

# Metro 2040: A Future in Doubt? MetroScope Base Case Evaluation

AND

## Where Do We Go From Here?

4<sup>th</sup> Oregon Symposium on Integrated Land Use and  
Transportation Models Nov. 15 – 17 2005

Sonny Conder, Principal Planner

November 15, 2005

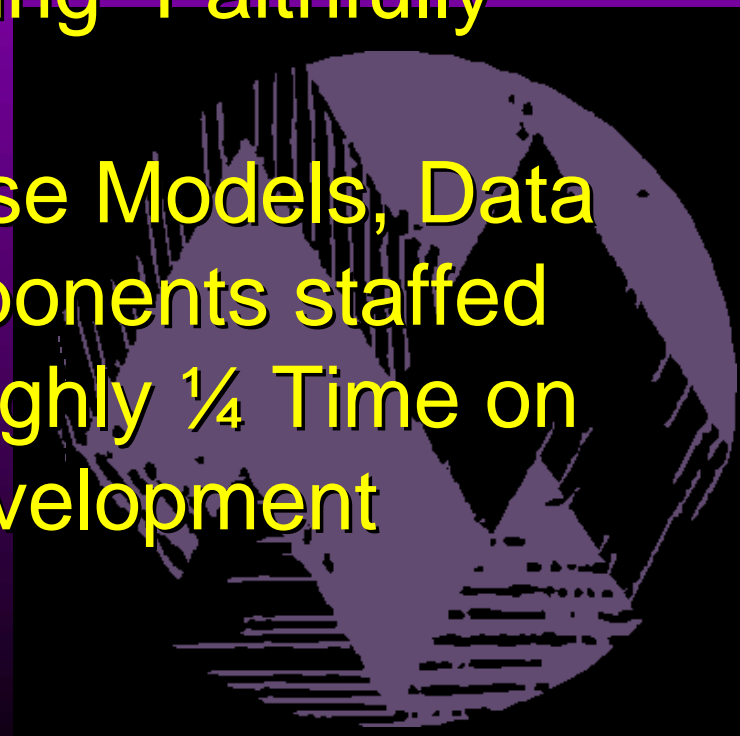
Metro Data  
Resource Center



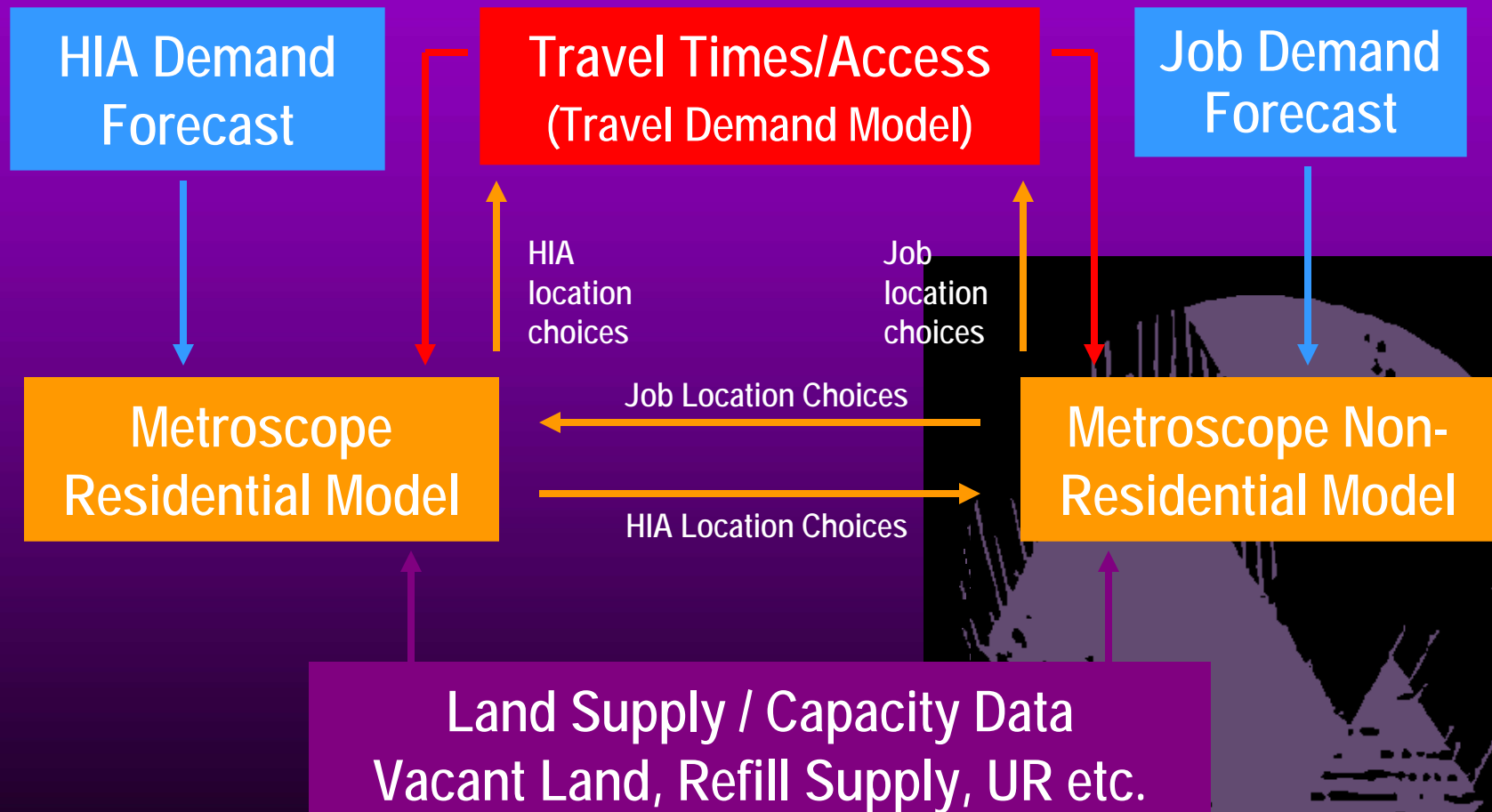
**First a Bit of Background –  
MetroScope Developed in House and  
Incrementally Primarily during the Period  
1996 – 2000**

**Most Importantly – Serving “Faithfully”  
since 2001**

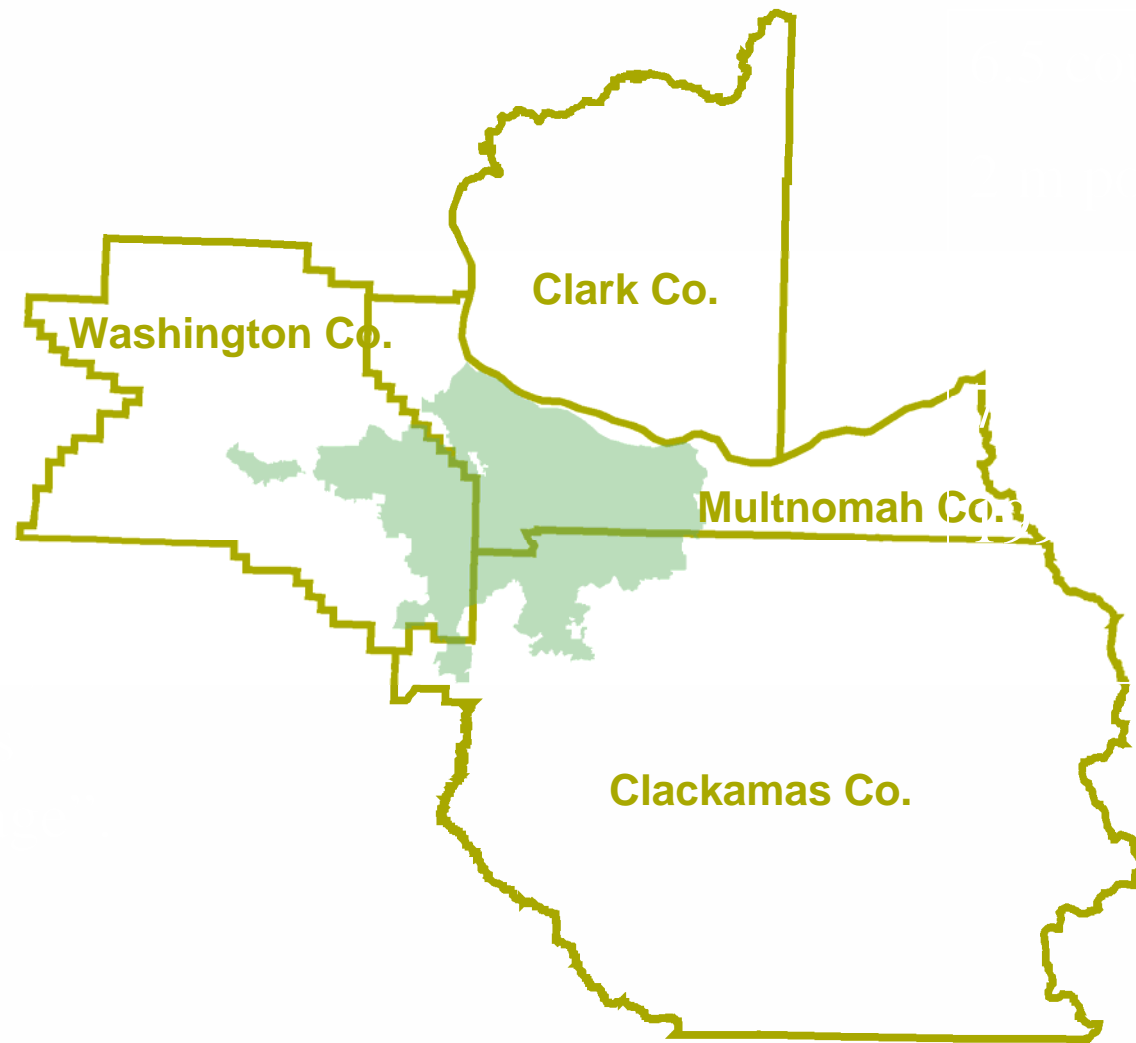
**The Econometric, Land Use Models, Data  
Research and GIS Components staffed  
by 4 People Working Roughly  $\frac{1}{4}$  Time on  
Model Runs and Development**



