McMinnville Residential Land Needs Analysis

Prepared for

City of McMinnville

by

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Chapter 1 Introduction

BACKGROUND

In August of 2000, the City of McMinnville contracted with ECONorthwest to inventory its buildable residential lands and conduct an analysis of its future residential land needs, consistent with the requirements of current Statewide Planning Goals, laws, and administrative rules. This document, entitled "McMinnville Residential Land Needs Analysis," is the result of that work. In sum, the document provides the following:

- A detailed, parcel-level inventory of each vacant, partially vacant, and redevelopable property within the current urban growth boundary, and its capacity to provide for future housing;
- An analysis of housing type and housing mix using residential permits, during the period of August, 1988, through June, 2000;
- A detailed analysis to determine McMinnville's housing demand and projected need to the year 2020;
- A summary that compares McMinnville's current residential land supply to the forecast of residential land need (including other public and semi-public uses that require residential land); and,
- An appendix with supporting information and data.

This analysis, when adopted by the City Council, will serve to update Chapter 5, Housing and Residential Development, of the McMinnville Comprehensive Plan. There have been no significant updates to this chapter since its acknowledgement by the Oregon Department of Land Conservation and Development Commission in 1983.

This analysis follows, to the extent possible, the methodology outlined in the "Planning for Residential Growth: A Workbook for Oregon's Urban Areas" produced by the Transportation and Growth Management Program (TGM) of the Oregon Department of Land Conservation and Development (DLCD). This analysis is subject to the requirements of House Bill 2709 (codified in ORS 197.296) which was passed by the Oregon Legislature in 1995. This legislation provides direction for communities conducting a buildable lands analysis and housing need assessment.

PURPOSE

Consistent with the requirements of House Bill 2709 (ORS 197.296), communities engaged in a buildable lands analysis and housing need assessment must complete, in part, the following:

- Inventory the supply of buildable lands within the current urban growth boundary;

- Determine the actual density and the actual mix of housing types of residential development that have occurred within the urban growth boundary since the last periodic review or five years, whichever is greater. For McMinnville this requires an analysis of development activity that has occurred since September of 1988, the date of our last periodic review.

- Conduct an analysis of housing need by type and density range, in accordance with ORS 197.303 and statewide planning goals and rules related to housing, to determine the amount of land needed for each needed housing type for the next 20 years.

This report presents an analysis consistent with the above outlined requirements, and draws upon previous work that ECONorthwest conducted in Linn and Benton Counties, several Oregon cities, and the Greater Wasatch Region of Utah. The report is intended to update Chapter 5, Housing and Residential Development, of the McMinnville Comprehensive Plan and serve as the basis for subsequent discussions and policy choices regarding the management of growth in McMinnville.

This report and the analysis contained within it does not, and is not intended to, address the requirements of ORS 197.296(4) and (5) relevant to actions that the City may need to take to avoid or minimize an expansion of the current urban growth boundary. These requirements of law will be satisfied by the City subsequent to the completion and adoption of this analysis, and finding that the current urban growth boundary contains insufficient land to accommodate the projected residential land needs.

The citizens of McMinnville have funded this report, in its entirety.

METHODS

In general, a Land Need Assessment contains a *supply* analysis (buildable and redevelopable land by type) and a *demand* analysis (population and employment growth leading to demand for more built space: residential and non-residential development). The geographic scope of the Land Need Assessment is all land inside the McMinnville Urban Growth Boundary.

LAND SUPPLY

The general structure of the supply analysis is based on the DLCD HB 2709 workbook "*Planning for Residential Growth – A Workbook for Oregon's Urban Areas*," which specifically addresses residential lands. They are described in detail in Appendix A. The major steps in the supply inventory are:

- Calculate the gross vacant acres by zoning district[1], including fully vacant and partially vacant parcels.
- Calculate gross buildable vacant acres by zoning district by subtracting unbuildable acres from total acres.
- Calculate net buildable acres by zoning district, subtracting land for future public facilities from gross buildable vacant acres.
- Calculate total net buildable acres by zoning district by adding redevelopable acres to net buildable acres.

