



2005 – 2060 Regional Population and Employment Forecast

for the seven-county
Portland-Beaverton-Vancouver OR-WA
Primary Metropolitan Statistical Area
(PMSA)

Public Review Draft May 19, 2008



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Overview

The 2007 Oregon Legislature adopted ambitious legislation reforming the growth management process in the Portland region. Senate Bill 1011, which was supported by a broad coalition of public and private partners, offers Metro, along with Clackamas, Multnomah, and Washington counties, greater flexibility in determining which areas are most suitable for accommodating growth. It also provides increased long-term protection for important farm and forest lands and natural landscape features.

Among other provisions, SB 1011 provides new factors to guide the designation of urban reserves, those areas that will be first in line for inclusion within the urban growth boundary (UGB). These areas, in conjunction with land already within the UGB, will provide 40-50 years of capacity for urban growth.

To begin the regional growth management discussion, Metro has developed this long-range population and employment forecast. Metro, the three counties and local governments are engaged in a collaborative planning process through which they will refine the long-range population and employment forecast and allocate 30 years of the forecasted growth to various locations in the region.

Disclaimer

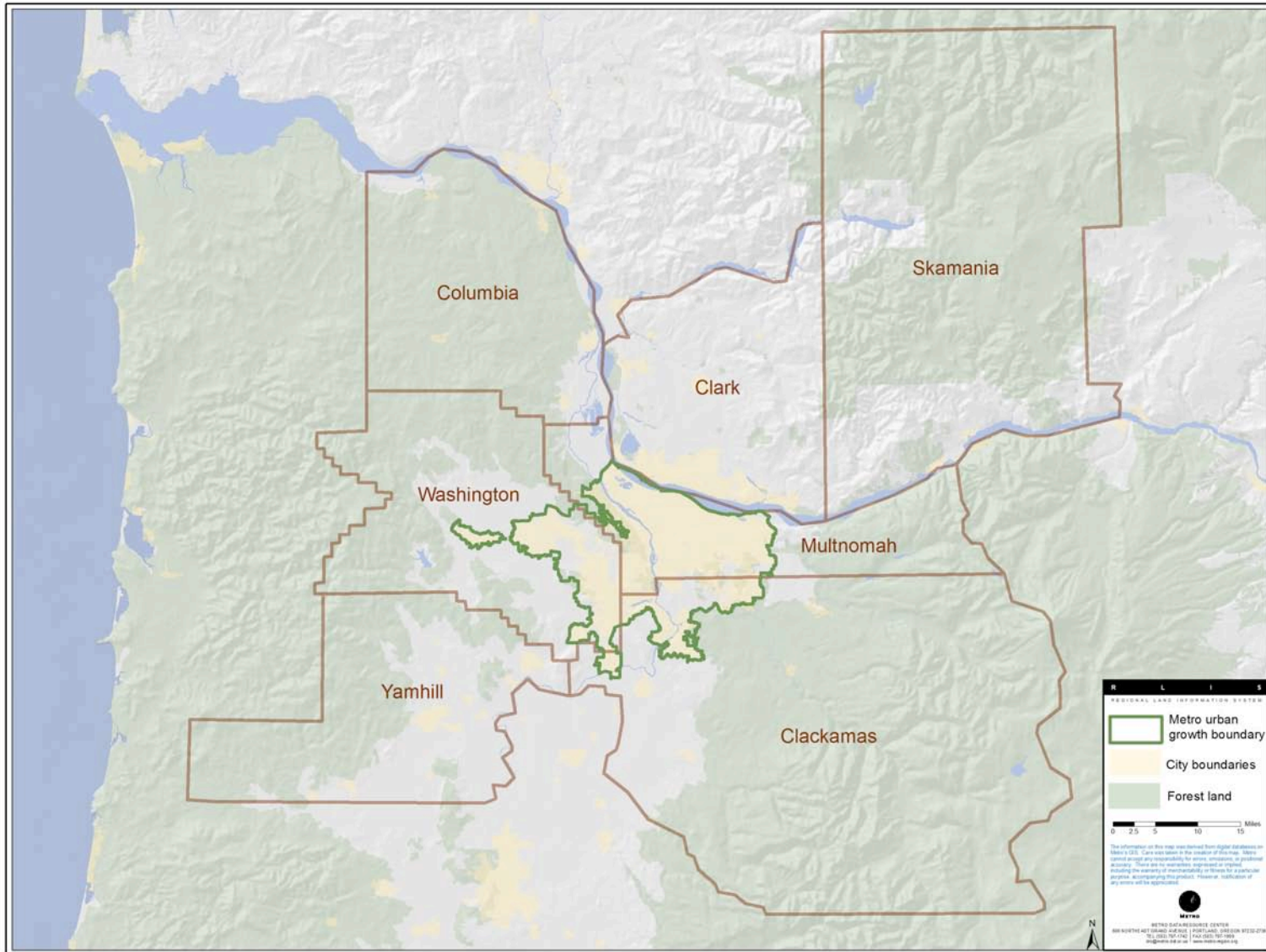
These forecasts are necessarily imprecise due to their long time horizon. Because of the many uncertainties associated with this 50-year scope, rather than selecting single numbers as projected 2060 population and employment levels, this report considers multiple scenarios and offers a range of projections.