# Metroscope Schematic



# Forecast Allocation Area



Tailored  
growth to  
also anti  
external

Metro Data  
Resource

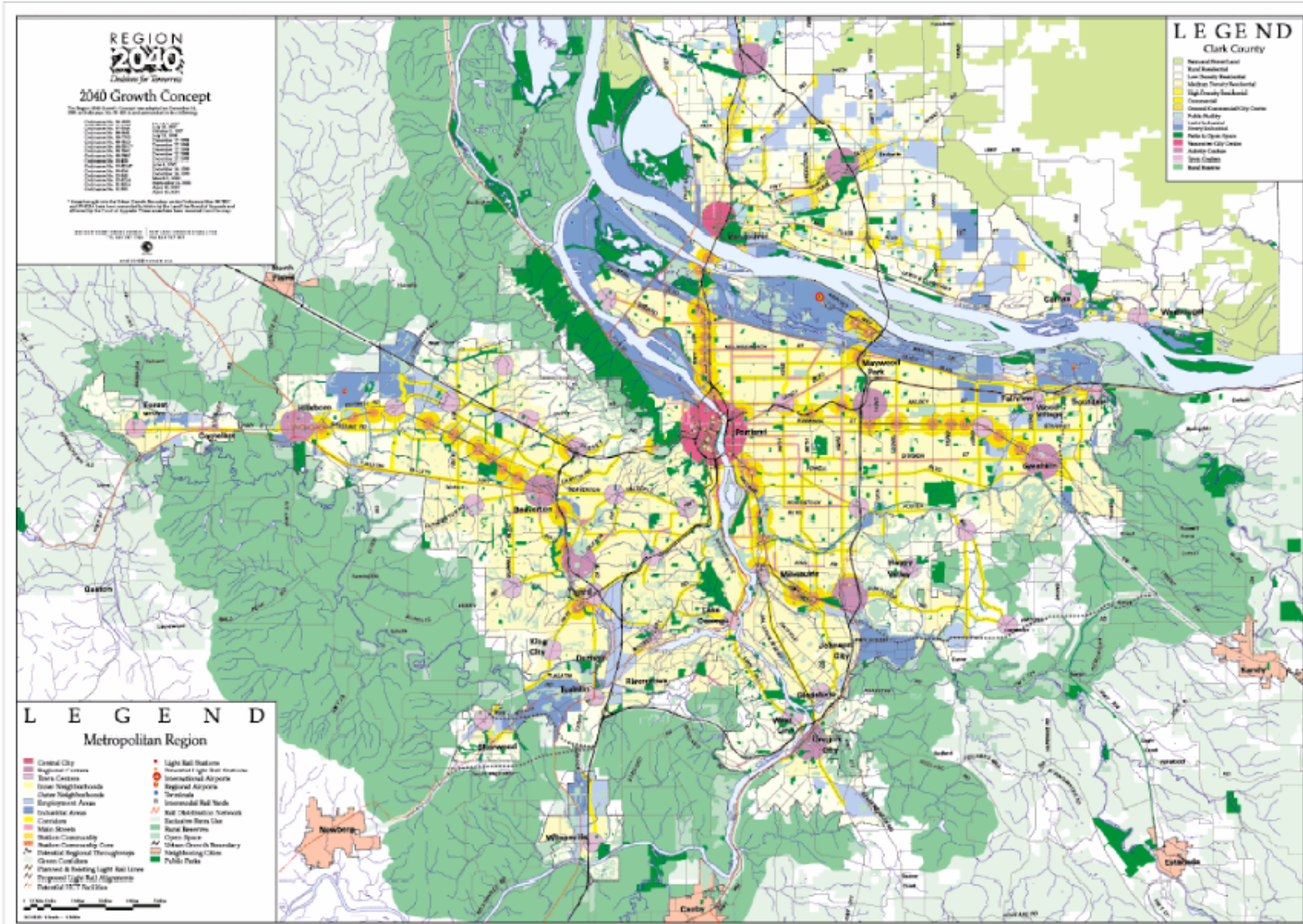
# The Metro 2040 Plan

Started in 1992 and Completed in 1995  
Concept is to Increase Densities in Transit  
Available Centers and Corridors  
Allows for Flexibility in Housing Design  
And Residential Densities.  
Requires Local Jurisdiction Planning and  
Compliance (Metro Certified Compliance  
in 1998).



# Metro 2040 Plan

Figure 5 : Metro 2040 Plan Design Types

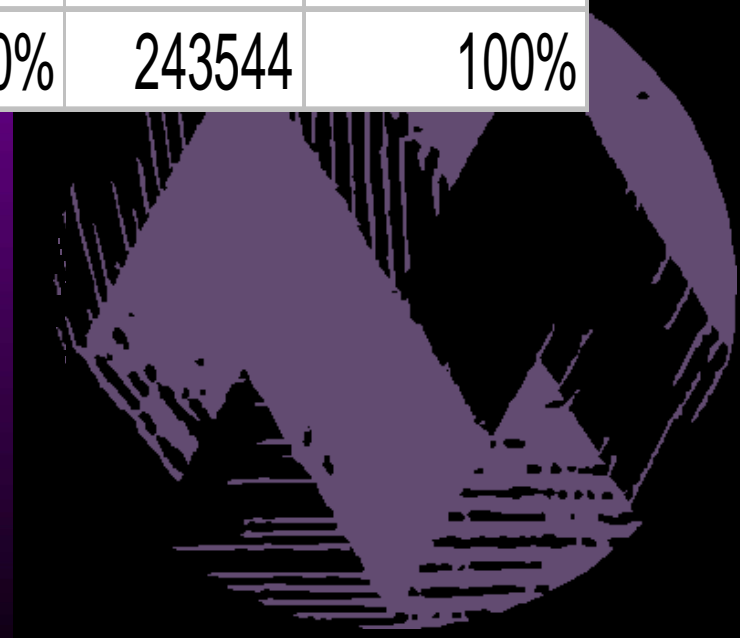


# Metro 2040 Plan – Nonresidential Capacity Assumptions

	2040 Employment Assumptions			
Design Type	Acres Vacant	% of Total	Capacity	% of Total
Centers/Corridors	3620	7%	166195	44%
All Other	48750	93%	208364	56%
Total	52370	100%	374559	100%

# Metro 2040 Plan – Residential Capacity Assumptions

	2040 Household Assumptions			
Design Type	Acres Vacant	% of Total	Capacity	% of Total
Centers/Corridors	3620	7%	73306	30%
All Other	48750	93%	170238	70%
Total	52370	100%	243544	100%





# 2040 Plan Economic Issues

Demand Side – Variety of Building Types, Densities and Lot Sizes not Established by Past Development Patterns.

Supply Side – Land Costs, Construction Costs, and Redevelopment Costs not Accounted for.

Practical Response – Establish Performance Indicators, Monitor Development and Make Changes as Needed.



