

2002-2022 **Urban Growth Report:** A Residential Land Need Analysis

August 2002
Updated December 2002



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Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 24 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

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Conclusion

The Residential Urban Growth Report (UGR) is a technical document estimating the capacity for providing housing within the Urban Growth Boundary (UGB), and comparing this capacity with the expected growth for the next 20 years. The 2002 Residential UGR provides a portion of the technical findings needed to verify the State Goal 14 requirements needed to amend the UGB.

The Residential UGR compares the Regional Population and Housing Forecast with the zoned land capacity from 24 cities and three counties to determine whether a 20-year land supply is available inside the current UGB. A series of additions and subtractions are made to better estimate the land supply.

If a deficit is found ORS 197.296 and Metro Code provide several options for addressing the deficit. Three options available to the region include: 1) expand the UGB by the number of acres necessary to meet housing needs, 2) create additional capacity inside the UGB by adopting additional regulations or other measures, 3) combine expansion of the UGB and policy changes to meet a shortfall. Policy changes could take the form of upzoning, minimum floor area ratio (FAR) requirements or incentives that optimize development of land. The Department of Land Conservation and Development has stated that Metro can only take credit for increases in capacity if a regional regulation or measure has been adopted.

In brief, the housing need (demand number) for the 2000-2022 1/2 time frame is 220,700 units. The estimated capacity within the existing UGB is 177,300 units, which results in a deficit of 43,400 units. With additional measures to encourage greater refill in Centers, the capacity of the UGB can reasonably be expected to increase to 183,300 units, thereby reducing the deficit to 37,400 units. Specific assumptions and policy choices associated with this estimate are elaborated in the report. Table 1 is an overall synopsis of the housing needs analysis.

**2000-2022 Urban Growth Report
Dwelling Unit Capacity Estimate & Need
2002-2022 Regional Forecast
of Residential Land Need
November 2002**

Line No.		SUPPLY	DEMAND
Residential Demand Estimates (in Households)			
1a/	4-County Population Forecast (July 2000 to Dec. 2022) - 22 1/2 years		744,200
1b/	4-County Household Forecast (July 2000 to Dec. 2022) - 22 1/2 years		312,100
2/	Capture 68% of 4-County Forecast in Metro UGB		212,200
3/	plus: 4% vacancy rate		8,500
4/	Household Demand in the Metro UGB:		220,700
July 2000 Vacant Land Inventory (all zones):		Metro UGB	
5/	Gross Vacant Land	44,000	
6a/	less: Title 3 (Water Quality Protection)	7,600	
6b/			
7/	Gross Vacant Buildable Acres (GVBA) - rounding	36,400	
8/	less: Fed., State, Municipal exempt land (actual count)	1,700	
9/	less: Acres of Platted Single Family Lots (actual count)	2,000	A
10/	less: Acres for Places of Worship and Social Org. (per capita basis)	700	C
11/	less: Major Easements (Natural Gas, Electric & Petroleum) (actual count)	700	R
12/	less: Acres for New Streets (0%, 10%, 18.5%)	4,900	E
13/	less: Acres for New Schools (per capita student basis: H=45, M=55, E=70)	900	S
14/	less: Acres for New Parks (based on SDC fees)	1,100	
15/	Net Vacant Buildable Acres (NVBA)	24,400	
NVBA by Type:		Metro UGB	
16/	Net Vacant Buildable Acres – Employment see Employment Land Need Analysis		
17/	Net Vacant Buildable Acres - Residential	14,900	
	Net Vacant Buildable Acres (NVBA)	14,900	
Dwelling Unit Capacity at Current Local Zoning (as of Jan. 2001)		Metro UGB	
18/		108,700	
19/	add: Res. Development in vac. Mixed Use Areas (MUC)	10,400	U
20/	less: Units Lost to Underbuild @ 20%	(23,800)	N
21/	add: Units from Residential Refill @ 26.3%	58,000	I
22/	add: Minimum Development Capacity on Title 3 land (actual count)	500	T
23/	add: Units from Platted Single Family Lots (actual count)	14,000	S
24/	add: Land Adjustments (land capacity for these items not included in line 18/)		
24a/	Pleasant Valley Master Plan	5,000	
24b/	Villebois Village	2,300	
24c/	Marylhurst Convent town center development	700	
24d/	Washington Square regional center plan update	1,500	
25/	Subtotal: Dwelling Unit Capacity	177,300	
26/	Net Need in Residential Dwelling Units (DEFICIT):		
27/	add: Added policy actions inside UGB (refill: +2.7% centers)	6,000	(43,400)
28/	Adjusted Dwelling Unit Capacity	183,300	
29/	Net Need for Residential Households (DEFICIT):		(37,400)

Chapter 1

Introduction to the Report

Purpose

State land use law and Metro Code require periodic review of the Metro's UGB to assess its capacity to accommodate future urban growth for a 20-year period. The *2002 Residential Urban Growth Report* (UGR) represents the technical findings needed to verify that State Goal 14, has been met in order to amend the UGB.

The Residential UGR is a blending of science, policy and technical assumptions in a study that estimates regional housing capacity. This report uses the best available research about urban growth boundaries, capacity and economic growth to estimate regional housing need (demand). The supply (inventory) estimates in this report are to the maximum extent possible grounded in scientific research and up-to-date geographic information system (GIS) data. Where data are inconclusive, policy assumptions are recommended based on region wide goals and objectives.

State law, Metro Code and current policy direction provided by the Executive Office are all integral to estimating supply and demand. These estimates, therefore, represent a mix of regulation, policy and technical findings. State law ORS 197.269(2) requires at least 20 years supply of buildable land be provided for residential development. In addition to planning for future housing, Metro also plans for a 20-year land supply for commercial and industrial development which is addressed in the 2002 UGR: An Employment Land Need Analysis.

UGR Update – What's New?

Two Reports

The 2002 UGR has been separated into two companion reports – A Residential Land Need Analysis and An Employment Land Need Analysis.

In general, the methodology used for calculating the regional housing capacity in the Residential UGR has remained constant for the past several years, making it an almost rote exercise. Calculating employment land need on the other hand has proved to be a more complex procedure, and staff is currently exploring better methods to more accurately determine the regional need. Due to the distinct character of the methodologies, staff developed two stand-alone reports – A Residential Land Need Analysis and An Employment Land Need Analysis. This report deals solely with the residential land need analysis.

Upzone/Ramp-Up/Underbuild

Several methodological changes are included in the 2002 edition of the Residential UGR. These changes are in response to implementation of the Functional Plan requirements and a review of our technical practices. Most jurisdictions have adopted minimum density standards (80 percent of the underlying zoning) and are in compliance with Title 1, Table 1 targets of the Urban Growth Management Functional Plan. Achieving compliance with Table 1 targets is an indication that local jurisdictions have completed all zoning changes to increase capacity and therefore the upzone and ramp-up factors from the 1997 UGR are no longer necessary. Ramp-up had been included in prior UGRs as a discount to the anticipated upzone by local governments to account for the time it takes to make the required Functional Plan changes. The Functional Plan requires local governments to set minimum residential density standards at 80 percent of the maximum allowed.

Accessory Dwelling Units

Staff conducted a review of the accessory dwelling units factor. In review, we believe that to call out accessory dwelling units as a separate factor double counts both refill rate and the density assumptions for vacant land. In addition to this, efforts to track the construction of these units have proven difficult. Thus they are not called out separately in this report as an addition to land capacity.

Major Utility Easements

A new deduction from the land supply is being made for major utility easements in order to comply with State law and to more fully account for all non-buildable lands. The type of easements and the land area removed from buildable land is detailed in Chapter 4.

Residential Vacancy Rate

A residential vacancy rate of 4 percent is specifically called out in the 2002 Residential UGR. Although a 5 percent residential vacancy rate has been assumed in past editions of the UGR it had not been called out as part of the adjustments to the land demand discussion.

Adjustments

A new factor called adjustments has been added to this report. An allowance is reserved for adjustments to the buildable land supply so that the most accurate information is available for the 2002 Residential UGR. The “supply” was based on 2000 vacant land data and zoning and adjustments provide a way to report and more accurately account for major land use changes that have occurred since that time. Specific adjustments are outlined in the Summary Table on page 4 and are listed in detail in Appendix B.

New Model

Output from the new MetroScope model is used for portions of the 2002 Residential UGR. The MetroScope model is a set of decision support tools developed to evaluate changes in economic conditions, land use trends and transportation activity within the region. The four models that comprise MetroScope include an economic model, travel model and two real estate location models. All these models interact with the Metro GIS and the Regional Land Information System (RLIS) to allow mapping of results and maintenance of spatial relationships between data. The model is run in five-year iterations between the land use and transportation models. The purpose of bringing the four models together into a single, integrated framework is to allow them to interact with each other, producing more accurate predictions of future conditions and allowing them to better reflect the full effects of policy choices.

Five potential growth case studies were run to test the effectiveness of a range of policy options in implementing the 2040 Growth Concept or making changes to enhance the effectiveness of the existing policies. Each case study was a test of a unique set of policy objectives. A Base Case study tested the impacts of the application of current 2040 Growth Concept policies. An I-5 Trade Corridor case study tested whether major transportation improvements to the I-5 trade corridor diminish or enhance the effectiveness and the implementation of the 2040 Growth Concept. A third case study tested whether developing a new complete community in the Damascus area would effectively accommodate a 20-year need for land. An Enhanced 2040 Centers case study tested whether additional policies and incentives would enhance the functionality of 2040 Centers while limiting UGB expansion. Selected parts of this information helped provide the range of possible outcomes from different UGB decisions. Of particular importance to this report are the model outputs for the refill and capture rates.

Centers Research

Metro is evaluating the Centers identified on the 2040 Growth Concept map to determine if there is additional capacity to be found within these areas that would effect the bottom line numbers for this Residential UGR, testing capacity and policy effectiveness.

Centers are the keystone of the region's strategy to manage growth. The adopted Regional Framework Plan and the Functional Plan establish policy directions, regulations and recommendations to strengthen Centers. The hierarchy of Centers designated on the 2040 Growth Concept map includes the Central City, 7 Regional Centers, 30 Town Centers and the Station Communities around light rail stations.

Metro conducted a three-phased study to examine Centers. Phase I was a series of interviews with local government staff. Phase II of the Centers study consisted of an economic analysis examining why Metro's Centers are not developing at the densities anticipated. Phase III identified tools and developed an action plan designed to answer strategic and regional level implementation questions. A fuller discussion of the implications of the research is in the Increase in Refill Rate section in Chapter 5 of this report. A copy of the studies can be found on Metro's website at www.metro-region.org.