These forecasts do not represent any policy agenda or policy decision of the Metro Council.

Why produce population and employment forecasts?

To plan for the future, you need to have an idea what the future might look like. To carry out their responsibilities in the areas of land use and transportation planning, governments of the region depend on credible forecasts of future population and jobs. Authorities ranging from the Metro Charter to Oregon statutes to federal law also require similar forecasts. Over several decades, Metro's Data Resource Center has developed sophisticated tools for generating the forecasts that inform the region's planning work. These forecasts are also used by many other public and private entities.

As noted above, the 2060 forecasts will be used by the region in designation of urban reserve areas. The use of forecasts in the reserve process is described at the conclusion of this document.



Map 1: Portland-Beaverton-Vancouver OR-WA PMSA

(Geographic extent of the regional forecast encompasses seven counties. The Metro UGB comprises a fraction of the land area of the region.)

Summary results

Based on a range of assumptions and growth rates, Metro’s Data Resource Center made five projections for the year 2060 of population and employment in the seven-county Portland-Beaverton-Vancouver Primary Metropolitan Statistical Area (PMSA), which consists of Clackamas, Columbia, Multnomah, Washington and Yamhill counties in Oregon as well as Clark and Skamania counties in Washington.

	U.S. Trend (0.8% Trend)	Econometric Trend	OR Trend (1.4% Trend)	Ptld. 1980- 2000 (1.8% Trend)	Ptld. 1960- 2000 (2.0% Trend)
2000 Census	1,927,881	1,927,881	1,927,881	1,927,881	1,927,881
2035 Population	2.7 million	3.2 million	3.2 million	3.6 million	3.8 million
2060 Population	3.2 million	3.8 million	4.5 million	5.6 million	6.2 million
2000 BLS* Employment	973,200	973,200	973,200	973,200	973,200
2035 Employment	1.4 million	1.7 million	1.7 million	1.9 million	2.0 million
2060 Employment	1.7 million	2.0 million	2.4 million	3.0 million	3.3 million

*Bureau of Labor Statistics

Figure 1: Population and employment scenario projections for the Portland-Beaverton-Vancouver OR-WA PMSA

Source: Metro

How did Metro produce these projections?

Metro produces the “econometric trend” Portland regional forecast through 2035 using its own state-of-the-art regional econometric model. This model, which is maintained and operated by in-house Metro staff, has been thoroughly vetted by an independent panel of economic and demographic experts from across the U.S. It relies on national growth factors obtained from the economic forecasting firm Global Insight, Inc., as well as birth and death rates derived from the U.S. Census Bureau’s most current “middle series” fertility and survival rates. Both the national economic data and national demographic forecast data are then regionalized based on regional growth factors; net migration into the region pegged to relative differences between regional and national economic growth factors; and actual birth and death rates derived from local vital statistics. Population and migration trends are directly linked to specific economic sectors modeled in the regional econometric model, so employment trends and population growth are dependent upon one another.

Global Insight does not produce a U.S. macroeconomic outlook that extends more than 30 years into the future. Consequently, to complete the “econometric trend” forecast to the full 2060 horizon, the post-2030 population trend from the regional econometric forecast has simply been extrapolated forward to converge with the trend growth rate predicted for U.S. population. Population growth for the Portland-Beaverton-Vancouver OR-WA PMSA is projected to average 1.4 percent per year from 2000 to 2035, and 0.8 percent per year from 2035 to 2060.