# The Sound of One Hand Not Clapping- State Land Use Law

State Rules on Lands Available for Urban Expansion – Hilly to Rolling Areas with Poor Farmland Called “Exception Areas” to be Used First; Flat Farmland Called EFU Land to be Used Last.

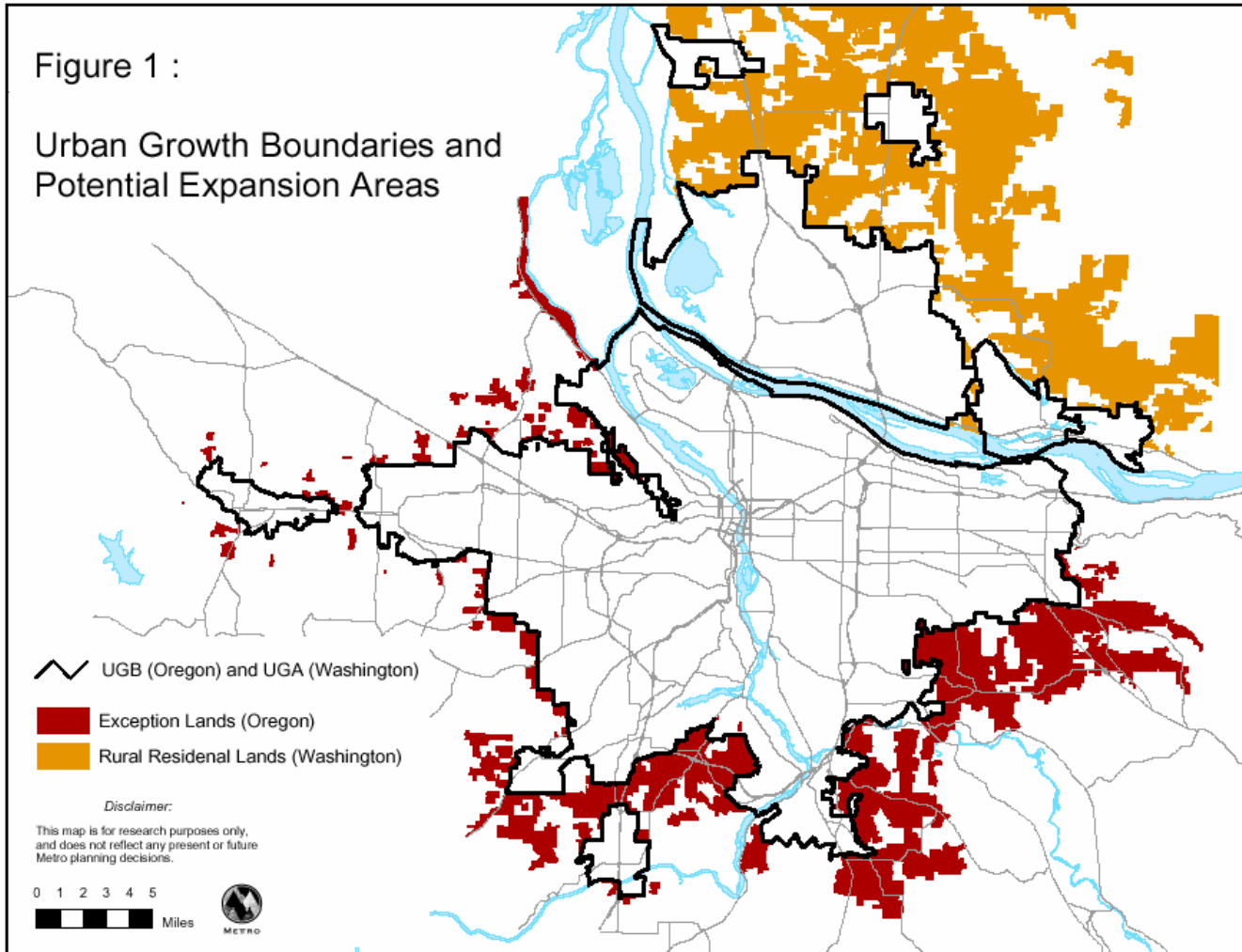
State Rules on Residential Land Supply – After Adjustment for Actual Density, Redevelopment, etc. Region Must Maintain a 20 Year Land Supply. UGB is Adjusted Every 5 Years to Maintain Supply



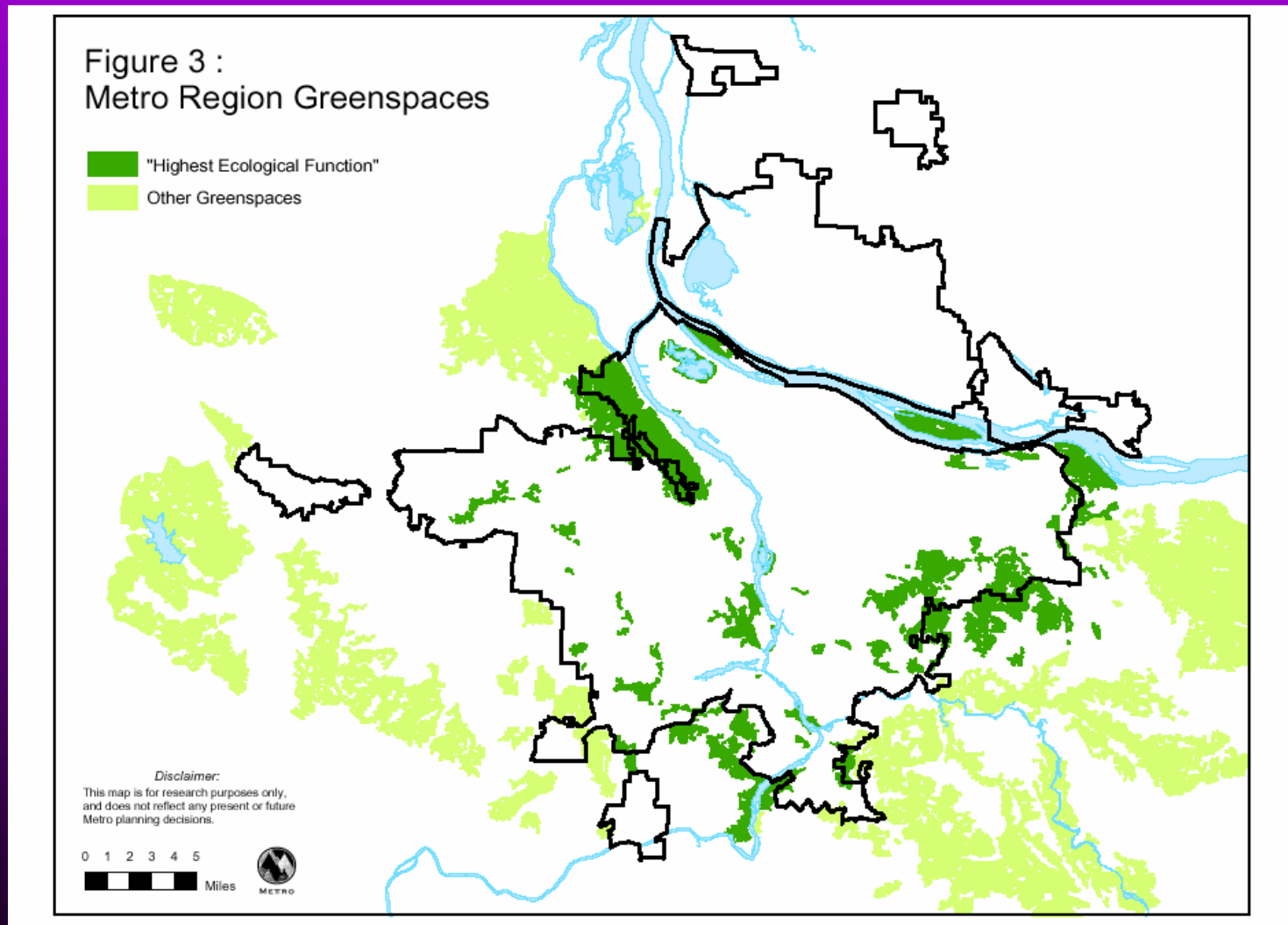
# Eligible UGB Expansion Lands

Figure 1 :

