

BEFORE THE BOARD OF COMMISSIONERS OF THE STATE OF OREGON

FOR THE COUNTY OF YAMHILL

SITTING FOR THE TRANSACTION OF COUNTY BUSINESS

In the Matter of Adopting a 20-year Coordinated Population Projection )  
for Yamhill County and the 10 Municipalities Within Yamhill County ) Ordinance 878  
Pursuant to HB 2709 (ORS 195.036), Docket PA-01-11, Rescinding )  
Ordinance 877 )

THE BOARD OF COMMISSIONERS OF YAMHILL COUNTY, OREGON (“the Board”) sat for the transaction of County business on November 8, 2012, Commissioners Leslie Lewis and Mary P. Stern being present, and Commissioner Kathy George being excused.

IT APPEARING TO THE BOARD that Yamhill County Planning Department applied for a Comprehensive Plan Amendment adopting a 20-year coordinated population projection for Yamhill County and the 10-municipalities within Yamhill County, as required by HB 2709, and

IT APPEARING TO THE BOARD that the Planning Commission heard this matter at a duly noticed public hearing on September 1, 2011, and voted unanimously 8-0 to recommend approval, and

IT APPEARING TO THE BOARD that on October 27, 2011 the Board convened a duly noticed public hearing, and then voted 3-0 to continue the application and direct Yamhill County Planning Staff to apply for a grant from DLCDC to hire a consultant to develop a population forecast, and

IT APPEARING TO THE BOARD that DLCDC awarded Yamhill County the grant, and Portland State University Population Research Center was hired to coordinate with Yamhill County and the 10-municipalities to develop a coordinated population forecast, and

IT APPEARING TO THE BOARD that on November 1, 2012, the Board held a continued public hearing, took testimony and voted 3-0 to approve the population forecast. NOW, THEREFORE,

IT IS HEREBY ORDAINED BY THE BOARD, that the application is approved as detailed in the Findings for Approval, Exhibit “A”, incorporated into this Ordinance by this reference. The October 2012 report prepared by the Portland State University Population Research Center is appended as Exhibit “B” and is hereby incorporated into this Ordinance by this reference. Ordinance 877 is hereby rescinded.

DONE this 8<sup>th</sup> day of November, 2012, at McMinnville, Oregon.

ATTEST

YAMHILL COUNTY BOARD OF COMMISSIONERS

B.O. 12-639

REBEKAH STERN DOLL  
County Clerk

Leslie D. Lewis

Chair  
LESLIE LEWIS

By Anne Britt  
Deputy Anne Britt

Unavailable for signature

KATHY GEORGE



APPROVED AS TO FORM:

Mary P. Stern

Commissioner

MARY P. STERN

Rick Sanai  
RICK SANAI, Yamhill County Counsel

Accepted by Yamhill County  
Board of Commissioners on  
11/8/12 by Board Order  
# 12-639

Findings for Approval, Exhibit "A", Ordinance 878

**DOCKET NO.:** PA-01-11

**REQUEST:** The request is to adopt a 20-year coordinated population projection for Yamhill County and the 10-municipalities within Yamhill County.

**APPLICANT:** Yamhill County

**LOCATION:** The projections would apply to the unincorporated areas of Yamhill County and the cities of Amity, Carlton, Dayton, Dundee, Lafayette, McMinnville, Newberg, Sheridan, Willamina and Yamhill.

**CRITERIA:** The Yamhill County Comprehensive Plan, the Oregon Administrative Rules 660-024-0030 and Oregon Revised Statute 195.036.

A. Background Facts

1. *History of the Issue (Yamhill County's perspective):* In 1995 the legislature passed HB 2709. It required local jurisdictions to maintain a 20-year supply of buildable residential lands and lands zoned for public schools. If there was not an adequate supply of land then the local jurisdiction is required to expand the urban growth boundary (UGB), increase the density or both. Along with this directive to the cities, the bill established that the coordinating body (county) shall establish and maintain a population forecast for the entire area within its boundary for use in maintaining and updating comprehensive plans and shall coordinate the forecast with the local governments within its boundary. This bill was passed and signed September 9, 1995. No money and very little directive was given to the counties as to how to administer this new state mandate of population coordination with every jurisdiction within the county.

Just after HB 2709 was passed the Yamhill County Planning Department and Road Department embarked on writing a transportation system plan. They hired JRH Transportation Engineering to assist with this endeavor. To complete the transportation plan, population information was used from the Portland State University (PSU) Center for Population Research and Census. The estimates for 1994 through 2014 were included in the report. The Yamhill County Transportation System Plan was finalized, adopted and "acknowledged" by the Department of Land Conservation and Development (DLCD) on March 27, 1996.

During this time Yamhill County was informed that the Department of Administrative Services (DAS) was going to provide population estimates. In January of 1997, those estimates were provided to Yamhill County. These estimates differed significantly from

what was already adopted in the Transportation System Plan (TSP). For example, the TSP showed a 2014 population projection of 116,975. The DAS estimate for 2015 was 110,253. In 1997, upon receipt of the population numbers, Sandy Mathewson, Associate Planner with Yamhill County, was given the task of meeting with representative from the cities and coming up with a coordinated projection. The results of the meeting were that 1) the cities did not like the DAS estimates and believed they were too low; 2) the cities found the county TSP projection to be acceptable for the time being but they may want to adopt a different (typically larger) number; 3) the cities were each at varying stages of the UGB process and were not ready for county-wide population coordination; and 4) they desired to do this on a case-by-case basis. There was some talk by the cities of assisting the County with funding for a demographic study and this appears to have extended into 1998, however no study was ever funded.

2. *Process:* The City of Newberg has initiated this process. The Land Use Board of Appeals ruled that the City of Newberg's 2005 population projection is not considered coordinated because it was not adopted as part of the Yamhill County Comprehensive Plan. Staff at the Department of Land Conservation and Development indicated that they will not accept anything less than a 20-year projection for each city within Yamhill County. They have informed us County staff that in order for Newberg to have a coordinated projection, it must be a projection coordinated with every jurisdiction in Yamhill County. The City of Newberg submitted population projections for Yamhill County and the 10-municipalities within Yamhill County. They requested that the County adopt these numbers. The County initiated the hearing process. Notice of the proposed numbers were sent to representatives of each of the municipalities and a public hearing was set before the Planning Commission. On September 1, 2011, the Yamhill County Planning Commission held a duly noticed public hearing and voted 8-0 to recommend approval to the Board of Commissioners.

The Planning Commission's recommendation was then forwarded to the Board of Commissioners. On October 27, 2011 the Board of Commissioners held a duly noticed public hearing. After the receipt of testimony the Board voiced concerns about the population forecasts presented by the City of Newberg. The Board of Commissioners voted to continue this docket item and directed Yamhill County Planning Staff to apply for a Transportation and Growth Management Grant from the Department of Land Conservation and Development (DLCD). DLCD awarded the grant to Yamhill County. Yamhill County put out a "Request for Quote" and eventually hired the Portland State University Center for Population Research to conduct the 20 year population forecast.

## DECISION

The Yamhill County Planning Department obtained a grant from the DLCD to fund the study and engaged the Portland State University Center for Population Research (PSU) to conduct the

20 year population forecast. PSU contacted Yamhill County and each of the cities and conducted a survey of potential development. PSU then issued draft numbers which were circulated to representatives of the municipalities. The comments that were received were incorporated into the report. The final numbers were then presented to the Board of Commissioners at their continued public hearing and public testimony was taken. That forecast report is attached as Exhibit "B" and is incorporated into this Ordinance by this reference. The forecasts and conclusions made in Exhibit "B" are hereby adopted by the County and the Yamhill County Comprehensive Plan as the coordinated *Population Forecast for Yamhill County, its Cities and Unincorporated Area, Years 2011-2035*.

End

Yamhill County Ordinance 878 - Exhibit "B"

**Population Forecasts for  
Yamhill County, its Cities and  
Unincorporated Area  
2011-2035**

Prepared by:  
Population Research Center  
College of Urban and Public Affairs  
Portland State University

October 2012



Portland State  
UNIVERSITY  
Population Research  
Center



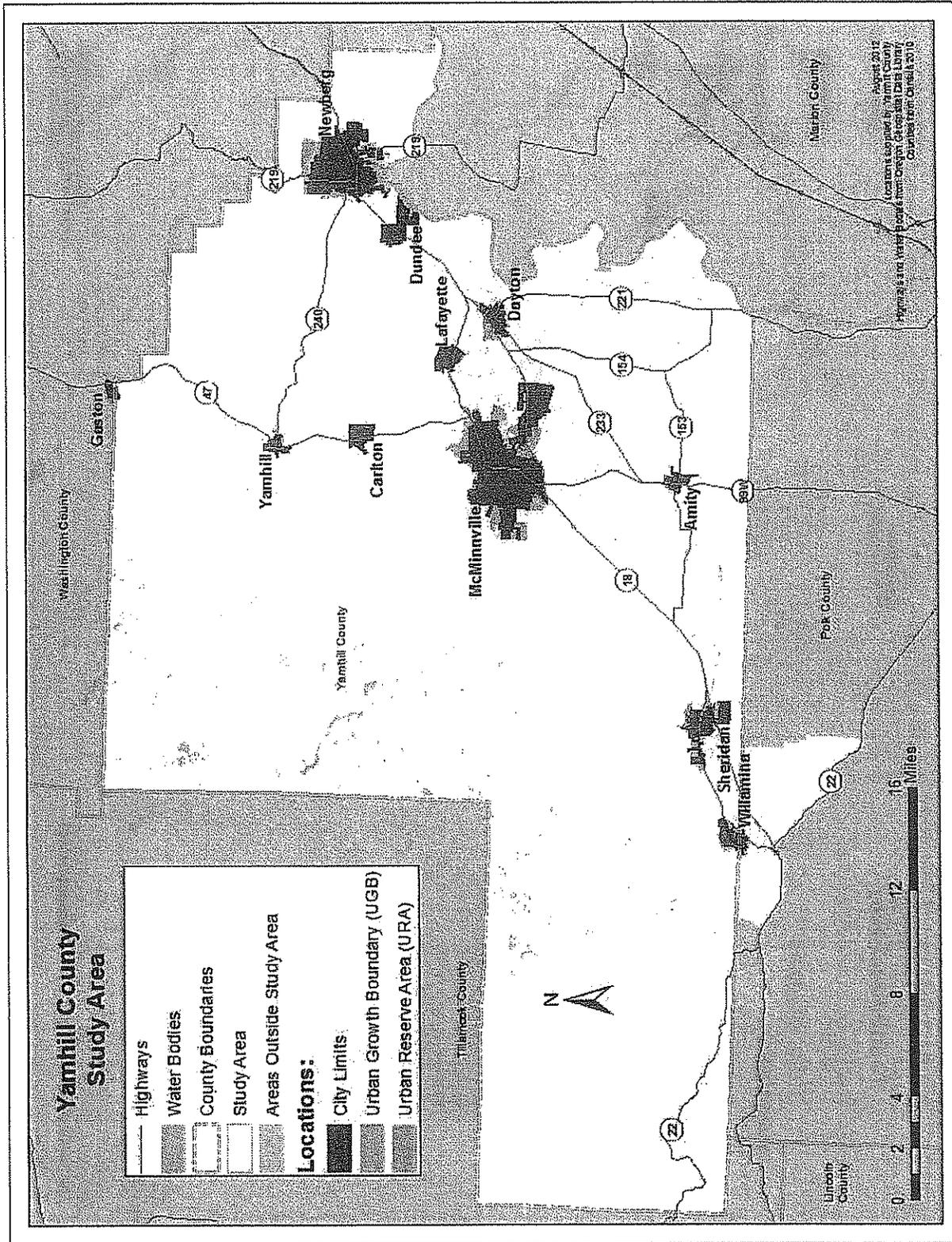
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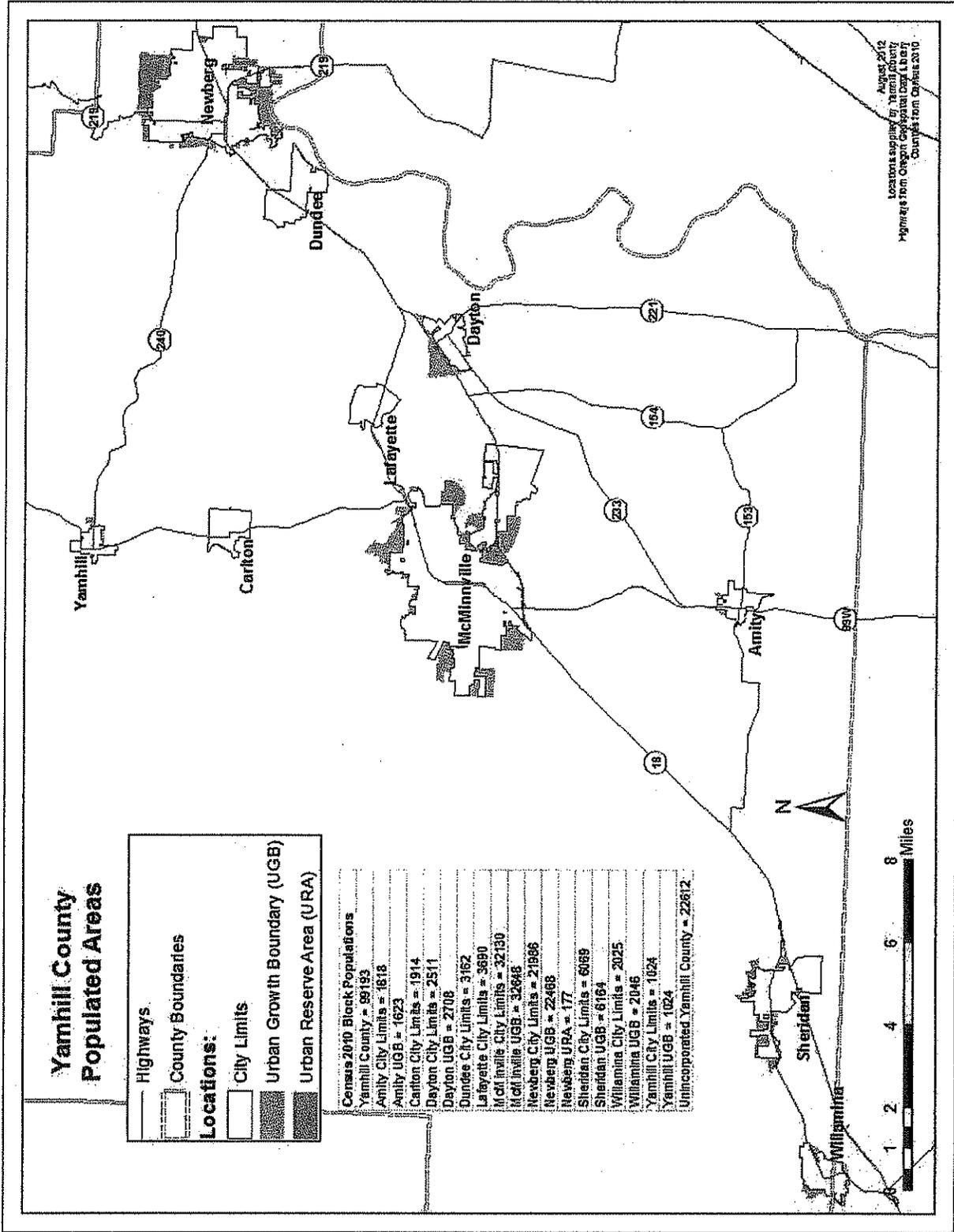
**Population Forecasts for  
Yamhill County, its Cities and  
Unincorporated Area  
2011-2035**

**October 2012**

**Project Staff:**

Risa Proehl, Population Estimates Program Manager  
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## INTRODUCTION

Yamhill County officials commissioned Portland State University's Population Research Center (PRC) to produce long-term population forecasts for the County, its ten incorporated cities and the county unincorporated area. Since the city of Willamina overlaps into Polk County, a separate forecast for the city portion located in Yamhill County is required in addition to the forecast for the city as a whole. The city level forecasts include the cities' respective urban growth boundary areas (UGB)<sup>1</sup>. For most cities this includes the surrounding unincorporated area in addition to the area within the city limits. The forecast for the county unincorporated area represents the area outside the UGBs. The forecast horizon extends 24 years from 2011 to 2035; and the forecasts are produced in 5-year intervals between 2010 and 2035, and for the single years of 2012 and 2032. The County will use the forecasts to coordinate revisions of the comprehensive plans for each of the study areas. The projections are benchmarked to the Population Research Center's 2011 certified population estimates for the city and county populations.

In 2011, Yamhill County's population was 99,850 and about 55 percent resided in the County's two largest cities: McMinnville (over 32,000) and Newberg (over 22,000). The 2011 population estimates for each of Yamhill County's eight smaller cities (or 'city areas') are all under 6,200, with most ranging from 1,000 to about 3,000 persons. The population forecasts for both large and smaller cities and the unincorporated area outside UGBs (non-UGB unincorporated area) were based on a most-likely, or medium growth, scenario for future growth.

Consideration was given to factors that influence Yamhill County's population dynamics, such as the population's ethnic and age composition, the number of annual births that occur, employment and commuting patterns, the number of building permits issued, and public school enrollment in the county's school districts. Data used to develop the forecasts include vital statistics; population, land use, building permit, and employment

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<sup>1</sup> The UGB used for McMinnville and its study area was a proposed amended UGB that was withdrawn in spring 2012; all references to the McMinnville UGB in this report pertain to this proposed UGB. See Appendix 9 for additional information about the McMinnville's UGB.

data; and school enrollments for districts within Yamhill County. Several different demographic methods and models were employed to prepare the forecasts, including the development of cohort-component models for the County and larger areas, and housing unit models for each of the county's smaller cities and the non-UGB unincorporated area. The cohort-component model incorporates rates of fertility, mortality, and migration. The housing unit model assumes a number of future added housing units, levels of housing occupancy, and averages of the number of persons per household. A description of recent historic demographic trends throughout the County and a summary of recent significant population changes during the forecast period are included in this report. Also, the data sources and methods utilized in the development of the forecasts are described in more detail later. For the countywide forecast and the two largest cities, cohort component forecasting models were utilized that incorporate rates of fertility, mortality and net migration. For the remaining eight considerably smaller city areas, housing unit models consisting of housing unit inventories and group quarters populations, average household sizes, and occupancy trends were used.

The growth assumptions about future trends in the forecasts for the County and for all of its sub-areas in our study each suggest that there will be continuing increases in population, but at slightly different rates from the beginning to the end of the forecast period. There are variations in the forecasts for the size and timing of the annual population increases. The share that each city represents of the county's total population does not change drastically during the forecast period, but the share that the non-UGB unincorporated area represents decreases from about 22 percent to 16 percent. This shift of persons residing in rural areas to more urbanized areas is a common trend throughout Oregon and the United States that has been ongoing for many years.

In the growth scenario for our population forecasts, we assume that the downturn of the local economy will continue to recover, but slowly. Therefore, housing construction is anticipated to be fairly sluggish for a few years in some areas, start to increase slightly in other areas, and will accelerate overall after 2015. At that time the net in-migration of families with children, the elderly, and Hispanics is predicted to increase and continue

throughout most of the forecast period. Regardless of how the economy performs, however, the rapid population growth during the 1990s and much of the last decade seen by many areas in Oregon is not sustainable in many areas, including Yamhill County, especially because the population is aging. An aging population means that the share of population that persons in the older age groups represent is becoming larger. While mortality rates may change minimally and the probability of dying decreases only slightly, the number of deaths does become greater in an aging population and has a negative effect on population growth. Additionally, in Yamhill County, the fertility rates are below replacement levels and so together with the aging population, natural increase (births minus deaths) has a weaker effect on increasing numbers. Positive population growth then becomes more and more dependent on net in-migration.

#### **Caveats Regarding the Report**

The body of this report covers demographic information and analysis for Yamhill County and its geographic sub-areas. With the exception of the non-UGB unincorporated area, the sub-areas in this study at times are called 'cities' but are actually 'city areas', which refer to the area within the city limits combined with its corresponding UGB area outside city limits; or in other words, all of the area within the city's urban growth boundary. In this study, the unincorporated area is usually referred to as the 'non-UGB unincorporated area' and it represents the area outside of any city and UGB.

Three of Yamhill County's cities, Carlton, Dundee, and Lafayette either have a UGB that is identical, or nearly identical, to their city boundary. The other cities have a UGB outside the city limits. Area in some of the UGBs is where a portion of the city area's housing stock is located and other UGBs outside the city have little to no population. In general, a small percentage of population resides in any location in the UGB outside the cities in Yamhill County. About 7 percent of Dayton's housing units (around 70) are in its unincorporated UGB area. The percentage of housing that is located in the other UGBs outside city limits in Yamhill County is only about 2 percent or less, ranging from fewer than 5 housing units in the cities of Amity and Yamhill to 180-200 units in McMinnville

and Newberg's UGBs, respectively; and there are approximately 40 units in Sheridan's UGB area.

In order to minimize skewing of demographic trends within our study area, 2000 and 2010 Census data were aggregated to correspond to 2011 jurisdictional boundaries obtained from the Yamhill County's GIS Department. Comparing data that represent geographic areas that are consistent over time removes the influence that changing boundaries have on determining actual population trends in a jurisdiction. Please note that some populations reported in our tables for 2000 and 2010 may slightly differ from 2000 and 2010 Census published populations. The difference is due to the data reallocation process to conform to the 2011 boundaries. Because the 2010 and 2011 boundaries are from two different sources, they are not perfectly matched to one another. We determined that any differences between the published Census data and the data we reallocated for this study are negligible and have no effect on demographic trends and population forecasts.

Historical demographic trends in this report are described for 2000-2011. Certified 2011 population estimates for Yamhill County and its cities are adjusted to include their UGBs and are shown on page 9 of this report. The 2000-2011 demographic data and trends are incorporated into the forecasts, and how they are incorporated is described in the methods section of this document.

The annual certified population estimates produced by PRC represent the area within the city limits. If a city does not send annual housing and population data to the estimates program, its certified estimate is held constant to the previous year and may not account for recent changes. As mentioned above, the populations shown in this report for 2011 represent the 2011 certified estimates adjusted to incorporate the city UGB areas. In instances where annual data for the city were not available, the population reported for 2011 may not include all changes that occurred from 2010 to 2011. However, the population forecasts for 2012 and beyond account for any annual data that may be lacking.

The 2010-2040 population forecast for Yamhill County produced by Oregon's Office of Economic Analysis (OEA) is used as a gauge for our countywide forecast results. The published OEA forecast currently available on their website was produced in 2004, and our forecast results are quite lower than those. However, OEA is, at this time, revising their forecasts to become more up-to-date, and to reflect the recent economic downturn experienced nationwide and incorporate Census 2010. It is our understanding that the OEA's revised forecast will become available within a few weeks after completion of this report. We conferred with OEA staff when producing our own forecast and had an opportunity to review their revised forecast in August 2012. Although the revised forecast accounts for the recession, it does not include Census 2010. Our forecast results for Yamhill County were very close to OEA's revised forecast, but slightly higher in the early part of the forecast period, and slightly lower toward the end. The differences in forecasts were by less than one percent in any 5-year time period (less than 850 persons), except the last period (2030-2035) when our forecast was 1,700 persons fewer than OEA's. During the 25 year period from 2010 to 2035, the average annual growth in OEA's forecast is about 1.6 percent and it is 1.5 percent in our forecast.

#### **A Note of Caution about the Forecasts Themselves**

Given that these projections are developed for long-term trends, they are conservative. This means that they do not assume drastic changes to the population trends (such as seen during a depression or natural disaster), and large fluctuations in growth rates are not envisioned.

Policy makers should view population projections as one of several available sources of information about likely future conditions. The forecasts in this report are based on assumptions developed from analysis of historical trends and expectations for the future. While the past gives some indication of what is likely to happen in the future, there is always the possibility of the occurrence of unforeseen events that could have a significant impact on population change. Thus, users of these projections should be aware that unexpected changes could happen and that it is wise to evaluate projections periodically in future years. Given the uncertainty of the timing, occurrence and magnitude of future

events, several points should be kept in mind when interpreting the population forecasts in this report.