Background

In 1997, Metro Council adopted the Regional Framework Plan and in 1996, the Functional Plan requirements. The plans provided coordinated guidance to local jurisdictions to manage future urban growth. In December 1997, the first UGR was issued and approved by Metro Council. The 1997 UGR concluded that there was a deficit of 32,370 dwelling units and a nearly 2,900 acre job shortfall.

Earlier in 1997, the Oregon Legislature enacted ORS 197.299¹ that required Metro to show substantial progress towards meeting this land need, within two years of identifying any shortfall in supply. At least half the need was to be accommodated by the end of 1998 and the remainder by the end of 1999. Accommodating 20 years of residential capacity within the UGB can be accomplished by increasing the size of the UGB or adopting policies to increase capacity of lands within the current boundary. Metro Code and State Law require review of the UGB capacity at least every five years.² The last complete review was conducted for the 1997-2017 period.

Consistent with State law, the Metro Council in December 1998 amended the UGB by adding 3,549 gross acres. The Metro Council also indicated their intent to add an additional 1,831 acres by resolution on the same date. These actions by the Metro Council met the requirement in State law to satisfy at least half of the land need identified in the 1997 UGR by the end of 1998. By the conclusion of 2000, the 1997-2017 UGB review was completed with two major changes recognized. First, the original need for 32,370 dwelling units was disallowed by DLCD because it was based upon 200-foot stream setbacks, which had not been implemented. This effectively eliminated the need for the "second half" of the needed UGB expansion of 1,831 acres. Second, the courts rejected 939 acres of expansion requiring this shortfall to be made up in the 2002 assessment.

Key Points:

- *State law requires that 20-year supply of land be provided within the UGB.*
- *The need estimates found in the UGR blend regulation, policy choices and technical findings.*
- *A deficit of 939 acres from the 1997-2017 UGB assessment must be made up in this round.*

¹ ORS 197.299 was introduced as HB 2709.

² ORS 197.296 was introduced as HB 2493.

2002 Periodic Review

Metro – Periodic Review

To comply with state law to ensure the land supply is adequate for a 20-year period, Metro requested the Land Conservation and Development Commission (LCDC) place Metro in a process called "periodic review" for the UGB. Periodic review is a cooperative process between the state, local governments and other interested persons.

Periodic review of the UGB takes place to assure that the process of reviewing and amending the UGB complies with statewide planning goals and that adequate provisions are made for needed housing, employment, transportation and public facilities and services. The law requires cities and counties to do periodic review every 5 to 15 years, depending upon their size and location. Small cities and counties are exempt. Metro must do periodic review every 5 to 10 years. Metro's last periodic review was completed in December 1992.

This periodic review includes a two-phase process. The first phase addressed legislative amendments to the UGB for the period 1997-2017 and was completed in September 2000, when the Metro Council determined that a 20-year supply of land was available. The second phase began in the fall of 2000 and covers the 20-year period from 2002 to 2022. The UGB may be amended if a demonstrated need exists.

Report Outline

The Dwelling Unit Estimate Summary Table (Table 1) summarizes the need analysis for housing. Table 1 illustrates deductions made to the gross vacant buildable acres (GVBA) to arrive at net vacant buildable acres (NVBA). Chapter 2 summarizes the regional population and dwelling unit forecast. Chapter 3 in this report expands in detail on lines 1 – 4 of the Summary Table dealing with demand. Chapters 4 and 5 provide more detail on lines 6 – 27 dealing with supply.

Chapter 2 2002-2022 Regional Forecast

Summary

As a basis for estimating future regional housing and employment demand, the baseline 2002-2022 Regional Forecast developed by Metro represents the most likely and reasonable “middle-of-the-road” growth projection. The forecast assumes a policy neutral stance on growth management and transportation policies in the region. What this means is that the forecast carries out the regulations and policies that are in force today and extrapolates their likely impacts in producing housing and employment demand projections (regional need) for the region. The forecast extends from July 2000 to December 2022, a period of 22.5 years. This is due to the fact that the best available data exists for 2000, based upon the July 2000 aerial photos and there must be a 20-year land supply from the date of the decision, which will be in December 2002.

The regional economic forecast is based on a framework of how the region has responded to historical trends – including economic, industry, demographic, national and global forces at work in the region. The regional baseline population and household forecast is tied to the economy of the region by the interaction of migration and employment trends/comparative economic strengths with neighboring state economies. A continuing vibrant regional economy will continue to draw migrants in the pursuit of greater economic opportunity and regional amenities. More importantly, about half of the region’s future population growth will be based on demographic characteristics of the region that exist today. Population growth will continue because residents will have children, and their children will have children.

Lastly, the regional baseline forecast was not derived to predict the variations in growth caused by recessions nor firm-level decisions such as the behavior of a single company. The forecast does not forecast business cycles. Instead, the forecast is meant to be indicative of what trajectory or growth path the region is likely to have during the next 20 to 30 years. By looking at historical trends and relationships, by discerning emerging trends, and folding into the regional forecast the expert opinions of regional experts and national forecasters (DRI-WEFA), the regional baseline forecast represents the reasonable approach available for the upcoming UGB decisions.

Alternative growth projections could also be considered, but have been deemed to be less likely and less reasonable approaches. Optional assumptions based on different national and international outlooks could easily produce a higher or lower regional forecast, but are less plausible. DRI-WEFA and other national sources have produced alternative U.S. growth scenarios which could be used to prepare regional high or low growth outlooks, but they represent a much lower probability of materializing in the future.

As part of completing periodic review, Metro will produce a high and low forecast later this year to accompany its regional baseline forecast. Based on national estimates, the baseline regional forecast represents more than an 80 percent probability while a significantly higher or lower regional forecast faces less than a 10 percent probability each of happening.

Actions taken by public agencies throughout the region could have the effect of increasing or decreasing this forecast (examples include – but are not limited to – Columbia River channel deepening, truck access into the Columbia Corridor, decreased investment in transportation and airport capacity, inadequate higher education financing, economic development incentives, and quality of life oriented actions such as clean water and access to open space).

Chapter 3 Residential Demand Analysis

Residential Demand – Overview

Residential Demand is taken directly from the Regional Economic and Population Forecast.³ A four-county population and household forecast from July 2000 to December 2022 (which equals 22.5 years) provides the basis for the demand estimate. The July 2000 vacant land inventory is being used as the basis for estimating supply. The December 2002 demand forecast is being used to insure a 20-year supply for the December 2002 decision. Population in the Metro region is expected to increase at a moderate pace of 1.6 percent per year. By the year 2022, population growth is expected to add another 744,200 residents to the region (in the four-county SMSA).⁴

In terms of the Metro UGB, population growth is expected to add 525,000 more residents or about another 212,000 households (or 220,700 dwelling units assuming a 4 percent vacancy rate). Metro Council had extensive discussions about the use of a vacancy rate. In Appendix A, Table Note 3, there is a description of the range considered for vacancy rate. Metro may look into vacancy rate as part of Task 3. These UGB figures are based on a 68 percent capture rate, which has been the historic rate between 1980 and 2000.

During the 1990s, about two-thirds of new residents had never lived in the Portland area before. Net immigration will still be a force driving population growth in the future, but a lesser one. Only about half of the region's population increase during the next 20 years will come from migration; the remainder will come from residents having children.⁵

Regional population growth is expected to average about 1.6 percent per year through 2030, as compared to about 2 percent from 1970 to 2000. Population will increase more rapidly in the near term as current conditions favor an economic rebound, which will attract greater number of migrants. Over the long haul, the average growth rate per year will start to taper off as regional economic growth moderates.⁶

Key Points:

- *Population growth through the forecast period is expected to increase at a moderate pace of 1.6 percent per year.*
- *By the year 2022, population growth is expected to add another 744,000 residents to the region.*
- *Migration contributes 50 percent of population growth.*

Capture Rate

Since the geographic extent of the Residential UGR is the limits of the UGB, a forecast of housing units (dwelling units) is derived for the portion of growth anticipated to occur inside the UGB. This proportion of growth (capture rate) is the fraction of dwelling units predicted to occur in the UGB relative to the total amount of growth overall in the four-county region (Multnomah, Clackamas, Washington and Clark Counties). The 1997 UGR, as well as subsequent updates, assumed the capture rate for the UGB to be 70 percent for households. Capture rate in the 2002-2022 Residential UGR is assumed to be 68 percent.

³ Economic Report to Council 2000-2030 Regional Forecast, preliminary draft March 2002.

⁴ SMSA four counties include Clackamas, Clark, Multnomah and Washington Counties.

⁵ 2000-2030 Regional Forecast, preliminary draft March 2002.

⁶ 2000-2030 Regional Forecast, preliminary draft March 2002.

Capture rate data is drawn from two sources; historic and future estimates. Historic estimates are available from 1980 up through year 2000. The basis for the capture rate is derived from historical data from 1980 through 1998. Historical data indicate a capture rate of 54 percent to 77 percent. The table listed below shows the range of capture rates.

**Table 2
Metro Region Historical Capture Rates**

Metro Capture Rates - 5 years:	1980-85	1985-90	1990-95	1995-00
Households	65.5%	53.7%	76.6%	68.8%
Metro Capture Rates - 10 years:	1980-90		1990-00	
Households	58.2%		72.9%	
Metro Capture Rates - 20 years:	1980-00			
Households	67.8%			

Future estimates of capture rates, based on specific land use assumptions, are an output from the MetroScope model.⁷ Five potential growth case studies were run to test the effectiveness of a range of policy options in implementing the 2040 Growth Concept or making changes to enhance the effectiveness of these policies. Each case study was a test of a unique set of policy objectives. A Base Case study tested the impacts of the application of current 2040 Growth Concept policies. An I-5 Trade Corridor case study tested whether major transportation improvements to the I-5 trade corridor diminish or enhance the effectiveness and the implementation of the 2040 Growth Concept. A third case study tested whether developing a new complete community in the Damascus area would effectively accommodate a 20-year need for land. An Enhanced 2040 Centers case study tested whether additional policies and incentives would enhance the functionality of 2040 Centers while limiting UGB expansion.