The supply analysis builds from a parcel-level database to estimates of buildable land by zone.[2] Each parcel was classified into one of the following categories:

- Vacant land
- Partially Vacant land
- Undevelopable land
- Developed land
- Potentially Redevelopable land

A detailed discussion of the methods and definitions used to complete the buildable lands inventory is presented in Appendix A.

The City identifies areas in steep slopes (slopes of 25% or greater), floodplains, wetlands identified in the National Wetlands Inventory (NWI), land that has no access, and land identified for future public facilities as constrained or committed lands. These areas were deducted from lands that were identified as vacant or partially vacant. Definitions of these characteristics and the results of the buildable residential lands inventory are presented in Chapter 3.

LAND DEMAND

Demand for land is characterized through analysis of national, regional, and local demographic and economic data. For residential uses, population and households drive demand. For the residential sector, for example, information about the characteristics of households is used to identify types of housing that will be sought by households.

One way to forecast housing demand is with detailed demographic and socioeconomic variables. If one could do the measurement fine enough, one

[1] Buildable lands analyses typically summarize data by both plan designation and zoning district. McMinnville, however, has only one residential plan designation category. Thus, the tables presented in this report are summarized by zoning district.

[2] The parcel-level database was based on information from the Yamhill County Assessor. The base data was supplemented with additional land use data and field work provided by City staff. This database is voluminous and is available for review in the McMinnville Planning Department.

might find that every household has a unique set of preferences for housing. But no regional housing analysis can expect to build from the preferences of individual households.[3] Thus, most housing market analyses that get to this level of detail try to describe *categories* of households on the assumption that households in each category will share characteristics that will make their preferences similar. A few metropolitan governments and research institutions are beginning to build housing models that recognize that households which share general characteristics do not all behave identically, but they can be shown to have statistically reliable propensities to choose certain housing types and locations.[4]

The DLCD Housing Workbook, for example, notes three household characteristics that strongly influence choices about residential location and housing type: age of the household head, size of the household, and income. Even if these were the only three significant variables influencing housing preferences (they are not), and if they each only had four subcategories (e.g., age of head 18-30, 31-40, 41-55, 55+) they would lead to 64 different household types (4*4*4).

It is difficult at best to allocate households to each of the 64 different housing types. Simpler forecasting techniques allow a reasonable estimate of the total number of housing units that will be needed based on expected population increases and the basic relationships between the variables shown in Figure 1-1.

ASSUMPTIONS

Any forecast is based on a set of assumptions. For this study, the housing forecast implicitly assumes:

- The County coordinated population forecasts are a reasonable approximation of population in 2020.
- Persons in group quarters will increase in the region between 2000 and 2020. Persons in group quarters will require land at densities comparable to other multifamily densities (densities of about 15 dwelling units per gross residential acre).
- For the planning period, average aggregate household size will remain the same as the 1990 Census figure of 2.54 persons.
- Vacancy rates will be cyclical, but will average 3%-5% between 2000 and 2020.

[3] Not only could one not measure the preferences of all existing households, one could not know what specific households would be migrating to the region.

[4] Those familiar with transportation modeling will recognize this as a “logit specification" common to the mode choice components of those models.