First, the Yamhill County population projections represent a forecast derived from assumptions representing our best judgment as to the possibilities for future conditions. It is not possible to judge at this time which of the assumptions, or combinations of assumptions, may best forecast future populations. The next several years will better reveal whether the modeled demographic trends are likely to occur. If different conditions arise, then it would be appropriate to revise the population projections, taking into account new assumptions.

Second, variations in forecasts become larger in the long run. As years go by, the population forecasts depend increasingly on assumptions about who and how many persons will move into and out of Yamhill County and the number of births that will occur annually to parents who reside in Yamhill County. The population forecasts become less certain over longer periods of time because the assumptions relied upon to forecast population more than twenty years from now may or may not come to fruition in reality.

Third, the smaller the population, the harder it is to develop an accurate forecast. Slight unpredicted variations in demographic trends can cause larger fluctuations in the population forecasts than those for larger populations. Forecasts for large cities and counties tend to be more precise than forecasts for small cities or towns.

Finally, population forecasts prepared by other researchers for one or more of our study areas exist and are available to the public. There is a temptation in interpreting the forecasts to ask: "Which is the correct forecast?" Asking such a question implies that there is need to pick one forecast at present and then base future plans on it without flexibility. The more appropriate use of the forecasts is to consider that there is likely to be some variation around our medium growth forecast presented in this report, and that we would want to update them as conditions evolve. Instead of using the numbers as an exact outcome that will occur over the twenty-four year forecast horizon, we urge government

officials and the public to "monitor and manage" the changing conditions that will affect future populations. The forecast presented in this report can serve as a guideline in this process of monitoring and managing.

## OVERVIEW OF THE REPORT

This report presents the results of a study conducted by the Population Research Center (PRC) to address the long-range planning needs of Yamhill County and produce population forecasts at the county and sub-county level. This report considers recent and historical demographic changes experienced within the County and provides forecasts from 2010 to 2035 in 5-year intervals and for years 2012 and 2032. Expected future populations that result from the most-likely demographic trends throughout Yamhill County are presented in this report. Sub-county populations and forecasts in this study represent the area within each city's urban growth boundary with the exception of the non-UGB county unincorporated area and the Polk County portion of Willamina. Since Willamina extends into Polk County, populations are reported for the city and its UGB as a whole, as well as for the portion of Willamina (and its UGB) located in Yamhill County separately.

For the sake of organization of this report and discussion of demographic characteristics, trends and forecasts, Yamhill County and its sub-areas are grouped into 2 categories: 1) the County and the most populous and more urbanized areas of McMinnville and Newberg and their UGBs, which captures about 55 percent of the County population; and 2) the remaining eight cities and their UGBs (most which have a 2011 population estimate of less than 4,000 persons except Sheridan which has 6,200), and the non-UGB County unincorporated area. Although the unincorporated area represented in this study has a 2011 population estimate of around 23,000, slightly larger than the Newberg area, it is grouped with the smaller, less urbanized cities in this report as it is more rural. Yamhill County and its two largest cities are sometimes discussed within one group; and the remaining eight cities and non-UGB unincorporated area in Yamhill County are discussed in another group. The 2011 population estimates and the grouping of the study area's jurisdictions are shown in the table below.

Table 1. Populations in Yamhill County

Areas	2011 Population Estimate*
Yamhill County	99,850
McMinnville	32,808
Newberg <sup>1</sup>	22,730
Amity	1,635
Carlton	2,036
Dayton	2,731
Dundee	3,210
Lafayette	3,745
Sheridan	6,230
Willamina <sup>2</sup>	2,057
Yamhill	1,024
Non-UGB Unincorporated Yamhill County	22,510

\*The certified 2011 populations for the cities were adjusted to include the UGBs.

<sup>1</sup>This figure excludes the urban reserve area (URA); <sup>2</sup>This figure represents the entire city.

**This report covers the following topics:**

Demographic Trends in Yamhill County and its Sub-Areas. A description of recent demographic trends and influencing population changes in the County, such as fertility, migration, and housing growth. Also included in this section is a description of some additional factors that influence population changes throughout the County: age and racial/ethnic composition of the population, housing construction, and employment trends. Significant demographic trends that are specific to the individual geographic sub-areas of the Yamhill County study area are also described.

Population Growth Assumptions for the County and its Larger Areas. A description of the assumptions used in the population forecasts for the County and its larger urban areas of McMinnville, and Newberg and their UGBs.

Population Growth Assumptions for the Smaller City Areas and the non-UGB Unincorporated Area. A description of the assumptions used in population forecasts for Yamhill County's 8 less populous city areas, and for the non-UGB unincorporated area.

The Population Forecasts (Countywide and Larger Area Results). A summary of the forecast results and the predicted population changes for the County, and McMinnville, and Newberg.

Population Forecasts for the County's Eight Smaller City Areas and the non-UGB Unincorporated Area. A summary of the forecast results and the predicted population changes in Yamhill County's 8 less populous city areas and the non-UGB unincorporated area.

Methods and Data Employed for Countywide and other Larger Area Forecasts. A description of the population forecast models and data sources used for the larger area forecasts.

Methods and Data Employed for the Smaller City Areas and non-UGB Unincorporated Area Population Forecasts. A description of the demographic models and data used to develop these forecasts.

**Several Appendices provide more detailed information, including:**

APPENDIX 1. Tables with detailed forecasts and historical populations in 5-year intervals for Yamhill County, the 2 larger cities for McMinnville and Newberg.

APPENDIX 2. Tables with detailed forecasts and historical populations in 5-year intervals for Yamhill County's 8 smaller cities and the non-UGB unincorporated area.

APPENDIX 3. Assumptions of demographic rates for Yamhill County, McMinnville, and Newberg.

APPENDIX 4. A table holding information considered when developing the forecasts and adjusting the forecast models for the ten city areas and the non-UGB unincorporated area.

APPENDIX 5. Tables presenting a compilation of demographic data and rates for Yamhill County and its sub-areas; and the rates and data assumed for the forecast populations.

APPENDIX 6. A map showing housing density within Yamhill County (2010).

APPENDIX 7. Data sources and data used are described in detail.

APPENDIX 8. Tables presenting county and city population data from the decennial censuses conducted from 1970-2010.

APPENDIX 9. Responses to the initial draft report and preliminary forecasts, including e-mails and comments.

APPENDIX 10. Summary of adjustments to the preliminary forecasts.

## RECENT DEMOGRAPHIC TRENDS AFFECTING YAMHILL COUNTY POPULATIONS

Evaluating past demographic trends provides clues about what the forecast for the future will look like, and helps determine the realm of likely possibilities. Past trends explain the dynamics of population growth particular to local areas. Relating recent and historical population change to events that influenced the change serves as a gauge for what might realistically occur in a given area over the long term.

Different growth patterns occur in different parts of Yamhill County. Each of the ten cities (or city areas), and the non-UGB unincorporated area were examined for any significant demographic characteristics or changes in population or housing growth that might influence their individual forecasts. Factors that were analyzed include births, age and racial/ethnic composition of the population, housing construction activity, and school enrollment and employment trends. It should be noted that population trends of individual cities and the unincorporated area often differ from the demographic trends of the county as a whole. However, in general, population growth rates in 2011 were lower than in previous years such as the early to mid-2000s. Annual growth rates have tended to decelerate since 2007 and recently have begun to stabilize.

### POPULATION

The total population in Yamhill County in 2011 is estimated to be 99,850, an increase of 525 persons since Census 2010. This growth of only half of a percent is significantly lower than the average annual growth rate during the 2000s, which was 1.5 percent. Population growth in Yamhill County during the 2000s was slightly higher than growth for the State of Oregon (1.1 percent per year). During the 2000s an average of 1,420 persons per year was added to Yamhill County's population, and during the 1990s, 1,940 persons were added on average annually. The share of Oregon's population residing in Yamhill County in 2011 was about 2.6 percent, which increased from 2.5 percent in 2000 and 2.3 percent in 1990. The share of the County's population that the sum of the cities represents

experienced an increase during the same time period, reaching 77 percent in 2011, while the share of population residing in the non-UGB unincorporated area decreased.

Since at least 2000, over half of Yamhill County's population has resided in one of its two largest cities, McMinnville and Newberg. McMinnville, with a 2011 population of just over 32,000 accounted for about 40 percent of the County's population growth during both the 1990s and 2000s. Newberg, whose 2011 population was almost 23,000, accounted for over a quarter of countywide growth during the same time periods. Both cities experienced growth rates higher than the County, as well. During recent years, however, the magnitude of increases in population has slowed down significantly.

In 2011, the eight smaller city areas collectively were home to 22 percent of the population in Yamhill County (almost 22,000 persons), an increase from 20 percent in 2000. This population experienced an average annual increase of just under 2 percent in the 2000s, or by 360 persons per year. The rate of population growth in all these cities in recent years, however, declined in magnitude as did County growth.

The population in the non-UGB unincorporated area was about 23,000 in 2011 and represented about 23 percent of the County population. From 2000 to 2011 this area's population decreased, but by less than 1,000 persons over the time period. The share of population residing in the non-UGB unincorporated area decreased from about 28 percent in 2000.

From 2000 to 2011, seven of Yamhill County's cities experienced a small increase in their share of county population – by at least a fraction of a percentage point. McMinnville's share of the county's population increased the most, by about 2 percentage points. The shares in Amity, Sheridan and Willamina all decreased slightly, but by less than a half of a percentage point each over the period. All three cities are located furthest southwest in Yamhill County, away from the Portland metropolitan area. A rural to urban shift of where persons choose to reside has been a common occurrence throughout Oregon and in the United States over many years.

Table 2 below displays the recent population for Yamhill County and its cities, and non-UGB unincorporated area. Also shown are the shares that cities represent of the county population and average annual change from 2000-2011.

Of all of Yamhill County's cities, Lafayette, Carlton, Yamhill, and McMinnville experienced the highest average annual growth rates from 2000-2011 ( at least 2.0 percent). The average growth rates for the other cities range from less than one percent to 1.9 percent per year during the same period. Most cities experienced average annual growth rates higher than the County.

Table 2. Yamhill County Populations by Jurisdiction

Major Urban Areas	Population		Share of County Population		# Ave. Annual Change	% Ave. Annual Change
	2000*	2011	2000	2011		
Yamhill County	84,992	99,850			1,351	1.5%
McMinnville	26,286	32,808	30.9%	32.8%	593	2.0%
Newberg	18,538	22,730	21.8%	22.8%	381	1.9%
Other Yamhill County Cities	Population		Share of County Population		# Ave. Annual Change	% Ave. Annual Change
	2000*	2011	2000	2011		
Amity	1,481	1,635	1.7%	1.6%	14	0.9%
Carlton	1,514	2,036	1.8%	2.0%	47	2.7%
Dayton	2,244	2,731	2.6%	2.7%	44	1.8%
Dundee	2,642	3,210	3.1%	3.2%	52	1.8%
Lafayette	2,586	3,745	3.0%	3.8%	105	3.4%
Sheridan	5,581	6,228	6.6%	6.2%	59	1.0%
Willamina	1,859	2,057	-	-	18	0.9%
Willamina (Yamhill Co.)	1,128	1,180	1.3%	1.2%	5	0.4%
Yamhill	805	1,037	0.9%	1.0%	21	2.3%

\*Population for 2000 is allocated to 2011 boundaries and includes UGB areas; the 2000 population in this table may differ from Census 2000 published population (see caveat explanation on page 3).

### AGE COMPOSITION

The number of persons in age groups 0-17, 18-64, and 65 and older residing in Yamhill County all increased from 2000 to 2011. However, regarding the percentages that they represent of the total population, there was a decrease in the share of children's population.

The share of total population that persons ages 0-17 years represent decreased from 27 to 25 percent during the time period. The share of persons ages 18-64 remained about the same at around 61 percent, but the share of the elderly - persons ages 65 and older - increased from 12 to 14 percent during the same time period.

In 2011, the share that persons ages 0-17 represented in Yamhill County (25 percent) was higher than the State by 2 percentage points, and the shares of persons ages 18-64 (61 percent), and 65 and older (14 percent), were lower by one and a half percentage points and a half of a point, respectively.

The most recent age-group data available for Yamhill County's sub-areas are from the 2010 Census. From 2000 to 2010, all cities and the unincorporated area in Yamhill County experienced a decrease in the share of children's population. The share of children's population in most areas declined by between 2 to 5 percentage points. The shares in McMinnville and Carlton declined by about one percentage point, and in Lafayette and Sheridan by less than half of a point.

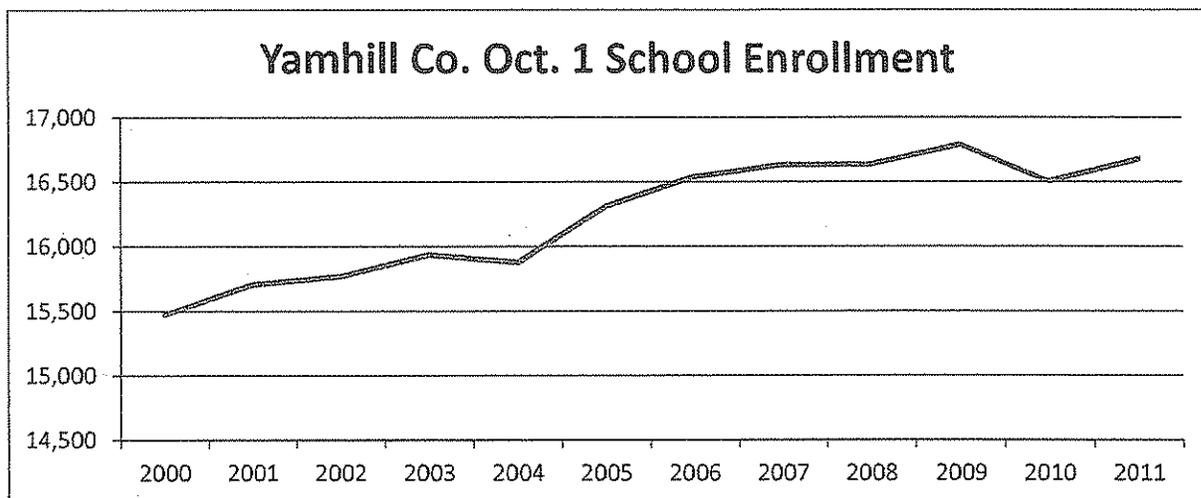
According to Census 2010, all cities except Sheridan have a higher share of children's population than Yamhill County as a whole. Sheridan and the unincorporated area both have the smallest share of children's population (around 22-23 percent). The cities with the highest share of children are Dayton, Lafayette, and Amity, Carlton, and Willamina. In 2010, children captured more than 30 percent of the total population in each of these cities.

In 2010, the unincorporated area had the highest share of elderly (17 percent), followed McMinnville (15 percent). The remaining cities each had shares of 12 percent or less, which is below the county share (13 percent).

### SCHOOL ENROLLMENT

Changes in school enrollment in local school districts serve as an indicator of population change, especially for the 5-17 age group. Elementary and secondary school enrollment data show an increase in school enrollment in Yamhill County from about 15,500 in 2000

to almost 17,000 in 2011. This represents an increase of 8 percent or 1,200 students with an average annual change 107 students per year. Enrollment grew between 2000 and 2011 modestly for grades kindergarten through 5; and more significantly for grades 7 through 12.



Changes during 2000-2011 in school enrollment have varied within the county. Three of the seven districts in the County experienced increases while the other four had decreases. Increase was most significant in the McMinnville School District where an average of 90 students were added each year, which represents 18 percent growth. Sheridan and Newberg School Districts experienced enrollment growth of 16 percent (Sheridan) and 4 percent (Newberg). Thirteen students annually were added in Sheridan School District, and 18 in Newberg. All other school districts in Yamhill County experienced falling enrollment between 2000 and 2011. Enrollments in Willamina and Yamhill-Carlton School Districts declined by 17 percent (losing an average of 15 students per year) and 11 percent (13 fewer students per year), respectively. Enrollment in Dayton School District fell by 4 percent and Amity School District by 2 percent during the period. Both districts lost fewer than 3 students per year on average.

## RACE AND ETHNICITY

According to Census 2010, white non-Hispanics accounted for 79 percent of the County's population, which decreased from 84 percent in 2000. Ethnic minorities accounted for 21 percent of the population in 2010. Hispanics represented the largest share of the ethnic minority population (approximately 70 percent), followed by persons who identified themselves by more than one race (11 percent), Asian/Pacific Islanders (8 percent), and Native Americans (6 percent). Blacks and persons of some other race represented about 4 percent, and 1 percent of the County's ethnic minority population, respectively. Of the total County population, Hispanics represented 15 percent.

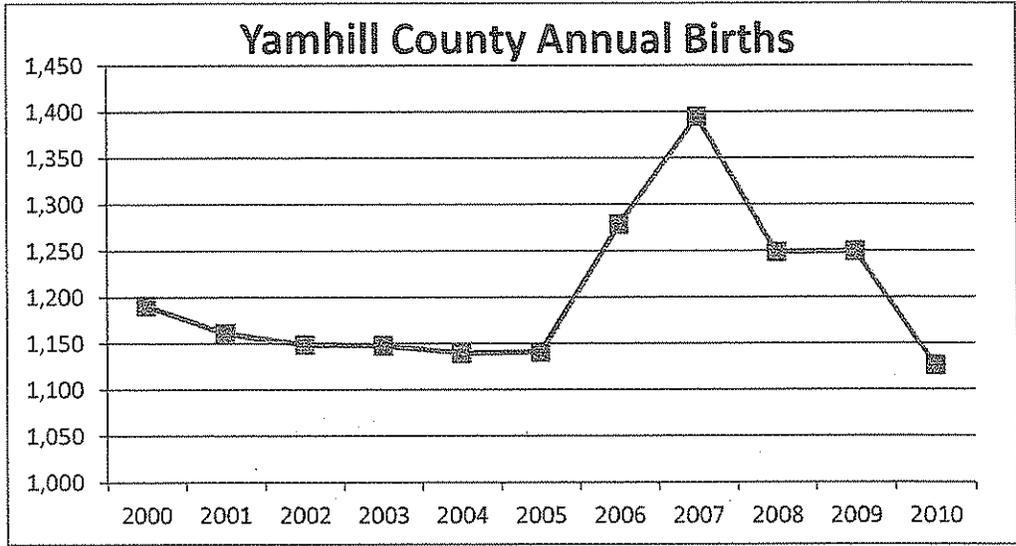
In 2010, McMinnville and Newberg had by far the largest Hispanic populations (about 6,700 and 3,000 respectively), a reflection of their larger overall populations. Two other cities, however, had a higher percentage of Hispanics in their populations: Dayton (28 percent) and Lafayette (22 percent). According to Census data, the population share of white non-Hispanics in all Yamhill County's cities and the unincorporated area decreased during the 2000s, while the share of ethnic minority population (mainly the Hispanic population) has been increasing.

## BIRTHS AND FERTILITY

### **Births**

Since 2000, there have been between 1,127 and 1,395 births in Yamhill County annually (see Figure 1). The number of births has fluctuated each year since 2000. The first half of the decade showed a fairly steady decline in the number of births in the County, starting at 1,191 in the year 2000 and dropping to about 1,140 in 2004 and 2005. Over the course of the next two years, however, this trend reversed quite markedly, with 2006 having over 100 more births than the year before, and in 2007, adding more than another 100 to the 2006 figure. As the recession and housing crisis struck, that increase dramatically reversed to the point that the county was home to 1,127 new births in 2010, a figure even lower than in 2000.

Figure 1. Yamhill County Births



The largest number of births occurred in the two most populous cities, McMinnville and Newberg. Together they comprised roughly 60% of the county’s births each year. McMinnville’s birth trend was similar to the county, although its rise began earlier in 2003. Like the county though, it peaked in 2007 with 538 births and then dropped each year to 417 in 2010, a figure barely higher than its year-2000 number of 416. The number of births in Newberg is notably more stable; unlike the county as a whole, Newberg was home to more births in 2010 than in 2000. Although like its counterparts its number peaked in 2007, its rises and drops were far less pronounced.

Data indicate that the unincorporated area of the county experienced a large drop in the number of births during the ten-year period. These areas began with 287 births in the year 2000 but by 2010 there were only 157 – a decline of 44.9%. No other geography examined had such a large drop. Only Dundee and Sheridan experienced a decline in the number of births, with 14% and 7.8% drops, respectively. (Please note that an anomaly in the data could explain the extreme decrease in births in the unincorporated areas. We believe it is likely that the number has dropped, though, as the area is home to the smallest share of children’s population and largest share of the elderly in the County.)

Table 3 below shows the number of births by the area in which the mother resides. Please note that the number of births fluctuates from year to year. It is worth noting that a city with an increase in births between two years could easily show a decrease for a different two year period.

Table 3. Births, 2000-2010

City + UGB + URA	Number of Births		2000-2010	
	2000 <sup>1</sup>	2010 <sup>1</sup>	# Change	% Change
Yamhill County	1,191	1,127		
Amity	10	17	7	70.0%
Carlton	5	15	10	200.0%
Dayton	23	39	16	69.6%
Dundee	43	37	-6	-14.0%
Lafayette	57	57	0	0.0%
McMinnville	416	417	1	0.2%
Newberg	277	305	28	10.1%
Sheridan	64	59	-5	-7.8%
Willamina (full)	7	27		
Willamina (Yamhill County portion only)	4	14	10	250.0%
Yamhill	6	10	4	66.7%
Unincorporated Yamhill County <sup>2</sup>	286	157	-129	-45.1%
<sup>1</sup> Births are allocated by Census block and include urban growth boundaries (UGBs) and urban reserve areas (URAs) where applicable; current boundaries supplied by Yamhill County are used in the calculations.				
<sup>2</sup> The unincorporated figures exclude current city limits, UGBs, and URAs as supplied by Yamhill County.				

The shares of County births in the cities coincide fairly well with the shares of population, with some exceptions. The share of Yamhill County births captured by McMinnville and Newberg in 2010 was 64%, although their populations only make up 56% of the total county population. The shares of births and population in the smaller cities tend to be fairly close to one another. The unincorporated area, though, accounts for 23% of the county

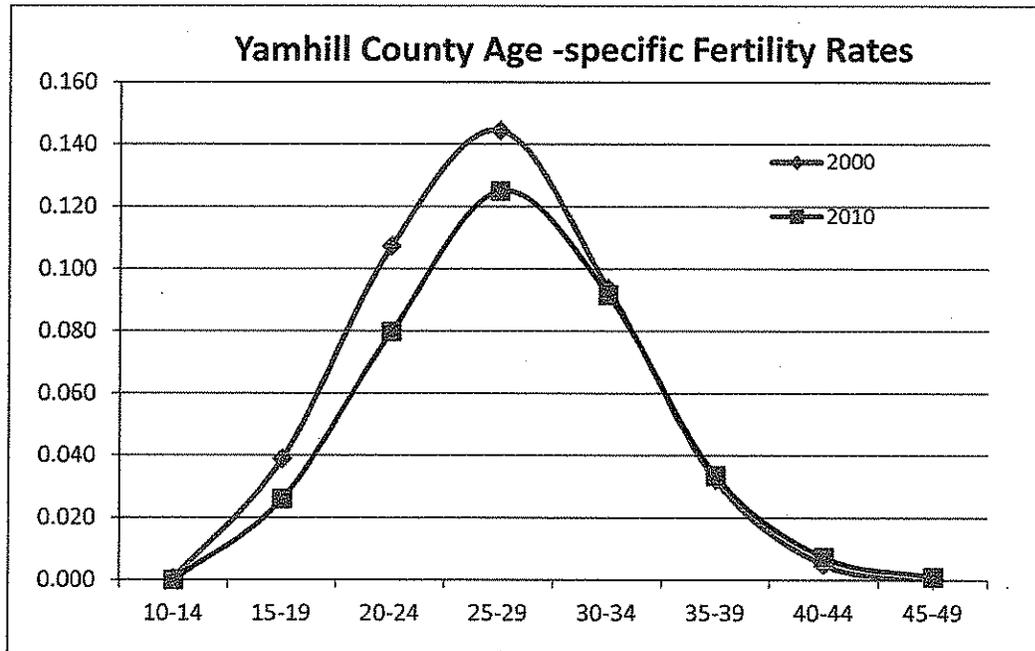
population but only 14% of the 2010 births. This variation means that either the fertility rate, or the percentage of households that are families, or both, is lower in unincorporated areas than the whole county; and conversely for McMinnville and Newberg, that the fertility rate, or percentage of family households, or both, is higher.

