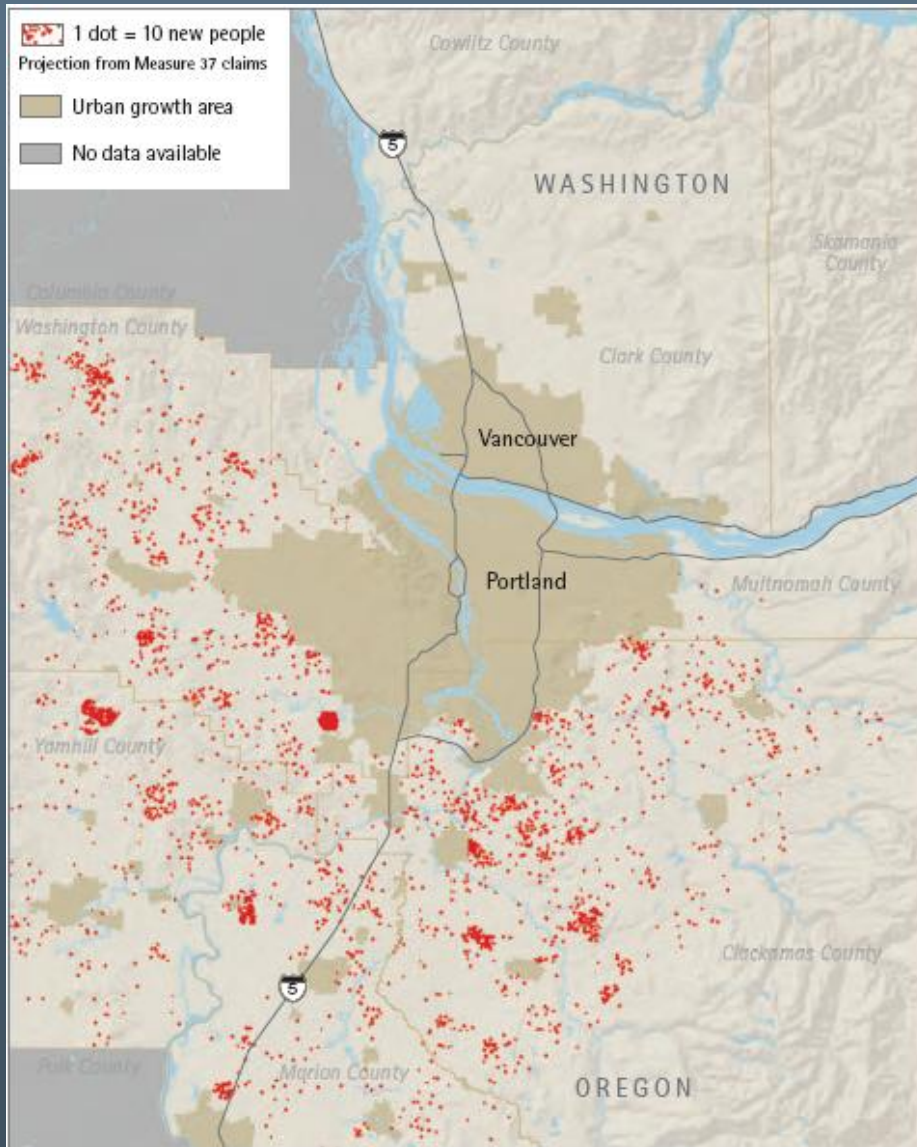


Figure 7

Sources: M37 Claims: Institute of Portland Metropolitan Studies; Boundaries, Roads and Water: Metro RLIS; US Census Bureau; UGBs, Tax Lots: Metro RLIS; Marion County and Yamhill County Data Current as of 12/04/06

In the Portland area, **Measure 37 claims** cluster around the UGB. Claims are concentrated on valuable resource lands; either forest or farmland. Most claims seek to subdivide land and create more housing.

Measure 37



Most **Measure 37 claims** seek to subdivide land and create more housing. In the Portland area, most claims are outside the UGB, where they will fuel the creation of new exurbs. These claims are concentrated on forests and farmlands.



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