Urban Growth Boundaries and Potential Expansion Areas

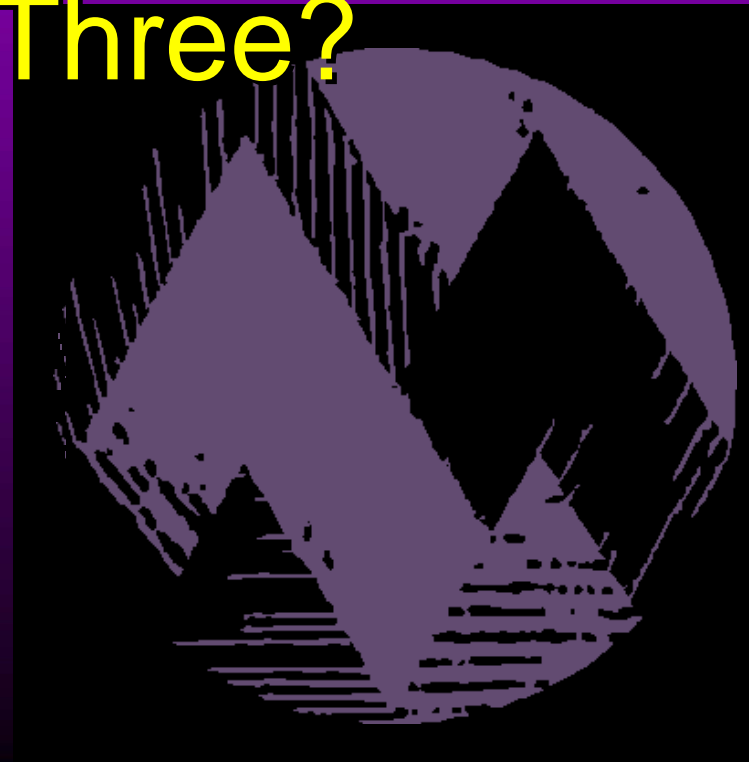


# Metro Identified Regionally Significant Habitat Lands



# Metroscope 2030 Base Case Modeling – One, Two and Three?

INPUTS:



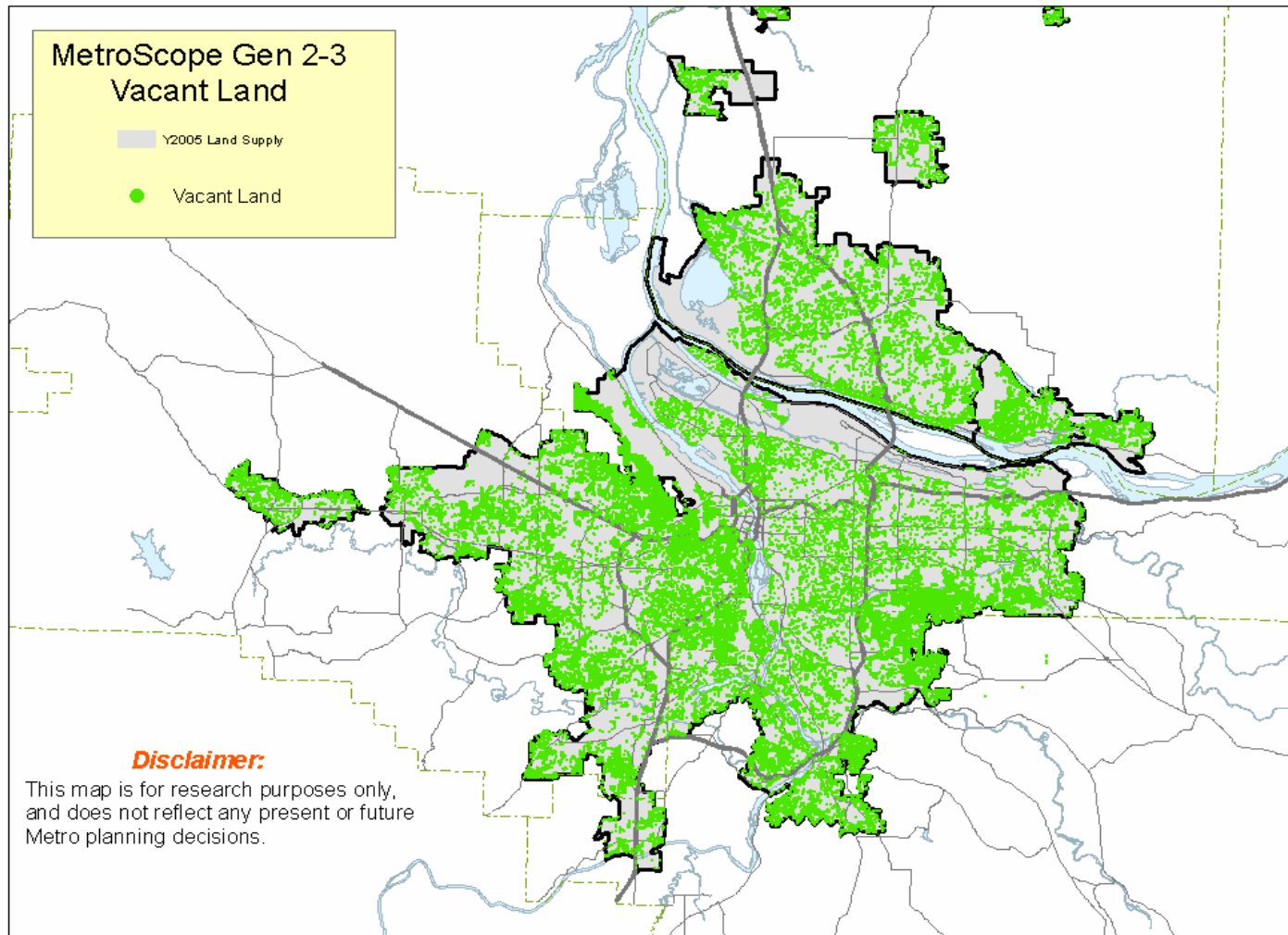
# Annual Employment Land Consumption

❖ Non-residential land consumption:  
500 gross acres average per year

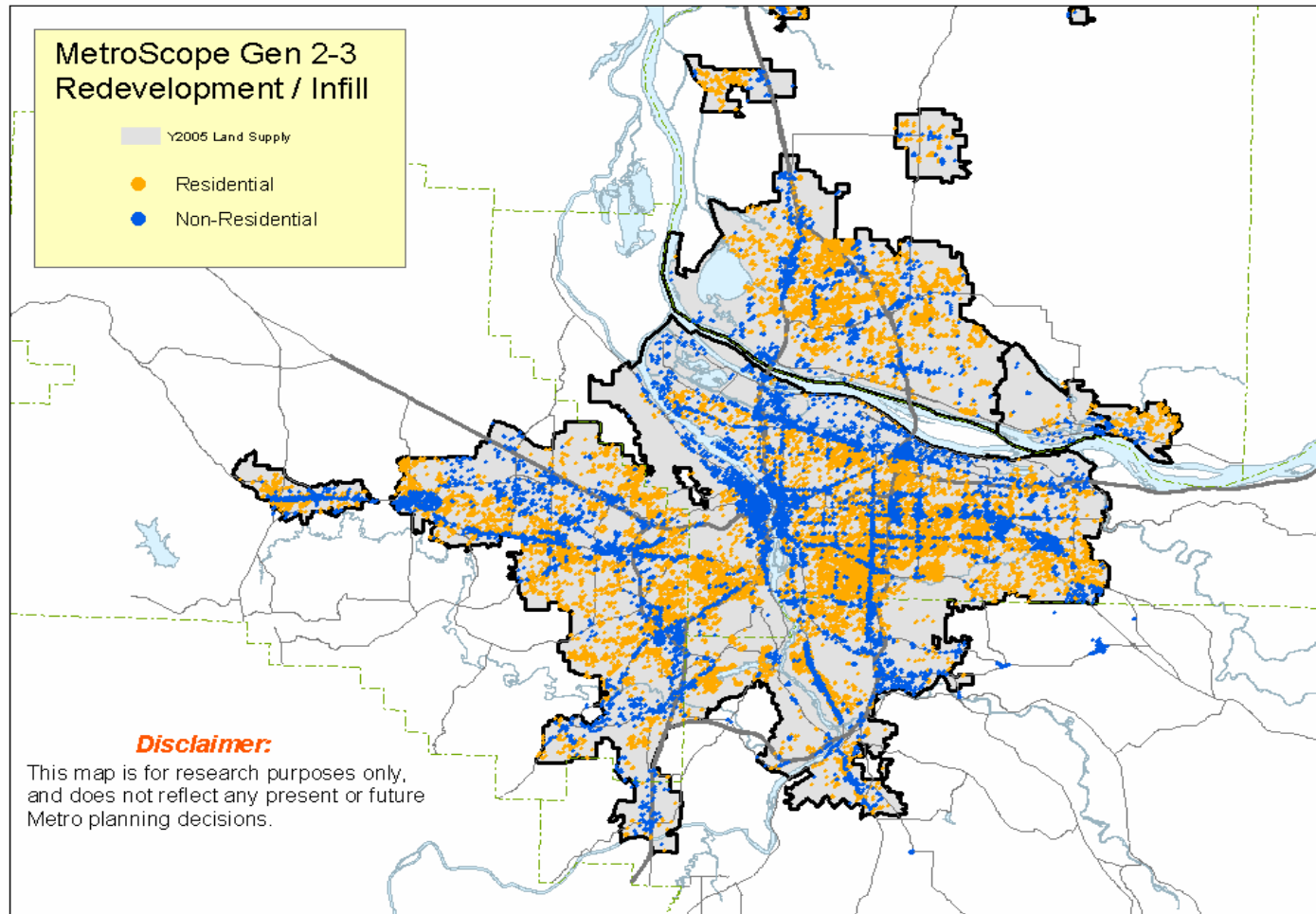
- 300 acres industrial
- 100 acres commercial
- 100 acres institutional