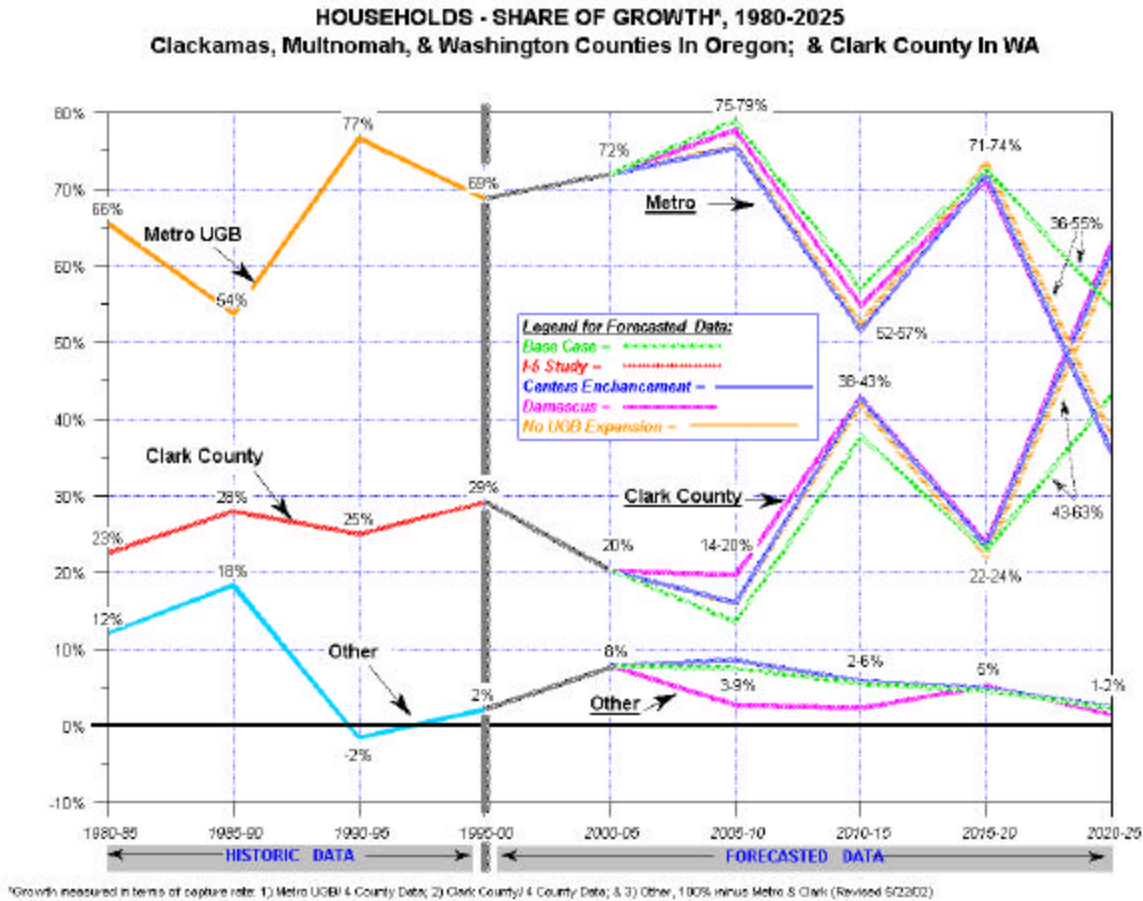
MetroScope case studies capture rates range from 52 percent to 79 percent depending upon the amount of land added to the UGB and the amount of capacity made available within the UGB. As experience and modeling has shown, capture rates can vary based on a number of different factors. The reasonable range of capture rates to assume based upon both historic and modeled rates, range from 65 to 75 percent.

The Capture Rate Graph (Figure 1 - Household-Share of Growth) illustrates a direct relationship between the capacity within the Metro UGB, Clark County’s UGA and is reflected in capture rates. In other words, a policy that holds a tight Metro UGB pushes growth to Clark County, whereas a policy that allows a larger UGB means less proportional growth in Clark County.

It is assumed that the remaining residential growth will locate to Clark County, unincorporated portions of the tri-county area, and cities located beyond the Metro UGB (e.g., Banks, Barlow, Canby, Estacada, Gaston, Molalla, North Plains and Sandy).

⁷ The MetroScope Model is a decision support tool developed to evaluate changes in economic conditions, land use trends and transportation activity. Five case studies were modeled and produced estimates of capture rates in five-year increments from 2000 up through 2025.

Figure 1



Magnitude of Capture Rate Choices

Capture rate changes produce substantial swings in the amount of households that need to be accommodated within the UGB. Three scenarios are illustrated in Table 3 that show the effect of differing capture rates on the regional forecast (65 percent, 70 percent, 75 percent) with the resulting change in demand from the recommended 68 percent capture rate.

Table 3

CAPTURE RATES	65%	70%	75%
Four-County Housing Forecast within the Metro UGB	202,800	218,400	234,000
4-County with 4% Vacancy Rate	210,900	227,100	243,400

Changes in the capture rate result in an increase in the need of approximately 3,200 dwelling units per 1 percent increase in the rate. Assuming a lower capture rate than previously will have consequences to neighboring communities, because the overall population within the four-county area is only partially affected by the size of the Metro UGB. If the capture rate in the Metro UGB is pushed downward,

together with limits on the Clark County UGA, the demand for dwelling units is shifted to neighboring communities like Banks, Scappose, Canby, etc. Selection of the capture rate should take into consideration impacts on surrounding communities.⁸

Effects of the Capture Rate on Residential Refill Rates

Generally, there is an inverse relationship between residential refill rates and the capture rate, although this relationship can be affected by a number of different factors. Essentially, the higher the refill rate the less new vacant land (UGB expansion) Metro needs to add to accommodate growth. The lower the refill rate, the more land Metro will need to add to the UGB. This year, the decision process has benefited from the addition of a new tool – capture rate and refill rate outputs from the MetroScope model. As shown by MetroScope, limited UGB expansion results in higher market demand for refill but not at a sufficient rate to avoid shifting a share of growth outside the Metro UGB. Conversely, a larger expansion ensures growth is accommodated in the Metro UGB but undermines market demand for refill.

Some key refill rate findings from the MetroScope analyses suggest that:

- Higher refill rates are achievable through an aggressive program of incentives for development in designated mixed-use Centers. Selection of a refill rate should be tied to how aggressive a Centers incentive program is adopted.
- Higher than planned redevelopment and infill rates (refill) can be achieved but at the expense of lower capture rates and higher home prices.
- For residential purposes, maximizing the use of Centers substantially increases residential refill and reduces overall residential vacant land consumption.
- Demand for refill in Centers is highest in the central city areas.

Key Points:

- *The overall residential capture rate assumed in the 2002 Residential UGR is 68 percent*
- *A capture rate of 68 percent is assumed to indicate the average proportion of residential growth that will occur within the UGB until 2022. The rates are derived from the two decades of historic data and MetroScope modeling results.*
- *Historical capture rates from 1980-2000 ranged between 54 percent and 77 percent.*
- *Capture rates from MetroScope model case studies from 2000 - 2020 range from 52 percent to 79 percent.*
- *A reasonable range to consider for this Residential UGR is 65 percent to 75 percent.*

⁸ For more detailed information about capture rates please refer to June 3, 2002 memo from Lydia M. Neill, Principal Regional Planner to Andy Cotugno, Planning Director, and the MetroScope findings report.

Chapter 4

Buildable Lands Analysis – Determining the Region’s 20-Year Land Supply

Land Inside the UGB

The 2002 UGB contains 235,549 acres. December 1998 UGB amendments brought approximately 3,000 additional acres into the boundary.⁹

Vacant Land Inventory

Metro’s Data Resource Center (DRC) has been producing a regional Vacant Land Study every other year since 1990. The most recent Vacant Land Study completed is based on digital aerial photography flown in July 2000. This study identifies fully and partially developed parcels within the Metro region. As part of updating the data for the 2002 Residential UGR, the supply of vacant land on hand is derived from the stock of vacant land data identified by the July 2000 data. Based on this careful inventory, there is a total of 43,900 gross vacant acres.¹⁰

Metro defines vacant parcels as tax lots with no improvement value or building(s). In addition, Metro has defined partially vacant parcels as those with an undeveloped portion of a lot that is larger than one-half acre.

In updating each year’s vacant lands inventory, DRC staff focus on removing areas from the previous year’s inventory that have become developed. Each parcel in the UGB is examined. Building permit data collected from local jurisdictions assist with this effort. County tax assessor data are also checked to ensure that the parcel in question has no improvement value located on it (an improvement value would indicate that the parcel is developed or at least partially developed).

In addition to removing developed areas from the vacant land data layer, staff may identify additional vacant lands that were undetected in the previous year’s inventory. This occurred with the 1998 update. Metro’s 2000 aerial photos have a higher level of resolution (one-foot pixels) than the 1998 aerial photos (two-foot pixels), allowing greater precision in the identification of vacant areas. Each year since Metro began measuring vacant lands the accuracy of Metro’s vacant lands data has incrementally improved.

Metro’s definition of vacant land follows very specific guidelines. The following points clarify important attributes of Metro’s vacant land analysis methodology.

- Vacant lands do not indicate whether a vacant parcel is listed on the market to be sold and developed. The vacant lands inventory process does not include a qualitative judgement about a parcel’s desirability for development, or identification of issues that would affect development.
- The vacant lands data alone do not necessarily indicate that the parcel is buildable. The Residential UGR starts with vacant lands, and using GIS, removes the areas that are considered environmentally constrained such as wetlands and floodplains (i.e., there is an important distinction between vacant lands and vacant *buildable* lands).

⁹ Includes Pleasant Valley Maser Plan, Dammasch Town Center concept, South Hillsboro and excludes Stafford and Bethany which were remanded by the courts.

¹⁰ Source: RLIS 2000 data.

Key Points:

- *Aerial photography was flown in July 2000.*
- *Partially vacant land is defined as vacant parcels with an undeveloped portion of the lot that is greater than one-half acre (over 20,000 square feet).*
- *Vacant land is defined as any undeveloped parcel/tax lot and any partially undeveloped lot with the undeveloped portion larger than one-half acre.*
- *Vacant land data do not imply a degree of development readiness or current marketability.*

Gross Vacant Acres to Gross Vacant Buildable Acres

Environmentally Constrained Land

Environmentally constrained land is deducted from Gross Vacant Land to arrive at Gross Vacant Buildable Acres (GVBA). Metro's Stream and Floodplain Protection Plan (Title 3 of the Functional Plan) was adopted by Metro Council in June 1998. It requires cities and counties within the Metro UGB to meet regional performance standards relating to water quality and floodplain management. This analysis assumes that all riparian areas beyond those defined in Title 3 are buildable. Environmentally constrained land is protected under Title 3 of the Metro Functional Plan. Through Metro's Title 3 process, 7,600 vacant acres¹¹ of environmentally sensitive land has been identified. Environmentally constrained lands include only water quality and flood management areas (as defined in Title 3 of the Functional Plan), consisting of:

Title 3 Restrictions

- 1996 flood inundation areas and FEMA floodplains.
- Wetlands, from an enhanced National Wetlands Inventory and local wetland inventories.
- Wetland Areas, 50 feet from the edge of wetland.
- Riparian Areas, variable riparian corridor between 15 feet and 200 feet depending on the area drained by the water feature and the slope of the land adjacent to the water.