### **Yamhill County Fertility**

The total fertility rate is the average number of children a woman bears throughout her fertile years. In 2010, the total fertility rate in Yamhill County was 1.82. This rate declined from 2.12 in 2000, and is now below the replacement rate, which is the average number of children a woman needs to bear in order to avoid population losses barring net migration. The total fertility rate in Yamhill County is slightly higher than the State average which was 1.79 children per woman in 2010 and 1.98 in 2000. In general, the total fertility rates have declined during the past three decades nationwide and in Oregon. A potentially larger decrease in fertility rates has been offset by the increase of the female Hispanic population, which is associated with higher fertility rates than the majority population of white non-Hispanics.

Age-specific fertility rates in the County have shifted slightly in recent years (see Figure 2), too. As also seen statewide, there has been an increase in the percentage of women postponing child-bearing or deciding not to have children at all. In addition, there is now a smaller share of younger mothers than in the past.

Figure 2. Yamhill County Fertility



In the 2008-2010 time period, 71 percent of all births in Yamhill County were to white non-Hispanics, 24 percent were to Hispanics, and 5 percent were to either Asians/Pacific Islanders, blacks, Native Americans, or to women of other or multiple races. The share of Hispanic births in Yamhill County is larger than the state percentage, which was 2 percentage points lower during the same time period. Since 2000 and earlier, the percentage of births to Hispanics in the County and statewide has increased while the percentage of births to white non-Hispanics has decreased.

#### HOUSING AND HOUSEHOLDS

Carlton, Dundee, and Lafayette have UGBs that are either identical or nearly identical, to their city boundaries. Yamhill has a UGB very close to its city boundary as well, though the UGB area is primarily for industrial uses. In general, the number of housing units in the UGB areas outside city limits is very small or negligible. Amity, for example, had 575 housing units as of the 2010 Census, while its unincorporated UGB area had 1. Only Dayton has a significant percentage of its housing stock in its unincorporated UGB area, with 7.4%, or 67 units, outside the city limits (see methodology for details on how this is

estimated). McMinnville and Newberg had 195 and 173 units in their UGBs, respectively, but the percentages were only around 2 percent.

The rates of increase in the number of housing units are generally similar to the corresponding population growth rates. For example, Carlton's population increased by 26.9% from 2000-2010, while the number of housing units increased 27.3%. The largest discrepancy between these rates occurred in Yamhill, whose population grew by 27.2% in population but by 40% in the number of housing units. The growth rates for housing may differ from those for population because of demographic changes: the city has experienced changes in the average number of persons per household or in occupancy rates.

From 2000 to 2010, an average of 684 additional units has been added to Yamhill County's housing stock every year. In terms of percentage growth, Lafayette (48%) and Yamhill (40%) experienced the most dramatic increases in housing stock. In terms of raw numbers, the county's two largest cities had the biggest increases in housing units, with McMinnville adding 2,830 units and Newberg adding 1,805. Together, these two cities account for 68% of all new housing units during the decade.

Table 5. Housing Unit Change, 2000-2010

City + UGB	Housing Units, 2000	Housing Units, 2010	New Housing Units 2000-2010	Percent Increase
Yamhill County	30,270	37,110	6,840	22.6%
Amity	497	576	79	15.9%
Carlton	577	768	190	33.0%
Dayton	699	904	205	29.3%
Dundee	963	1,175	212	22.0%
Lafayette	888	1,317	429	48.3%
McMinnville	9,743	12,573	2,830	29.0%
Newberg	6,604	8,409	1,805	27.3%
Sheridan	1,392	1,684	292	21.0%
Willamina (full)	718	786	68	9.5%
Willamina (Yamhill County portion only)	438	439	1	0.2%
Yamhill	268	375	107	39.9%
Unincorporated Yamhill County <sup>2</sup>	8,203	8,944	741	9.0%
<sup>1</sup> Populations are allocated by Census block and include urban growth boundaries (UGBs) where applicable; current boundaries supplied by Yamhill County are used in the calculations.				
<sup>2</sup> The unincorporated figures exclude current city limits and UGBs as supplied by Yamhill County.				

### Housing Occupancy

According to the Census 2010 data, Yamhill County's housing occupancy rate was about 93.6 percent, which is higher than the rate for Oregon (about 90.7 percent). Although the occupancy rate for the County, all its ten cities, and unincorporated area has slightly declined since 2000, the occupancy rate did not fluctuate much from 2000 to 2010 for most cities, except for Dayton and Willamina. In these two cities, a change of over just over three percentage point was observed. Since the share of seasonal or vacation homes within the County and its cities is relatively small compared to places with more tourism activities, the housing occupancy rate has been about 90 percent or above for all jurisdictions within the County. Places with the highest occupancy rates – above 94 percent - are Dayton, Dundee, McMinnville, and Yamhill. Cities with lowest occupancy rates – below 92 percent - are Carlton, Lafayette, and Willamina.

### **Average Household Size**

In 2010, about 94 percent of Yamhill County's population resided in households. The average number of persons that occupy a household (PPH), or household size, is influenced by several factors. The age and racial/ethnic composition of a population provides some indication of the size of the area's PPH. A high share of elderly population versus the share of married couples and growing families yields a smaller PPH due to the propensity of elderly to live alone; whereas higher PPH may be attributed to the tendency to have larger families or share housing by some racial/ethnic groups than others. Changes in an area's fertility rates and school enrollment also have a bearing on changes in PPH. An increase in PPH is supported by higher fertility rates and increasing school enrollment. A stable PPH could mean the population composition, and the number of births are stable; but it could also mean that an increase in the number of births, married couples and growing families is being offset by an increase in the number of elderly.

As revealed in Census 2010, the PPH in Yamhill County is around 2.70 and is somewhat higher than it is statewide (2.47). The County's PPH declined slightly from 2.78 in 2000. The highest PPHs observed in 2010 were in Amity, Dayton, and Lafayette, where the PPHs were 3.00, 3.17, and 3.09, respectively. The cities with the lowest PPHs in Yamhill County are McMinnville and Newberg, with averages of 2.61 and 2.66 persons residing in each household in 2010.

In general, the PPH in single-family units (SFR) is typically higher than in multi-family residences (MFR), or mobile homes. Analysis of American Community Survey (ACS) data for 2006-2010 reflects that the PPH varies by housing type in Yamhill County and most cities, similar to the pattern observed elsewhere in general. In Lafayette and Yamhill, however, the PPH is higher in multi-family and mobile homes respectively than in other housing unit types.

### **Group Quarters Facilities' Population**

In 2010, 6 percent of Yamhill County's population, or 5,461 persons, resided in group quarters facilities such as nursing homes, college dormitories, or jails and prison. This

percentage decreased very slightly (by a fraction of a percent) from 2000, however, the actual number residing in group quarters facilities increased by 437. Together the cities of McMinnville, Newberg, and Sheridan are home to about 92 percent of the County's group quarters population with their college dorms and the prison. The remaining 8 percent of the group quarter populations is distributed among Dundee, Willamina, Yamhill, and the unincorporated area of Yamhill County. The group quarters facilities in these areas are mostly care homes for the elderly.

### ANNEXATIONS

Although territory annexed into the cities has no bearing on overall population change in the city areas in our study (since annexed areas are already within the UGBs and we use consistent boundaries over time), annexation activity provides background information and indication of growth. Annexations throughout Yamhill County were very minimal during the 2000-2010 period. These cities did not annex any land at all: Carlton, Dundee, Lafayette, and Willamina. Amity, Dayton, McMinnville, and Yamhill each annexed new territory but the annexations did not include any residents at the time. Sheridan and Newberg each annexed territory that included existing residents, however, the Sheridan annexation included only a single person while Newberg brought 38 persons into its boundaries. During the ten-year period, a total of 39 residents was annexed from the unincorporated area and into incorporated cities.

Table 6. Annexations in Yamhill County, 2000-2010

City + UGB	Annexed Population 2000-2010
Yamhill County (all annexations)	39
Amity	0
Carlton	<i>none</i>
Dayton	0
Dundee	<i>none</i>
Lafayette	<i>none</i>
McMinnville	0
Newberg	38
Sheridan	1
Willamina	<i>none</i>
Yamhill	0

## MIGRATION

Sixty-five percent of Yamhill County's population increase from 2000 to 2011 was accounted for by net-migration (movers in minus movers out). An average of around 920 more persons moved into Yamhill County than moved out annually during this period. Migration rates are estimated to be highest among older middle-age persons with their children, and retirees. Migration rates overall are estimated to be a little lower in the 2000s through 2012 than were experienced during the 1990s.

In 2010, about 15 percent of Yamhill County's population had moved within the previous 12 months. Of the movers, 58 percent stayed within the County. Of those who moved into Yamhill County from somewhere else, 67 percent came from another county within Oregon, and 33 percent came from out of state.

## EMPLOYMENT

According to unemployment data from the State of Oregon Employment Department, the 2011 unemployment rate in Yamhill County was around 9.2 percent, which was slightly lower than for Oregon (9.5 percent). Since at least 2000, the rates have been similar.

ACS data for 2006-2010, (the most recent year for which we have data for cities), report that the lowest unemployment rates in the County were in Dundee, Yamhill, and Newberg. The areas with unemployment rates significantly higher than the County rate were Dayton and Willamina.

Data on commuting patterns obtained from the Census Bureau (Local Employment Dynamics data, or LED) reveal that in 2010 about 45 percent of workers residing in Yamhill County are employed in jobs located within the County. About 21 percent work in McMinnville and 11 percent in Newberg. About 8 percent of all workers residing in Yamhill County commute to Portland and 5 percent, to Salem. Cities with the smallest percentage of workers commuting outside the county for work – under 50 percent – are

Dayton and McMinnville. The largest percentage of its workers commuting to their jobs outside Yamhill County resides in Newberg, Lafayette, and Dundee (over 60 percent).

## DEMOGRAPHIC ASSUMPTIONS FOR THE COUNTYWIDE AND SUB-AREA POPULATION FORECASTS

An area's demographic characteristics affect the rate at which its population changes over time. These characteristics include the age and gender structure, propensity to have children, and race/ethnicity. The gender and age structure of the population influences household size and mortality rates; the age structure and ethnicity of the female population influences fertility rates. Additionally, the economy, employment opportunities, and housing availability also influence population change. When the local economy is struggling and unemployment rates and inflation are high, the rate of in-migration decelerates. When the economy is strong, job growth increases, goods and services are more affordable to a higher percentage of population, and in-migration increases to areas that are accessible to jobs and housing, while out-migration decreases. The demographic characteristics of in and out-migrants influence how local populations change as well. For example, the net in-migration of young families has a different effect on a population growth versus the net in-migration of elderly single householders as the number of births and household size amongst these two population groups are at opposite ends of the scale.

In short, the population of an area is determined by the number of births and deaths that occur in that area, and the number of people moving in or out (net migrants). Of the demographic rates that influence population growth in Oregon, mortality rates change very little; and fertility rates, while they do vary more than mortality, change fairly slowly over time. Migration rates are more volatile as they are influenced by more dynamic factors such as job and housing availability, and the economy.

Regardless of how the economy performs, however, the very fast population growth during 1990s and most of the last decade across Oregon will likely not occur in the future at similar levels. First, the population in Yamhill County (and most other areas in Oregon) is aging. An aging population means that the share of population in the older age groups is becoming larger. While mortality rates decline minimally and the probability of dying is declining over time a bit, the number of deaths that occurs does become greater in an aging population and has a significant negative effect on population growth. Secondly, fertility

rates in Yamhill County are below replacement levels, and so together with the aging population, natural increase (births minus deaths) has a weaker effect on increasing annual population numbers. Positive population growth then becomes more and more dependent on net in-migration.

Assumptions about fertility, mortality, and migration for the population forecasts were developed for Yamhill County's population forecast and for the forecasts of McMinnville and Newberg. The assumptions for population growth are based on predictions of countywide and local demographic trends, and how robust the economy will be during the next twenty-four years. The population forecasts produced for Yamhill County's eight smaller city areas and the non-UGB unincorporated area are based on housing growth that is informed by current population composition and recent demographic trends.

A listing of the demographic rates assumed for future change for Yamhill County, McMinnville, and Newberg is presented in Appendix 3, and for all cities, in Appendix 5.

#### SPECIFIC ASSUMPTIONS FOR DEMOGRAPHIC COMPONENTS:

##### **Mortality**

Mortality and life expectancy rates used in our study are those developed for Oregon. The change in future mortality rates and life expectancies in Yamhill County are assumed to follow the same pattern as Oregon and as seen in the national projections developed by the U.S. Census Bureau. Mortality is projected to consistently decline ever so slightly over the forecast period, and life expectancy and survival rates are projected to improve slightly. For Oregon, the life expectancy for males in 2008 (the most recent year for which we have the data) was 76.9 years, and for females was 81.5 years. By 2040, life expectancy is projected to be 81.1 years for males and 85.2 years for females.

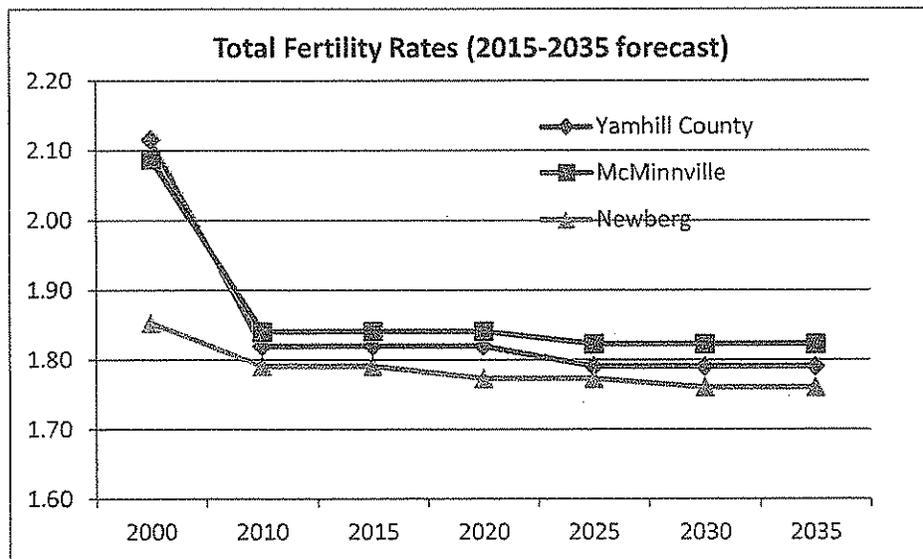
Although life expectancy increases, the magnitude of change in the survival rates in each 5-year period of our population forecast is very small. Despite this slight increase in

survival rates, the aging population and the larger number of persons in the older age groups will produce an increase in the number of annual deaths over the forecast period.

### Fertility

Our study assumes that fertility rates will vary slightly during the forecast period. We predict that current fertility rates will continue to decline slightly over the next few years, and then stabilize. The stabilization of fertility rates will occur due to increasing diversity and an increase in immigrant population. However, the total fertility rate (TFR, the average number of children each female bears during her lifetime) in the County, McMinnville and Newberg will continue to remain at or above state-level fertility rates, but below the replacement level TFR of 2.1 during the entire forecast period. Our assumptions for the total fertility rates in Yamhill County follow similar national trends predicted by the Census Bureau.

Figure 4 Total Fertility Rates: Yamhill County, McMinnville, and Newberg, 2000-2035.



### Migration

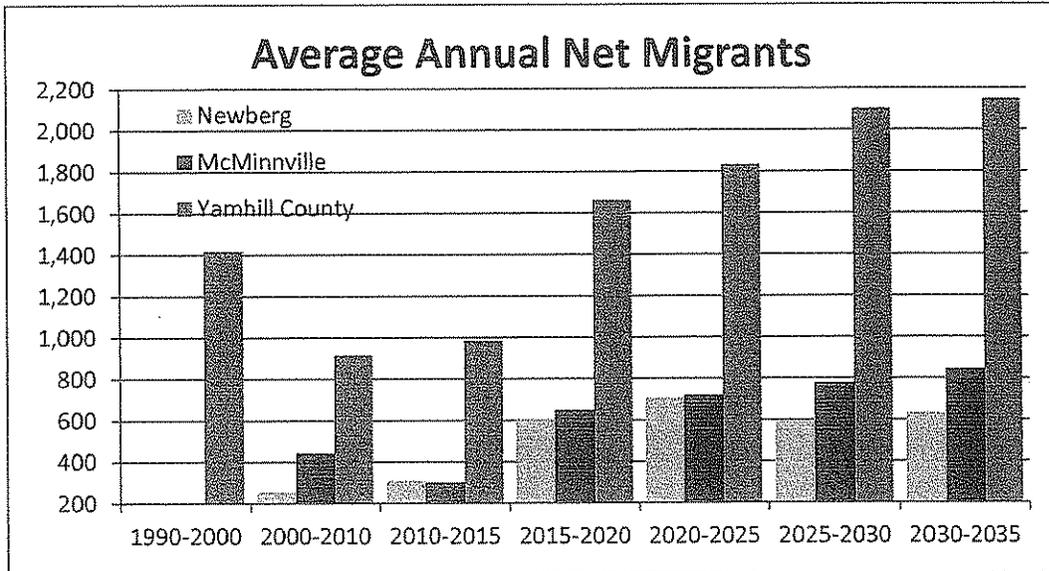
Migration is the most volatile and difficult component of population change to predict. Both economic and social factors in and outside of an area affect the volume and flow of

migration. Given the recent recession and current fairly stagnant economy in the state and the study area, population growth in Yamhill County is not expected to rebound greatly during the 2012 to 2015 period. This slump is assumed to be followed by a bump in growth in the next 5 to 10 years and then taper off in the long run. However, population growth will continually remain positive in Yamhill County, McMinnville and Newberg during the next twenty-four years and net migration will have more and more influence on annual increases.

Migration will remain the major component of growth throughout the forecast period in all three geographic areas. The majority of annual increases in the near term will be attributed to net in-migration rather than natural increase. Moreover, by the end of the forecast horizon, net in-migration will account for all of the increases in population and will be needed to offset a natural decrease caused by the aging population in Yamhill County, McMinnville, and Newberg. The net migration rates in Yamhill County and McMinnville (the number of net migrants per 100 persons) is assumed to accelerate in the near term and then stabilize after the year 2020. In Newberg, the rates will increase more sharply over the next 10-15 years and then decline a bit. In all three areas, though, net migration rates at the end of the forecast period will be higher than currently.

While no forecast can predict the exact timing of economic cycles, the population forecast assumes that there will be both downturns and upswings as there have been in the past, and that net migration will continue to be a strong factor in contributing to the County's population growth over the long run. Specifically, though, for Yamhill County and Newberg, we assume that net migration rates will be higher during 2012-2015 than it was during 2005-2010, but lower than in the 1990s and early 2000s. In McMinnville, our assumption is that net migration rates during 2012-2015 will be closer to those experienced during 2005-2010. We expect the economy to recover eventually, and net in-migration to regain renewed vitality in all three areas after 2015. In the periods after 2015, levels of annual net migrants to the County will exceed those experienced during the 1990s. Net in-migration will accelerate some and will gain momentum until around 2030 when the magnitude lessens a bit.

Figure 5. Assumptions for Net Migration for Yamhill County, McMinnville, and Newberg



DEMOGRAPHIC ASSUMPTIONS FOR YAMHILL COUNTY'S EIGHT SMALLER CITY AREAS

The population forecasts produced for Yamhill County's eight smaller city areas and the non-UGB unincorporated area are based on a medium growth scenario. Rates of population growth for these areas are assumed to be determined by corresponding growth in the number of housing units, and changes in housing occupancy rates and average number of persons per household (PPH). The change in housing unit growth is much more variable than change in housing occupancy rates or PPH.

Some general and broad assumptions about future housing growth apply to the eight smaller cities. First, the housing growth trends from 2000 to 2011 that were assumed to have bearing on how housing growth rates will change during the forecast period. For some cities in Yamhill County, housing growth rates are not predicted to be as high as in the early 2000s, but not as low as in the past five years when the economic downturn impacted housing growth. In these cases, growth rates are expected to gradually increase as the housing development speeds up, and aligns with the recovery of the economy. The growth rates will level off if there is no foreseeable future development. In other cities,

where events or circumstances that may have limited the housing development in the past, special consideration was given to adjust the growth rates up because the past trend would not be an appropriate scenario for future growth. Our second assumption is that generally for all city areas, as the availability of buildable lands approaches capacity, housing growth rates tend to decelerate. If boundaries expand, and additional housing growth can be accommodated, then rates rebound. Our study is not a land capacity study, but changing growth rates can be partially attributed to a shrinking amount of available buildable land over time. Third, the expected future changes in the County have at least some influence on what is predicted to occur in the cities. However, individual or specific situations unique to each city, such as planned development or transportation plans, would have greater influence on the cities' population forecasts than on the expected countywide trends.

Making assumptions about housing occupancy and PPH is also necessary when forecasting household population by the housing unit method. In the eight smaller cities, housing occupancy rates are not assumed to change drastically during the forecast period. The occupancy rates for all cities are predicted to either remain fairly stable or undergo only slight changes.

The PPH is not assumed to change substantially throughout the forecast period, but is expected to decline slightly and gradually. Some of the explanation for a general decline in PPH can be attributed to smaller household size associated with an aging population and a growing share of multi-family housing residences, which tend to house fewer persons per housing unit than in single family residences. These patterns that contribute to a smaller household size can be observed in Yamhill County and its sub-areas as younger members of the households move away for education or for work, or when the elderly members age in place. In cities where the Hispanic share of population is high or is increasing significantly, such as Amity, Dayton, Lafayette, McMinnville, and Sheridan, the PPH is anticipated to undergo less decline than in other areas. The higher PPH and higher fertility associated with the Hispanic ethnic group helps to offset the smaller PPH of the elderly population and multi-family housing.

The number of persons residing in group quarters is a component of population that is added to the number of persons residing in households to arrive at the total population. In our forecasts produced by the housing unit method, the number of persons residing in group quarters facilities is assumed to remain fairly stable during the forecast period except where there are known plans for development of group quarters facilities (such as the potential Federal Correction facility expansion in Sheridan). Since 2000, there has not been much change overall in group quarters population and its share to the County's population. This situation is expected to remain about the same throughout the forecast period.

The assumptions regarding future housing growth that were used to develop the forecasts for the individual city areas other than McMinnville and Newberg are summarized below. For additional supporting information, considerations, and assumed rates for each of the forecasts see Appendices 4 and 5.

Amity: Housing growth rates are assumed to increase slightly and gradually in the next 10 years as the economy recovers and growth stabilizes from 2025-2035. This is due to some availability of buildable land, but limited long term development plans. Housing occupancy rates will experience slight fluctuations over time, and PPH remains one of the highest in the County with a slight decline over the forecast period.

Carlton: Housing growth rates are assumed to increase in the next 10 years as the economy recovers and previously planned and approved housing construction resumes. Housing growth is anticipated to peak in 2025 and housing growth rates will remain steady towards the end of the forecast period, accounting for expanded infrastructure and planned housing development. Housing occupancy rate will experience slight fluctuations over time, and PPH is relatively stable with a gradual and slight decrease.

Dayton: Housing growth rates are assumed to increase in the next 10 years as the economy recovers and as previously planned and approved housing resume construction. The housing growth rates are expected to remain stable from 2025 to 2035, partly due to potential development associated with the completion of the Newberg-Dundee By-pass

project, since Dayton is located at the end of the transportation project. Housing occupancy rates will experience slight fluctuations over time, and PPH remains one of the highest in the County with only a slight decline over the forecast period. High Hispanic population partially offsets some of the impact from decreasing household size due to aging population and changes in housing types.

Dundee: Dundee is expected to have steady housing growth during the forecast period with the pace of growth picking up fully by around 2020. Planned future housing from the Riverside District Master plan and potential growth associated with the completion of the Newberg Dundee By-pass project will be the main driving force for growth during the forecast period. The occupancy rates and PPH are forecast to have little change.