The projected employment trend for 2000 to 2035 is derived from Metro’s regional econometric model and driven by the Global Insight U.S. macroeconomic outlook. Post-2035 employment projections are extrapolated based on a stable employment-population ratio.

The other four scenarios extrapolate various plausible population trends into the future:

- **U.S. Trend:** The average annual rate of growth as projected by Global Insight, Inc. and the U.S. Census Bureau for the entire U.S. population through 2035 is 0.8 percent. This projection assumes a similar growth rate for the Portland region through 2060.
- **Oregon Trend:** This projection assumes a 1.4 percent rate of population growth, the projected growth rate for the state of Oregon overall as estimated by the State Demographer.
- **Portland PMSA 1980-2000 Trend:** This projection assumes a 1.8 percent rate of population growth, the region’s average annual growth rate from 1980 to 2000.
- **Portland PMSA 1960-2000 Trend:** This projection assumes a 2.0 percent rate of population growth, the region’s average annual growth rate from 1960 to 2000.

Figures 2 and 3, which chart the five scenarios projected in this report, indicate the range of possibilities.

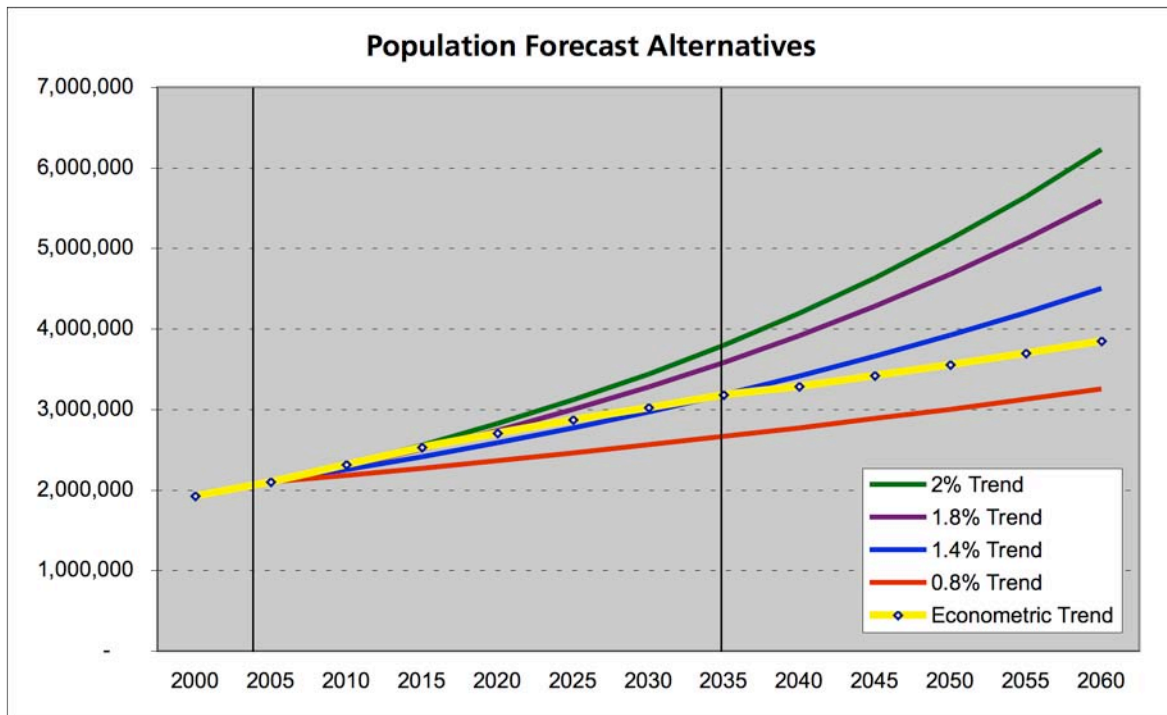