Steep Slopes Beyond Title 3

The buildable lands analysis assumes that upland areas with slopes greater than or equal to 25 percent outside of adopted Title 3 riparian areas have development potential.¹² The development potential on steep slopes is assumed to be current zoning.

Development on Environmentally Constrained Land (Title 3)

Environmental constrained lands do not have the same development capacity as buildable lands. These types of land include steep slopes, flood plains, wetlands, natural resource and riparian areas.

Although environmentally constrained land is not included in the net vacant buildable land inventory, some low-density type development has historically occurred in these areas. Capacity on these lands is calculated by each environmental land component (i.e., floodplains, 1996 flood areas, and steep slopes outside of Title 3 regulated areas). Lots located wholly within Title 3 areas continue to be allotted one dwelling unit per tax lot, because Metro code allows this exemption to Title 3 limitations. Approximately 500 tax lots are located wholly within the Title 3 regulated areas and therefore would result in additional capacity of approximately 500 dwelling units which is accounted for on line 22 of Table 1.

¹¹ Source: RLIS 2000 data.

¹² The 1997 UGR assumed these areas were environmentally constrained. The June 1998 adoption of Title 3 regulations did not protect these lands unless falling within water quality and flood management areas.

Additional Technical Notes on Capacity Estimates

Steep Slopes

Steep slopes are defined as those areas greater than 25 percent slope. In the past (1997 UGR), these areas have been considered unbuildable. These lands are more expensive to develop, are less efficient to develop because of topographic constraints and may have life and property safety concerns due to geologic hazards. In the 1999 UGR Update it was stated that the historical rate of development in steep sloped areas was estimated by examining building permit data from 1995 through 1998. The historical rate and current zoned capacities on these lands were reported as approximately the same (6.4 dwelling units per 5 acres). Therefore, in the 2002 Residential UGR, current zoning is assumed. To the extent steep slopes are included in Title 3 coverage, they are treated as Title 3 areas (see above).

Floodplains

Floodplains are defined as areas located within the 100-year floodplain and indicated on the Federal Emergency Management Agency's (FEMA) maps¹³, and/or the area inundated by the 1996 flood. Structures located in the floodplain can cause life and property losses in the floodplain and downstream. Most jurisdictions allow construction in the flood plain as long as the finished floor elevation is located at least one foot above the FEMA flood elevation. Title 3 allows construction in the floodplain with balanced cut and fill. Balanced cut and fill requirements may decrease future construction in the floodplain due to cost. Land within the 100-year floodplain and 1996 flood inundation area (located outside of the Title 3 water quality and riparian areas) are assumed to develop at zoned capacity.

Cities and Counties in Compliance with Title 3 Requirements¹⁴

Standard	No. Jurisdictions Applicable	No. Jurisdictions in Compliance	Percent Implemented
Floodplain	25	22	88%
Water Quality	26	19	73%
Erosion Control	27	25	93%

Key Points

- *Environmentally constrained lands do not have the same development capacity as buildable lands.*
- *These types of land include steep slopes, flood plains, wetlands, natural resource and riparian areas.*
- *Capacity in Title 3 regulated lands is estimated at 500 dwelling units based upon one unit per lot.*
- *Capacity on non-Title 3 regulated steep slope lands and floodplains and 1996 flood areas is based on current zoning.*

Gross-to-Net Reductions

GVBA are further refined to account for future streets, schools, parks, places of worship/fraternal organizations, and major utility easements over the 20-year planning period.

¹³ Maps distributed by FEMA.

¹⁴ As of July 25, 2002.

Federal, State, Municipal Exempt Land

A total of 1,700 acres of federal, state, county and city owned land have been removed from gross vacant buildable acres (GVBA).¹⁵ The data was identified from tax assessor codes for exempt uses. No dwelling unit capacity is assumed on these lands because they are assumed to address public facility needs for cities, counties and federal agencies. Housing Authority and Portland Development Commission lands were not removed from gross vacant buildable acres because they are in public ownership to provide housing capacity. This method is consistent with that used in the 1997 UGR and subsequent updates.

Vacant Single Family – Platted Lots

All parcels less than 3/8 of an acre are temporarily set aside from the inventory of GVBA. These parcels do not receive reductions for future streets, parks, schools and places of worship/fraternal organizations, because they are assumed to have sufficient right-of-way already dedicated to serve them because of their small size and they are already platted to their minimum possible size. A total of 2,000 acres of small platted lots are temporarily removed from GVBA.¹⁶

In single family zones, capacity on these parcels is assigned one dwelling unit per parcel rather than the underlying zoning classification. The dwelling capacity (one per lot) on this subset of vacant land is later added back to the final supply estimates when the residential portion of net vacant buildable land is converted into a dwelling unit capacity estimate.

Lots less than 3/8 of an acre but zoned for non-residential or multi-family purposes are also not reduced in capacity by the gross-to-net reduction calculation for similar reasons as stated above. However, these individual parcels are included back into net vacant buildable acres to compute dwelling unit capacity for multi-family development and employment land supply respectively based upon the zoning classification assigned to that parcel. This is consistent with the method used in the 1997 UGR and subsequent updates.

Future Streets

As noted above no reduction for future streets is applied to parcels less than or equal to 3/8 of an acre in size. A 10 percent reduction is applied to parcels between 3/8 of an acre and one-acre. Staff assumes due to the smaller size of these parcels that the likelihood is great they are already served by some street access and that only limited further right-of-way would be required. An 18.5 percent reduction is applied to parcels larger than one acre. The total deduction for new streets is 4,900 acres.¹⁷

The 18.5 percent reduction is based on a study of subdivision development during 1997 and 1998 on all parent parcels larger than one acre. A total of 170 platted subdivisions were reviewed from each of the three counties. Of these subdivisions, the average amount of land used for streets was 18.5 percent. Although this rate is applied globally to all vacant land, it was derived from measuring only single family lots.

The 18.5 percent rate applies to all street classifications. Expansion of freeway and arterial streets suggested in the RTP will partially occur within existing rights of way or adjacent to already developed parcels. The RTP estimates that approximately 1,600 acres are required for these future expansions. The 18.5 percent assumption for all vacant land provides enough land for these acres because of the

¹⁵ Source: RLIS 2000 data.

¹⁶ Source: RLIS 2000 data.

¹⁷ Source: 2000 RLIS data.

excess land assumed for multi-family and non-residential parcels that require substantially less than 18.5 percent for streets. These rates were used in the 1997 UGR and subsequent updates.

Review of the Street Right-of-way Widths

Metro Council has asked staff to review the local street allowance based on the implementation of the Transportation Planning Rule (TPR) to allow narrower streets. Most of the local governments have completed this work and allow a variety of street designs to be used in new subdivisions depending upon topography, functional classification, anticipated traffic volumes and adjoining uses. The recommended pavement width for narrow streets (curb to curb) is between 20 to 28 feet although right-of-way is needed to accommodate more than just curb to curb pavement width. Additional right-of-way is required to accommodate street trees in planter strips, sidewalks and driveway aprons that meet ADA standards. With additional storm water run-off concerns right-of-way widths are not likely to be reduced further although pavement widths may be reduced.

To evaluate whether the narrow street widths were being applied an additional analysis of newly dedicated right-of-way (2001) was conducted by DRC staff. A sample was collected of 395 right-of-way segments in Washington, Clackamas and Multnomah Counties within the UGB. Most right-of-way segments ranged from 30-65 feet in width with the most common being 50 feet. The second most frequent width was 35 feet. The average length was between 268 to 276 feet. Portland had the greatest number of new dedications. From this data it was difficult to discern whether the dedication was only for a portion of the width of the street (i.e., 35 feet of a 70 right-of-way). To examine whether the percentage of street right-of-way dedicated is adequate for different size parcels an additional study would need to be undertaken to examine subdivision plats. This information is not available from the RLIS database and would involve obtaining copies of the plats from each of the counties. For this report, the existing 0-10-18.5 percent deductions will be used. This assumption produces a deduction of a total of 4,900 acres for new streets.

Future Public Schools

Acres for New Schools

In order to estimate the amount of land dedicated for future schools, the ratio of students per acre by elementary, middle and high school is used to calculate the school land need. In past UGRs, this pencils out to 70 students per acre figured for an elementary school, 60 students per acre for a middle school and 55 students per acre for a high school. These ratios are based on the amount of land school district staff believe they will be able to obtain for each of the school types. There are three ways to approach how Metro estimates the amount of land necessary for future schools. One approach is based on what the school district wants to build. The second approach is based on what the school district can obtain under constrained land conditions, and the last approach is based on current conditions.

A projection of student population growth is estimated from the regional forecast. This projection is adjusted to coincide with the UGB capture rate. The estimates are also adjusted to account for the number of students believed to attend private schools or being home schooled. Approximately 90 percent of all students attend public schools.

Each of these options represents a different set of assumptions for how much land per student is required.

“Ideal” Site Size Requirements

	<u>Students Per Acre Ratio</u>	<u>Site Size</u>	<u>Enrollment Size</u>
High School	55	40 acres	2,200 students
Middle School	60	20	1,200
Elementary School	70	10	700

“Constrained” Site Size Requirements – 20% Denser than Ideal

	<u>Students Per Acre Ratio</u>	<u>Site Size</u>	<u>Enrollment Size</u>
High School	65	40 acres	2,600 students
Middle School	70	20	1,400
Elementary School	85	10	850

Actual Student Land Need Ratio, 2001

	<u>Students Per Acre Ratio</u>
High School	50
Middle School	40
Elementary School	52

The “constrained” option was selected with the addition of 200 acres for the 2002 Residential UGR. A total of 900 acres are needed for new schools.

Future Parks

History

The amount of land needed for development of future parks is computed based upon a park ratio of acres of parkland per 1,000 residents. The 1997 Update to the UGR was based on a 1998 survey rate of 20.9 acres per 1,000 residents. This ratio was updated from 14.4 acres per 1,000 that was used in the 1997 UGR. This ratio was based on an inventory of parks and open spaces completed in 1997 (Metro’s Greenspaces Department). The park ratio included neighborhood parks, wildlife refuges and preserves, Metro and municipal open spaces, and regional parks. From this need, acquisitions inside and outside the UGB through the Greenspaces bond measure were subtracted producing a net set aside for parks. The 20.9 ratio used in the 1997 Update resulted in a need of 8,598 acres which was then reduced by 4,900 acres for parks and open space acquisitions (past and future) both inside and outside of the UGB. The total deduction for parks was 3,678 acres (3,700 rounded).¹⁸

Review by MPAC Parks Subcommittee

The MPAC Parks Subcommittee was charged with making an estimate recommendation for future park land needs. They explored five possible methods of estimating future parks and their likely impact on the housing and job capacity calculations within the Metro UGB.¹⁹ A summary description of each approach follows:

1) Existing Ratio. This is an estimate based on the existing ratio of acres of parks to people and forecasting new parks from the forecast of new people in the region (20.6 acres per 1,000 residents). Using this method, future parks could consume as many as 10,860 acres.