Lafayette: Housing growth rates are assumed to increase slightly and gradually in the next 10 years as the economy recovers. Housing growth rates will stabilize from 2020-2035. Growth is expected to continue due to completion of previously platted subdivision and some availability of buildable land. There is also some potential growth associated with the completion of the Newberg-Dundee By-pass project expected since Lafayette is located toward the end of the transportation project. Housing occupancy rates and PPH are assumed to remain stable throughout the forecast period.

Sheridan: Few subdivisions are expected and housing growth is expected to be limited over the forecast period but there is some availability of buildable land. Overall, some population growth is anticipated from both housing growth and potential expansion of the group quarters facility. There may be some additional jobs created from the new group quarters facility expansion, and the metal fabrication industry will increase the demand for new housing. The occupancy rates and PPH are forecast to have little change.

Willamina: Housing and population growth is assumed to increase in Willamina over the forecast horizon due to the existence of platted residential tax lots ready for development. Population growth rates are anticipated to increase more rapidly over the nearer term and then become less pronounced toward the end of the forecast period. The majority of

housing and population growth is expected to occur in the Yamhill County portion of the city. The occupancy rates and PPH are forecast to have little change over the forecast period.

Yamhill: Planned housing development will increase population and housing growth rates in the short run, however, the growth is forecast to slow slightly after 2030 due to limited future planned development. The occupancy rates and PPH are forecast to have little change over the forecast period.

Non-UGB Unincorporated Area: As cities grow, the amount of population and housing growth in the unincorporated area will be limited. We assume that the rural to urban shift of population seen in Yamhill County, Oregon and nationwide will continue. Also, any small increases to the housing base will cause little addition of persons due to the aging population and smaller PPH. Occupancy rates are assumed to remain stable throughout the forecast period, which historically are slightly lower than in the county overall.

## POPULATION FORECASTS FOR YAMHILL COUNTY AND ITS SUB-AREAS

In our population growth scenario, one which will extend into the future similar demographic trends as those recently seen in Yamhill County, countywide population and populations in all of its cities and unincorporated area are expected to increase from 2011 to 2035. Average annual growth rates for most cities will be lower in the beginning of the forecast period than at the end. Average annual rates will rise after 2015, and continue for around a decade, then decline a bit before 2035. Yamhill County will undergo an increase of almost 43,000 persons from 99,851 in 2011 and population will reach almost 142,830 by 2035.

Most of the countywide population growth will occur in McMinnville and Newberg. These city areas will account for just under 77 percent of the population increase in Yamhill County during 2011-2035. The average annual growth rate for each of these cities over the forecast period is predicted to be around 2 percent and their shares of County population increases continuously, though slightly.

Yamhill County's eight smaller cities will experience population increases so that by 2035, the sum of their populations will capture around 22 percent of the countywide population, almost the same as in 2011. The number of persons added to these smaller cities combined is predicted to be 9,217 during the forecast period, with an average rate of increase of 1.5 percent per year.

Population in the non-UGB unincorporated area of the County is foreseen to not experience much change in population size. From 2011 to 2035, fewer than 1,000 additional persons are expected to reside in the unincorporated area. The share of county population however, is presumed to steadily decline from 22 percent at the beginning of the 24-year forecast period to 16 percent at the end.

Figure 6 below shows historical and forecast populations for Yamhill County, each of the combined city areas, and the non-UGB unincorporated area. Figure 7 displays the County share of the historical and forecast population captured by each area.

Figure 6. Historical and Forecast Populations for Cities Combined and for Yamhill County

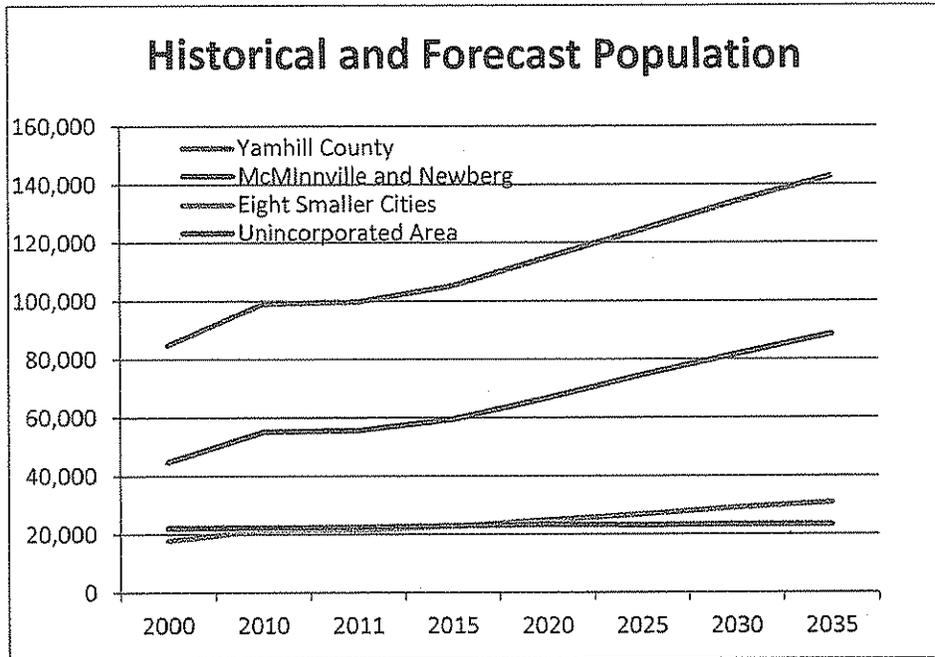
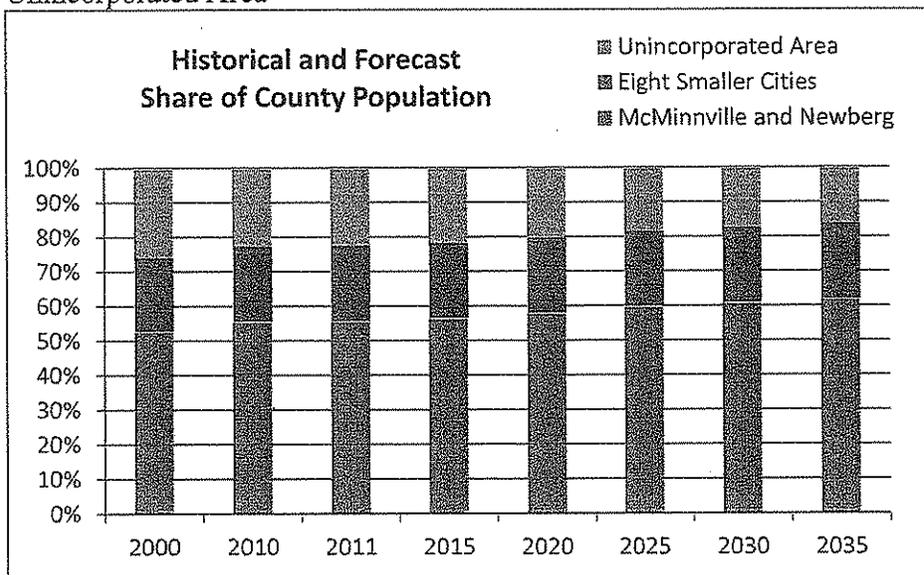


Figure 7. Historical and Forecast Shares of Population, Larger Cities, Smaller Cities, and Unincorporated Area



POPULATION FORECASTS FOR YAMHILL COUNTY, MCMINNVILLE AND NEWBERG

In the countywide forecast and the forecasts for McMinnville and Newberg, population growth will occur at a moderate pace or stronger throughout the forecast period. The rate and timing at which population will increase and the magnitude of growth differ slightly between the three geographies. Overall, the rates of population increase will become renewed after several years of slower growth that began at the end of the 2000s.

From 2011 to 2035, population increases in Yamhill County, McMinnville and Newberg range from 42 to 69 percent. Newberg is anticipated to undergo population increases at the fastest pace, followed by McMinnville (52 percent).

A summary of the forecast results are shown in Table 7 below. More detailed forecast results are included in Appendix 1.

Table 7. Population Forecast (Summarized)

Population Forecast	Census 2010	2011 (PRC est)	2020	2030	2035	2011-2035		Average Annual Change	
						Change		Number	Percent
						Number	Percent		
Yamhill County	99,193	99,851	115,220	134,204	142,830	42,980	43.0%	1,791	1.5%
McMinnville	32,648	32,808	38,430	46,171	49,983	17,175	52.4%	716	1.8%
Newberg	22,468	22,730	28,250	35,408	38,490	15,760	69.3%	657	2.2%

POPULATION FORECASTS FOR YAMHILL COUNTY'S EIGHT SMALLER CITY AREAS AND THE NON-UGB UNINCORPORATED AREA

Based on our forecast, four of Yamhill County's eight smaller city areas are expected to experience population increases of over 1,000 persons from 2011 to 2035. They are: Dayton, Dundee, Lafayette, and Sheridan. During the forecast period, Dundee and Lafayette are forecast to increase their population by over 50 percent, which amounts to an addition of an average of about 74 and 86 persons per year, respectively. Populations in Amity, Carlton, Dayton, Sheridan, and Yamhill are forecast to increase by 25-50 percent between 2011 and 2035, adding an average of 19, 36, 43, 101, and 15 persons per year, respectively. Willamina will undergo much slower growth over the same period, with a population increase of only 15 percent, and adding an average of 13 persons per year.

The unincorporated area (excluding all 10 cities and their corresponding UGB areas) in Yamhill County is anticipated to experience an increase of almost 4 percent, or 828 persons, during the forecast period. At this rate, an average of 34 persons will be added annually for the area. The population in the unincorporated area is expected to be 23,338 by 2035.

Table 10 below shows the population forecasts for Yamhill County's eight smaller cities beginning with population in 2010. For more detailed results of the smaller city areas and non-UGB unincorporated area forecasts, see Appendix 2.

Table 10. Population Forecasts for Yamhill County's Smaller Cities and Unincorporated Area (Summarized)

Population Forecast	Census 2010	2011 (PRC est)	2020	2030	2035	2011-2035 Change		Average Annual Change	
						Number	Percent	Number	Percent
						Amity	1,623	1,635	1,779
Carlton	2,007	2,036	2,247	2,669	2,890	854	41.9%	36	1.5%
Dayton	2,708	2,731	3,021	3,520	3,765	1,034	37.9%	43	1.3%
Dundee	3,162	3,210	3,772	4,592	4,985	1,774	55.3%	74	1.8%
Lafayette	3,742	3,745	4,394	5,349	5,797	2,053	54.8%	86	1.8%
Sheridan	6,164	6,228	7,276	8,366	8,657	2,429	39.0%	101	1.4%
Willamina (Yamhill County portion only)	1,180	1,180	1,285	1,375	1,426	246	20.8%	10	0.8%
Willamina (full)	2,046	2,055	2,179	2,295	2,361	307	14.9%	13	0.6%
Yamhill	1,024	1,037	1,217	1,352	1,403	366	35.3%	15	1.3%
Unincorporated Yamhill County <sup>1</sup>	22,467	22,510	23,436	23,418	23,338	828	3.7%	34	0.2%

<sup>1</sup>The unincorporated figures exclude current city limits and UGBs as supplied by Yamhill County.

## METHODS AND DATA FOR POPULATION FORECASTS

Consistent boundaries for the geographic parts of the study area (such as those for cities and UGBs), which are those defined in 2011, were used to compile population, birth, housing, and land use data. Historical and recent demographic statistics and rates were calculated for these areas so that any boundary changes that occurred during the time span covered in this study would not skew demographic trends.

Developing long-term population forecasts for the County and its sub-areas (its cities and unincorporated area), requires these main stages: 1) compiling and evaluating historical and recent data to ascertain demographic characteristics and trends in the study area and to obtain a population base from which the forecasts may be launched; 2) making assumptions about the future and adjusting the data or rates in the forecasting models (calibrating the models) to incorporate predicted rates or trends; and 3) reconciling, or controlling the sum of the sub-area forecasts to the countywide forecast.

We first develop population projections, then we make adjustments to the projections to produce the forecasts. Population projections are developed by extending historical and current demographic and housing trends into the future. Forecasting population requires that assumptions be made about the future and adjusting the projection models to account for circumstances that perhaps skewed past trends or that with near certainty will affect future change. Such circumstances in the past could be a building moratorium or the opening of a new group quarters facility. Events affecting future change would be, for example, planned future housing development that is higher than usual, a foreseen change in an area's physical ability to accommodate growth (available buildable land is approaching capacity, or improvements to infrastructure that are underway), anticipated changes in the economy (the location of a new employer, the closing of an industry, or the upswing or downturn of the economy in general), or an expected change in the local population and household composition (age, ethnicity, average household size).

Two different types of primary demographic models were utilized to develop the population forecasts for Yamhill County and its sub-areas. For Yamhill County, McMinnville and Newberg, cohort-component models were used. For each of eight smaller city areas and the non-UGB unincorporated area, housing unit model models were relied upon. The cohort-component model best predicts population over the long-term for areas with larger populations. The housing unit model is better suited for smaller populations and incorporates recent annual housing data that account for more variability in population growth over the forecasting period. The forecasting models are described in more detail below.

#### COHORT-COMPONENT MODEL

A demographic projection model called the cohort-component model was used to forecast the population residing in Yamhill County and in its larger sub-areas. Separate cohort-component models were developed for the County, McMinnville, and Newberg. These forecasts are 2010-based projections. However, adjustments were made to the model to incorporate into the forecasts the 2011 PRC certified population estimates and capture information from the most recent data available.

The cohort-component model predicts future populations as outcomes of the life events that occur over time. These events are comprised of births, deaths, and migrations. Thus, an area's population grows when births outnumber deaths and when more people move into the area than leave it. These events occur more often in certain age groups, or cohorts, than in others. For example, people tend to move around the most when they are in their 20s, and the elderly have lower chances than people in their 40s to survive over the next five years. Applying appropriate age- and gender-specific rates of birth, death and migration to the existing population cohorts of the County produce its future population.

The cohort-component method of forecasting population depends on the availability of accurate data on the age and gender composition of an area's population. The most precise information about population age structure in an area is usually provided by the most recent U.S. Census of Population. Rates of life events are applied to the known population

cohorts and are usually derived from data such as those provided by the U.S. Census and the Oregon Center for Health Statistics. These rates are then modified to account for the most recent trends as well as for future ones. Examples of such trends that may affect the future population of an area include the recent tendency among women of childbearing ages to delay having their first child, or a predisposition of young men (ages 20 to 29) to be more mobile than women in the same age cohort. A set of assumptions must be developed to address likely changes in the initial rates of life events and are based on judgment about how the trends might evolve in the study area. The existing population structure mostly determines the future population composition of the area, but it may change slightly depending on age-specific migration rates predicted for the future. Trends detected in historical and recent data, such as housing, land use, employment, and school enrollment data help to determine these future migration rates.

The population and housing data came from the 2000 and 2010 Censuses of Population and Housing and from PRC's 2001-2011 annual population estimates; additional housing information and land use data were obtained from the Yamhill County GIS Department; the Oregon Center for Health Statistics provided information on fertility and mortality; the Oregon Department of Education furnished school enrollment data; and labor force and employment data are from the Oregon Employment Department.

The 2000 and 2010 population and housing data from the Censuses were available at the census-block level of geography by age group and gender. The census blocks were allocated into jurisdictional boundaries, obtained from Yamhill County GIS and defined in 2011, using Geographic Information Systems (GIS). The 2000 population data were then organized into five-year age cohorts, such as 0 to 4 years, 5 to 9 years, and so on. Each of these cohorts was then "survived", or aged into the next cohort to the year 2010.

"Surviving" the cohorts is accomplished by applying age- and sex-specific survival rates. These rates represent the proportion of population in each younger cohort that would survive during a given time period (such as the five years between 2000 and 2005) to become the next older cohort. This process is repeated for each five-year age group and five-year time interval between 2010 and 2035. Forecasting a known population (the 2010

Census population) and its age distribution enables appropriate adjustments to be made to the model so that the forecasted population becomes aligned with the actual population and ensures the accuracy of the model's projections.

During each five-year interval, a certain number of live births occur to the women in childbearing ages. To calculate the number of newly born residents of the County and its larger sub-areas, age-specific fertility rates were applied to the numbers of women in childbearing cohorts (under age 20, 20 to 24, and so on up to 45-49 years). Fertility rates indicate how many children women in a given age group are likely to give birth to during each five-year period. Once born, children become subject to survival rates and are "moved", or "aged", through the system like all the other cohorts.

The most difficult part of forecasting population is to estimate the in- and out-migration of an area. Since little reliable data are available to study in- and out-migration, it's best to use net migration rates, which is the balance between in- and out-migration. Net migration can be calculated if the population is known at the beginning and the end of a previous time period, as well as the number of births and deaths that occurred during the same time. Net migration is positive when more people move into the area than leave it; it is negative if the opposite is true. Net migration rates used in the cohort-component model can be interpreted as the number of people who are added to (or subtracted from) a given cohort due to migration over a given period of time (in this case, five years) per each 100 persons. The initial net migration rates for the cohort-component model were derived from the 2000 and 2010 population cohorts for the census blocks that are located within the County and larger jurisdictional boundaries (as defined in 2011), as well as from births and deaths that occurred in the same area during 2000-2010. The rates were adjusted so that the "forecast" population for the year 2010 from Census 2000 fit the actual population obtained from the 2010 Census. The net migration rates used to forecast the population in the County and in its larger sub-areas from 2010 to 2035 were further modified to reflect the most likely future migration patterns. Demographic trends identified in post-2000 data from PRC's annual population estimates had some bearing on the adjustments made to the model in the initial, 2000-2010, forecast period. In addition, migration patterns are greatly influenced by

the local economy and by housing growth in the area, both current and assumed. When making the final adjustments to the net migration rates, consideration also was given to plans for future development in the region.

The development of the forecasts of population residing in McMinnville and Newberg utilized the same methodology as the countywide forecasting described in the preceding section. A unique set of demographic data was used for each of the cities, and trends specific to each of them were considered when making adjustments to their cohort component models.

#### HOUSING UNIT METHOD AND MODEL

A Housing Unit model was created to prepare the forecasts for each of eight smaller city areas in Yamhill County and for the non-UGB unincorporated area. This method requires that a current housing inventory for each area be compiled and that past and recent rates of change in each inventory be known. Additional housing and population data needed as the components of the housing unit model besides housing units are occupancy rates, the average number of persons per household (PPH), and group quarters population. In this method, the number of housing units in an area is first projected or forecast, and then assumptions about housing occupancy and average household size are made to forecast household population. Persons residing in group quarters, (such as in college dormitories, prisons, and nursing homes) are also projected and then added to the household population to obtain the total population forecast. An area's total population is calculated in the housing unit method by multiplying the number of forecasted housing units by the assumed occupancy rate and PPH, and then adding to that product, the group quarters population. This process is carried out for five-year intervals throughout the forecast period.

Data used in the housing unit models are from the 2000 and 2010 Census of Population and Housing, and from recent and historical building permit and taxlot data that were obtained from the Census Bureau and the Yamhill County GIS Department. Other housing data and group quarters population data were collected from the local jurisdictions

themselves by PRC's Population Estimates Program (we send a housing and population questionnaire to Oregon's cities and counties and request that they complete and return the form to us each year). In a few cases, data were not available from cities. In this situation, adjustments were made to account for recent changes estimated to have occurred in the city's housing unit inventory detected from the countywide land use data obtained from Yamhill County.

Population and housing data from 2000 and 2010 Censuses were compiled for each geographic part in the study area. An allocation of data was made to the 2011 jurisdictional boundaries using the same GIS methods as described previously in the cohort-component model section. Housing inventories were created from the 2000 and 2010 Census data. The inventories were updated to 2011 with the recent housing data from Yamhill County and PRC. Housing growth trends were analyzed and gleaned from the Census data, the tax lot data, and PRC's housing data.

The number of housing units is projected based on past housing growth trends. Housing growth rates were calculated using the housing inventories and the amount of annual or periodic change they experienced. The housing trends were extrapolated into the future and applied to the 2011 housing inventory to predict the numbers of housing units in the future. Adjustments were made to the models to accelerate or curb growth based on current conditions compared to the past, or plans for future change. For example, in the case of the city of Dayton, the low annual growth rates observed in recent years (2000-2011) were adjusted up a bit to account for plans for potential housing development in the future, although details are not known at this time. Based on information provided by staff from each individual city, consideration was given to account for plans for housing development, as well as for the readiness of infrastructure to accommodate housing increases, and the inclination of the city to promote growth. (See Appendix 4 for consideration given to individual cities and the unincorporated area for adjusting the forecast models).

Specific adjustments were made to the model to account for known planned future housing. The numbers of housing units scheduled to be constructed and completed during the forecast period were accounted for in the model by factoring in planned housing units in the 5-year time period that construction is planned to be completed.

Census data from 2000 and 2010 were also used to calculate average household sizes (PPH) and housing occupancy rates. Data from the Census Bureau's American Community Survey (ACS) are available as an additional data source for checking for reasonableness and variability by housing type. ACS data for less populous areas such as the eight smaller cities in Yamhill County are multi-year 5-year average data, for 2006-2010.

Occupancy rates for the County's sub-areas were predicted for 2012-2035 based on the most recent Census data (2010), and adjusted according to past occupancy trends detected from the 2000 and 2010 data and investigation of the housing market conditions. In addition, population and housing composition, and the rural or urban classification of cities were considered to predict changes the occupancy rates will undergo in the future. Minor adjustments were made to the occupancy rates for some cities based on a relationship to the predicted County rates.

The 2011 PPHs were estimated based on past trends in the 2000 and 2010 data. The 2011 PPHs were assumed for the future using the rationale that the increase of the Hispanic population, aging populations, and smaller household size in areas with more multiple family housing units would lead to a slight gradual decline or balanced PPH (the PPH for Hispanics is higher than the average, the PPH for persons ages 65 years and older is lower, and the PPH for multiple family residences is lower than single family units). However, after reconciliation of the sum of the sub-area forecasts to equal the County forecast (discussed later on page 51), the PPHs were slightly adjusted to exactly coincide with the final forecasted populations and households.

Demographic factors that influence the PPH include age and racial composition of population, fertility rates, and changes in school enrollment. Additional data that are recent

and available for the sub-county areas, such as the number of annual births and school enrollments, along with historical trends, are used to help predict future PPH.

The number of persons residing in group quarters is a component of population that is added to the number of persons residing in households to arrive at the total population. After the population residing in housing units was forecasted for each city and for the unincorporated area, the group quarters population was projected for the same areas. The prediction of future group quarters populations was based on historic and recent trends of the share of the total population that reside in group quarters facilities in each sub-area and planned future group quarters developments (in actuality, the group quarters population does not significantly change much unless a facility closes or a new one is built). The projected group quarters populations were then added to the forecasted housing unit populations to obtain total population forecasts.

#### BIRTH DATA

Births for each year from 2000 to 2011 were assigned to current city area boundaries using individual birth records obtained through a confidential data sharing agreement with the Oregon Center for Health Statistics. Birth data for earlier years were obtained from published data for Yamhill County. Annual births from 2012 to 2035 were forecast as part of the cohort-component model by applying the fertility rates described earlier in the discussion of the cohort-component model to the forecast female population by age group.

#### RECONCILIATION OF THE FORECASTS

For our study, we developed separate population forecasts for each of the County's sub-areas. For consistency, the sum of the parts must equal the whole, which means here that the sum of the individual forecasts of the County's sub-areas should add to the County-level forecast. The countywide forecast served as the control total to which the sum of the individual forecasts for the cities and the unincorporated area were reconciled. Some minor adjustments were made to the sub-area forecasts so that when added together, the result is the same as the forecast for the County.

The adjustments were made to the sub-area forecasts using control factors that were calculated based on the relationship between the control total and the sum of the parts. The actual difference between the control forecast and the sum of the forecasts for the parts was proportionately distributed to each of the individual sub-area forecasts by multiplying each individual sub-area forecast by the control factor.

Please note that in some instances, fluctuations in the forecast growth rates are at least partially attributed to the reconciliation of the sum of the sub-areas to the County, or the control process.