# All Vacant Land – Year 2000 Buildable Lands – 30K in OR, 12K in WA

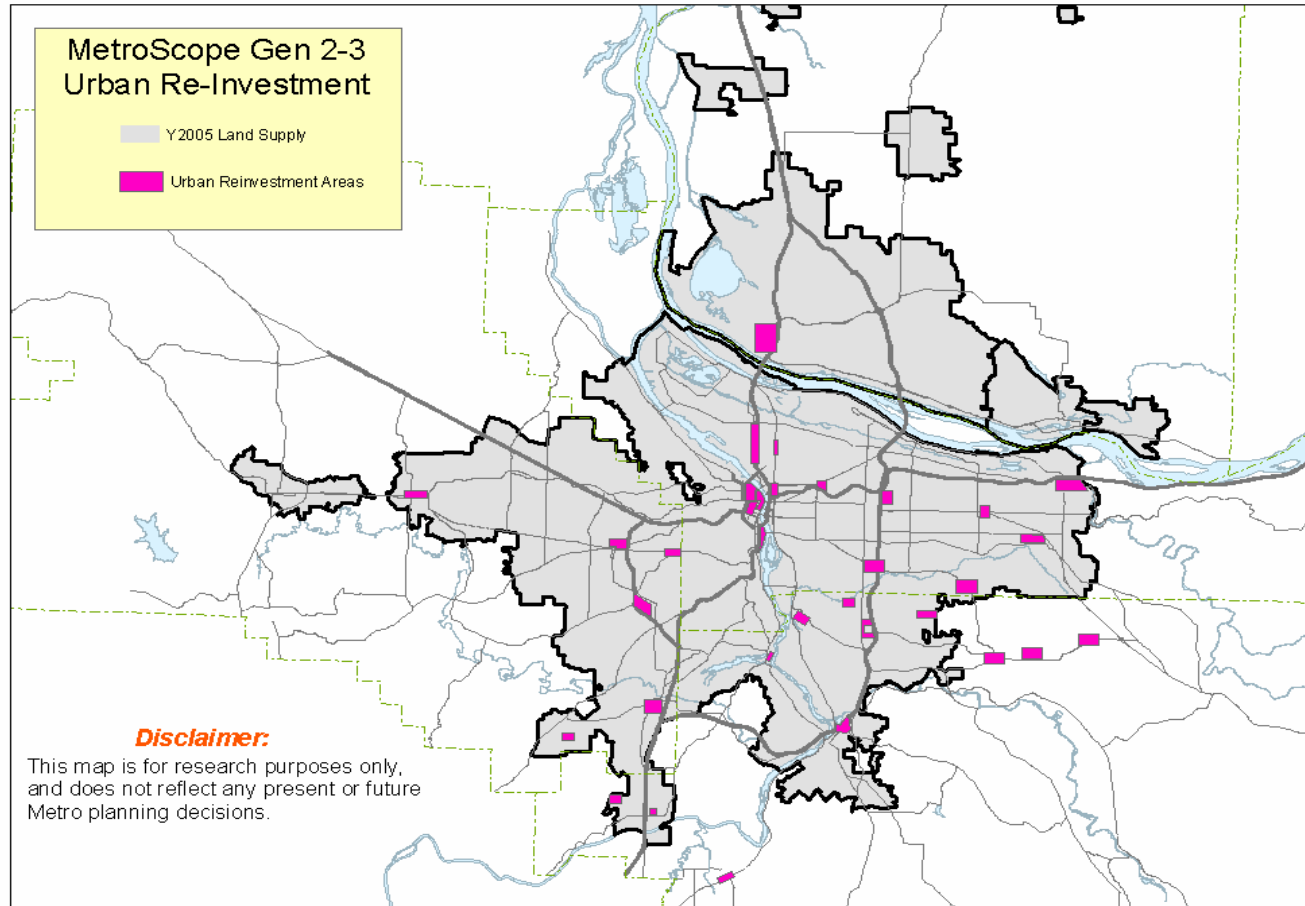


# All Redevelopment and Infill Lands – Year 2000 – 10K Acres in OR, 2.5K in WA

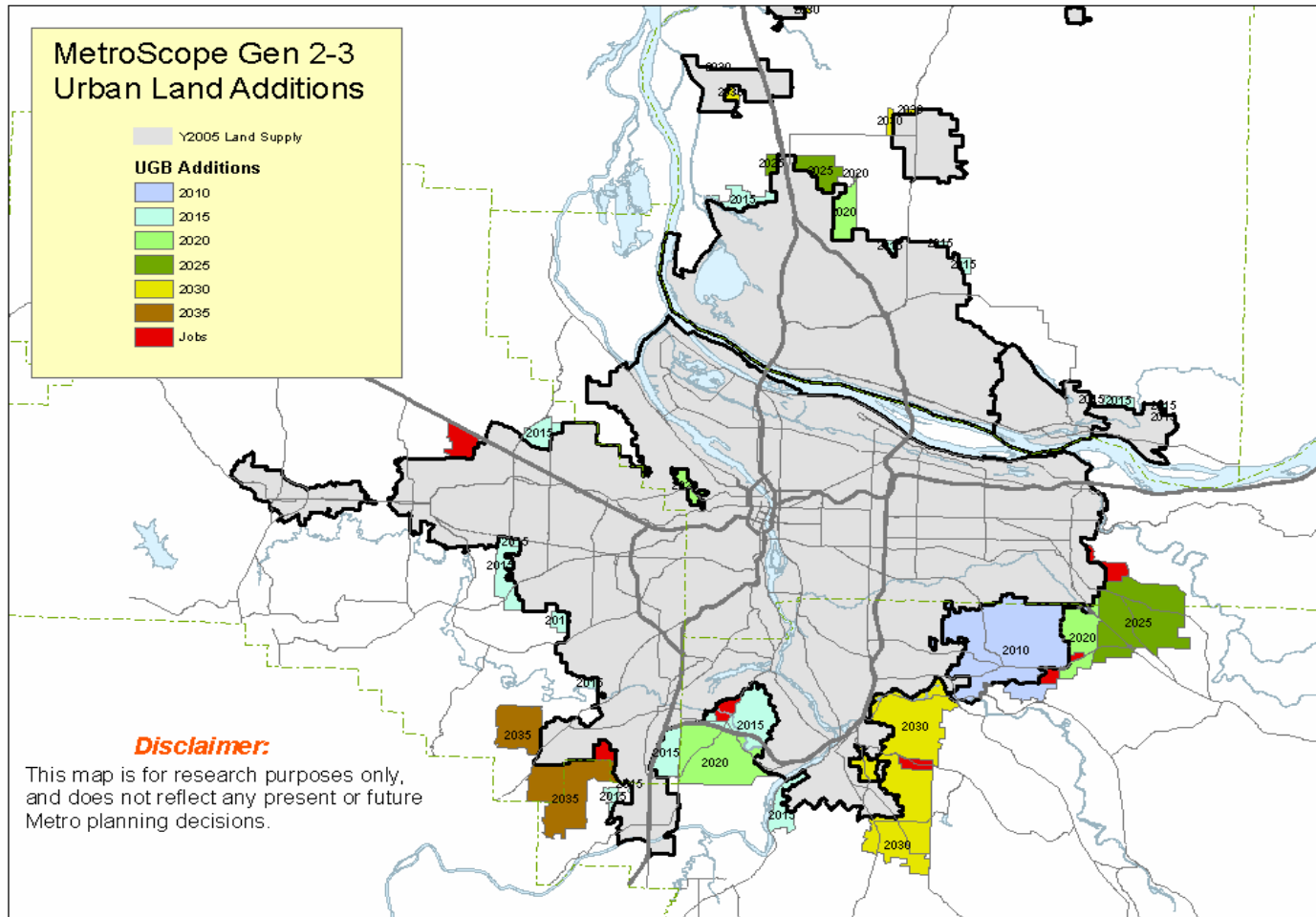




# Urban Renewal Acres – Land and Construction Subsidy Through Public Policy

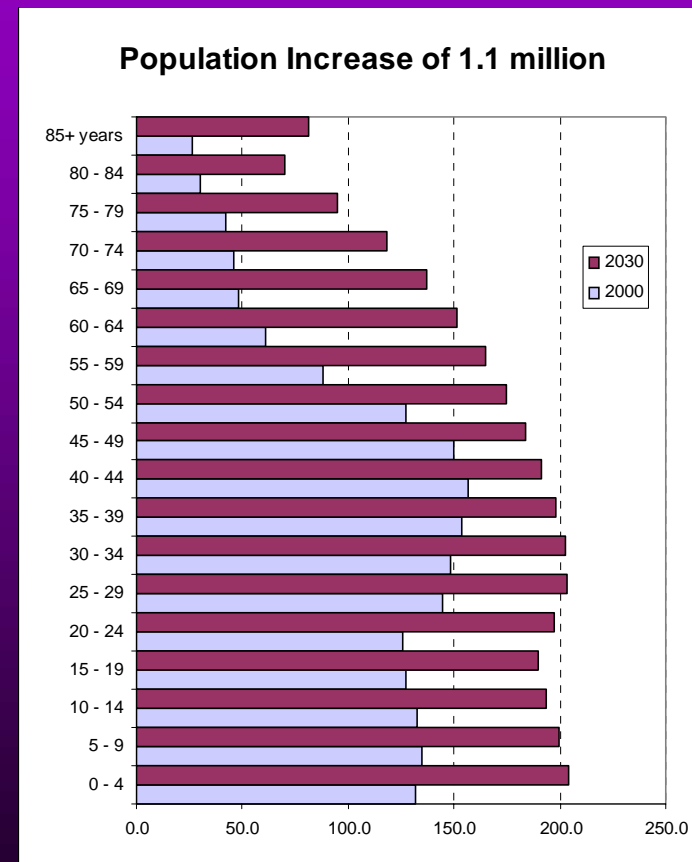


# UGB Expansions – 50K plus Acres over 30 Years



# Population Forecast 2000-30

- ❖ Population increase of 1.1 million residents in the 4 county region.
- ❖ Population in 2030 will be nearly 2.9 million residents.
- ❖ Growth is equal to adding the same number of households as 2 cities the size of Portland

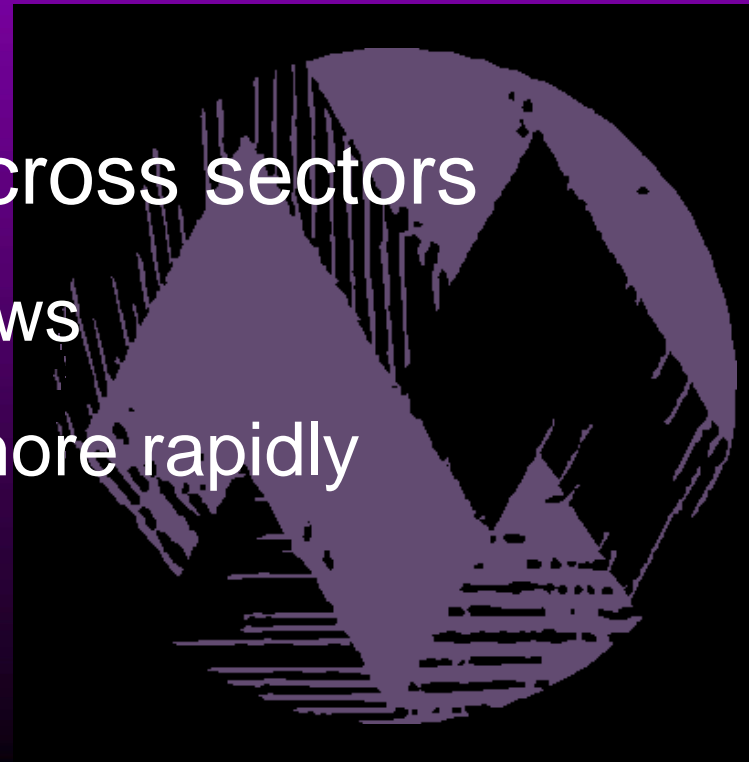


# 2030 Forecast – Employment

❖ 650,000 new jobs in Portland and Vancouver areas