2) Active Parks Ratio. This is an estimate based on active parks - the active parks being lands like playgrounds and ball fields, the passive parks being features like steep slopes, streams, etc. This

¹⁸ Source: Technical Appendix to Dwelling Unit Capacity Estimates for the 1999 UGR, December 1999.

¹⁹ For more information about the MPAC Parks Subcommittee report, refer to A Background Report for Estimating Future Parks and their Capacity Implications within the Metro UGB, June 19, 2002.

method yields an estimate of about 2,290 acres of new active parks. Passive park lands, likely to have little development potential, are not accounted for in this paper.

3) Historic Rate. This approach looks at the actual rate of addition of park and open spaces to the UGB for several different periods. This method yields an estimate of at least 8,000 acres of new parks land need.

4) Parks-to-Developed Land Ratio. This method estimates future parks based on the past ratio of parks to developed land. However, while it documents that there are about 16 acres of parks and open space for every 100 acres of developed land as of the year 2002, it does not yield a year 2022 estimate.

5) Fiscal Resource. This is an estimate based on the existing fiscal resources available to purchase new lands. This is estimated in large part based on estimates of existing system development charges as well as any dedicated local bond measures also available to purchase open space. This method yields an estimate of about 1,050 acres.

The MPAC Parks Subcommittee believes the best estimate for future parks is about 1,050 acres over the next 20 years. This estimate is based on what is financially justifiable by using available revenue sources (primarily system development charges). It should be noted that this estimate does not take into account the impact of future funding mechanisms that may be approved and implemented in the future. It is also based on acquisition of those types of parks that could be expected to be provided in conjunction with new development and that would need to be located on lands that could otherwise accommodate new jobs or housing. These lands would accommodate active parks that usually need relatively flat building sites to accommodate playgrounds, sports fields, etc. It was also the conclusion of the MPAC Subcommittee that this does not reflect the desired level of parks throughout the UGB. Subsequent to this, MPAC recommended 2,300 acres based on the expectation that resources exceed the base System Development Charges level, but Council selected 1,100 acres because they felt they couldn't count on the extra funds.

At this time, 1,050 acres are assumed to be needed for future parks, as recommended by the MPAC Parks Subcommittee. For purposes of the Residential UGR, 1,050 acres has been rounded to 1,100 acres.

Future Places of Worship and Fraternal Organizations

The total deduction for places of worship is 700 acres.²⁰ The land need for future places of worship and fraternal organizations are based upon a ratio of 1.4 acres per 1,000 persons which reflects existing conditions that was calculated in 1994 for the 1997 UGR. An estimate of the ratio applied to population projections and the amount of land for future need for places of worship and fraternal organizations are calculated and then the current vacant land holdings of these organizations are deducted from the future need. Rather than removing the specific parcels owned by places of worship and fraternal organizations, these parcels were retained as part of the region's buildable land supply, and 700 acres of land need was deducted proportionally from parcels of gross vacant buildable land, in the same manner as schools and parks. Approximately 85 percent of the need for these uses are estimated to occur in residential areas, with the remaining 15 percent in commercial areas (based on historic land holding patterns). The same assumption was used in the 1997 UGR and subsequent updates.

²⁰ Source: RLIS 2000 data.

Re-use and Redevelopment of Church Lands

Metro Council pointed out that there are a number of religious organizations that have developed affordable and senior housing on church owned lands that were previously committed for religious purposes. It appears that although this is occurring it is difficult to accurately measure how many of these instances have taken place. Staff has queried Metro Housing program staff and some local governments to get a sense of where these changes have taken place and the frequency of the occurrence.

Anecdotal evidence has indicated that churches are frequently broadening their mission and providing more social services, daycare and education. Although this has obvious benefits to the community, this may raise compatibility issues in residential neighborhoods where most churches are located. Most zoning codes currently permit church uses to occur in residential and commercial zones. In addition to providing some of the services mentioned above, there have been some instances where church sites are redeveloped for housing use.

Redevelopment of church sites may be most applicable in areas found in older neighborhoods that are losing membership as their membership ages. Although St. Anthony's in southeast Portland has been developed as a model for the Archdioceses of Portland that they hope can be replicated in other parts of the country the decision to undertake this type of development is up to the individual parish. Individual parishes within the Catholic Church are responsible for buying, selling and developing their land and there is no overall stated mission by the church to require or encourage this type of activity.

The Housing Technical Advisory Committee (HTAC) examined the St. Anthony's model and tried to assess the probability of replicating this elsewhere in the region. An initial search of church properties in RLIS as well as contacts with church groups proved difficult and was not pursued.

Because of the lack of evidence of a trend that these lands are fulfilling some of the housing demand it is recommended that redevelopment activity on these types of lands be monitored in the future to ascertain whether redevelopment of these sites is occurring by developing parking lots, excess land or converting church buildings to housing uses. In the meantime, selection of an appropriate refill rate could include a judgement of the rate of this redevelopment activity.

Major Utility Easements

The total amount of actual land used for easements by natural gas, electric and petroleum utilities, and radio and TV towers is 700 acres.²¹ Radio and TV tower tax lots were identified and removed from the buildable land inventory. Easements for major utilities consist of linear corridors of land based on specific width requirements for public safety. These include a 75-foot easement requirement for Bonneville Power Administration lines and natural gas lines, and a federal 50-foot standard for petroleum pipelines. Easements typically allow very limited uses and do not allow the construction of buildings in these areas and are therefore removed from the buildable land inventory. This deduction is a new factor that has been included to more fully approximate non-buildable land.

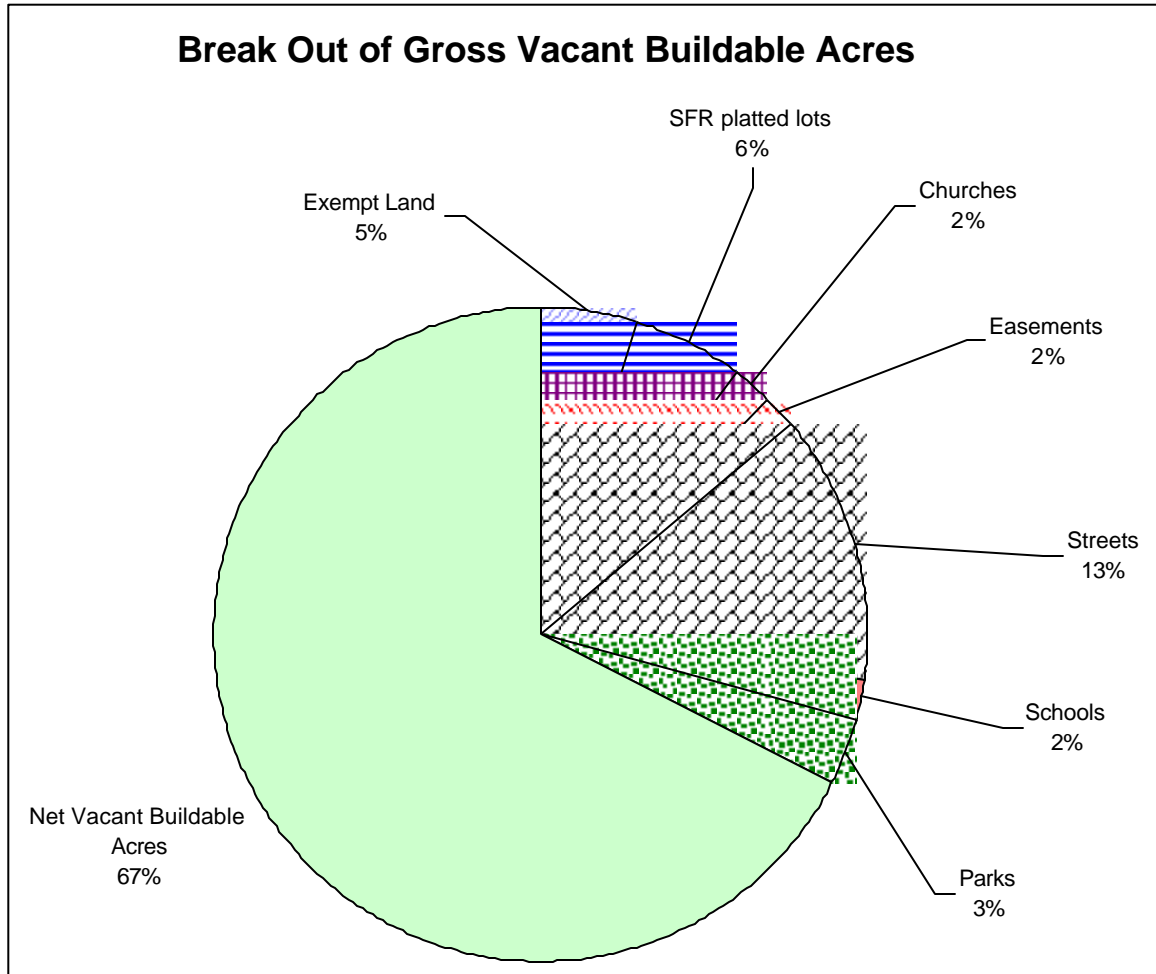
Gross vacant buildable land minus land needed for future streets, schools, parks, places of worship/fraternal organizations, and major utility easements yields Net Vacant Buildable Acres. The aggregate rate of reduction from GVBA based upon these various components is approximately 25 percent.

²¹ Source: RLIS 2000 data.

Figure 2: Break Out of Total Gross Vacant Buildable Acres

Figure 2 graphically depicts the relative size of each category of land that is removed from gross vacant buildable acres.

Figure 2



Net Vacant Buildable Land

The region's dwelling unit capacity is estimated from net vacant buildable acres (NVBA). NVBA is broken out by residential uses according to the underlying zoning of each parcel. A total of 14,900 acres of NVBA is available for conversion to residential uses.