#### SUPPORTING DATA AND PROJECTIONS PRODUCED FROM OTHER DEMOGRAPHIC MODELS

In addition to evaluating demographic trends detected from the data used in our forecasting models, we reviewed other data and information to obtain a better understanding of the dynamics of population change specific to the study areas. This supporting information helps us to make better, or more realistic, assumptions about future population growth and helps us to use better judgment when making adjustments to our demographic models. Most of the supporting data and information were available either at the County level of geography, or for other large geographic areas. Still, the information is valuable for forecasting the County and sub-area populations. The sources include labor force data and economic profiles from the Oregon Employment Department, school enrollment data for school districts in Yamhill County from the Oregon Department of Education, and demographic and socioeconomic data from the 2006-2010 ACS. Also, preliminary revised population projections for 2010 to 2040 from the Oregon Office of Economic Analysis (OEA), and employment projections from the Oregon Employment Department were used to gauge our countywide results and for comparison.

Also, to help make our forecasts more accurate, we developed additional sets of population projections from demographic models other than the primary models employed in this study. Secondary sets of projections were produced to serve as an evaluation tool to verify that the numbers forecast from the primary models are reasonable. The additional

projections were used to detect and evaluate, and adjust if necessary, any inconsistencies that those primary forecasts may have had.

Population trends models were developed for each of Yamhill County's cities. These models are used for projecting total population size for County sub-areas. They provide projections, by five years intervals, from 2010 to 2035.

One population trends model is based on a ratio method. The basic idea of the ratio method is that local city populations are under the same influences of change as the surrounding county population. In particular, we assume here that the influences of population change (fertility, mortality, and migration) are similar in Yamhill County's cities and unincorporated area, and that there is a link between population changes in Yamhill County and those in its cities and unincorporated area. In this model, we note that the proportion of Yamhill County's population that resides in each of the 10 cities has changed over time, however slight that may be.

For the County projection in this population trends model, we relied on a preliminary revised 2010-2040 population forecast for Yamhill County prepared by Oregon's Office of Economic Analysis (OEA). OEA's forecast assumes that annual population growth rate for the county increases from its recent level of about 1.5 percent (for the 2000-2010 period) to reach 1.8 percent during 2010-2015, and then to continually diminish back down to 1.4 percent by 2035. The pattern of change seen in OEA's preliminary revised forecast is similar to the forecast produced by our countywide cohort-component model.

Another population trends model projects future populations based on historical average annual change in each individual city. We trended populations from 1970 to 2010 for each city in our study to arrive at 2015-2035 populations.

We developed a simple economic model to produce an additional population forecast for Yamhill County. The model projects net-migration based on an assumed relationship between population change and economic patterns. We used employment projections for

Yamhill County (Oregon Economic Region 3) developed by the Oregon Employment Department as a basis for building our economic model. However, the future number of jobs, or number of workers, is available for only part of our forecast period. The employment projections are prepared for one ten-year period, 2010-2020, but they were still useful to compare to our forecasts for 2015 and 2020, and to determine if the two sets of projections are within a reasonable range of one another.

The employment projections provide a predicted demand for workers to fill future jobs. The forecast from our cohort-component model provides the supply of workers available to fill those jobs. We compare the difference between the projected additional number of workers (the projected number of jobs from the employment projections) and the forecast number of persons ages 15-64 in the cohort-component model to see if they are in a reasonable range.

Additional housing unit models were developed for all geographic sub-areas in this study, not only for the smaller city areas and non-UGB unincorporated area. For areas where a cohort-component model was created to produce its population forecast, the forecast results generated from the two models were checked and compared.

#### GENERAL COMMENTS ABOUT POPULATION FORECASTS

The longer the time-span of the forecast, the more likely it is that conditions change, and thus the uncertainty in rates and assumptions increase. It is crucial to have recent data that allows testing, or calibrating, the assumptions used in the forecasting models. The study area's historical population helps to calibrate and adjust original migration rates and growth rates in the forecast models so that a better fit between actual and predicted number of persons can be achieved. In the long-run, however, the local economy and conditions affecting populations are likely to change in ways not currently anticipated.

All population forecasts are based on a combination of a beginning population; various known, estimated, and predicted rates; and the forecasters' judgment about future trends. The forecasts may err through imprecise data or unexpected shifts in demographic trends.

Generally, forecasts for larger geographical areas, such as the entire county are more reliable than those for small areas, such as for a small city with fewer than one or two thousand persons. These forecasts may be used as a guide to population growth over the next few years. However, changes in local areas will surely affect populations in some cities and actual populations will deviate from those shown here. The differences between the forecast and actual populations will vary in magnitude and perhaps direction at some points during the forecast period.

The historical, recent, and predicted demographic rates and other statistics affecting population change in our study area (Yamhill County and each of its geographic sub-areas) are summarized and shown in Appendix 5. Also included in these summary tables are the population forecasts so that they may be viewed alongside their supporting information.

In the forecast tables accompanying this report, the original calculations for the population forecasts use decimal fractions. Because the fractions are rounded to show whole numbers, the numbers may not add exactly to the totals.

## **APPENDIX 1**

### **Detailed Population Forecasts for Yamhill County, McMinnville and Newberg**

Populations for Yamhill County, McMinnville, and Newberg										
AREA	Historical →				Forecast →					
	2000*	2010	2011	2012	2015	2020	2025	2030	2032	2035
Yamhill County	84,992	99,193	99,851	100,708	105,220	115,108	124,509	134,204	137,590	142,830
McMinnville	26,286	32,648	32,808	33,045	34,757	38,430	42,283	46,171	47,659	49,983
Newberg	18,538	22,468	22,730	22,963	24,663	28,250	32,213	35,408	36,610	38,490

\*Population for 2000 is allocated to current boundaries.

Avg. Annual Change in #	Historical →			Forecast →					
	2000-2010	2010-2011	2010-2011	2012-2015	2015-2020	2020-2025	2025-2030	2030-2035	
Yamhill County	1,420	658	160	1,504	1,978	1,880	1,939	1,725	
McMinnville	636	160	262	570	735	771	777	763	
Newberg	393	262	262	567	718	793	639	616	

Avg. Annual Growth Rate	Historical →			Forecast →					
	2000-2010	2010-2011	2010-2011	2012-2015	2015-2020	2020-2025	2025-2030	2030-2035	
Yamhill County	1.5%	0.7%	0.7%	1.5%	1.8%	1.6%	1.5%	1.2%	
McMinnville	2.2%	0.5%	0.5%	1.7%	2.0%	1.9%	1.8%	1.6%	
Newberg	1.9%	1.2%	1.2%	2.4%	2.7%	2.6%	1.9%	1.7%	

## **APPENDIX 2**

### **Detailed Population Forecasts for Yamhill County's Eight Smaller City Areas and Non-UGB Unincorporated Area**

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Populations for Yamhill County, its Cities, and Unincorporated Area												
AREA	Historical →					Forecast →						
	2000*	2010	2011	2012	2015	2020	2025	2030	2032	2035		
Amity	1,481	1,623	1,635	1,650	1,719	1,779	1,879	1,984	2,026	2,097		
Carlton	1,514	2,007	2,036	2,065	2,080	2,247	2,465	2,669	2,757	2,890		
Dayton	2,244	2,708	2,731	2,762	2,835	3,021	3,266	3,520	3,625	3,765		
Dundee	2,642	3,162	3,210	3,259	3,437	3,772	4,185	4,592	4,764	4,985		
Lafayette	2,586	3,742	3,745	3,802	4,018	4,394	4,874	5,349	5,552	5,797		
Sheridan	5,581	6,164	6,228	6,296	6,417	7,276	7,573	8,366	8,488	8,657		
Willamina (Yamhill County portion only)	1,128	1,180	1,180	1,182	1,223	1,285	1,336	1,375	1,395	1,426		
Willamina (full Yamhill)	1,859	2,046	2,055	2,063	2,112	2,179	2,243	2,295	2,321	2,361		
Yamhill	805	1,024	1,037	1,050	1,150	1,217	1,285	1,352	1,377	1,403		
Unincorporated Yamhill County <sup>2</sup>	22,187	22,467	22,510	22,630	22,919	23,436	23,150	23,418	23,336	23,338		

\*Population for 2000 is allocated to current boundaries.

<sup>1</sup>Populations are allocated by Census block and include urban growth boundaries (UGBs) where applicable; current boundaries supplied by Yamhill County are used in the calculations.

<sup>2</sup>The unincorporated figures exclude current city limits and UGBs as supplied by Yamhill County.

Avg. Annual Change in #	Historical		Forecast →							
	2000- 2010	2010- 2011	2012- 2015	2015- 2020	2020- 2025	2025- 2030	2030- 2035			
Amity	14	12	23	12	20	21	23			
Carlton	49	29	5	33	44	41	44			
Dayton	46	23	25	37	49	51	49			
Dundee	52	48	59	67	83	81	79			
Lafayette	116	3	72	75	96	95	90			
Sheridan	58	64	40	172	59	159	58			
Williamina (Yamhill County portion only)	5	0	14	12	10	8	10			
Williamina (full) Yamhill	19	9	16	13	13	10	13			
Unincorporated Yamhill County <sup>1</sup>	22	13	33	13	14	13	10			
	28	43	96	103	-57	54	-16			

<sup>1</sup>The unincorporated figures exclude current city limits and UGBs as supplied by Yamhill County.

Avg. Annual Growth Rate	Historical →		Forecast →										
	2000-2010	2010-2011	2012-2015	2015-2020	2020-2025	2025-2030	2030-2035	2035					
AREA													
Amity	0.9%	0.7%	1.4%	0.7%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
Carlton	2.8%	1.5%	0.2%	1.5%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Dayton	1.9%	0.8%	0.9%	1.3%	1.6%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.3%
Dundee	1.8%	1.5%	1.8%	1.9%	2.1%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.6%
Lafayette	3.7%	0.1%	1.8%	1.8%	2.1%	2.1%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.6%
Sheridan	1.0%	1.0%	0.6%	2.5%	0.8%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	0.7%
Williamina (Yamhill County portion only)	0.5%	0.0%	1.1%	1.0%	0.8%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.7%
Williamina (full)	1.0%	0.4%	0.8%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%
Yamhill	2.4%	1.3%	3.0%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.7%
Unincorporated Yamhill County <sup>1</sup>	0.1%	0.2%	0.4%	0.4%	-0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	-0.1%

<sup>1</sup>The unincorporated figures exclude current city limits and UGBs as supplied by Yamhill County.

## **APPENDIX 3**

### **Demographic Assumptions for Yamhill County, the Cities of McMinnville and Newberg**

## Survival Rates, Oregon

Female										
Age	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035
0	0.99898	0.99902	0.99906	0.99911	0.99915	0.99916	0.99916	0.99916	0.99916	0.99916
5	0.99940	0.99942	0.99943	0.99945	0.99947	0.99947	0.99947	0.99947	0.99947	0.99947
10	0.99851	0.99862	0.99874	0.99885	0.99897	0.99899	0.99899	0.99899	0.99899	0.99899
15	0.99793	0.99797	0.99801	0.99806	0.99810	0.99811	0.99811	0.99811	0.99811	0.99811
20	0.99788	0.99785	0.99783	0.99780	0.99777	0.99776	0.99776	0.99776	0.99776	0.99776
25	0.99709	0.99726	0.99743	0.99760	0.99777	0.99780	0.99780	0.99780	0.99780	0.99780
30	0.99617	0.99623	0.99629	0.99636	0.99642	0.99643	0.99643	0.99643	0.99643	0.99643
35	0.99500	0.99475	0.99450	0.99426	0.99401	0.99396	0.99396	0.99396	0.99396	0.99396
40	0.99242	0.99187	0.99132	0.99078	0.99023	0.99012	0.99012	0.99012	0.99012	0.99012
45	0.98720	0.98667	0.98613	0.98560	0.98507	0.98496	0.98496	0.98496	0.98496	0.98496
50	0.97781	0.97805	0.97829	0.97854	0.97878	0.97883	0.97883	0.97883	0.97883	0.97883
55	0.96276	0.96417	0.96558	0.96699	0.96840	0.96868	0.96868	0.96868	0.96868	0.96868
60	0.94261	0.94486	0.94712	0.94939	0.95166	0.95211	0.95211	0.95211	0.95211	0.95211
65	0.91381	0.91633	0.91885	0.92138	0.92392	0.92443	0.92443	0.92443	0.92443	0.92443
70	0.86922	0.87241	0.87561	0.87882	0.88205	0.88270	0.88270	0.88270	0.88270	0.88270
75	0.79919	0.80055	0.80191	0.80327	0.80464	0.80491	0.80491	0.80491	0.80491	0.80491
80+	0.55294	0.55494	0.55695	0.55896	0.56098	0.56138	0.56138	0.56138	0.56138	0.56138

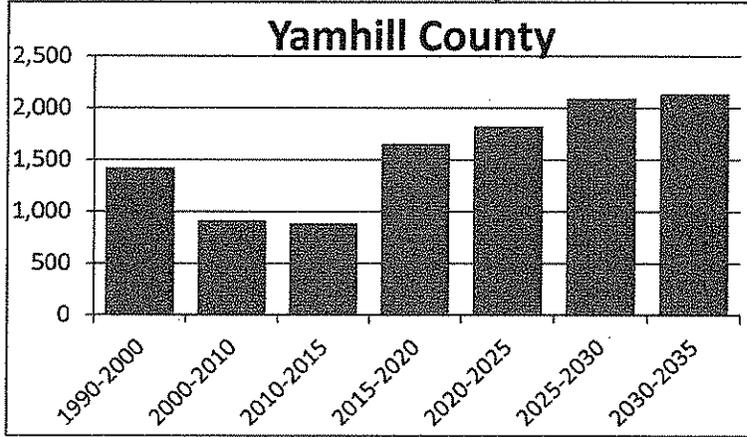
  

Male										
Age	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035
0	0.99866	0.99871	0.99877	0.99882	0.99888	0.99889	0.99889	0.99889	0.99889	0.99889
5	0.99917	0.99919	0.99921	0.99924	0.99926	0.99926	0.99926	0.99926	0.99926	0.99926
10	0.99681	0.99721	0.99761	0.99801	0.99841	0.99849	0.99849	0.99849	0.99849	0.99849
15	0.99344	0.99391	0.99437	0.99484	0.99531	0.99540	0.99540	0.99540	0.99540	0.99540
20	0.99235	0.99285	0.99335	0.99386	0.99436	0.99446	0.99446	0.99446	0.99446	0.99446
25	0.98968	0.99071	0.99174	0.99278	0.99381	0.99402	0.99402	0.99402	0.99402	0.99402
30	0.98511	0.98717	0.98923	0.99129	0.99336	0.99377	0.99377	0.99377	0.99377	0.99377
35	0.98335	0.98489	0.98644	0.98799	0.98954	0.98985	0.98985	0.98985	0.98985	0.98985
40	0.98219	0.98259	0.98298	0.98338	0.98378	0.98386	0.98386	0.98386	0.98386	0.98386
45	0.97737	0.97684	0.97630	0.97577	0.97524	0.97513	0.97513	0.97513	0.97513	0.97513
50	0.96530	0.96509	0.96488	0.96468	0.96447	0.96443	0.96443	0.96443	0.96443	0.96443
55	0.94279	0.94455	0.94632	0.94809	0.94987	0.95022	0.95022	0.95022	0.95022	0.95022
60	0.91304	0.91682	0.92061	0.92442	0.92825	0.92902	0.92902	0.92902	0.92902	0.92902
65	0.87098	0.87655	0.88215	0.88779	0.89347	0.89461	0.89461	0.89461	0.89461	0.89461
70	0.79940	0.80839	0.81749	0.82669	0.83599	0.83786	0.83786	0.83786	0.83786	0.83786
75	0.69154	0.70434	0.71738	0.73066	0.74419	0.74692	0.74692	0.74692	0.74692	0.74692
80+	0.46846	0.47840	0.48855	0.49892	0.50951	0.51165	0.51165	0.51165	0.51165	0.51165

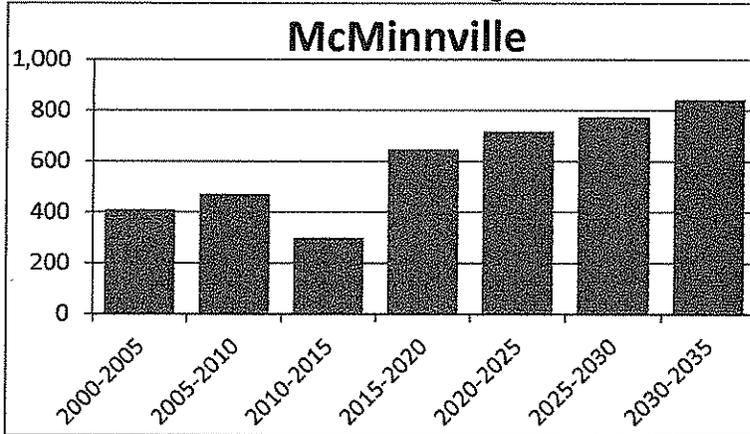
Historical and Forecast Total Fertility Rates Yamhill County, McMinnville and Newberg

Year	Yamhill County	McMinnville	Newberg
2000 (known)	2.12	2.09	1.85
2005 (estimated)	1.95	1.98	1.79
2010 (known)	1.82	1.84	1.79
2015	1.82	1.84	1.79
2020	1.82	1.84	1.77
2025	1.79	1.82	1.77
2030	1.79	1.82	1.76
2035	1.79	1.82	1.76

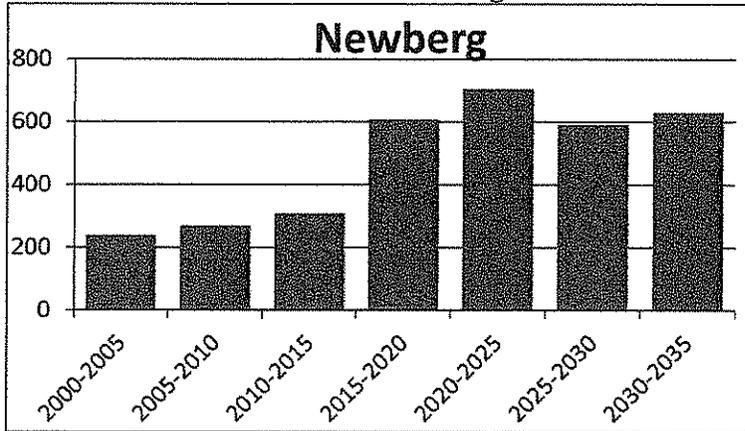
Historical and Forecast Annual Net Migrants in Yamhill County, 1990-2035



Historical and Forecast Annual Net Migrants in McMinnville, 2000-2035



Historical and Forecast Annual Net Migrants in McMinnville, 2000-2035



**APPENDIX 4**

**Information Considered When Developing Forecasts for  
Yamhill County's Sub-Areas**

### Information Considered to Develop Housing and Population Forecasts

The information in the table below is obtained from submittals to PRC from city officials/staff. Included for some cities is information that we gleaned from planning documents and reports.. The information pertains to population and housing characteristics of Yamhill County's sub-areas, and to changes believed to occur in those areas in the future. The information has been summarized for clarity and conciseness. **The table is a tool we used to develop the population forecasts and is in 'working' format.**

<b>Amity</b>						
Observations about Population (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est . Year Completion	Future Group Quarters Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
Over 15% Hispanic pop, increase from 11% in 2000; 8% elderly (less than Co.)		*Rezoning to permit 2 homes, 2012				<b>Promos:</b> *UGB expanded by 24 acres  <b>Hinders:</b> *Current economic recession
<b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b>						
*Using comprehensive plan from 1978						

Carlton						
Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)	Observations about Housing (including vacancy rates)	Planned Housing Development/Est . Year Completion	Future Group Quarters Facilities	Future Employers	Infrastructure	Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes
<ul style="list-style-type: none"> <li>*Mix of age groups</li> <li>*New development geared toward established families</li> <li>*Small % Hispanic (6%), but incr. slightly from 2000.</li> <li>*9% elderly share.</li> </ul>	<ul style="list-style-type: none"> <li>*Smaller homes selling</li> <li>*High foreclosure rate</li> <li>*Home rentals as vacation homes rising</li> </ul>	<ul style="list-style-type: none"> <li>*5 phase, 155 lot SFR detached subdivision over 10 years, home prices 190k-250k (Carlton Crest, 7<sup>th</sup> St.)</li> </ul>	<ul style="list-style-type: none"> <li>*None</li> </ul>	<ul style="list-style-type: none"> <li>*Wine tasting room (pending review)</li> <li>*WineMakers Studio expansion (possible)</li> <li>*2 community winery buildings (inquiries)</li> <li>*Mini-warehouse storage facility</li> </ul>	<ul style="list-style-type: none"> <li>*New water main, estimated completion 2015</li> </ul>	<p><b>Promos:</b></p> <ul style="list-style-type: none"> <li>*Planned water line upgrade</li> <li>*Wine industry and tourism</li> <li>*Available land within UGB</li> <li>*Proximity to nearby job markets</li> <li>*2009 urban renewal district for downtown</li> </ul> <p><b>Hinders:</b></p> <ul style="list-style-type: none"> <li>*Current water lines</li> <li>*Aging streets, sewer lines</li> <li>*Parts of town lack stormwater facilities</li> <li>*Limited residential zoning</li> <li>*Transportation access, traffic from Portland Metro</li> </ul>
<p><b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b></p>	<ul style="list-style-type: none"> <li>*Comprehensive Plan updated June 2007 <ul style="list-style-type: none"> <li>-Projects 57 MFR units, 176 SFR units (by 2027)</li> <li>-Projects 73 commercial jobs, 136 industrial jobs (by 2027)</li> </ul> </li> <li>*Wastewater Facilities Plan adopted 2007</li> <li>*TSP update adopted June 2009</li> <li>*Water Master Plan update underway, est. completion 2013</li> </ul>					

<b>Dayton</b>							
<b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b>	<b>Observations about Housing (including vacancy rates)</b>	<b>Planned Housing Development/Est . Year Completion</b>	<b>Future Group Quarters Facilities</b>	<b>Future Employers</b>	<b>Infrastructure</b>	<b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b>	
*~30% Hispanic, incr from 25% in 2000. *~10% senior citizens	*835 residential utility connections; 24 vacant (3%)	*17 of 36 SFR units built in Country Heritage subdivision; Phase II not started; project approved 2005	*None	*Small entrepreneurial -type business	*\$900k in water improvements scheduled in 2013-2014 *\$12 million needed for water improvements, \$19 million needed for sewer improvements	<b>Promos:</b> *Close to large population centers *Bedroom community to Portland, Salem <b>Hinders:</b> *Lack of economic opportunities *Lack of large commercial or industrial zoned parcels	
<b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b>							
*Projected growth of 2.25% unmet							

<b>Dundee</b>						
<p><b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b></p> <p>*Median age, income increasing          *Aging population with more resources, fewer young families.</p>	<p><b>Observations about Housing (including vacancy rates)</b></p> <p>*Generally stable tenure; rental vacancy rate at 1.4% while homes at 2.1%</p>	<p><b>Planned Housing Development/Est . Year Completion</b></p> <p>*1 SFR unit, 2012          *Riverside District Master Plan, June 2011, 970 residential units on 360 acres, no est. completion date</p>	<p><b>Future Group Quarters Facilities</b></p> <p>*None</p>	<p><b>Future Employers</b></p> <p>*Continued employment in retail, tourism, local manufacturing</p>	<p><b>Infrastructure</b></p> <p>*Severe constraints on water availability          *New wastewater treatment plant under construction, est. completion 2012          *New fire station planned, construction begins 2013          *School district interested in expanding or remodeling elementary school or building new one          *Newberg-Dundee Bypass construction begins 2013</p>	<p><b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b></p> <p><b>Promos:</b>          *Land available for development, including 29 residential acres outside Riverside Master Plan          *Riverside District Master Plan adopted          *Updating Transportation System Plan</p> <p><b>Hinders:</b>          *Lack of water capacity          *Current traffic on 99W deters visits</p>
<p><b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b></p> <p>*Riverside District Master Plan envisions 970 dwelling units, plus commercial and industrial development on 360 acres          -Current development limited due to lack of water capacity          -Development assumed to begin once water capacity issue resolved          -Expected to cater to mix of incomes and diverse population</p>						