Figure 2: Population scenarios for the Portland-Beaverton-Vancouver OR-WA PMSA

Source: Metro

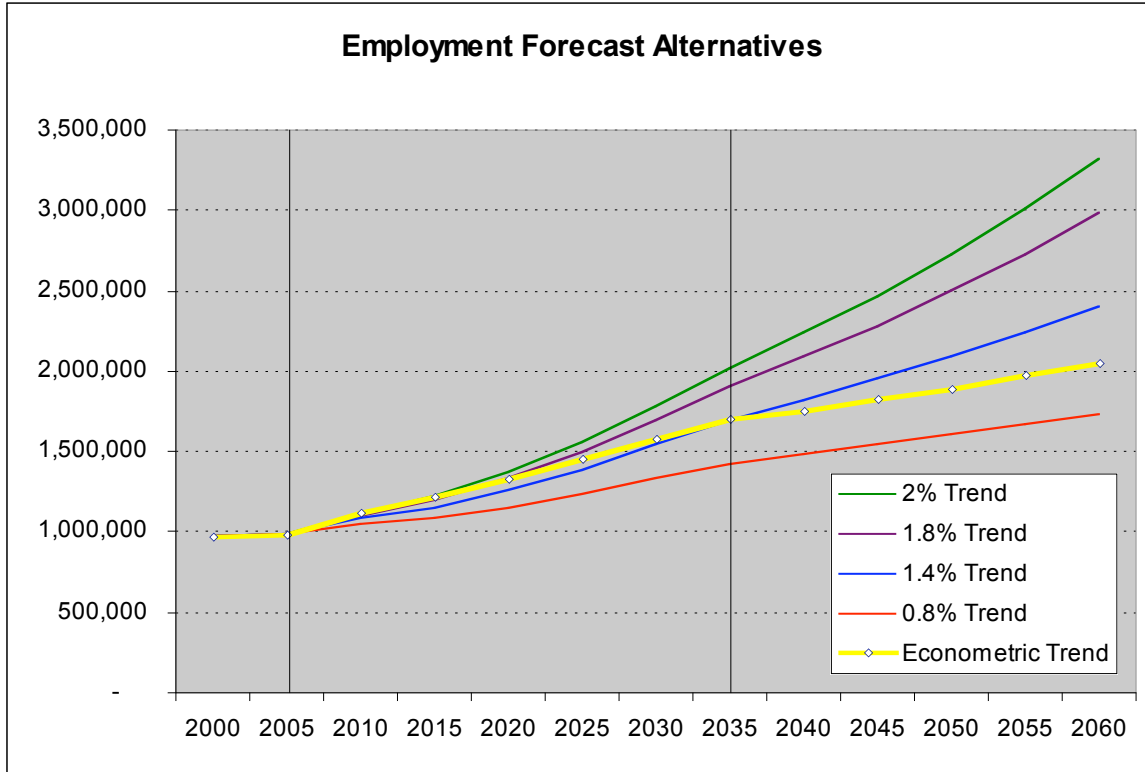


Figure 3: Employment scenarios for the Portland-Beaverton-Vancouver OR-WA PMSA

Source: Metro

What are the variables?

The regional economy is increasingly dependent on global and national forces that are beyond the region's influence and are not easily quantifiable through standard economic tools.

Economic globalization affects the flow of trade, foreign exchange rates, and the cost and availability of foreign and domestic skilled and unskilled labor.

Another trend that may or may not be within the region's influence is the influx of members of the so-called "creative class" to the Portland region, which has contributed to growth in the region's knowledge-based industries. Population growth in the region continues to reflect the region's status as one of the nation's more desirable metropolitan areas; population continued to increase even as employment stagnated during the recession during the early part of this decade.

These are but a few examples of the many factors that will ultimately affect both population and employment trends in the region.

How do the projections compare to historical growth rates?