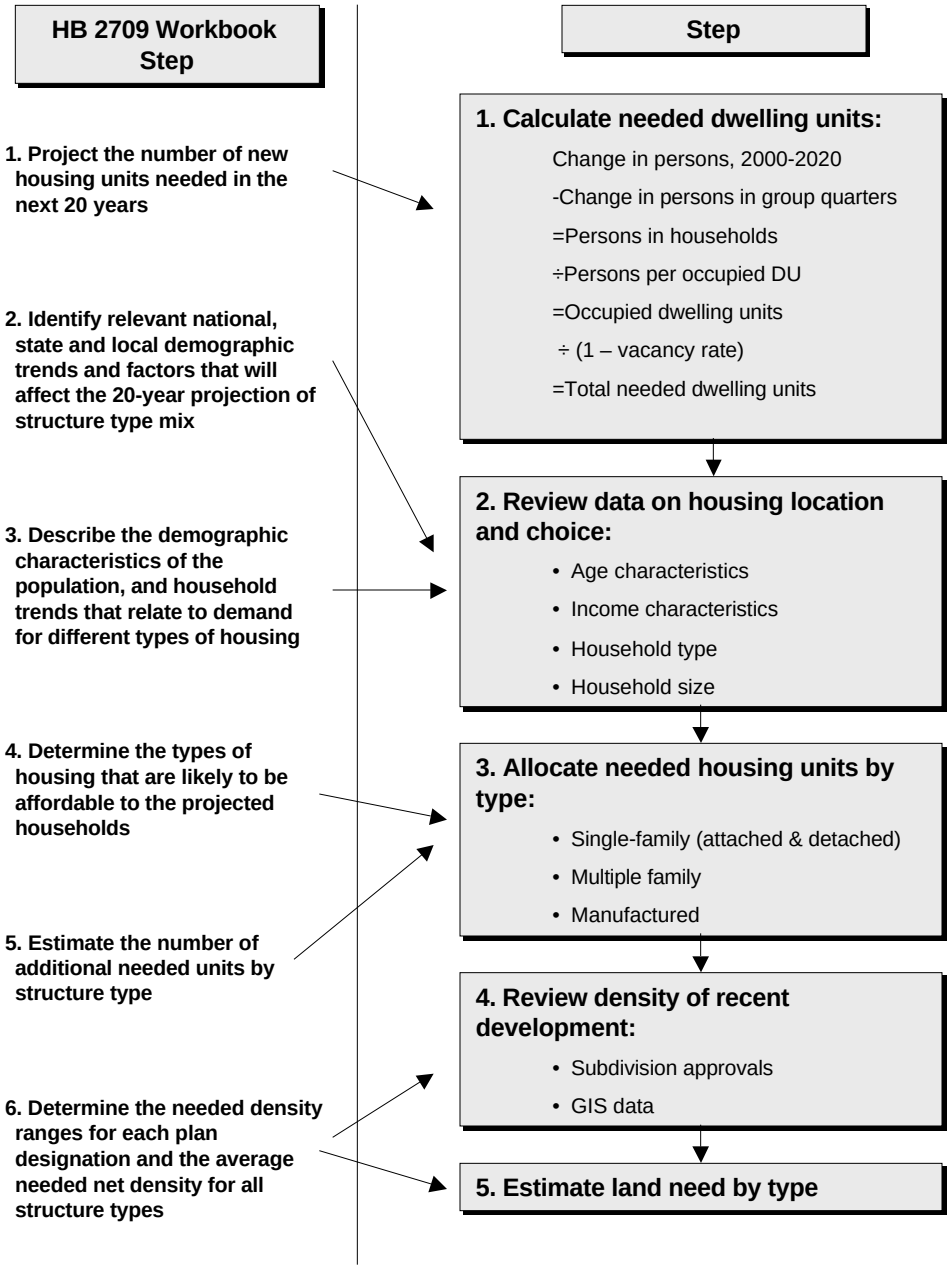
The specific assumptions applied to the housing demand and need simulations and supporting data are presented in Chapter 5, Housing Needs Analysis.

This report presents two housing forecasts; both apply the assumptions described above.

1. *Baseline forecast*. The baseline forecast is an extrapolation of *actual* housing mix and density trends between 1988 and 2000 for the period 2000-2020. The baseline forecast is consistent with Task 5, Step 1 of the Workbook (page 37).

2. *Alternative forecast*. The alternative forecast (or *housing need* forecast) considers demographic shifts, trends in national, state, and local housing markets, land development costs, as well as other variables. The alternative forecast is consistent with Task 3, Steps 1-6 (pages24-34).

Figure 1-1. Relationship between HB 2709 workbook methods and methods used for the McMinnville Housing Analysis



ORGANIZATION

The rest of this report is organized as follows:

- **Chapter 2, Framework For A Housing Needs Analysis,** describes the theoretical and policy underpinnings of conducting a Goal 10 housing needs analysis for Oregon cities.
- **Chapter 3, Buildable Residential Land Supply**, describes the supply of residential land available to meet the 20-year need for housing.

- **Chapter 4, Historical Development Trends**, summarizes building permit and subdivision data to evaluate residential development by density and mix for the period beginning September 1, 1988, through June 30, 2000.
- **Chapter 5, Housing Needs Analysis**, presents a housing needs analysis consistent with HB 2709 requirements and the HB 2709 Workbook.
- **Chapter 6, Comparison of Supply and Need**, compares buildable land supply with estimated housing need.