<p><b>Lafayette</b></p>	<p><b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b></p> <p>*Income, educational attainment, Hispanic population rapidly rising *Relatively young population</p>	<p><b>Observations about Housing (including vacancy rates)</b></p> <p>*Significant SFR development in last 20 years</p>	<p><b>Planned Housing Development/Est . Year Completion</b></p> <p>*14 SFR building permits, 2011; ~12 new homes annually from same non-profit *1 manufactured home installation permit issued, 2011 *126 vacant platted subdivision lots in city limits *9.6 acres to be subdivided</p>	<p><b>Future Group Quarters Facilities</b></p>	<p><b>Future Employers</b></p>	<p><b>Infrastructure</b></p> <p>*Sewer treatment plant relatively new *Water system can meet growth for at least 20 years</p>	<p><b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b></p> <p><b>Promos:</b> *Bedroom community for nearby job markets *UGB expansion review beginning</p> <p><b>Hinders:</b> *Current economic recession</p>
<p><b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b></p>	<p>*In initial step of reviewing UGB for potential expansion; expansion geared toward residential rather than job development</p>						

<p><b>McMinnville</b></p> <p><b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b></p>	<p><b>Observations about Housing (including vacancy rates)</b></p> <p>*~35% rentals, 8% residential vacancy</p> <p>*Housing starts slightly up</p>	<p><b>Planned Housing Development/Est. Year Completion</b></p> <p>*Habitat for Humanity: 35 SFR, 2013 (pending)</p> <p>*21 lot SFR subdivision, 2013</p> <p>*36 unit MFR complex, 2012</p> <p>*24 SFR lots, 2013</p> <p>*99 SFR lots, unplatted, unknown completion</p>	<p><b>Future Group Quarters Facilities</b></p> <p>*44-bed memory care facility (pending)</p>	<p><b>Future Employers</b></p> <p>*Continued expansion of Evergreen Museum Campus</p>	<p><b>Infrastructure</b></p> <p>*Continued upgrading of sanitary, storm sewer lines</p> <p>*Newly adopted TSP</p>	<p><b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b></p> <p><b>Promos:</b></p> <ul style="list-style-type: none"> <li>*Wastewater facility to double capacity in near-term</li> <li>*Newberg-Dundee Bypass will enhance access</li> <li>*Local/regional hospital</li> <li>*Evergreen Museum Campus</li> <li>*Linfield College</li> </ul> <p><b>Hinders:</b></p> <ul style="list-style-type: none"> <li>*No direct access to Interstate 5</li> <li>*Bioanalytical Services closed in 2012; 20 jobs lost</li> </ul>
<p><b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b></p>	<p>*LCDC acknowledged 2023 population projection of 44,055</p> <p>*Projected rate of 2.54 persons per dwelling unit</p> <p>*Projected 6,014 new dwelling units 2003-2023</p>					

<b>Newberg</b>						
<b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b> *George Fox University growing, though rate likely to slow *Rising median age; some housing projects for the elderly *% Hispanic population rising *Attracts families with children	<b>Observations about Housing (including vacancy rates)</b> *Vacancy rate up due to recession *Housing costs dropped *Static housing stock for low-income residents; most construction geared toward higher-end	<b>Planned Housing Development/Est. Year Completion</b> *Springbrook Master Plan accommodates 1,345 dwelling units over ~10 years *Multiple other projects; 178 SFR and 182 MFR units	<b>Future Group Facilities</b> *Friendsview Manor retirement community planning 165 unit expansion *New skilled nursing facility *George Fox University seeking additional dorm space	<b>Future Employers</b> *Strong manufacturing growth *Wine/tourism *Providence expansion, other health facilities on rise *Schools and higher-education expansion *Potential retail growth	<b>Infrastructure</b> *Good water, wastewater infrastructure *Newberg-Dundee Bypass begins construction 2013 *Good electricity, natural gas infrastructure *Consistent expansion, upgrading of schools	<b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b> <b>Promos:</b> *Planning for growth, urban reserve area, expanded industrial area *Proximity to Portland Metro without being under Metro's jurisdiction *Quality of life *Plentiful supply of residential land <b>Hinders:</b> *Land-use laws *Traffic expected to remain heavy after Newberg-Dundee Bypass Phase I *Lack of MFR, affordable housing
<b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b> *Advisory committees recommend medium rather than high or low growth forecast *Adopted 2005 PSU forecast of 2035 UGB population of 48,316; forecasted 2010 population at 24,497 though 2010 Census showed 22,674 in city and 564 in UGB area *Promoting economic growth; June 2012 forecast 2.5% AAGR in employment *Updating Transportation System Plan based on AAGR rate; expected 2035 population 41,228						

<p><b>Sheridan</b></p>	<p><b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b></p> <p>*Federal Correctional Institution (FCI) comprises ~1,800 inmates</p>	<p><b>Observations about Housing (including vacancy rates)</b></p> <p>*Little building activity since 2007</p>	<p><b>Planned Housing Development/Est . Year Completion</b></p> <p>*None planned; only one that might be submitted is for 13 SFR units *1 SFR under construction, 2012</p>	<p><b>Future Group Quarters Facilities</b></p> <p>*Potential FCI expansion to ~4,000 inmates within 20 years *Housing Authority may build some units, but 3 years out at a minimum</p>	<p><b>Future Employers</b></p> <p>*Potential metal fabrication firm with 15-50 employees in 2013 *Potential FCI expansion</p>	<p><b>Infrastructure</b></p> <p>*Water, sewer systems capable of accommodating 700 new residential units</p>	<p><b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b></p> <p><b>Promos:</b> *Water, sewer systems capable of accommodating 700 new residential units</p> <p><b>Hinders:</b></p>
<p><b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b></p>							

<b>Willamina</b>							
<b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b>	<b>Observations about Housing (including vacancy rates)</b>	<b>Planned Housing Development/Est . Year Completion</b>	<b>Future Group Quarters Facilities</b>	<b>Future Employers</b>	<b>Infrastructure</b>	<b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b>	
Diversity reflected in Census data	*Recent building permits for rehabilitation and remodeling of existing structures	*Several subdivisions approved: 1 platted, 1 expired, 1 granted extension *Largest MFR development (24 units) recently renovated	None	*Growth of Hampton Lumber, Grand Ronde, prison in Sheridan *New convenience store *Possible equestrian center, cultural/busine ss center at former high school	*Awarded funding to update master plan for water and sewer services, work could be complete by September 2014 *Consolidated school facilities undergoing improvements	<b>Promos:</b> *Vacant lots platted *Completed first phase of code assistance program emphasizing downtown development <b>Hinders:</b> *None mentioned	
<b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b>	*Strategic community plan in progress *Energy focused on creating additional facilities and connectivity between parks, trails, and open spaces						

<b>Yamhill</b>						
<b>Observations about Population Composition (e.g. about children, the elderly, racial ethnic groups)</b>	<b>Observations about Housing (including vacancy rates)</b>	<b>Planned Housing Development/Est . Year Completion</b>	<b>Future Group Quarters Facilities</b>	<b>Future Employers</b>	<b>Infrastructure</b>	<b>Promotions (Promos) and Hindrances (Hinders) to Population and Housing Growth; Other notes</b>
*Stable population *All SFR (no apartments), many families *White with some Latino	*No new construction; currently 2 foreclosures	*30 vacant lots for mid-market SFR units but no new subdivisions proposed	*None	*None	*Adequate for existing development, some capacity for growth	<b>Promos:</b> *Vacant lots *Good infrastructure *Good schools  <b>Hinders:</b> *None
<b>Highlights or summary of influences on or anticipation of population and housing growth from planning documents and studies</b> *Additional vacant residential areas available for housing expansion beyond existing vacant lots *Vacant industrial property of ~25 acres within UGB; no current plans for its development						

## **APPENDIX 5**

### **Supporting Data and Forecast Summary Tables**

## Supporting Data and Forecast Summary Tables

These tables hold a summary of supporting data that were used to develop the population forecasts. They include recent historic data (including populations that are known or were estimated). The data are grouped by geographic area. There is a table for Yamhill County and one for each of its city areas and non-UGB, non-URA unincorporated area.

Population and housing data and rates for 1990, 2000, and 2010 are from decennial censuses using block-level geography and Yamhill-County-supplied city, UGB, and URA boundaries;  
 2000-2010 birth data and 2000-2010 enrollment data are from administrative records;  
 All numbers for years 2015-2035 are predicted.

Abbreviated column headings key:

**Pop** = population; **#Ave Ann Pop Growth** = number average annual population growth; **%Ave Ann Pop Growth** = percent average annual population growth; **%Pop 65+** = percentage population ages 65 and over; **% Pop Hisp** = percentage population that are Hispanic; **HH** = households; **Hsg Units** = housing units; **Ocpncy** = occupancy; **Average HH Size** = average number of persons per household; **GQ pop** = group quarters population; **Schl Enrl** = school enrollment.

Yamhill County	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	84,992			11.70%	10.60%	28,732	30,270			94.90%	2.78	5,024	1,191	15,473
2010	99,193	1,420	1.50%	13.40%	14.70%	34,726	37,110	684	2.04%	93.60%	2.7	5,461	1,127	16,531
2011	99,851	658	0.70%			34,965	37,366	256	0.07%	93.60%	2.7	5,472		
2012	100,708	858	0.90%			35,273	37,684	318	0.08%	93.60%	2.7	5,472		
2015	105,220	1,504	1.50%	15.50%		36,342	38,580	299	0.23%	94.20%	2.74	5,642		
2020	115,108	1,978	1.80%	19.00%		40,187	42,661	816	1.01%	94.20%	2.71	6,202		
2025	124,509	1,880	1.60%	22.40%		43,980	46,688	805	0.90%	94.20%	2.69	6,202		
2030	134,204	1,939	1.50%	24.70%		47,933	50,884	839	0.86%	94.20%	2.66	6,702		
2032	137,590	1,693	1.20%			49,579	52,631	874	0.34%	94.20%	2.64	6,702		
2035	142,830	1,747	1.20%	26.10%		51,957	55,156	842	0.47%	94.20%	2.62	6,702		

\*Total public school enrollment in school district(s) in which area is located.

Amity (+UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	1,481			8.7%	11.5%	473	497			95.2%	3.13	0	10	876
2010	1,623	14	0.9%	7.9%	15.4%	540	576	8	1.48%	93.8%	3.01	0	17	840
2011	1,635	12	0.7%			540	576	0	0.00%	93.7%	3.03	0		
2012	1,650	15	0.9%			545	581	5	0.91%	93.7%	3.03	0		
2015	1,719	23	1.4%			564	597	5	0.89%	94.4%	3.05	0		
2020	1,779	12	0.7%			587	621	5	0.81%	94.4%	3.03	0		
2025	1,879	20	1.1%			623	660	8	1.20%	94.4%	3.01	0		
2030	1,984	21	1.1%			662	701	8	1.21%	94.4%	3.00	0		
2032	2,026	21	1.1%			678	718	9	1.21%	94.4%	2.99	0		
2035	2,097	24	1.1%			704	746	9	1.24%	94.4%	2.98	0		

\*Total public school enrollment in school district(s) in which area is located (Amity 4I).

Carlton	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	1,514			9.2%	4.6%	537	577			93.4%	2.81	0	5	1,309
2010	2,007	49	2.8%	9.1%	6.0%	669	768	19	2.86%	91.4%	2.86	0	15	1,144
2011	2,036	29	1.5%			697	742	-26	-3.39%	93.9%	2.92	0		
2012	2,065	29	1.4%			707	753	11	1.41%	93.9%	2.92	0		
2015	2,080	5	0.2%			734	786	11	1.42%	93.4%	2.83	0		
2020	2,247	33	1.5%			800	857	14	1.73%	93.4%	2.81	0		
2025	2,465	44	1.8%			883	945	18	1.97%	93.4%	2.79	0		
2030	2,669	41	1.6%			969	1,037	18	1.85%	93.4%	2.76	0		
2032	2,757	44	1.6%			1,005	1,077	20	1.86%	93.4%	2.74	0		
2035	2,890	44	1.6%			1,059	1,134	19	1.73%	93.4%	2.73	0		

\*Total public school enrollment in school district(s) in which area is located (Yamhill-Carlton 1).

Dayton (+UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	2,244			7.8%	25.4%	680	699			97.3%	3.30	0	23	994
2010	2,708	46	1.9%	10.2%	28.4%	855	904	21	2.57%	94.6%	3.17	0	39	948
2011	2,731	23	0.8%			864	914	10	1.14%	94.5%	3.16	0		
2012	2,762	31	1.1%			874	925	10	1.13%	94.5%	3.16	0		
2015	2,835	25	0.9%			922	959	12	1.23%	96.1%	3.07	0		
2020	3,021	37	1.3%			986	1,026	13	1.34%	96.1%	3.06	0		
2025	3,266	49	1.6%			1,069	1,113	17	1.62%	96.1%	3.05	0		
2030	3,520	51	1.5%			1,156	1,203	18	1.56%	96.1%	3.04	0		
2032	3,625	53	1.5%			1,193	1,241	19	1.55%	96.1%	3.04	0		
2035	3,765	46	1.3%			1,241	1,291	17	1.32%	96.1%	3.03	0		

\*Total public school enrollment in school district(s) in which area is located (Dayton 8).

Dundee	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	2,642			9.1%	7.4%	932	963			96.8%	2.83	0	43	4,890
2010	3,162	52	1.8%	10.2%	10.4%	1,136	1,175	21	1.99%	96.7%	2.78	8	37	5,242
2011	3,210	48	1.5%			1,153	1,193	18	1.51%	96.7%	2.78	8		
2012	3,259	49	1.5%			1,171	1,211	18	1.52%	96.7%	2.78	8		
2015	3,437	59	1.8%			1,227	1,268	19	1.53%	96.7%	2.80	8		
2020	3,772	67	1.9%			1,351	1,396	26	1.93%	96.7%	2.79	8		
2025	4,185	83	2.1%			1,504	1,555	32	2.15%	96.7%	2.78	8		
2030	4,592	81	1.9%			1,656	1,712	31	1.93%	96.7%	2.77	8		
2032	4,764	86	1.8%			1,721	1,779	34	1.92%	96.7%	2.76	8		
2035	4,985	74	1.5%			1,804	1,865	29	1.57%	96.7%	2.76	8		

\*Total public school enrollment in school district(s) in which area is located (Newberg 29J).

Lafayette	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	2,586			7.8%	20.2%	841	888			94.7%	3.07	0	57	6,499
2010	3,742	116	3.7%	8.0%	22.1%	1,193	1,317	43	3.94%	91.8%	3.09	0	57	7,408
2011	3,745	3	0.1%			1,218	1,319	2	0.15%	92.3%	3.07	0		
2012	3,802	57	1.5%			1,236	1,339	20	1.51%	92.3%	3.07	0		
2015	4,018	72	1.8%			1,307	1,401	21	1.51%	93.3%	3.07	0		
2020	4,394	75	1.8%			1,429	1,532	26	1.79%	93.3%	3.07	0		
2025	4,874	96	2.1%			1,585	1,699	33	2.07%	93.3%	3.07	0		
2030	5,349	95	1.9%			1,740	1,865	33	1.86%	93.3%	3.07	0		
2032	5,552	101	1.9%			1,806	1,936	35	1.86%	93.3%	3.07	0		
2035	5,797	82	1.4%			1,885	2,021	28	1.44%	93.3%	3.07	0		

\*Total public school enrollment in school district(s) in which area is located (Dayton 8 and McMinnville 40).

McMinnville (+UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	26,286			14.2%	14.6%	9,285	9,743			95.3%	2.66	1,602	416	5,505
2010	32,648	636	2.2%	14.6%	20.5%	11,849	12,573	283	2.55%	94.2%	2.61	1,716	417	6,460
2011	32,808	160	0.5%			11,822	12,549	-24	-0.19%	94.2%	2.63	1,716		
2012	33,045	237	0.7%			11,912	12,645	96	0.76%	94.2%	2.63	1,716		
2015	34,757	570	1.7%	16.5%		12,563	13,259	205	1.58%	94.8%	2.63	1,716		
2020	38,430	735	2.0%	19.4%		13,960	14,733	295	2.11%	94.8%	2.63	1,716		
2025	42,283	771	1.9%	22.4%		15,484	16,341	322	2.07%	94.8%	2.62	1,716		
2030	46,171	777	1.8%	24.7%		16,968	17,908	313	1.83%	94.8%	2.62	1,716		
2032	47,659	744	1.6%			17,535	18,507	300	1.65%	94.8%	2.62	1,716		
2035	49,983	775	1.6%	26.4%		18,493	19,518	337	1.77%	94.8%	2.61	1,716		

\*Total public school enrollment in school district(s) in which area is located (McMinnville 40).

Newberg (+UGB, not URA)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	18,538			10.7%	10.4%	6,265	6,604			94.9%	2.76	1,241	276	4,890
2010	22,468	393	1.9%	12.0%	13.3%	7,876	8,409	181	2.42%	93.7%	2.66	1,502	304	5,242
2011	22,730	262	1.2%			7,980	8,527	118	1.39%	93.6%	2.66	1,502		
2012	22,963	233	1.0%			8,068	8,621	94	1.09%	93.6%	2.66	1,502		
2015	24,663	567	2.4%	13.5%		8,643	9,176	185	2.08%	94.2%	2.66	1,672		
2020	28,250	718	2.7%	15.9%		10,029	10,648	294	2.97%	94.2%	2.65	1,672		
2025	32,213	793	2.6%	18.8%		11,568	12,282	327	2.86%	94.2%	2.64	1,672		
2030	35,408	639	1.9%	21.4%		12,827	13,618	267	2.07%	94.2%	2.63	1,672		
2032	36,610	601	1.7%			13,335	14,157	270	1.94%	94.2%	2.62	1,672		
2035	38,490	627	1.7%	23.2%		14,053	14,919	254	1.75%	94.2%	2.62	1,672		

\*Total public school enrollment in school district(s) in which area is located (Newberg 29J).

Sheridan (+UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	5,581			8.1%	8.9%	1,290	1,392			92.7%	2.76	2,024	64	1,899
2010	6,164	58	1.0%	8.9%	16.6%	1,555	1,684	29	1.90%	92.3%	2.78	1,846	59	1,897
2011	6,228	64	1.0%			1,559	1,672	-12	-0.74%	93.3%	2.81	1,846		
2012	6,296	68	1.1%			1,584	1,697	26	1.54%	93.3%	2.81	1,846		
2015	6,417	40	0.6%			1,644	1,778	27	1.54%	92.5%	2.78	1,846		
2020	7,276	172	2.5%			1,752	1,894	23	1.27%	92.5%	2.78	2,406		
2025	7,573	59	0.8%			1,859	2,010	23	1.18%	92.5%	2.78	2,406		
2030	8,366	159	2.0%			1,964	2,124	23	1.10%	92.5%	2.78	2,906		
2032	8,488	61	0.7%			2,008	2,171	24	1.10%	92.5%	2.78	2,906		
2035	8,657	56	0.7%			2,069	2,237	22	0.99%	92.5%	2.78	2,906		

\*Total public school enrollment in school district(s) in which area is located (Sheridan 48J with small piece in Willamina 30J).

Willamina +UGB (Yamhill County portion only)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	1,128			9.80%	4.40%	405	438			92.50%	2.79	0	4	989
2010	1,180	5	0.50%	10.10%	6.40%	395	439	0	0.02%	90.00%	2.96	11	14	859
2011	1,180	0	0.00%			395	439	0	0.00%	90.00%	2.96	11		
2012	1,182	2	0.20%			396	440	1	0.01%	90.00%	2.96	11		
2015	1,223	14	1.10%			422	463	8	0.52%	91.20%	2.87	11		
2020	1,285	12	1.00%			447	490	5	0.57%	91.20%	2.85	11		
2025	1,336	10	0.80%			470	515	5	0.50%	91.20%	2.82	11		
2030	1,375	8	0.60%			489	536	4	0.40%	91.20%	2.79	11		
2032	1,395	10	0.70%			496	544	4	0.15%	91.20%	2.79	11		
2035	1,426	10	0.70%			509	558	5	0.26%	91.20%	2.78	11		

\*Total public school enrollment in school district(s) in which area is located (Willamina 30J).

Willamina (whole city +UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	1,859			10.30%	3.90%	669	718			93.20%	2.78	0	7	989
2010	2,046	19	1.00%	9.70%	5.90%	706	786	7	0.90%	89.80%	2.88	11	27	859
2011	2,055	9	0.40%			708	788	2	0.03%	89.80%	2.89	11		
2012	2,063	9	0.40%			710	791	3	0.03%	89.80%	2.89	11		
2015	2,112	16	0.80%			742	811	7	0.26%	91.50%	2.83	11		
2020	2,179	13	0.60%			769	840	6	0.35%	91.50%	2.82	11		
2025	2,243	13	0.60%			794	868	6	0.33%	91.50%	2.81	11		
2030	2,295	10	0.50%			819	895	5	0.30%	91.50%	2.79	11		
2032	2,321	13	0.60%			828	905	5	0.11%	91.50%	2.79	11		
2035	2,361	13	0.60%			845	924	6	0.21%	91.50%	2.78	11		

\*Total public school enrollment in school district(s) in which area is located (Willamina 30J).

Yamhill City (+UGB)	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	805			7.1%	6.1%	257	268			95.9%	3.13	0	286	1,309
2010	1,024	22	2.4%	8.9%	5.5%	353	375	11	3.36%	94.1%	2.88	9	157	1,144
2011	1,037	13	1.3%			357	379	4	1.11%	94.1%	2.88	9		
2012	1,050	13	1.3%			361	384	5	1.26%	94.1%	2.88	9		
2015	1,150	33	3.0%			380	400	5	1.39%	95.0%	3.00	9		
2020	1,217	13	1.1%			408	430	6	1.41%	95.0%	2.96	9		
2025	1,285	14	1.1%			438	461	6	1.44%	95.0%	2.91	9		
2030	1,352	13	1.0%			470	494	7	1.37%	95.0%	2.86	9		
2032	1,377	13	0.9%			483	509	7	1.45%	95.0%	2.83	9		
2035	1,403	9	0.6%			496	522	4	0.86%	95.0%	2.81	9		

\*Total public school enrollment in school district(s) in which area is located (Yamhill-Carlton 1).

Uninc. Yamhill County	Pop	# Ave Ann Pop Growth	% Ave Ann Pop Growth	% Pop 65+	% Pop Hisp	HH	Hsg Units	# Ave Ann Hsg Growth	% Ave Ann Hsg Growth	Ocpncy Rate	Average HH Size	GQ pop	Births	Schl Enrl*
2000	22,187			12.5%	5.1%	7,767	8,203			94.7%	2.84	157	287	1,309
2010	22,467	28	0.1%	17.0%	6.6%	8,305	8,944	74	0.86%	92.9%	2.68	369	158	1,144
2011	22,510	43	0.2%			8,022	8,624	-320	-3.65%	93.0%	2.76	369		
2012	22,630	120	0.5%			8,066	8,670	47	0.54%	93.0%	2.75	369		
2015	22,919	96	0.4%			8,414	8,963	98	1.11%	93.9%	2.68	369		
2020	23,436	103	0.4%			8,771	9,343	76	0.83%	93.9%	2.63	369		
2025	23,150	-57	-0.2%			8,830	9,406	13	0.13%	93.9%	2.58	369		
2030	23,418	54	0.2%			9,110	9,705	60	0.63%	93.9%	2.53	369		
2032	23,336	-41	-0.2%			9,187	9,786	41	0.42%	93.9%	2.50	369		
2035	23,338	0	0.0%			9,262	9,866	27	0.27%	93.9%	2.48	369		

\*Total public school enrollment in school district(s) in which area is located (Yamhill-Carlton 1).