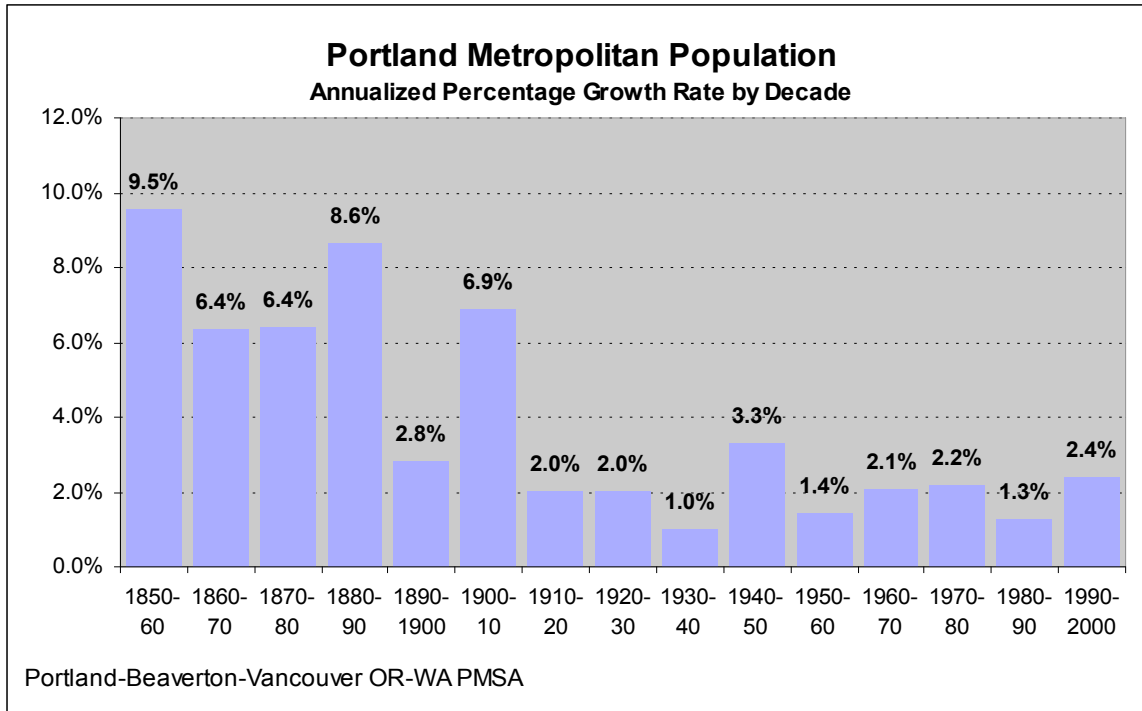


Figure 4: Decade-by-decade illustration of population trends for the Portland-Beaverton-Vancouver OR-WA PMSA from 1850 to 2000

Source: US Census as compiled by Metro (geographic extent of the PMSA is the same seven counties for purposes of calculation consistency, despite updates and changes in PMSA definition over the years)

Figure 4 helps put the five population growth scenarios in perspective with historical population trends. All five scenarios project slower population growth in the region for the next 50 years than has historically been experienced since the inception of the state.

Population trends have varied widely since 1850. At a glance, the historical data show two distinct periods of growth: 1) a hyper-expansion phase that carried through the early pioneer days and ensuing decades through 1910, when the base population of the region was small, and 2) a slower pace over the last century, reflecting the maturation of Portland as a metropolitan area.

Population growth in the region averaged 2.44 percent per year during the 20th century. It took over 100 years before the region’s population reached one million residents in 1966. In recent decades, the effect of annual compounding growth on a larger population base (even at the relatively modest rate of 1.9 percent) pushed population to two million people in only 36 years – one-third the time it took following statehood to reach the first million residents of the region.

Which scenario projection is the right number?

There is no “right” number. These numbers represent neither ironclad predictions nor desires, but rather projections of what might happen based on our knowledge of the past and research-based forecasts of future economic and demographic trends. Over time, we may be able to narrow the range between the high and low estimates, and the region will make major land use and transportation decisions based on our best estimates of future population and job counts, but it is impossible to eliminate uncertainty when projecting a half-century into the future.

An emerging branch of demographic study relies heavily on statistical probability theory and “Monte Carlo” simulation techniques to estimate the likelihood that population growth will approach a given level by a given point in time. Using this method, Metro staff has produced the “cumulative distribution function” (CDF) depicted in the Figure 5 to illustrate the probability that population in the region in 2060 will be *less than or equal to* a certain projected or forecasted value.

This estimate starts with the “single point” birth rate, death rate and migration assumptions used in the econometric trend forecast. To reflect the uncertainty that underlies those numbers, the CDF curve depicts 10,000 scenarios (Monte Carlo simulation results) that represent population outcomes in the year 2060 if these variables differ to a greater or lesser degree from the “single point” assumptions.