The report also includes an appendix:

- **Appendix A, Land Supply Methods and Summary Tables**, presents more detailed discussion of the residential buildable lands inventory.
- **Appendix B, National and Regional Housing Trends** presents research ECO has performed over the course of several years describing key factors affecting housing at the national and regional level.
- **Appendix C, Coordinated Population Forecasts** presents McMinnville's county coordinated population forecast.
- **Appendix D, Persons per Household** presents information related to the number of persons per household over recent decades for twelve Oregon cities whose population ranks them tenth through 22nd in the state; McMinnville ranks 15th, near the middle of this group.
- **Appendix E, School District No. 40 Land Needs** presents a letter from the McMinnville School District on their estimated land needs.

Chapter 2 Framework for a Housing Needs Analysis[5]

OVERVIEW

Economists view housing as a bundle of services for which people are willing to pay: shelter certainly, but also proximity to other attractions (job, shopping, recreation), amenity (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools). Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make tradeoffs. What they can get for their money is influenced by both economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of household head, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

Thus, housing choices of individual households are influenced in complex ways by dozens of factors; and the housing market in McMinnville is the result of the individual decisions of thousands of households. These points should underscore the complexity of projecting what types of housing will be built between 2000 and 2020.

The complexity of a housing market is a reality, but it does not obviate the need for some type of forecast of future housing demand and need, and its implications for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions about the dynamics of markets and policies than from the specific estimates of future demand and need. Thus, we start our housing analysis with a framework for thinking about housing and residential markets, and how public policy affects those markets.

OREGON HOUSING POLICY

The passage of the Oregon Land Use Planning Act of 1974 (ORS Chapter 197), established the Land Conservation and Development Commission (LCDC), and the Department of Land Conservation and Development (DLCD). The Act required the Commission to develop and adopt a set of statewide planning goals. Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies.

[5] This chapter is based on a discussion presented in the Linn-Benton Regional Housing and Economic Study (ECONorthwest, 1999).

At a minimum, local housing policies must meet the requirements of Goal 10 (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600.008). Goal 10 requires incorporated cities to complete an inventory of buildable residential lands and to encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

Goal 10 defines needed housing types as "housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels." This definition includes government-assisted housing and mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490. For communities with populations greater than 2,500 and counties with populations greater than 15,000, needed housing types include (but are not limited to):

- Attached and detached single family housing and multiple-family housing for both owner and renter occupancy; and,

- Manufactured homes on individual lots planned and zoned for single family residential use.

In 1995, the Oregon legislature passed House Bill 2709 which is now codified as ORS 197.296. It amends the Oregon Land Use Planning Act and further refines Goal 10 as follows:

- Amended the definition of buildable lands to include "developed land likely to be redeveloped";

- Requires coordination of population projections by counties (ORS 195.036);

- Sets criteria for prioritizing land for UGB expansions (ORS 197.298);

- Sets specific requirements in ORS 197.296 for conducting residential buildable land inventories and housing needs assessments; and,

- Requires demonstration of a 20-year residential buildable land supply.

Figure 2-1 shows the major components of ORS 197.296 (HB 2709) and which communities must address those components.

Figure 2-1. Who must comply with ORS 197.296 requirements

Requirement	Population > 25,000 or high growth rate [a]	All Jurisdictions	Comments
Apply new definition of buildable lands	✓	✓	
Coordinate population forecasts	✓	✓	
Conduct buildable lands and housing needs analysis	✓	✓	Required by Goal 10
Meet residential land needs for 20 years	✓		
Take measures to increase densities and/or expand the UGB	✓		Subject to Goal 14 requirements
Determine appropriate residential locations and densities for market	✓		
Apply refined priority of lands for UGB expansions	✓	✓	

Source: ***Planning for Residential Growth: A Workbook for Oregon's Urban Areas***, TGM Program, ODOT, DLCD, June 1997

[a] Communities are required to address all the provisions of ORS 197.296 if: (1) they have population of more than 25,000; or (2) they have experienced a rate of population growth greater than the state for three of the past five years. McMinnville has had a growth rate greater than the state for each of the past five years and is therefore subject to the requirements of ORS 197.296.