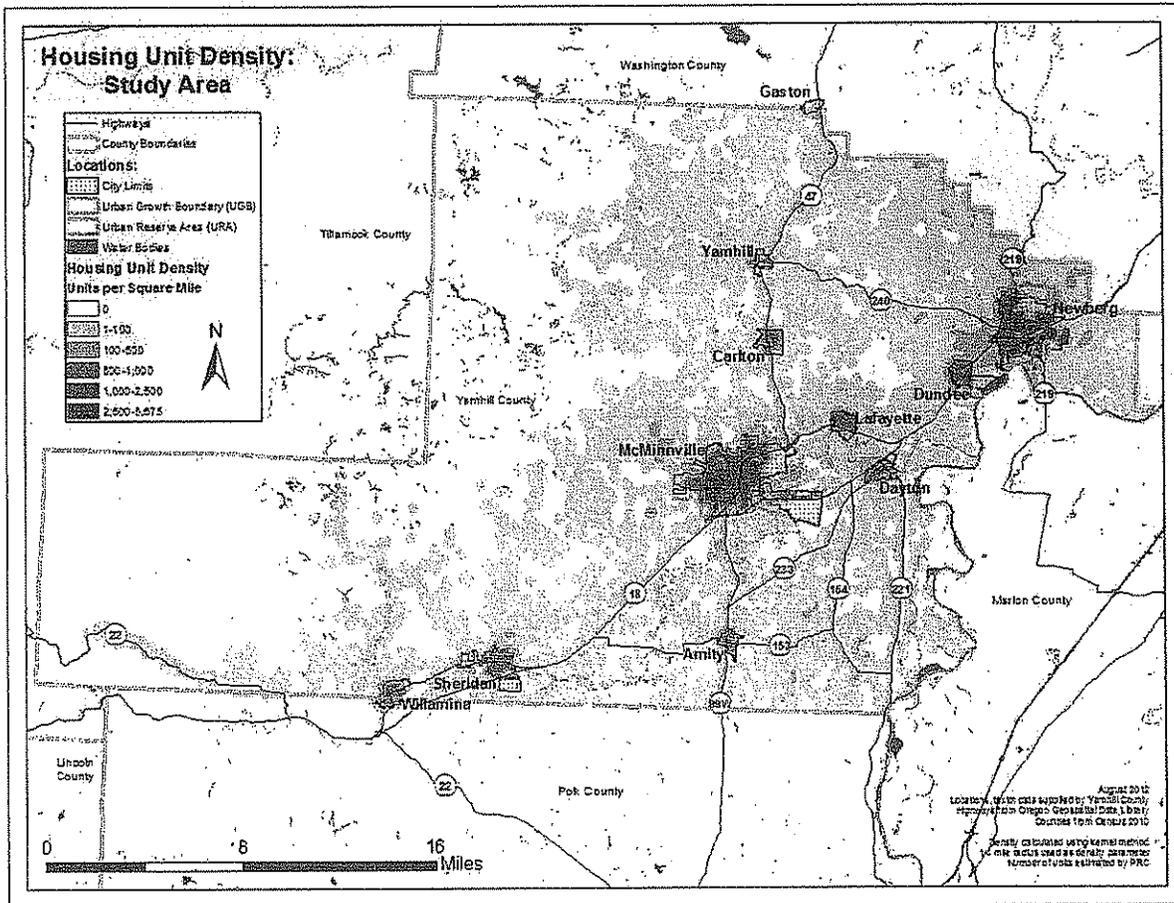
## **APPENDIX 6**

### **Maps of Housing Unit Density in Yamhill County and its Sub-areas**

## Housing Density Maps (2010) Yamhill County Cities & Urban Growth Boundary Areas

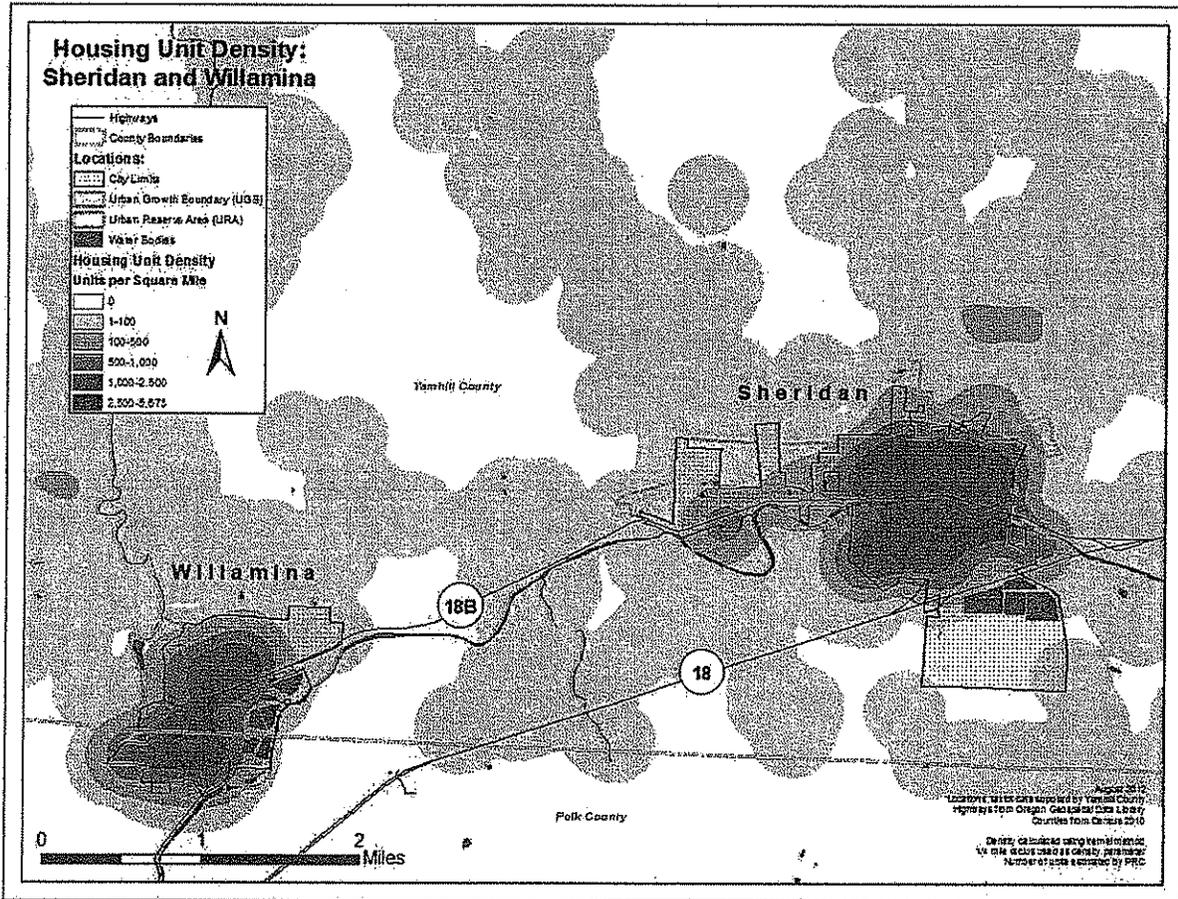
The following maps show the density distribution of existing housing in and around the cities of Yamhill County. The first map, at a larger scale than the others, depicts the density in the study area as a whole. The subsequent maps each illustrate densities in smaller communities. Urban Growth Boundaries (orange lines) are graphically drawn around city boundaries (black lines with gray dots within the city limits), and the urban reserve area of Newberg is outlined with light green. The density layer, which shows housing density in units per square mile, has been graphically drawn beneath the location layer. Areas with no housing units are uncolored (white). Legends use the same classes and shades from map to map. Classes are separated by break values. The first class is 1 to 100 units per acre (lightest gray), the second is 100 to 500 units per acre, the third class is 500 to 1,000 units per acre (medium gray), and so on.

### Study area (Yamhill County)



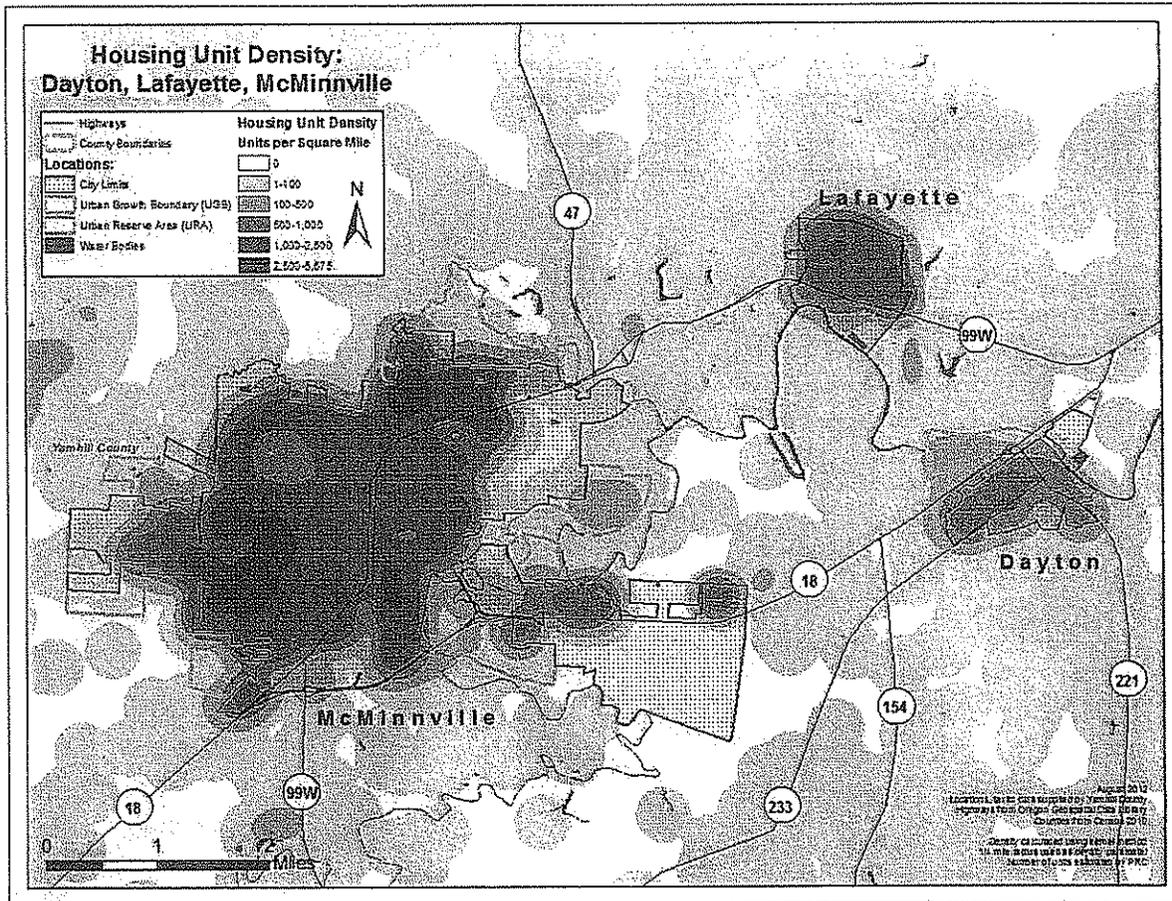
*The densest locations in the area have over 2,500 units per square mile. These areas are concentrated exclusively within city limits. Most cities contain relatively high unit density, though eastern Dundee, northeastern Newberg, southeastern McMinnville, and southern Sheridan more closely match the rural areas outside of the cities.*

## Western Cities



*The bulk of housing units in Sheridan and Willamina lie along Route 18-Business within the city limits. Much of Willamina's city limits have moderate density, though the western and southern sections of Sheridan more closely match the rural areas outside the city limits. Density in both locations decreases toward the urban growth boundaries.*

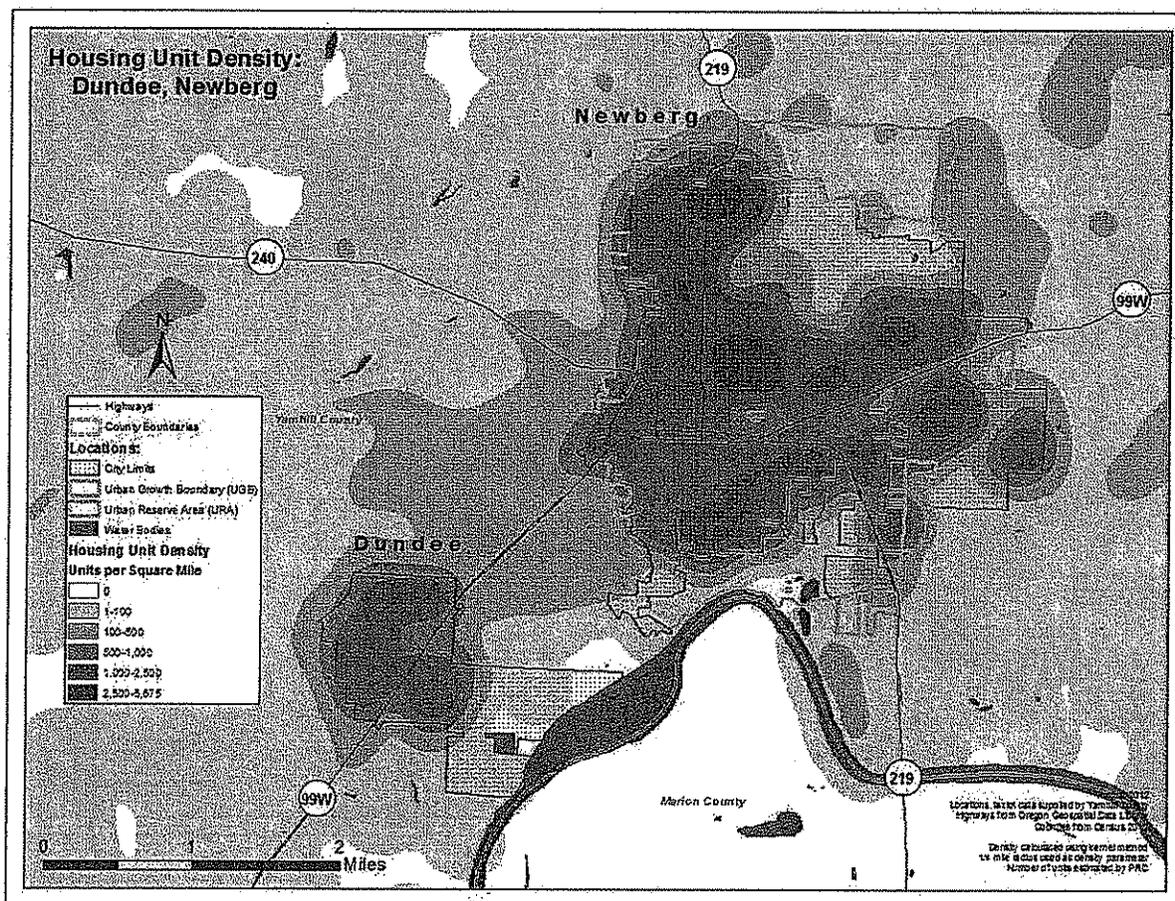
## Central Areas



*McMinnville, the county seat of Yamhill County, exhibits higher housing unit density than most areas in the county, and it also has a notably more diverse range of density than other areas as well. Its western section is quite dense, while its southeastern area is unpopulated. Unusual for most areas of the county is a relatively higher-density area within the urban growth boundary but outside the city limits (directly south of the junction between Highways 47 and 99W).*

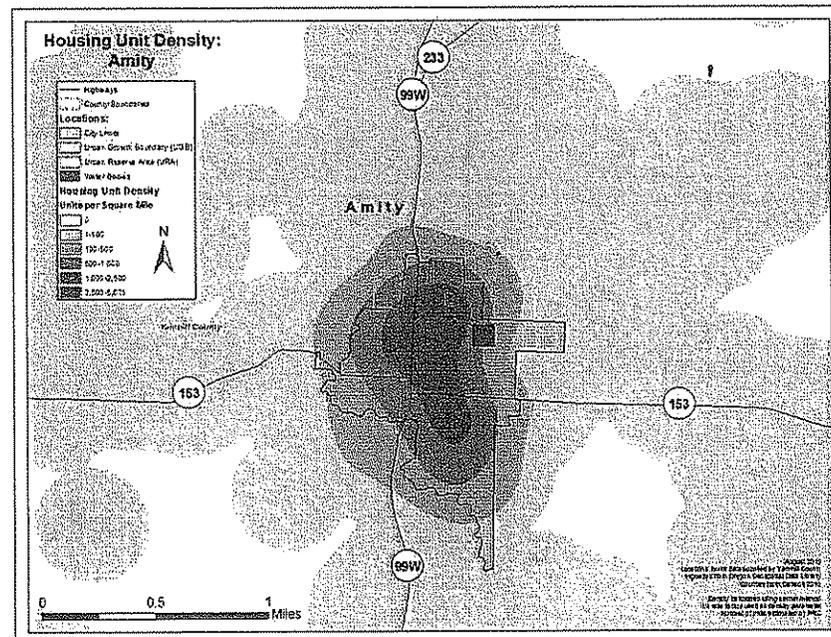
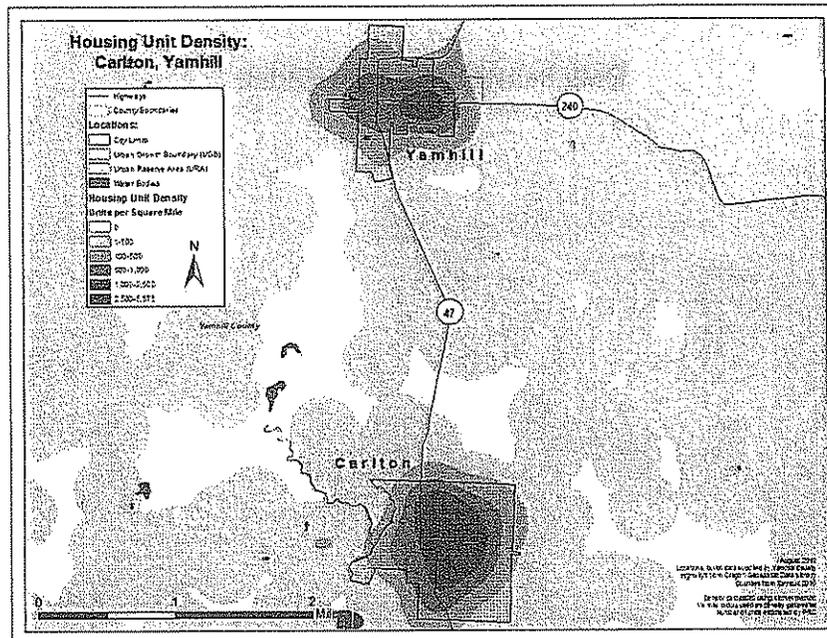
*Lafayette and Dayton are both smaller towns with their housing units clustered within the city limits. Lafayette's units lie north of Hwy. 99W while Dayton's are clustered south of Hwy. 18 in its older core area. North of 18 in Dayton is an area within the urban growth boundary that already exhibits moderate density.*

## Dundee and Newberg



Newberg, like McMinnville, has a number of areas in the highest housing unit density category. Most of its population is clustered within the city limits. Although the city has sizeable land area in its urban growth boundary and urban reserve area, these areas tend to be relatively unpopulated. Dundee's population is also clustered within the city limits along Highway 99W. Of note is the relative lack of housing in Dundee's eastern section and Newberg's southern area; the planned Newberg-Dundee Bypass is expected to be constructed through these areas. It is possible these areas will give rise to non-residential development as a result, though existing land use in the vicinity currently remains residential.

## Rural Towns



*Amity, Carlton, and Yamhill are smaller towns; each has its population concentrated along the rural highways in the area and within their respective city limits. Each is surrounded predominantly by agricultural land, and although Amity and Yamhill have urban growth boundaries, they do not have a noticeable effect on the cities' density patterns.*

## **APPENDIX 7**

### **Data Sources and Description**

## Data Sources and Description

This population forecast report is based on data obtained from several sources. Much of the data were aggregated to the county or city level of geography by PRC staff. The data sources include:

- *Decennial Census.* The U. S. Census Bureau's decennial Census is the only source of data collected for small areas across the nation. We used 1990, 2000, and 2010 census data to obtain the population by age and sex residing in the County, its cities, and unincorporated area. We compared the changes from 2000 to 2010 to develop an initial estimate of the age-sex profile for net migrants in the cohort-component models. Female population ages 15-44 were used with birth data to calculate fertility rates. In addition, data for population by race/ethnicity, group quarters, and housing were obtained from the censuses.
- *American Community Survey.* The American Community Survey (ACS) is a U.S. Census Bureau survey that includes estimated figures for areas with populations above certain thresholds. The ACS asks the same or similar questions to the 1990 and 2000 censuses that were not included in the 2010 Census. We used the 2000 and 2010 Censuses and 2006-2010 American Community Survey data to develop estimates of housing and population change.
- *Annual Population Estimates.* Annual population estimates for cities and counties of Oregon are prepared by the Population Research Center at Portland State University as part of its Population Estimates Program. Data on state income tax returns, births, deaths, Medicare and school enrollment, and information about changes in housing stock and group quarters population are utilized in developing the population estimates. We used population estimates of Yamhill County, its cities, and its unincorporated area from 2000 to 2011 in this study to help to approximate growth trends throughout the County.

- *Area Boundary Files.* In spring 2012, Yamhill County's Geographic Information Systems Department provided the boundary files for cities, UGBs, and Newberg's URA within our study area. These files were used for mapping and aggregating demographic and other data unique to each geographic location in our study area.
- *Building Permit Data.* Building permit data were obtained from two different sources: PRC's Population Estimates Program annual questionnaires, U.S. Census Bureau Residential Construction Division. Building permit data were used, along with taxlot data, to estimate the number of housing units constructed after the 2000 Census and create a current housing inventory for each geographic part in our study area.
- *Land Use Data.* Taxlot data were provided by the Polk and Yamhill County Geographic Information Systems Departments. Taxlot data were used to create current housing unit inventories for the geographic parts in our study area. Taxlot and zoning data were both used to identify housing units and to obtain an overall assessment of the availability of buildable lands.
- *Birth and Death Data.* Information on births and deaths reported for the Yamhill County area were obtained from the Oregon Center for Health Statistics 2000 to 2010. The data were used for two purposes. One use was for calculating overall fertility and mortality rates for the County. These rates were used in the demographic models. The second use was to note the number of births in order to examine birth trends and the correspondence between births and population change.
- *School Enrollment Data.* These data were obtained from the Oregon Department of Education for school districts in Yamhill County for years 2000-2011. Changes in the levels of school enrollment suggest changes in population and households, such as increasing or decreasing net migration or average household size.
- *Local Employment Dynamics Data.* These data for 2002-2010 from the U.S. Census Bureau and the Oregon Employment Department provide background information about commuting patterns of workers. The percentage of workers that reside in

Yamhill County and have jobs in the County was evaluated. Where these workers have jobs within the County, was also identified. An area's availability of employment or draw of workers, influences population and housing changes. These data were evaluated to detect changes in commuting patterns.

- *Oregon Labor Force Data and Employment Projections.* Labor force data from the Oregon Employment Department for 2000-2010 were evaluated to determine trends and their relation to population change. The employment projections, also from the Employment Department, were available for the economic region in which Yamhill County is located (Region 3) are available for 2010 to 2020. We then related and compared our population projections to the employment projections. We developed a simple economic model to forecast countywide net migration based on the projected demand for additional workers in the employment projections. The projected net migration was compared to the net migration forecasted in our model.
- *Regional Economic Profiles and Reports.* Background and current economic information for Yamhill County and Economic Region 3 were obtained from the Oregon Employment Department. The information was used to provide us with an understanding of historical and recent economic trends and the general economic climate in our study area. Ultimately, the information enabled us to make more rational assumptions when developing Yamhill County's future population.
- *Other Background Information.* Carlton Comprehensive Downtown Plan (2010); City of Dayton Planning Atlas and Comprehensive Plan (2011 revision); Dundee Transportation System Plan Update (2012); Comprehensive Plan: Dundee, Oregon (1977), City of Lafayette Comprehensive Plan (2001), McMinnville Residential Land Needs Analysis (2001), City of McMinnville Transportation System Plan (2010), McMinnville Urban Renewal Feasibility Study (2012), City of Newberg Comprehensive Plan (2010), City of Dundee Vision Statement (2012), Yamhill County Transportation System Plan (1996), Yamhill County Comprehensive Land Use Plan (1996). Additional information that city officials and staff thought might have bearing on the population forecasts were collected from most cities in Yamhill County.