Land Adjustments

A new factor is reserved for adjustments to the buildable land supply so that the most accurate information is available for the 2002 Residential UGR. The vacant and buildable land supply is based on 2000 aerial photography that was flown in July 2000. There may be instances where local governments have adopted area plans, such as the Washington Square Regional Center, that increase the residential or employment capacity of lands that was not reflected in the 2000 land supply and 2000 zoning. In addition, federal, state or local governments may have sold vacant public properties that are now available for development such as the Dammasch Hospital site in Wilsonville. There also may be

instances where the Standard Regional Zoning information has been incorrectly identified. A set of decision making rules help guide which lands will be considered for adjustments to the 2002 Residential UGR and which lands will be reconciled during the next legislative process.

A table of all changes is included as Appendix B to the Residential UGR. These changes are anticipated to be ongoing.²²

Decision Rules for Buildable Land Supply Changes

All changes to the buildable land supply must have taken place by December 31, 2002. Any subsequent changes effective after this date would be picked up in a subsequent UGB analyses. A minimum of 20 acres is required because this analysis is conducted on a regional level. Changes would be made to the buildable land supply based on:

- Only those areas will be considered where formal land use action has taken place.
- Errors in a Standardized Regional Zone (SRZ) assignment.
- Mapping error; either an incorrect assignment to vacant or developed categories.
- Change in the categorization of land from public to private ownership, (minimum of 20 acres in size).

²² For more information about land adjustments please refer to May 17, 2002 Memo.

Chapter 5 Residential Supply Analysis

Itemized Accounting of Residential Dwelling Unit Capacity

After adjusting GVBA by various gross-to-net factors (i.e., exempt land, platted lots, future streets, easements, schools, parks and places of worship), the amount of vacant land remaining becomes Net Vacant Buildable Acres (NVBA). The land that is zoned for residential purposes is separated to create the supply of vacant residential land for capacity calculation. This is the vacant land that residential dwelling units can be constructed upon. NVBA available to be converted to dwelling unit capacity totals 14,900 acres.

Dwelling Unit Capacity at Current Local Zoning Densities

Net vacant buildable acres are converted to dwelling unit capacity by aggregating local zoning classifications to Metro's Standard Regionalized Zones (SRZs). RLIS is the source for current local zoning (through 2001). SRZs normalize 746 different zoning categories across 24 cities and 3 counties. SRZs assume the average density in each zone when the assignments are made to the regionalized category. This density applied to the specific location of net buildable acre yields dwelling unit capacity. This is consistent with the method used in the 1999 UGR Update.

Standard Zoning Designations

A new list of standard zoning designations was included in the 1999 Update of the 1997 UGR. Metro staff defined a broader set of zoning designations, to capture a greater level of detail from approximately 746 different zoning categories that now exist throughout the region. The standard zoning designation list was last updated in 2002. The 26 standard regional zoning designations are shown below in Table 4.

Table 4 – Standard Regional Zoning Designations

Standard Regional Zone And Abbreviation	Dwelling Unit Per Net Acre
RRFU (Rural or Future Urban)	10.0
FF (Agricultural or Forestry)	10.0
SRF1 (Single Family 1)	2.0
SRF2 (Single Family 2)	3.0
SRF3 (Single Family 3)	4.5
SRF4 (Single Family 4)	6.0
SRF5 (Single Family 5)	7.5
SRF6 (Single Family 6)	10.0
SRF7 (Single Family 7)	16.5
MFR1 (Multi-family 1)	20.0
MFR2 (Multi-family 2)	40.0
MFR3 (Multi-family 3)	75.0
MFR4 (Multi-family 4)	100.0
MUC1 (Mixed Use Center 1)	14.1
MUC2 (Mixed Use Center 2)	25.9
MUC3 (Mixed Use Center 3)	58.8
CC (Central Commercial)	0
CG (General Commercial)	0
CN (Neighborhood Commercial)	0

Standard Regional Zone And Abbreviation	Dwelling Unit Per Net Acre
CO (Office Commercial)	0
IL (Light Industrial)	0
IH (Heavy Industrial)	0
IA (Industrial Area)	0
IMU (Mixed Use Industrial)	0
PF (Public Facilities)	0
POS (Parks and Open Space)	0

As was discussed above, SRZs represent a range of densities. The previous step uses the midpoint of the range. Dwelling capacity based on these current zoning densities is 108,700 units (prior to the adjustments noted below).

Key Points:

- *The 746 unique local zones have been collapsed into the 26 SRZs.*
- *Gross vacant buildable land minus land needed for future streets, schools, parks, places of worship/fraternal organizations, and major utility easements yields NVBA.*
- *A new deduction is being made for major utility easements in order to more fully account for all buildable lands.*
- *A new factor has been added to reflect adjustments to the 2002 buildable land supply so that the most accurate capacity information is available for the 2002 Residential UGR.*

Residential Development in Mixed Use Areas

Dwelling unit capacity is adjusted to account for additional units generated by residential development on vacant land in mixed-use zones. Additional housing unit capacity from residential development in mixed-use areas is estimated at 10,400 dwelling units.

Underbuild Rate

Underbuild represents a statistical estimate of the dwelling unit capacity lost due to residential development at less than maximum permitted densities in residential zones. The underbuild accounts for such factors as poor access, steep slopes, small or odd shaped lots, neighborhood common areas, greenways, storm water detention areas and many other site specific conditions, that make it difficult to develop at full capacity as indicated by the zoning.

Flexible local codes may allow the market to respond more efficiently to physical constraints. Higher market demand for residential lots may make it more economical to develop solutions to constraints. Higher land prices have the effect of decreasing underbuild because there is a greater profit incentive to use land more efficiently and build closer to maximum densities.

Under the Metro Code Section 3.07.120, regulations establish a minimum density requirement that specifies that residential development must at least be constructed at 80 percent of the maximum density. This requirement was adopted by Metro Council in November 1996 and is being implemented by local jurisdictions through code changes. In effect, the Functional Plan provides assurance that underbuild will be no more than 20 percent for residential development within the UGB. Because this is a regulated floor for zoning capacity the UGR assumes that 80 percent of capacity in residential zoning districts will be achieved. In the 1997 UGR, the Metro Council adopted a rate of 21 percent underbuild

for single family residential development as a result of a study conducted in 1995. For this report, the underbuild rate is assumed to be 20 percent.

Underbuild is reported as a loss of 23,800 dwelling units from zoned capacity.

Residential Refill Rate

Residential refill is defined as development of new residential units on any lot defined in the Metro database as “developed.” Refill is a term that includes both infill and redevelopment. Redevelopment occurs when a structure is removed and another built in its place. Infill occurs when more units are constructed on an existing developed site. Since “vacant” land includes any tax lot or any part of a tax lot that has a vacant portion larger than ½ acre, this includes development on an existing developed lot or partially developed lots with a vacant portion smaller than ½ acre.

Observed residential refill rates were obtained from a Technical Report Residential Refill Study conducted in February 1999 that reported a rate of 25.4 percent. This study was repeated in January 2000 and was entitled Report on the Residential Refill Study for 97-98 reported a rate of 26.3 percent. The studies found that a point estimate of the refill rate could vary based on economic cycles, policy changes and incentives. Policy changes and incentives can increase the rate and the rate is expected to increase over time. Data from these studies suggest that the amount of land added to the UGB is inversely related to refill rates. These rates are averages for the entire region, but reflect areas of the region that have refill rates that are much higher (central city and other areas with high demand and limited supply) and other areas are lower than the regional average. Areas with lower refill rates are most likely due to lessened demand, lower land prices, age of buildings and/or where there is a more readily available supply of vacant land. Development prefers greenfield or vacant sites to sites with constraints that must be resolved prior to development. Redevelopment issues include site contamination, building remediation or land assembly that increase development costs and add uncertainty to the process. These constraints may be offset by the fact that refill parcels are likely to have transportation access and utilities already available.

In the 1999 UGR Update, the Metro Council choose an aspirational refill rate of 28.5 percent. At the time this rate was adopted, existing experience from a study and adopted policies supported a refill rate between of 26.3 percent and 28.5 percent.

Residential Refill Rates

REFILL RATES	
Historical Refill Rates	25.4% to 26.3%
1999 UGR Rate	28.5%

The 2002 Residential UGR assumes a historical refill rate of 26.3 percent and proposes changes to increase the refill rate to 29 percent based on past trends, modeled rates, computation of accessory dwelling units and a combination of incentives and minor policy changes. ORS 197.296(6) provides the legal basis for this proposed increase.

"197.296 (6) If the housing need determined pursuant to subsection (3)(b) of this section is greater than the housing capacity determined pursuant to (3)(a) of this section, the local government shall take one or more of the following actions to accommodate the additional housing need:

- (a) Amend its urban growth boundary to include sufficient buildable lands to accommodate housing needs for the next 20 years. As part of this

process, the local government shall consider the effects taken pursuant to paragraph (b) of this subsection. The amendment shall include sufficient land reasonably necessary to accommodate the siting of new public school facilities. The need and inclusion of lands for new public school facilities shall be a coordinated process between the affected public schools districts and the local government that has the authority to approve the urban growth boundary;

- (b) Amend its comprehensive plan, regional plan, functional plan or land use regulations to include new measures that demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years without expansion of the urban growth boundary. A local government or metropolitan service district that takes this action shall monitor and record the level of development activity and development density by housing type following the date of the adoption of the new measures:
or
- (c) Adopt a combination of the actions described in paragraphs (a) and (b) of this subsection."

Modeled Refill Rates

The MetroScope model produces forecasted refill rates as an output from the model. Rates from the model case studies are helpful in choosing a rate that best reflects the Metro Council's objectives and policy choices for the region. The MetroScope model rates range from 26.6 percent to 50.7 percent depending upon the policy assumptions imbedded in each case study. For example- the Centers and Hold the UGB case studies produced refill rates between 44-50 percent using a very aggressive incentive program that was spread across the region in most all regional and town centers. Even the Damascus case study produced higher refill rates that were spread over the region even though the targeted incentives were located in the Damascus area. Table 5²³ illustrates the different refill rates that could be used to estimate the potential for refill related development if additional capacity was provided through upzoning, incentives or implementation of other programs in different employment zones. For example, the use of incentives in Centers can boost the refill rate by making this type of land more attractive for development.

2040 Centers Implementation Strategy

Metro's consultants recommended that Metro policy focus on the implementation of Regional and Town Centers. The Centers policy needs to start with a recognition that the region's Centers are all evolving at different rates in terms of planning, market position and implementation. Metro can and should play a role in each of the three stages of Centers development. In broad terms, it is helpful to think about the evolution of Centers in three stages: planning, emerging and maturing. Implementation assistance can and should be tailored to each stage along the evolutionary cycle of Centers growth.