❖ Job growth is uneven across sectors

- Manufacturing growth slows
- Service sector jobs rise more rapidly



# Some Results -- Density

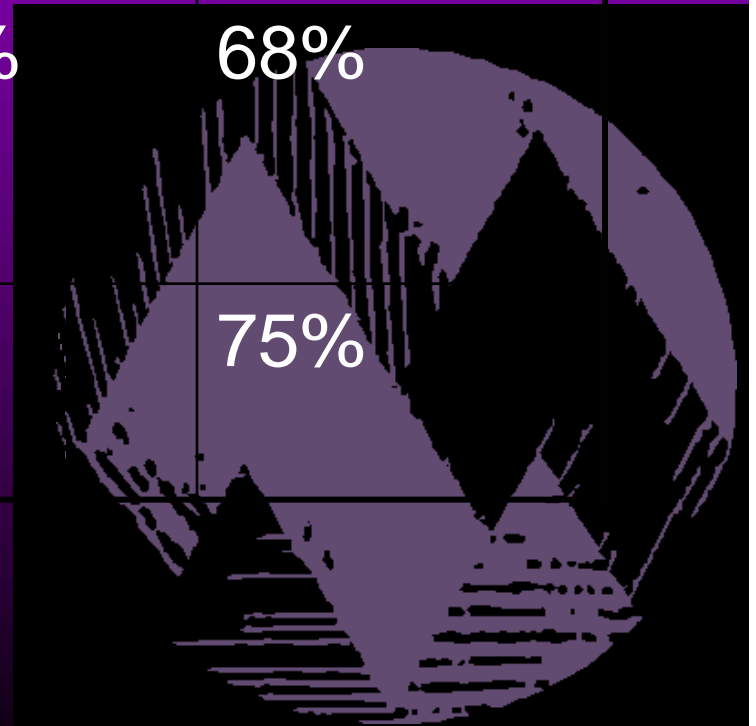
	History	Forecast	Target
Residential Refill Rate	28%	26.1%	28.5%
Dwelling Units/Gr. Acre	5.7 du/acre	5.3 du/acre	6.5 du/acre
Consumption/yr	1,500 acres	1,600 acres	1,300 acres

# Nonresidential Densities

	History	Forecast	Target
Nonres Refill Rate	35 – 45%	34.7%	40%
Emp /Gr. Acre	25.2 emp/acre	24.8 emp/acre	No target
Consump- tion/yr	500 acres	530 acres	No target

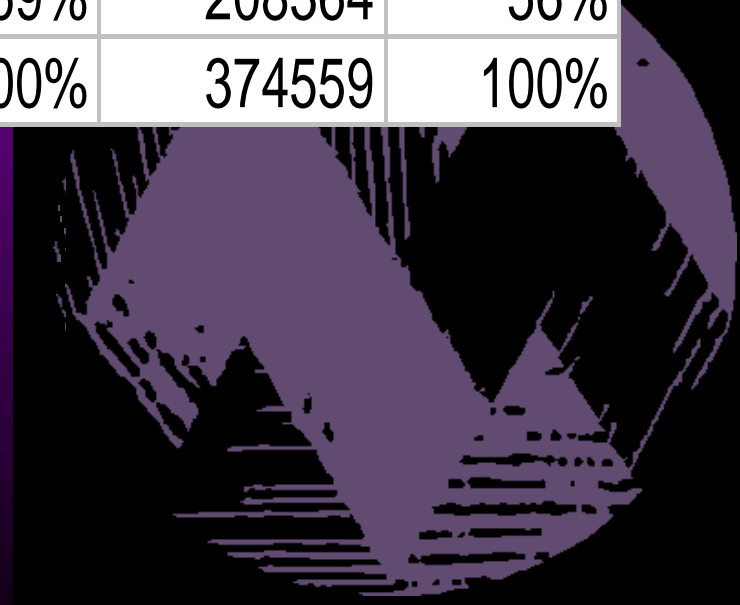
# Some Results – Capture Rates

	History	Forecast	Target
Household Metro share	70%	70.5%	68%
Jobs Metro share	75%	74%	75%