2060 Population Forecast Cumulative Distribution Function Portland – Vancouver (7 county) PMSA

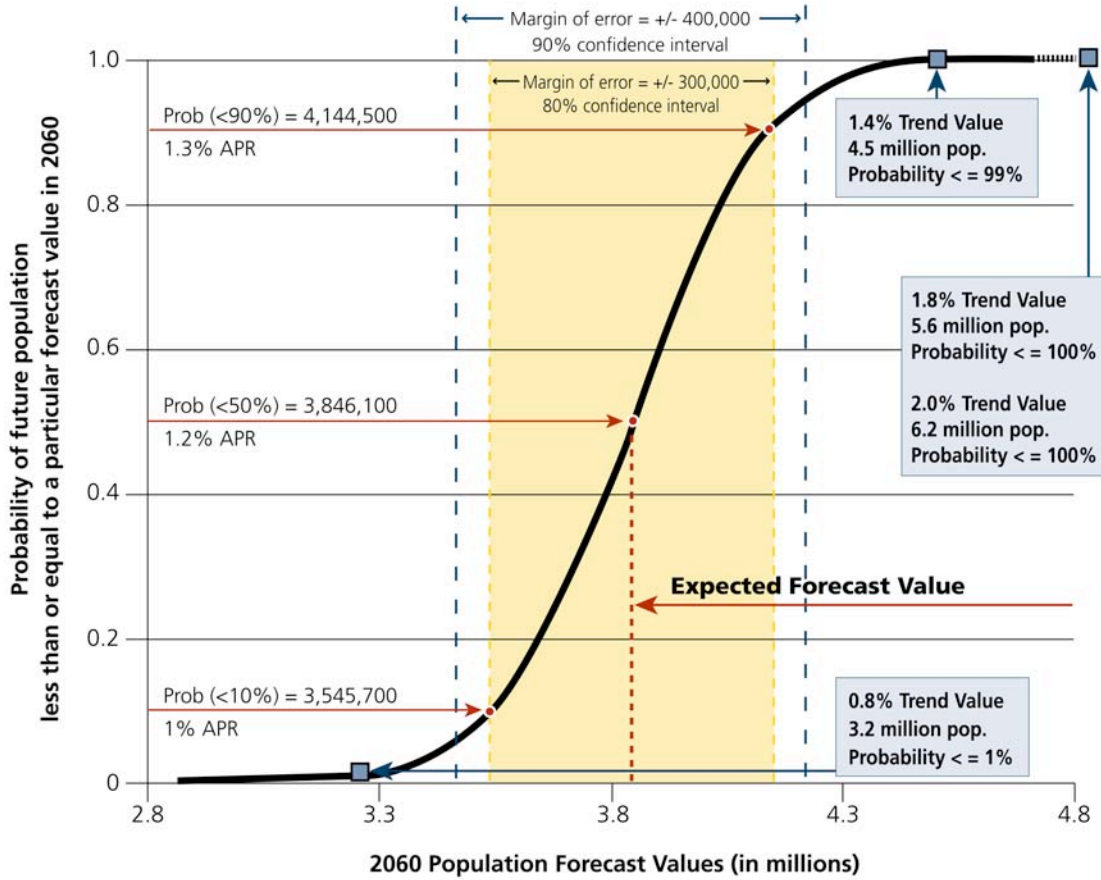


Figure 5: Cumulative probabilistic population distribution function annotated with the same five population scenario projections

Source: Metro

Figure 5 shows where each of the five alternative population projections depicted in Figure 1 falls within this probability range. The red line, the CDF curve, shows the cumulative probability (the y axis) that the region’s population (the x axis) will remain below the forecasted value in the year 2060.

For example, there is only a 10 percent likelihood that the population of the seven-county Portland-Beaverton-Vancouver OR-WA PMSA will be less than 3.5 million residents in year 2060 and a 90 percent chance it will remain below 4.1 million. Another way of stating this is to say that there is an 80 percent chance that the region’s population in 2060 will fall between 3.5 million and 4.1 million. The midpoint of the curve represents the economic trend forecast of 3.85 million; under this scenario, there is an equal likelihood that actual 2060 population will be above or below this level.

The probability function indicates that all of the alternative growth trends depicted in Figure 1 fall on the extreme ends of the curve, meaning they are extremely unlikely (less than 1 percent probability each).