The study recommended that the definition of Centers in the Regional Framework Plan be enhanced to better define the concept of Centers without adding more regulatory language dictating densities, mix of uses or transportation requirements.

The primary policy change should focus on implementation. To date, development in Centers has been lacking due to a combination of market realities and the fact that Centers are the most difficult places in the region to do development. Metro policy can facilitate development in Centers through its role as teacher and coach. Amendments to the Functional Plan should provide flexibility for local governments

²³ Table excerpted from Table 3 Localized Refill Rates – MetroScope Case Studies, UGR Primer, June 3, 2002.

to encourage the types of development that is most appropriate for their communities while at the same time encouraging development in Centers. An in depth discussion of Metro's recommended policies are contained in the 2040 Refinement Report, Policy Recommendations.

The Residential UGR anticipated an additional 2.7 percent capacity in designated mixed-use Centers will be achieved through incentives, MTIP, and additional measures to achieve a final refill rate at 29 percent.

New policy directions for inclusion in the Metro Code or the Regional Framework that focus on developing successful Centers include:

- Refine the definition of a Center. The 2040 Growth Concept refers to a "Neighborhood Center" but does not expand on this. The hierarchy of Centers could be expanded to include this type of Center that is smaller than a Town Center.
- Develop additional policies to strengthen Center development. A regional strategy for Centers could include investment in Centers by Metro and efforts by Metro to secure complementary investments by others.
- Monitor and develop performance measures for Centers to determine whether strategies for Centers are succeeding and report the results to the region and the state.
- Develop an incentive program to assist in implementation.
- Focus appropriate types of development in Centers including corresponding policies in other areas such as restricting commercial uses in significant industrial areas.

Next Steps in the Evolution of Centers

A work program to implement the recommendations from the Centers studies and the MPAC Jobs Subcommittee will be developed. This will include development of new Centers policies. Issues that need further examination are:

- Determining the relationship between the Centers and Corridors
- Examining the relationship between the Centers and Employment and Industrial Areas
- Measuring performance
- Determining a process for categorizing and prioritizing the Centers
- Agency roles for Centers development
- Addressing regulations

Accessory Dwelling Units

In November 1996, Metro Council adopted the Functional Plan with a requirement that cities and counties not prohibit the construction of at least one accessory dwelling unit within any detached single family dwelling. Local Governments had a deadline to amend their codes accordingly by February 1999. Based on this requirement in the Functional Plan, the capacity analysis in the 1999 UGR Update provided for accessory units as a proportion of the total number of single family dwellings. In each successive preparation of the UGR all factors are evaluated by staff to determine if they can be supported by available data or if a new methodology can be developed to more accurately reflect market conditions. After review of the accessory dwelling unit factor staff recommended deleting this separate line item due to the fact that accessory dwelling units have proved difficult to count and track. Accessory dwelling units are more appropriately included as an incidental component of the refill rate and as part of the densities assumed on vacant land.

Why do we Expect Increases to Refill Rates in the Future?

The Residential UGR is forecasting a very small increase in the refill rate within the next 20 year period because of several factors. First, the magnitude of change of a refill rate from 26.3 percent to 29 percent is extremely small when the results of that change take place over a 20 year period. For

example, a 6,000 dwelling unit deficit (difference between 26.3 and 29 percent refill rate) over 20 years is only 300 units per year or when compared equally to 24 cities it amounts to an increase of 12.5 units per year. In summary this small increase in the refill assumption is valid for the following reasons:

- Past trends- Metro Refill Studies confirmed rates increasing from 25.4 to 26.3 percent
- 2040 continues to play out in Regional and Town Center development
- Model confirmation- MetroScope confirmed the rate of 26 percent with the Base case model run²⁴
- MetroScope model runs confirm that incentives do indeed produce higher refill rates
- Incentives and policy adjustments will be targeted at areas where demand is greatest such as Regional and Town Centers that are performing well and the Central East Side Industrial District
- Accessory dwelling units are now included in the refill rate
- New Refill Study- will be performed as part of Performance Measures follow up work

When do we expect to see changes in the refill rate?

Undoubtedly time will pass before changes in the refill rate can be observed in either a localized basis or regionally. The reason for this delay is that policy changes take time to be drafted and implemented. In addition, the market needs time to respond to policy changes and the availability of incentives to create measurable results also takes time. Examples of incentive programs range from increased MTIP allocations, implementation of additional urban renewal districts, and availability of additional resources to recruit and locate target business in Regional and Town Centers. Selected policy changes in specific areas could raise the rates in those areas as well as the overall regional refill rate and justify the use of a higher refill rate in the 2002 Residential UGR. The Central east side Industrial district has a refill rate in the Base case of 40 percent which increases to upwards of 90 percent in the Centers and Hold the UGB cases. Granted these cases applied a very aggressive refill strategy that is not expected to be duplicated for this area but it shows the tremendous upside for realizing a higher refill rate (both localized and regionally). No other Center showed such a dramatic increase. For example- the City of Portland will be developing a work program to review the plan for the Central City area in 2003. This work is anticipated to take approximately one year to complete. Amending a plan that could allow more housing opportunities in this district generally takes 3-4 years to complete. Certainly this planning and allowance for market adjustments can be accomplished with the 20 year planning horizon and justify a slightly higher overall regional rate.

Based upon proposed adoption of a “Centers” strategy, including the application of MTIP funding to areas that are achieving increased centers development Metro is proposing a 29 percent refill rate.

²⁴ The difference between the observed rate of 26.3% and the Base case of 26.6% is probably not statistically significant.

Table 5: Localized Refill Rates – MetroScope Case Studies

Employment Zones	Areas ²⁵	Base Case	Damascus	Centers	Hold the UGB	Rate Differences Between Base and Hold UGB
106	Central Eastside	40.4	42.0	90.4	96.1	55.7
304, 306	Beaverton	52.1	54.1	68.1	67.7	15.6
202, 203	Clackamas TC	20.25	45.4	27.9	31.25	11.0
124	Gresham	15.6	20.1	36.6	38.0	22.4
311, 312	Hillsboro	34.2	38.75	45.1	44.7	10.5
206	Oregon City	19.8	35.7	39.3	38.8	19.0
101	Portland CBD	99.6	99.6	99.7	99.8	.2
303	Tigard	53.0	54.0	72.8	72.4	19.4
301	Tualatin	13.1	25.9	34.9	34.4	21.3
211	Wilsonville	11.5	18.0	16.8	20.3	8.8
213	West Linn	7.1	7.7	12.9	17.1	10.0
All zones	Regional Rate ²⁶	26.6	32.3	44.0	50.7	24.1

Key Points

- *Metro Refill Study confirms a refill rate between 26.3 and 30 percent.*
- *MetroScope model runs confirm that incentive programs can produce higher refill rates.*
- *A key finding from this research is that the region’s needs and Metro’s function have changed since the adoption of the existing policies related to the 2040 Growth Concept.*
- *Focus policy changes on implementation.*
- *By focusing on incentives in Centers we can achieve a refill rate of 29 percent.*
- *A work program to implement the recommendations from the Centers studies and the MPAC Jobs Subcommittee will be developed.*

²⁵ Areas are rough approximations of regional and town center boundaries. Regional and town center boundaries do not nest within MetroScope employment zones.

²⁶ Includes all zones not just those listed in the selected areas above.

Appendix A

Table Notes

- 1a-1b. Source: Metro Data Resource Center, Metro Report, Economic Report to the Metro Council, 2000-2030 Regional Forecast, March 2002, preliminary draft.
2. Source: Capture rate assumption derived from MetroScope base case study and the historical capture rate from 1980-98. The capture rate is defined as the proportion of housing (or employment) that locates inside the Metro UGB relative to the four-county area (Multnomah, Clackamas, Washington and Clark). Other case study options which were tested and investigated with the MetroScope real estate and land use model indicate a range of potential capture rates depending on different land use policy assumptions.

Case Study Option Test Scenario:	Periodic Capture Rates (percent)					Entire 2000-25
	2000-05	2005-10	2010-15	2015-20	2020-25	
Base Case	71.9	79.0	57.0	72.6	54.5	66.2
I-5 Transportation Study	71.9	79.0	57.0	72.6	54.5	66.0
Centers Enhancement	71.9	75.4	51.5	71.8	35.5	59.0
Damascus/New Community	71.9	77.7	54.9	71.1	35.6	60.0
No UGB Expansion	71.9	75.7	52.5	73.5	37.7	60.4

Source: MetroScope case studies

Metro Region Capture Rates

Metro Capture Rates - 5 years:	1980-85	1985-90	1990-95	1995-00
Households	65.5%	53.7%	76.6%	68.8%
Metro Capture Rates - 10 years:	1980-90		1990-00	
Households	58.2%		72.9%	
Metro Capture Rates - 20 years:	1980-00			
Households	67.8%			

Historical Capture 1980-98 = 70%

Source: Census reports, building permits, PSU population estimates as compile by Metro DRC.

3. Source: Metro DRC analysis as compiled from Portland General Electric vacancy data. We assume a vacancy rate of 4 percent based on the average historical trend. Vacancy rates vary widely from year-to-year based on available housing supply and the amount of current demand. Speculation by homebuilders in one period may tend to overbuild and create a surplus stock, which pushes up the vacancy rate. In periods of strong population growth, vacancy rates fall due to higher demand for housing. In slack periods vacancy rates may rise due to lower

population demand. The PGE data show vacancy rates swings of between 3.5 percent to 7.6 percent and the 2000 Census estimate of 6.2 percent. Finally, vacancy rates may never decrease close to zero because of "frictional vacancy." People change homes all the time, so in order to facilitate these moves, there necessarily has to be a percentage of the housing stock that remains unoccupied.