# Nonresidential Allocation by 2040 Plan Design Type

Design Type	2040 Employment Assumptions			
	Forecast	% of Total	Capacity	% of Total
Centers/Corridors	163162	31%	166195	44%
All Other	371246	69%	208364	56%
Total	534408	100%	374559	100%





# Residential Allocation by 2040 Plan Design Type

	2040 Household Assumptions			
Design Type	Forecast	% of Total	Capacity	% of Total
Centers/Corridors	46,547	14%	73,306	30%
All Other	284,984	86%	170,238	70%
Total	331,531	100%	243,544	100%

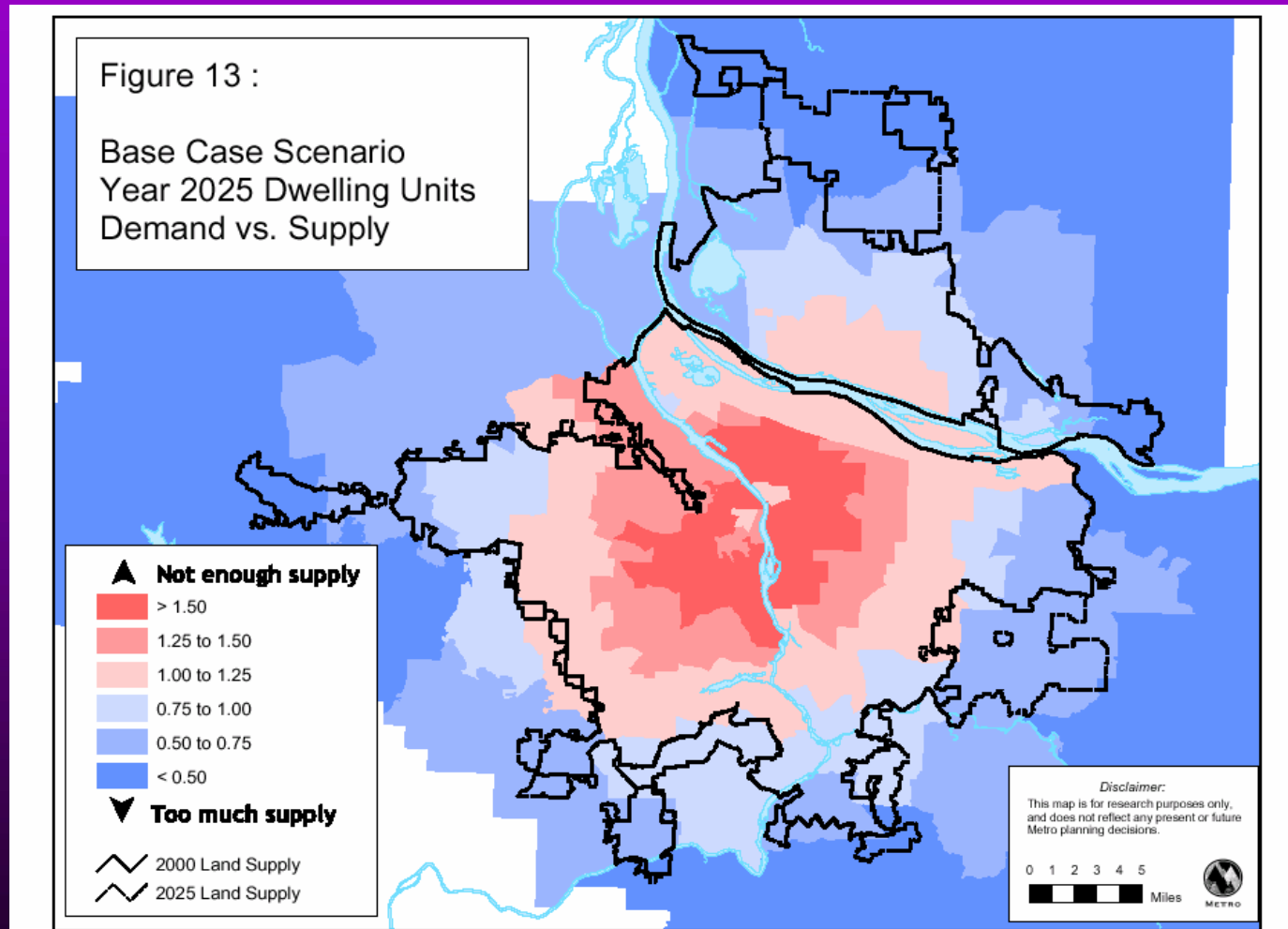
# Year 2000 – 2030 Price Indices

Residential Weighted Price Index: 1.60

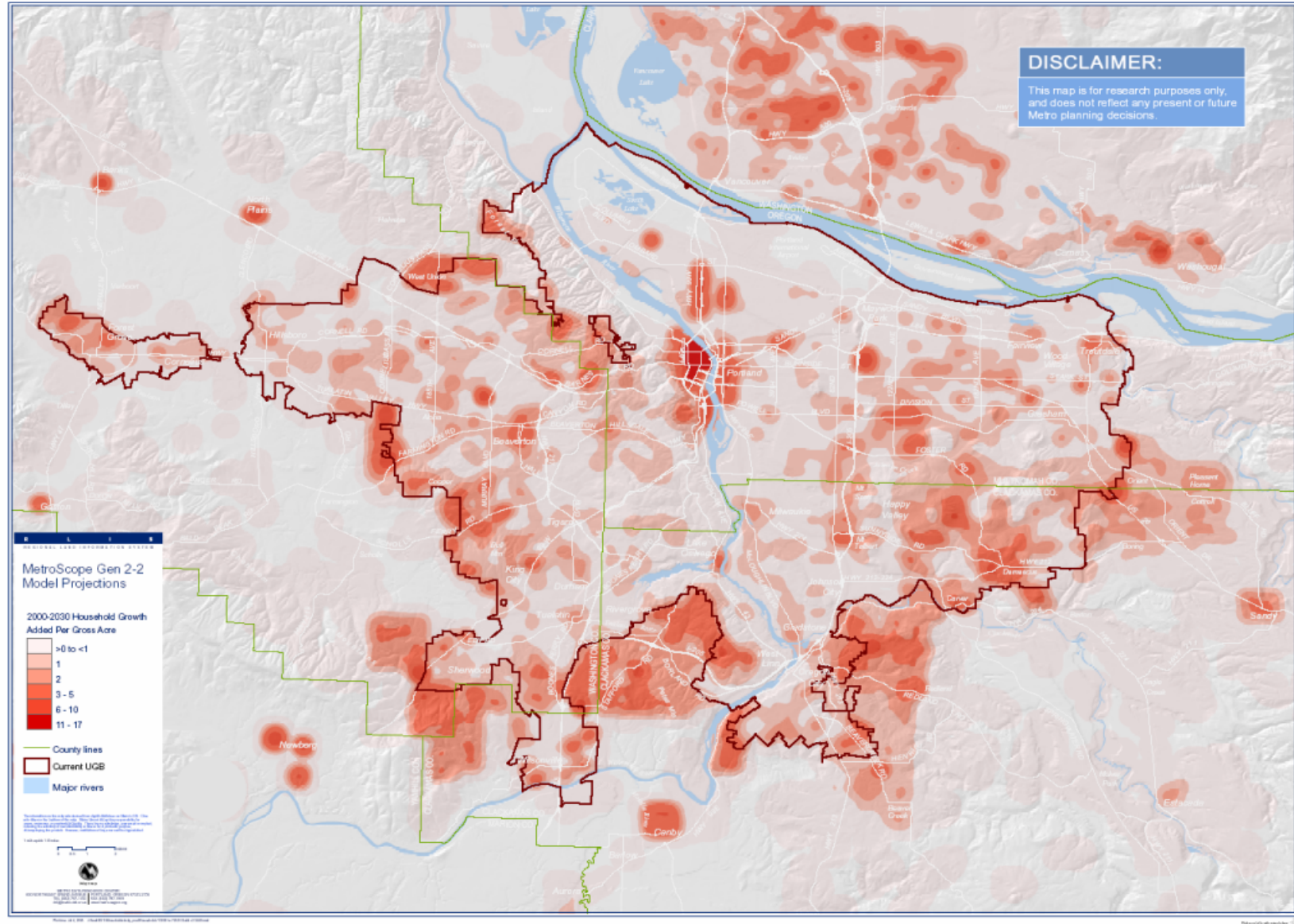
NonRes Weighted Price Index: 1.09



# MetroScope 2030: Basic Demand and Supply Mismatch – The Price of High Cost Choices and Congestion

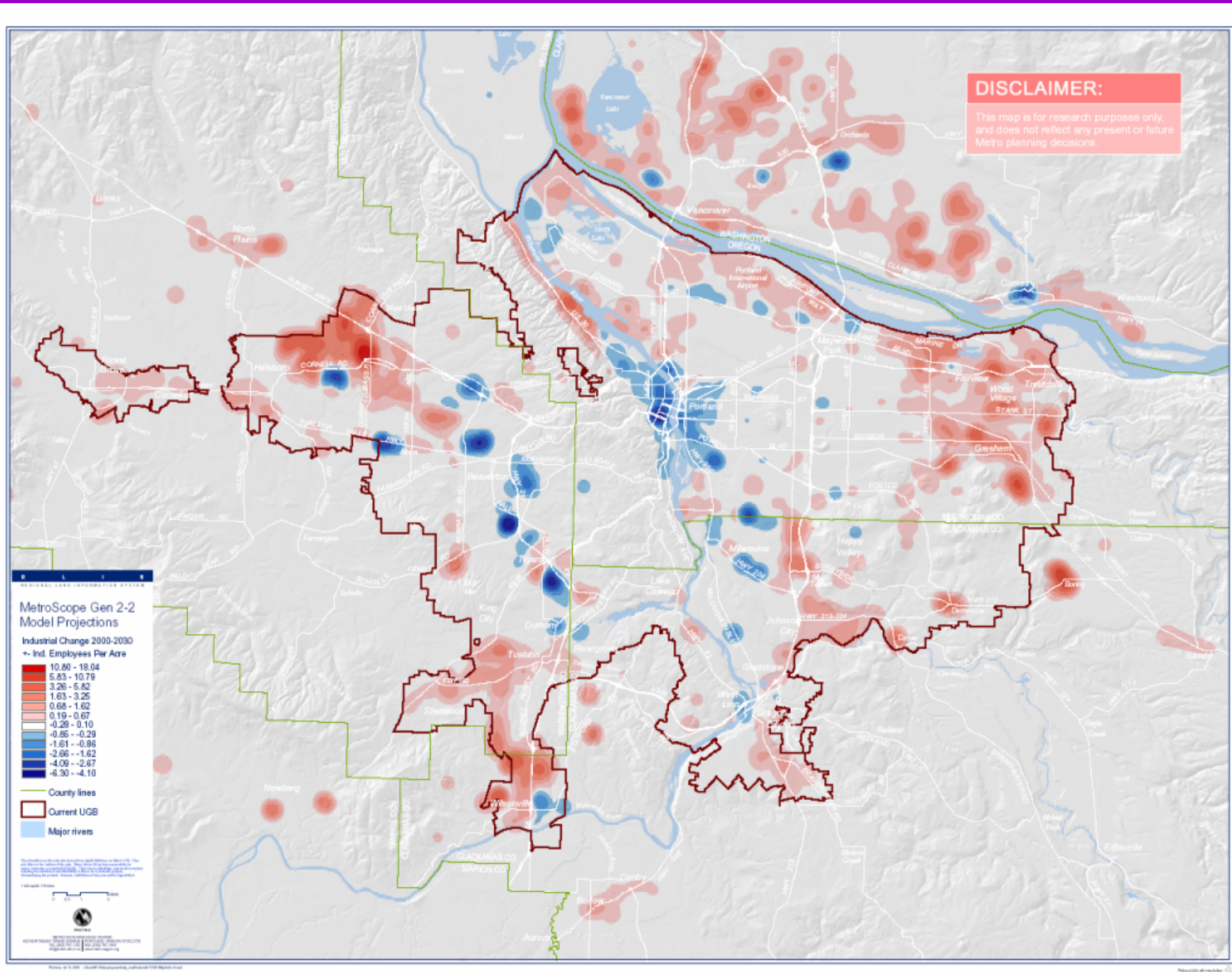