DEMAND VERSUS NEED

The language of Goal 10 and ORS 197.296 usually refers to housing need: it requires communities to provide needed housing types for households at all income levels. Goal 10's broad definition of need covers all households: from those with no home to those with second homes. Some people would not consider those in the latter category as having a housing need, and prescribe that their housing should be a big concern of public policy.[6]

State policy does not make a clear distinction between need and demand. Following is our definition, which we believe to be consistent with definitions in state policy:

- *Housing need* can be defined broadly or narrowly. The broad definition is based on the broad mandate of Goal 10 that requires communities plan for housing that meets the needs of households at all income levels. Thus, Goal 10 implies that everyone has a housing need because everyone needs housing. However, definition used by public agencies that provide housing assistance (primarily the Department of

[6] Goal 10 defines all housing types for all income levels as "needed" housing. Public policy typically attempts to address areas where the market does not meet demand; in the case of housing, lower cost housing for low-income households. All cities have plan designations and zoning districts that allow for single-family residential development. City's, however, rarely have policies that dictate the price of housing that gets built in those districts. Instead, they typically allow the market to determine the type and value of housing that gets built.

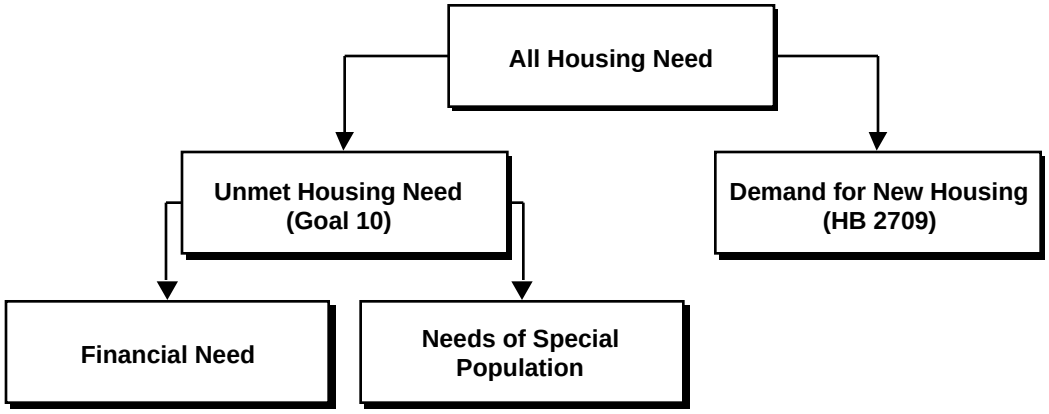
Housing and Urban Development – HUD, and the Oregon Housing and Community Services Department - HCS) is more narrow. It does not include most of the households that can purchase or rent housing consistent with the requirements of their household size for a price that is affordable. Households that can find and afford such housing have need: they are either unhoused, in housing of substandard condition, overcrowded, or paying more than their income and federal standards say they can afford.

- *Housing market demand* is what households demonstrate they are willing to purchase in the market place. Growth in population leads to a growth in households and implies an increase in demand for housing units that is usually met primarily by the construction of new housing units by the private sector based on developers' best judgments about the types of housing that will be absorbed by the market. HB 2709 includes a market demand component that applies to certain jurisdictions: buildable land needs analyses must consider the density and mix of housing developed over the previous five years or since their most recent periodic review, whichever is greater.

In short, a housing evaluation should make a distinction between housing that people might need (housing needs) and what the market will produce (housing market demand).

Figure 2-2 shows our way of distinguishing between housing needs that are unmet and those that are met via market transactions. All housing need is the total number of housing units required to shelter the population. In that sense, it is approximately the number of households: every household needs a dwelling place. But some of that need is met through market transactions without much government intervention because households have the income to *demand* (purchase) housing services (as owners or renters). That demand is shown in the box on the right. Other households, however, have needs unmet, usually because they lack the resources to purchase housing services (financial need), but because of special needs as well (though, even here, the issue is still one of financial resources).