## **Appendix 8**

### **Historical City and County Populations for Yamhill County**

Historical Population for Yamhill County and Places (city limits, no UGB)

Population	Amity	Carlton	Dayton	Dundee	Lafayette	McMinnville	Newberg	Sheridan	Willamina*	Yamhill (city)	Uninc. Yamhill Co.	Yamhill County	Willamina, Yamhill Co.
1970	708	1,126	949	588	786	10,125	6,507	1,881	1,193	516	16,312	40,213	715
1980	1,092	1,302	1,409	1,223	1,215	14,080	10,394	2,249	1,749	690	20,492	55,332	1,186
1990	1,175	1,289	1,526	1,663	1,292	17,894	13,086	3,979	1,748	867	21,586	65,551	1,194
2000	1,478	1,514	2,119	2,598	2,586	26,499	18,064	5,561	1,844	794	22,651	84,992	1,128
2010	1,614	2,007	2,534	3,162	3,742	32,187	22,068	6,127	2,025	1,024	23,548	99,193	1,180
Source: U.S. Census Bureau													
Average Annual Change													
1970-1980	38	18	46	64	43	396	389	37	56	17	418	1,512	47
1980-1990	8	-1	12	44	8	381	269	173	0	18	109	1,022	1
1990-2000	30	23	59	94	129	861	498	158	10	-7	107	1,944	-7
2000-2010	14	49	42	56	116	569	400	57	18	23	90	1,420	5
Average Annual Growth Rates													
1970-1980	4.3%	1.5%	4.0%	7.3%	4.4%	3.3%	4.7%	1.8%	3.8%	2.9%	2.3%	3.2%	5.1%
1980-1990	0.7%	-0.1%	0.8%	3.1%	0.6%	2.4%	2.3%	5.7%	0.0%	2.3%	0.5%	1.7%	0.1%
1990-2000	2.3%	1.6%	3.3%	4.5%	6.9%	3.9%	3.2%	3.3%	0.5%	-0.9%	0.5%	2.6%	-0.6%
2000-2010	0.9%	2.8%	1.8%	2.0%	3.7%	1.9%	2.0%	1.0%	0.9%	2.5%	0.4%	1.5%	0.5%

\*Whole city

## **Appendix 9**

### **Email Comments about the Preliminary Population Forecasts**

(The preliminary population forecasts and a draft report were made available to the public on September 5, 2012. The following comments were received via email regarding the forecast results. Feedback about the forecasts were received from four sources.)

**Comments from 1,000 Friends of Oregon**

**From:** Mia Nelson [mailto:mia@friends.org]  
**Sent:** Sunday, September 09, 2012 11:56 AM  
**To:** Ken Friday  
**Cc:** 'Sid Friedman'  
**Subject:** Re: Draft - Yamhill County Coordinated Population Forecasts Report

Dear Ken,

Sid and I have reviewed the draft. Thank you for providing it. It appears that PSU has done a thorough job...and they did catch the 2000 Sheridan census error, which was the one thing I was concerned about.

This is more comprehensive than I was expecting from a first draft...for example, I see they've already considered city planning documents, even some that haven't even been adopted yet (Newberg). Because of that, they're already pretty far down the road with this, and it seems unlikely that there could be much in the way of additional input from cities or citizens that would materially change the outcome.

Therefore, we would be supportive of sending this draft straight to the commissioners. If it does turn out that PSU wants to make changes, those could be done in the context of the board's normal process. For example, there are some things we think should make the rural population higher (such as the known M37/49 claims). But we're comfortable bringing that up at the board's hearing, and will respect PSU's judgement on whether or not our information warrants a change. I hope the cities will take a similar approach.

We don't see a reason to cause further delay by holding pre-hearing meetings on this.

Mia

---

Mia Nelson  
Willamette Valley Advocate  
1000 Friends of Oregon  
220 East 11th Avenue, Suite 5  
Eugene, OR 97401  
(541) 520-3763

## Comments regarding Willamina's forecast

The Portland State University responses to these questions and comments are in CAPS directly following each item.

**From:** Mattson, Marjorie [mailto:[MMattson@mwvcog.org](mailto:MMattson@mwvcog.org)]  
**Sent:** Thursday, September 13, 2012 3:56 PM  
**To:** Ken Friday  
**Cc:** Hollis, Sue; Debbie Bernard  
**Subject:** Draft pop rpt - general and Willamina comments

Ken - I read through the PSU population document.

First, I will start with some general comments. The Unemployment figure listed on Page 26 does not include a date. One could assume that it is 2011 after reading the comparison to 2000. However, I wondered if the opening sentence needs to include a year. YES, INCLUDING THE YEAR IS IMPORTANT - WE ADDED '2011' TO THE SENTENCE.

And, the next paragraph—unless I missed it, the acronym ACS does not appear to be noted earlier in the text. I realize that it is listed at the end of the document. ON PAGE TWENTY-FOUR THERE WAS ALSO THE ACRONYM, 'ACS'. WE ADDED THE COMPLETE NAME AT THIS REFERENCE.

Page 31, 2<sup>nd</sup> paragraph, 5<sup>th</sup> line, aging is misspelled—no “e”. AGEING IS A PROPER ALTERNATE SPELLING OF AGING. THANK YOU FOR POINTING OUT THE INCONSISTENCY - I CHANGED THE SPELLING TO MATCH THE OTHER REFERENCES TO THIS ADJECTIVE IN THE REPORT.

Again—unless I missed it, I did not gather why the expectation is that the economy will recover but notes a year of 2015. Is it only assuming there will be such a change based a net migration? (example on page 31) THIS IS AN ASSUMPTION MADE BASED ON ECONOMIC INDICATORS AND THE GENERAL OPINION OF SOME ECONOMISTS AND OTHERS THAT THE ECONOMY IS STARTING TO IMPROVE A BIT (THOUGH IT IS MUCH MORE SLUGGISH THAN ANTICIPATED OR HOPED FOR IN THE LAST COUPLE OF YEARS) AND THAT IT WILL PICK UP MOMENTUM IN THE NEAR TERM (WITHIN A

FEW YEARS) RATHER THAN NOW OR IN THE LONG TERM (IT WONT TAKE 15-20 YEARS TO RECOVER).

If the document is not printed in color (page 38)—the charts are hard to read. I AGREE IT IS, AND THE LEGENDS ARE IN THE SAME ORDER AS THE SERIES APPEAR IN THE GRAPHS TO HELP WITH THE INTERPRETATION.

Page 47, first line—is data plural or should the text read “data WAS not available” or “data SETS were not available.” TECHNICALLY THE WORD 'DATA' IS PLURAL; HOWEVER, IT HAS BECOME ACCEPTED TO SINGULARIZE IT IN GRAMMAR BECAUSE SO MANY PEOPLE DO IT. MOST OF US WHO WORK WITH DATA HERE AT THE CENTER USUALLY KEEP IT PLURAL, THOUGH.

Only 5 cities are listed on pages 35-36. I know that Dayton is mentioned on page 34 but so was Lafayette. No separate “call outs” for the other three or an explanation as to why they are not assessed—Amity, Carlton, Dayton? ALL 8 SMALLER CITIES ARE LISTED ON PAGES 34-36; AMITY, CARLTON, AND DAYTON ARE LISTED ON PAGE 34; DUNDEE, LAFAYETTE, SHERIDAN, WILLAMINA ARE LISTED ON PAGE 35; AND YAMHILL (ALONG WITH THE NON-UGB UNINCORPORATED AREA) IS LISTED ON PAGE 36.

And then responses more specific to the City of Willamina . . .

There was a delay in the City of Willamina returning the requested information/form to PSU/PRC. On page 35 there is an assessment of the City with the date on the draft document as August 2012 and would therefore not include additional details sent last week. Will PSU/PRC change this paragraph based upon more details? One concern I am raise is that a statement included notes lack of “planned development” and the City has several subdivisions that were earlier approved but no housing has been constructed and they are located in the Yamhill County portion of the City. WE WILL LIKELY REVISE THE PARAGRAPH PERTAINING TO WILLAMINA AFTER WE REVISE WILLAMINA'S FORECAST. THE REVISION WILL BE BASED ON DATA SUBMITTED BY WILLAMINA AFTER THE PRELIMINARY FORECASTS AND DRAFT REPORT WERE CIRCULATED. FOR NOW, IN THE LATEST REVISION, WE ADDED THE WORD, 'MUCH' REFERRING TO NOT MUCH PLANNED DEVELOPMENT.

Okay, and then I would like to know WHAT happened to the Willamina numbers—an increase of 13 people in 23 years in the Yamhill County portion—really (page 58)? And Average Annual Growth Rates of .2%, .3%, and .4% over the years between 2012 and 2035 (page 59)? Please see the attached email regarding the discussions when the City of Newberg was working on the calculations. THE INCREASE LISTED ON PAGE 58 ADDS UP TO 61 PERSONS OVER THE 23 OR 24 YEARS, NOT 13. THE NUMBERS SHOWN IN THE TABLE ON PAGE 58 SHOW AVERAGE ANNUAL CHANGE: 3 TIMES 3 YEARS, PLUS 2 TIMES 5 YEARS, PLUS 2 TIMES 5 YEARS, PLUS 2 TIMES 5 YEARS, PLUS 4 TIMES 5 YEARS = 59; WITHOUT ROUNDING THE NUMBERS ADD TO 61, WHICH IS THE NUMBER WE REPORT FOR THE 2011-2035 PERIOD CHANGE (PAGE 41, TABLE 10).

THE AVERAGE NUMBER OF PERSONS ADDED DURING THE WHOLE 24 YEAR PERIOD IS 3 AND IS ALSO SHOWN ON PAGE 41, TABLE 10 (ACTUALLY 2.5 PER YEAR WITHOUT ROUNDING). IN THE ATTACHMENT YOU INCLUDED WITH YOUR EMAIL COMMENTS ABOUT THE 2031 POPULATION PROJECTION FOR WILLAMINA IN YAMHILL CO., THE AVERAGE NUMBER OF PERSONS ADDED DURING THE FORECAST PERIOD CALCULATES TO BE 27 PER YEAR (1,752 IN 2031 MINUS 1,180 IN 2010 = 572; 572 DIVIDED BY 21 YEARS = 27.2 PERSONS PER YEAR). ACCORDING TO HISTORICAL CENSUSES, DURING THE LAST THREE DECADES (FROM 1980-2010) THE AVERAGE NUMBER OF PERSONS ADDED PER YEAR TO WILLAMINA'S POPULATION IN YAMHILL COUNTY WAS 0 (ACTUALLY -0.2). IN THE 1970S, THERE WAS A BOON WHEN AN AVERAGE OF 47 PERSONS WERE ADDED YEARLY. WE SURMISED THIS INCREASE IN THE 1970S WAS DUE TO AN INCREASE IN ACTIVITY OF THE TIMBER INDUSTRY, WHICH LEVELED OFF OR DECLINED AFTERWARD SINCE POPULATION GROWTH HALTED, AND DURING THE 1990S, THERE WAS A DECREASE IN POPULATION BY AN AVERAGE OF 7 FEWER PERSONS RESIDING IN WILLAMINA YAMHILL CO. EACH YEAR (-7 PERSONS PER YEAR FROM 1990 TO 2000).

WE DID NOT HAVE ANY INFORMATION FROM WHICH TO BASE ACCELERATED FUTURE HOUSING OR POPULATION GROWTH WHEN WE PREPARED THE PRELIMINARY FORECASTS. AS YOU KNOW, WE SINCE HAVE RECEIVED SOME HOUSING DEVELOPMENT INFORMATION FROM WILLAMINA, AND WE ARE WAITING FOR A RESPONSE TO OUR INQUIRY ABOUT SUBDIVISION DETAILS. WE ARE CONSIDERING REVISING WILLAMINA'S FORECAST UP A BIT BASED ON NEW INFORMATION ON THE NUMBER OF PLATTED VACANT RESIDENTIAL TAX LOTS, HOWEVER, WE HAVE NO RATIONALE OR EVIDENCE ON WHICH TO BASE A FORECAST AS HIGH AS THE ONE FOR 2031 IN THE ATTACHEMENT YOU SENT.

Unless there is not a correlation between the charts—the math does not work.

Page 57 – Willamina – YC County portion 2011 =’s 1,180 plus 13 (page 58) equals 1,193 and the PSU 2035 forecast is 1,241 (page 57)

Page 57 – Willamina – full City 2011 =’s 2,057 plus 27 (page 58) equals 2,084 and the PSU 2035 forecast is 2,200 (page 57) PLEASE SEE MY EXPLANATION FOR THE ITEM DIRECTLY ABOVE. THE SAME EXPLANATION FOR READING THE TABLE ON PERTAINS TO WILLAMINA FULL CITY AND ALL OF THE OTHER FORECASTS.

I read in the draft document mention of “rounding” numbers but the above seems like too much of a discrepancy. Please help if I am not reading charts correctly. PLEASE SEE MY EXPLANATION FOR THE ITEM ABOVE.

Larger areas available for residential development are within the Yamhill County portion so more likely the area that will grow. WE ARE TAKING THIS SITUATION INTO CONSIDERATION. PLEASE SEE MY COMMENTS ABOVE ABOUT REVISING WILLAMINA'S FORECAST.

There is no Willamina “sheet” entitled “Information Considered to Develop Housing and Population Forecasts” and may be a factor in the development of the above numbers. I do believe that Risa at PSU/PRC has since received the information this month. YES, WE RECENTLY RECEIVED INFORMATION SO THAT WE WILL INCLUDE A WILLAMINA "SHEET" IN APPENDIX 4 FO THE REPORT.

The school district numbers need to be reconsidered because the listed source is incorrect. They City is not part of the Sheridan School District. Willamina District consolidated its elementary, middle, and high school facilities to one campus last year and are now located in the northeast corner and within City limits. WE CORRECTED THE NOTE BENEATH THE TABLE FOR WILLAMINA YAMHILL COUNTY IN APPENDIX 5. THIS WAS A CASE OF COPY AND PASTING THE WRONG NOTE UNDER THE TABLE FOR WILLAMINA YAMHILL COUNTY. IT NOW READS THE SAME AS THE NOTE FOR WILLAMINA FULL CITY. THE NUMBERS ARE CORRECT.

Thanks for your help in sharing the above comments and adding any explanations that are available to you. Please let me know if I need to clarify any of the above comments. I am in the

office until about 4:30 today and then back on part of Monday following an a.m. appointment and I also have an afternoon meeting. I also plan to here Tuesday and Thursday—18<sup>th</sup> and 20<sup>th</sup>. AGAIN THANKS FOR YOUR FEEDBACK.

My direct line is 503-540-1617 if it is easier to have a discussion by telephone. MM

 Willamina email YC pop discussion.pdf  
842K [View](#) [Download](#)

*The printed attachment begins on the next page.*

Willamina email attachment: YC pop discussion.pdf

**From:** Ken Friday [<mailto:fridayk@co.yamhill.or.us>]  
**Sent:** Tuesday, August 30, 2011 4:11 PM  
**To:** Mattson, Marjorie; Barton Brierley  
**Cc:** Jessica Nunley  
**Subject:** RE: Population for the City of Willamina

Yes, this information will be provided to the Planning Commission.

**From:** Mattson, Marjorie [<mailto:MMattson@mwvcog.org>]  
**Sent:** Tuesday, August 30, 2011 4:11 PM  
**To:** Barton Brierley; Ken Friday  
**Cc:** Jessica Nunley  
**Subject:** RE: Population for the City of Willamina

Thanks Bart for checking the math and I appreciate the support in increasing the AAGR for the City of Willamina. I shared your comments with the City Manager and will let you know if she provides any additional remarks.

Ken -- thanks for forwarding the email. I am also making an assumption that this information will be provided to at the public hearing scheduled on September 1<sup>st</sup>. I am not in the office tomorrow (the 31<sup>st</sup>) but will be back in on Thursday. Please let me know if there is anything else that needs to be done on behalf of the City. MM

**From:** Barton Brierley [<mailto:barton.brierley@newbergoregon.gov>]  
**Sent:** Tuesday, August 30, 2011 3:56 PM  
**To:** Ken Friday

1

**Cc:** Mattson, Marjorie; Jessica Nunley  
**Subject:** RE: Population for the City of Willamina

Thanks. I support using the projection requested by Willamina. As a couple of rounding differences, I would suggest using 1,738 rather than 1,739, and describe the AAGR as 1.86% rather than 1.9%. This is similar to the "population share" safe harbor under OAR 660-024-0030(4)(b). There are a couple minor details one could pick at between that and the safe harbor, but overall I think that it is a defensible methodology to use.

As a note, I think Marge just reversed the numbers in her memo: a 1.9% AAGR gives you a 2031 projection of 1,752, and keeping the 2031 % the same as the 2010 Census % gives you 1,738 – which I think is just a rounding difference from her 1,739 number. Extending the 1.9% growth rate to two decimals gives you a 1.86% AAGR, and accounts for the difference. See the table below.

	2010 Census	2010 PSU	2031 Projections		
			1998 Willamina TSP AAGR	1.9% AAGR	Same % of County as 2010 Census
Yamhill Co.	99,193	99,405	146,067	146,067	146,067
Willamina	1,180	1,180	1,352	1,752	1,738
% of County	1.190%	1.187%	0.9%	1.2%	1.190%
AAGR			0.65%	1.9%	1.86%

This change makes little difference in the overall county projections.

*Barton Brierley, AICP*  
 Planning and Building Director  
 City of Newberg  
 P.O. Box 970, Newberg, OR 97132  
 503-537-1212 Fax 503-537-1272  
[barton.brierley@newbergoregon.gov](mailto:barton.brierley@newbergoregon.gov)

**From:** Ken Friday [mailto:fridayk@co.yamhill.or.us]  
**Sent:** Tuesday, August 30, 2011 9:44 AM  
**To:** Barton Brierley  
**Cc:** Jessica Nunley; Michael Brandt  
**Subject:** FW: Population for the City of Willamina

Please let me know what you think about this request from Willamina.

**From:** Mattson, Marjorie [mailto:MMattson@mwvcoq.org]  
**Sent:** Tuesday, August 30, 2011 9:23 AM  
**To:** Ken Friday  
**Cc:** Hollis, Sue  
**Subject:** Population for the City of Willamina

Ken – In reference to public hearing being conducted in regards to the population projects prepared by the City of Newberg, I would like to share the following.

First, a copy of an email sent earlier this summer regarding the population projection for the City of Willamina.

**From:** Mattson, Marjorie  
**Sent:** Tuesday, June 14, 2011 7:23 AM  
**To:** 'Ken Friday'  
**Cc:** 'Sue Hollis'  
**Subject:** RE: Coordinated population projection

Ken – Using some numbers that I have on file, to follow is a partial historic review of City comparison to County total population.

Newberg reports a 2010 portion as 1,180. It appears that the historic might be better reflective than using a 1998 Willamina TSP number.

Yamhill County and Willamina

2000	2001	2002	2003	2004	2005	2006		2010
1130	1130	1130	1130	1140	1150	1160	City Total	2025
85500	86400	87500	88150	89200	90310	91675		99450
0.013216	0.013079	0.012914	0.012819	0.01278	0.012734	0.012653		1292.85 (x 1.3) 1193.4 (x1.2)

August 30<sup>th</sup> comments continued. . .

In the recent worksheet the Yamhill County population projection extended to the year 2031 indicates a total population of 146,067. For comparison purposes, the City of Willamina (the portion located within Yamhill County, using a percentage of 1.2 percent, the City's population would be 1,752.

On behalf of the City of Willamina (serving as their land use planner), the City requests that the Average Annual Growth Rate assigned to the City of Willamina be changed from the .65 percent, as presented, to the use of an AAGR of 1.9 percent. Using that calculation, the City's population would be 1,739 in the year 2031.

If there are comments, concerns, or the need to clarify any of the above information, please contact me. Thanks for discussing the matter by telephone with me today.

Thanks – Marjorie Mattson

## Comments from Newberg

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**From:** Barton Brierley [mailto:[barton.brierley@newbergoregon.gov](mailto:barton.brierley@newbergoregon.gov)]

**Sent:** Monday, September 24, 2012 9:19 AM

**To:** Ken Friday

**Subject:** RE: PSU Population Report - Draft 4

I had one small comment:

On page 4, it says, "In general, a small percentage of population resides in any UGB in Yamhill County." This is a confusing statement, as about 77% of the population of the County lives inside UGBs. I think the statement meant to refer to the unincorporated portion of the UGBs.

*Barton Brierley, AICP*

*Planning and Building Director*

*City of Newberg*

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**PSU response:** We made the clarification on page 4 of the report.

## Comments regarding McMinnville's forecast

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**From:** Doug Montgomery [mailto:[Doug.Montgomery@ci.mcminnville.or.us](mailto:Doug.Montgomery@ci.mcminnville.or.us)]

**Sent:** Thursday, September 20, 2012 4:36 PM

**To:** Ken Friday

**Cc:** Ron Pomeroy

**Subject:** RE: PSU Population Report - Draft 4

Good afternoon, Ken,

My apologies for not getting comments to you sooner on this draft. I am headed out of town tomorrow and won't be back until after the September 24<sup>th</sup> deadline, but have asked Ron to review this draft and provide comment(s) for you in the next day or two. In looking through this briefly this afternoon I do note that the maps used in the analysis for McMinnville depict an incorrect urban growth boundary (the boundary that was challenged by 1000 Friends and subsequently remanded by the Courts). This error is compounded through the draft analysis in that the population figures are based upon this geography. We would ask PSU to make this correction to the maps and the corresponding population counts and estimates that appear in the report.

Thanks.

Doug

Doug Montgomery, AICP

Planning Director

City of McMinnville

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### Response from Ken Friday, Yamhill County:

The initial application for the Yamhill County population projection was started on May 12, 2011. At that time the 2003 McMinnville UGB was used in the analysis. This 2003 UGB amendment was litigated until March of 2012 when the city decided to drop pursuit of the 2003 UGB amendments. The 2003 UGB was provided to PSU when they started their report in 2012, and the error was not discovered until the August 2012 draft of the population forecast. Since the area taken out of the UGB was undeveloped, only a small number of households were removed from the McMinnville UGB. Due to the negligible difference, and the significant expense of redoing the entire report, the report will not be amended but the use of the 2003 UGB will simply be noted.

**PSU response:**

To clarify, the UGB used in the McMinnville study area is the proposed UGB that was withdrawn in spring 2012. The proposed UGB is smaller than the actual UGB.

Based on the tax lot data we received from Yamhill County at the onset of this study, we estimate that 30 housing units are affected by the difference in UGBs. Applying the occupancy rate and the average household size that we estimated for McMinnville in 2011, 74 persons were omitted from the McMinnville study area. Including the additional 74 persons in our study might have changed our forecast (likely would have increased the forecast numbers), but by a relatively insignificant amount, as this difference represents less than a fraction of one percent of the base population in McMinnville's UGB.

We added a footnote in the body of the report (page 2) where we mention the use of UGBs in this study. The footnote says, " The UGB used for McMinnville and its study area was a proposed amended UGB that was withdrawn in spring 2012; all references to the McMinnville UGB in this report pertain to this proposed UGB. See Appendix 9 for additional information about the McMinnville's UGB."

## Appendix 10

### Adjustments to Preliminary Forecasts

### **Adjustments to Preliminary Forecasts**

We made an adjustment to Willamina's forecast based on feedback we received from MWVCOG on behalf of Willamina, and based on our estimate of the number platted tax lots in a few different locations in the Yamhill County portion of the city.

We increased Willamina's forecast and transferred a bit of the forecast population growth from the Polk County portion of the city to the Yamhill County portion. The 2035 forecast population in the Yamhill County portion of Willamina is 185 persons higher than in the preliminary forecast, and 161 higher than the preliminary forecast for Willamina as a whole.

The amount of increase in Willamina's forecast (only the Yamhill County portion of the city) was added to the County forecast. The County's forecast was insignificantly impacted, and the forecasts for the other cities and the unincorporated area were not affected by this revision.

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