4. Dwelling Unit Demand is calculated from the household forecast with the 4 percent vacancy rate added to the projected change in household total to arrive at this figure.
5. Source: Metro RLIS, 2000. Vacant Land Analysis.
- 6a. Source: Metro RLIS, 2000. GIS tabulation of Title 3 regulation for water quality protection. This data layer includes five parts: 1) streams and rivers, 2) variable 75 to 200 foot riparian buffer (for water quality protection only), 3) 1996 flood area, 4) 100-year flood plain and 5) wetlands.
7. Gross Vacant Buildable Acres is calculated as the difference in gross vacant land less Title 3 setbacks for water quality protection.
8. Source: Metro RLIS, 2000. Land that is identified in the county assessors' records as tax exempt and owned by federal, state or municipal authorities is set aside from the buildable land and assumed to be reserved for future public facilities.
9. Source: Metro RLIS, 2000. Individual tax lots (i.e., platted lots) zoned for single family and under 3/8 acre are set aside from the supply of buildable land. We assume one dwelling unit for each lot. This is added back into the dwelling unit capacity estimate in line 23. – Lots are reported in acres and later translate to units.
10. Source: Metro RLIS, 2000. Estimated future land need for future churches is determined on a per capita basis of 1.4 acres per 1,000 future residents. This rate was determined in 1994 for the 1997 UGR.
11. Source: Metro RLIS, 2000. Actual GIS tabulation of known major easements for radio/TV towers, natural gas, petroleum and electricity lines intersecting with Metro's vacant land data. (Note: significant portions of the easements show development existing on it today.)
12. Source: Metro Data Resource Center analysis of street dedications in new subdivisions, unpublished GIS report, 1994. In this study, we determined that subdivisions or areas greater than one acre which have developed for residential purposes usually dedicate up to 18.5 percent of the initial buildable lot area for street. If the initial development site is under 3/8 acre, we found that the existing street network provided sufficient access to home sites. Development sites between 3/8 and one acre usually dedicated about 10 percent of the initial site area to streets.
13. Source: Interviews with local school district building facilities managers and site selection committees. The three methods assumed a different student per acre ratio for determining future school land need. The estimated land need ranged from 700 to 1,200 acres. **(Sample may not be scientifically representative.)** Council acknowledged a greater need for schools by choosing a deduction for future schools of 900 acres.

14. The 1997 UGR park ratio included neighborhood parks, wildlife refuges and preserves, Metro and municipal open spaces and regional parks.

The methods under consideration for calculating future parkland provide a range of values from 10,860, to 8,000, to 2,290 to 1,050 acres depending upon the ratio used. The MPAC Parks Subcommittee recommended a method based on the existing fiscal resources available to purchase new lands. This method yields an estimate of 1,050 acres (1,100 acres rounded).

15. Net Vacant Buildable Acres is a term of art in the Urban Growth Report. This estimate of land supply/inventory is the amount of vacant land that is available for accommodating future jobs and housing after deducting for the gross-to-net factors previously described.
16. Amount of Net Vacant Buildable Areas for accommodating future employment. – See the 2002-2022 Urban Growth Report: An Employment Land Need Analysis.
17. Amount of Net Vacant Buildable Areas for accommodating future housing.
18. Source: RLIS 2001 for zoning and 2000 Vacant Lands Analysis for buildable lands. The calculation of dwelling unit capacity is the product of residential land standardized regional zone designations that correspond to single and multi-family densities per local zones.
19. An estimate of the amount of vacant mixed use land designated in town centers and regional centers which will go toward brand new housing units. This figure does not account for mixed use redevelopment which will also add dwelling units to the region's capacity. The mixed use redevelopment amount is accounted for in line 21.
20. Based on what Metro's functional plan requires and regulates municipalities and counties to achieve at least 80 percent of their stated zoning densities.
21. Source: Metro Redevelopment Study, 1998. The latest actual readings of the amount of redevelopment is 25.4 percent (1994-96) and 26.5 percent (1996-98) of all new residential units are developed on parcels that Metro has identified as developed in its Vacant Land Inventory procedures.

MetroScope

Case Study Options	Estimated Refill Rate
Base Case	26.6%
I-5 Transportation Study	26.6
Centers Enhancement	44.0
Damascus/New Community	32.3
No UGB Expansion	50.7

Metro Council in its prior decision assumed an "aspirational" residential refill rate of 28.5 percent.

22. Source: Metro RLIS, 2000. An actual count of the number of tax lots which are wholly inside the Title 3 Water Quality protection area.

23. Source: Metro RLIS, 2000. The actual number of tax lots under 3/8 of an acre regardless of single family zoning density is added back as the number of already platted lots.
- 24.- Land adjustments are the land capacity for those items not included in line 18.
- 24d. See Appendix B.
25. Dwelling Unit Capacity is the summation of all the adjusted dwelling unit factors from above.
26. Additional policy actions effectively increase the refill rate by 2.7 percent to a total of 29 percent.
27. Adjusted dwelling unit capacity takes into consideration the effects of the additional policy actions applied inside of the UGB.
28. The estimated need is the difference between supply (i.e., dwelling unit capacity) and demand. The amount is negative which indicates a shortage of capacity in the current UGB.

Appendix B

Land Adjustments

Criteria:

- changes between July 2000 and December 2001
- formal action has been taken
- error in a SRZ
- mapping error
- change in the categorization of land from public to private ownership and a minimum of 20 acres in size

Villebois

Tax Lots:

31W15 02800 42 acres

31W15 02900 130 acres

City has this zoned for public facilities. Although planning efforts have been undertaken, there is no adopted plan for rezoning the area at this time. There is a Master Plan that was adopted by resolution in 1997. It is not an element of the comprehensive plan nor has any rezoning taken place. At this time, there is a study of this area in progress which is refining the Master Plan and rezoning is anticipated early next year to start the PUD process.

Although it is not in the Comprehensive Plan, it is possible to assume 2,300 dwelling units for this area for two reasons.

First, there is a reference in the Wilsonville Comprehensive Plan that states that development of the area has to be in conformance with the Master Plan which calls for 2,300 dwelling units. Second, in selling the property, the State placed a condition that at least 2,300 housing units would be built there. Right now, there is no estimate of employment capacity but it is expected that the employment uses would serve the housing and not, due to transportation limitations, become a destination area. There is an intent to provide employment and some thought is being given to design a community that is very supportive of home base occupations.

The Metro SRZ is General Commercial; maybe more appropriate as SFR 7.

West Hayden Island

Tax Lots:

2N1E19 00100	37 acres
2N1E19 00200	1 acre
2N1E19 00300	54 acres
2N1E28 00200	87 acres
2N1E29 00200	23 acres
2N1E29 00300	410 acres
2N1E29 00400	15 acres
2N1E30 00100	11 acres
2N1E30 00200	78 acres
2N1E30 00300	28 acres
2N1E30 00400	4 acres
2N1E33B 00200	6 acres

2N1E33B 00300	27 acres
2N1E33B 00400	3 acres
2N1E33B 00500	12 acres
2N1E33B 01100	1 acre
2N1W24 00100	1 acre

Total approximate acres: 798

Zoning brought into the UGB for a marine terminal only. The City has maintained the County's agricultural/forestry zoning.

The Metro SRZ for this site is Agricultural or Forestry which assumes 10 units to the acre, need to amend the Metro SRZ to Heavy Industrial, Parks/Open Space or Public Facilities.

Marylhurst

Tax Lots:

21E14 00300	55 acres
21E14 00400	52 acres
21E14 00401	7 acres
21E14 00402	8 acres

Total approximate acres: 122

Zoning: Lake Oswego has zoned this property Office Commercial and Office Campus. The 1995 Master Plan allows for 680 dwelling units.

Current Metro SRZ is Office Commercial that does not assume housing, need to amend the Metro SRZ to MUC 1.

Rosemont School

Tax Lots – numerous starts with 1N1E15BD

The site is approximately 8 acres and will accommodate 165 dwelling units.

Current Metro SRZ is MFR 1; this is the correct SRZ.

Camp Withycombe

Tax Lots:

22E09A 00900	43 acres
22E09A 00901	5 acres
22E10 00601	123 acres
22E10 00602	27 acres
22E10 00691	37 acres

Total approximate acres: 235

The State of Oregon owns Camp Withycombe. The area including the firing ranges was purchased by ODOT for Sunrise Corridor. The land, suitable for development, which would remain after the highway is built, is likely to be less than 20 acres in size and have wetland and hazardous material issues. The remaining portion of the camp (other than the firing ranges) will continue to be used for military purposes.

Current Metro SRZ is Heavy Industrial, need to amend to Public Facilities.

Durham Quarry

Tax Lots:

2S113AC01200	8 acres	Tigard
2S113DB00100	20 Acres	Tualatin

There is a Mixed-use Overlay Zone on the Quarry. Through an IGA, Tualatin is dealing with the application. Housing is an allowed use at a range of 25-50 units per acre but not required. There will be approximately 3,000 jobs generated at full build out of the quarry. There has been some interest in developing housing but the bulk of the development is most likely to be commercial.

Current Metro SRZ is Mixed Use Industrial on the Tigard portion and General Commercial on the Tualatin portion. This needs to be amended to Office Commercial or, if we want to assume some housing will be developed, MUC 2.

Washington Square Regional Center

Tigard portion adopted in February 2002. As it is a Regional Center, it is included in the amendments even though it was adopted after December 2001. There are no changes to Washington County and Beaverton portions.

Added capacity of 1,500 housing units and 4,465 jobs, approximately 986 acres.

Amend the Metro SRZ.

Downtown Lake Oswego

Metro SRZ is Central Commercial, should be amended MUC 2.

Alpenrose Dairy

Tax Lots:

1S1E18 00100	51.4 acres
1S1E8CC 00100	.4 acres

It is used for industrial purposes but it is zoned and the comp plan designation is for low density housing. R-10 – 10,000 sq. ft. lots and R-7 – 7,000 sq. ft. lots.

Current Metro SRZ is either SFR4 or SFR5, needs to be amended to SFR3.

Rock Creek – Happy Valley

Tax Lots:

various 12E36D, 22E01(A,B&D), 23E06(B&D)

Housing Capacity is 2,997

Job Capacity is 904

Current Metro SRZ is Rural Residential and Agricultural, needs to be amended to MUC 1, MUC 2, SFR 2 and SFR 5.

Coffee Creek Prison

Tax Lots:

Map 3S-1-3AB Tax Lots 500, 600, 700, 701, 702

Map 3S-1-3A Tax Lots 1300,1301, 1400, 1500, 1600, 1601

Map 3S-1-3AA Tax Lots 800, 900, 1000, to include the Bonneville Power Administration easement
119 Acres

At build out, the prison will house 1,252 inmates and employ 430 people.

Current Metro SRZ is Mixed Use Industrial, should be amended to SFR6.

Former Urban Reserve No. 55

300 Acres

The City has not rezoned this property. A consultant has been hired to prepare a plan for this area. The Court of Appeals decision was rendered in February 2002 and the City did not develop any plans during the appeal period.

Current Metro SRZ is Rural Residential, this is the correct SRZ at this time.

Appendix C

Document Reference Section

Many different documents were used for background information in creating the Residential UGR. For additional information please refer to the following list of documents:

- Economic Report to the Metro Council: 2000-2030 Regional Forecast – March 2002
- 2000 Vacant Land Supply Inventory
- UGR Primer – June 2002
- Centers Study – June 2002
- School Site Staff Report – July 2002
- Land Adjustments Memo – May 17, 2002
- Parks Subcommittee Report – June 2002
- MetroScope Findings Report – 2002

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