# Household Change 2000 – 2030





# Patterns of Industrial Emp Location 2000 - 2030

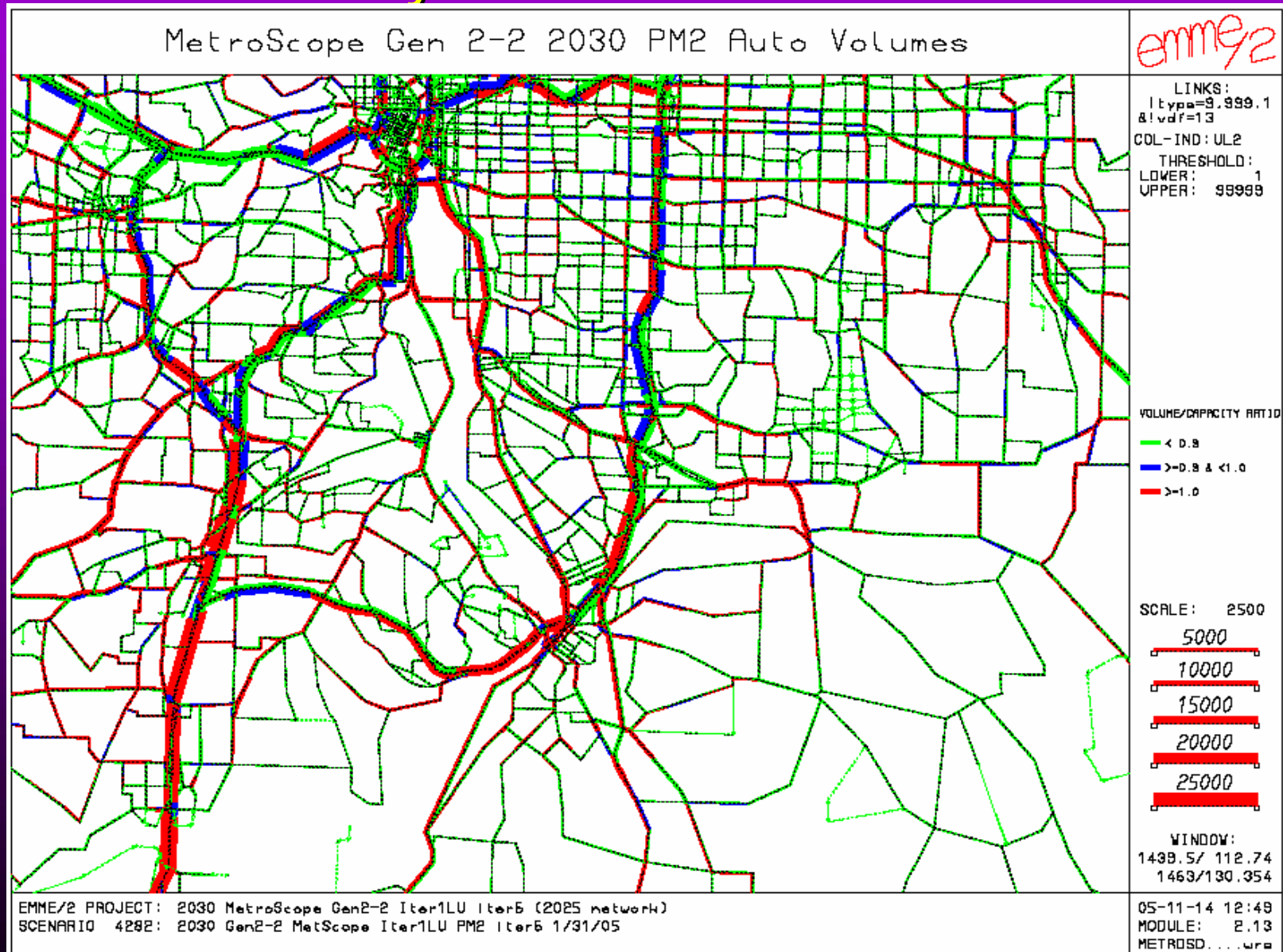


## Some Results – Transportation

	History	Forecast	Target
VMT/Capita	16.03	15.63	13.63
Ave Travel Time (work trips)	16.7 min	21.6 min	No Target
Ave. pm pk auto speed	30 mph	22 mph	No Target



# MetroScope 2030 Transportation – Paralysis of the Extremities





# Now What??

- Metro Council and Indeed the State Recognize 2040 Plans Needs to be Updated and State Law Needs to be Revisited
- We Will Soon be Doing the “2040 Look”



# The New Look

- From a Technical Perspective at the Metro Level will consist of a Number of MetroScope Runs Testing Alternative Urban Choices for UGB Expansion, 2040 Configurations, Transportation Investment, etc.
- Working with PTV America to Speed Up MetroScope and Automate Accounting, Data Display, etc.