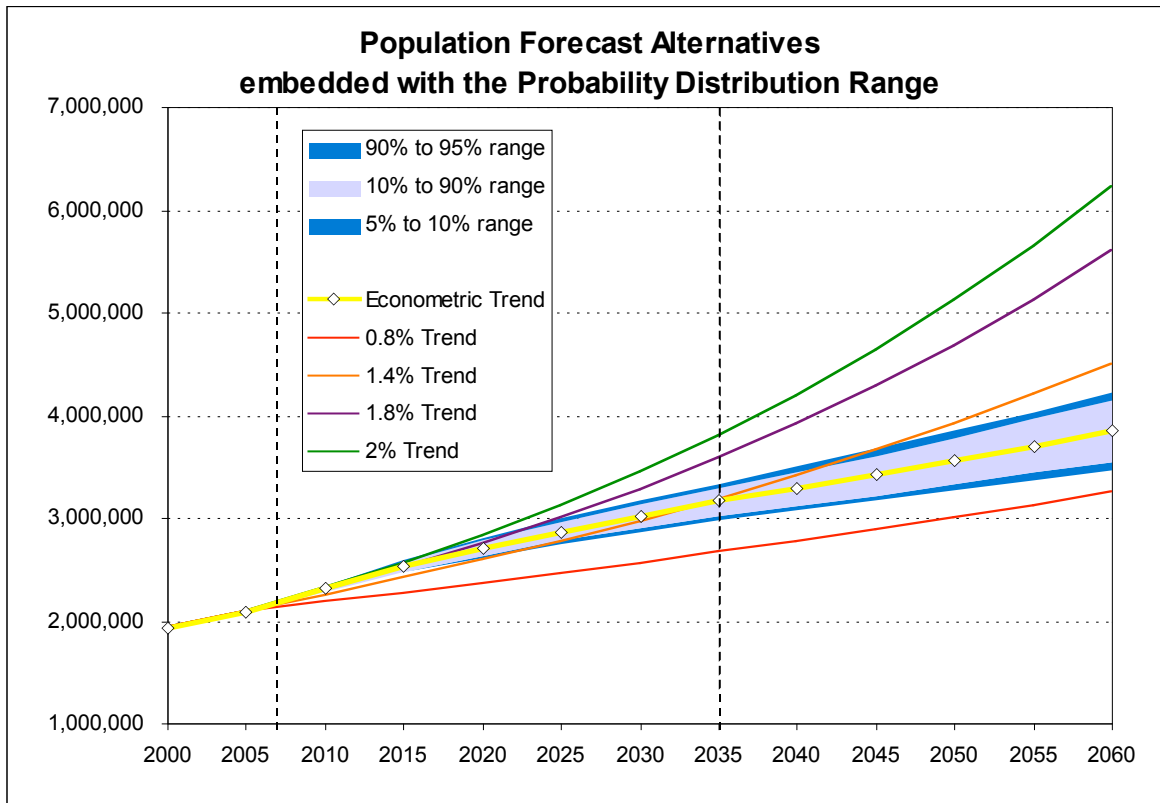


Figure 6: Portland-Beaverton-Vancouver OR-WA PMSA population scenario projections overlaid with the cumulative distribution function (CDF)

Source: Metro

Next steps

Designation of urban reserves at the end of 2009 will require forecasts and allocations. The allocations of where and how growth will occur cannot be made until the following questions are answered:

- **Regional choices:** What is the region’s ability and willingness to provide the necessary public facilities and services, governance and finance to support the creation of “Great Communities” that are sustainable and complete?
- **Local choices:** What is the ability and willingness of local jurisdictions and service providers to achieve local aspirations in existing centers, corridors and employment areas (e.g., up-zoning, targeted investments, transportation improvements)?
- **New land supply:** What is the potential capacity and suitability of the urban reserves to accommodate future jobs and people in a way that creates “Great Communities”?

Metro’s “Making the Greatest Place” program is designed to produce regional and local agreements on these policy choices in time for the region to designate urban and rural reserves.

Public Review Draft 2 - May 19, 2008

In spring 2009, Metro will release a 20-year population and employment forecast to guide development of the Urban Growth Report and a final 2060 forecast to inform designation of urban reserves. In summer 2009, Metro will circulate a draft Urban Growth Report reflecting growth assumptions and local aspirations. In fall 2009, the Metro Council will adopt a final Urban Growth Report and with Clackamas, Multnomah and Washington counties, jointly adopt urban reserves with a 40-50 year population forecast. In 2010, the Metro Council will make the next urban growth boundary decision using both the Urban Growth Report and the adopted urban and rural reserve areas.