Figure 2-2. Relationship between housing need, housing demand, and statewide land use policy



Most housing market analyses and housing elements of comprehensive plans in Oregon make forecasts of new demand (what housing units will get built in response to market forces). Work by housing authorities is more likely to talk about housing need for special classes, especially low-income. It is the role of cities under Goal 10 to adopt and implement policies that will encourage provision of housing units that meet the needs of all residents.

It is unlikely that housing markets in any metropolitan area in the US provide housing to meet the needs of every household. Even many upper-income households probably believe they "need" (want) more housing than their wealth and income allows them to afford. Goal 10 does not require communities address the housing “want” of residents.

More important, however, are more basic housing needs. At the extreme there is homelessness: some people do not have any shelter at all. Close behind follows substandard housing (with health and safety problems), space problems (the structure is adequate but overcrowded), and economic and social problems (the structure is adequate in quality and size, but a household has to devote so much of its income to housing payments that other aspects of its quality of life suffer). Moreover, while some new housing is government-assisted housing, public agencies do not have the financial resources to meet but a small fraction of that need. New housing does not, and is not likely to, fully address all these needs because housing developers, like any other business, typically try to maximize their profits.

In fact, many of those needs are much more likely to be satisfied by existing housing: the older, used stock of structures that is usually less expensive per square foot than new housing. Thus, forecasting the type of new units that might be built in a region (by type, size, and price) is unlikely to bear any relationship to the type of housing to which most people with acute housing needs will turn to solve their housing problems. One key reason for this is the dynamics associated with housing construction. The cost of building new housing is largely prohibitive for building dwelling units affordable to low-income households. This “trickle-down” effect is well known

among housing specialists. In most communities a quick comparison of new home prices with income distributions will underscore the fact that developers tend to focus on the move-up market and not on entry-level housing.

Viewed in the light of those definitions, the requirements of Goal 10 need clarification. Goal 10 mandates that communities plan for housing that meets the needs of households at all income levels. Thus, Goal 10 implies that everyone has a housing need. As we have noted, however, it is hard to justify spending public resources on the needs of high-income households: they have the income to purchase (demand) adequate housing services in the housing market. The housing they can afford may not be everything they want, but most policymakers would agree that the difference does not classify as the same kind of need that burdens very-low-income households.

This study is not the place to resolve debates about definitions of housing need and the purposes of Goal 10. Here are our assumptions about the distinction between demand and need in the rest of this study:

- Our analysis of need addresses the Goal 10 requirements regarding financial need (ability to obtain housing) as regard future households as well as those households whose circumstances suggest that they will have special problems in finding adequate and affordable housing services. That analysis occurs after, and largely independent of, the forecast of new housing that is likely to be built to supply effective demand.

- Our forecast includes a comparison of demand for new housing: what kind of housing of what type is likely to get built in the region over the next 20 years. The baseline forecast is the housing "demand" forecast, the alternative forecast is the housing "need" forecast.

Chapter 5 of this report presents our Housing Needs Analysis for McMinnville. The analysis is consistent with the framework described in this chapter and with the requirements of HB 2709 and other relevant state policy.

Chapter 3 Buildable Residential Land Supply

This chapter presents the results of the inventory of buildable residential land within the McMinnville Urban Growth Boundary (UGB).[7] The inventory only includes lands within the McMinnville UGB that have a plan designation for residential use. A detailed discussion of the methods and definitions used to complete the buildable lands inventory is presented in Appendix A.

Many ways exist to present the land supply data: for example, by development status, plan designation, zoning, or current use. This chapter uses the categorizations most relevant to policy making: vacant land by zoning district (i.e., future use classification), vacant land by parcel size, and land with redevelopment potential.

RESIDENTIAL LAND BY CLASSIFICATION

The supply analysis builds from a parcel-level database to identification of buildable land by zone. Each parcel was classified into one of the following categories (the complete definitions are included in Appendix A):

- *Vacant residential land* – Tax lots that have no structures or have buildings with very little value. For the purpose of this study, vacant residential land is land that is designated for residential uses and has a market improvement value less than $10,000.

- *Undevelopable Residential land* – For purposes of this study, land that is already committed to other uses by policy, lots under 4,000 square feet in size are considered undevelopable for residential uses, and lots with no existing or potential for future automobile access are considered undevelopable for residential uses.

- *Partially vacant (under-utilized) residential land* – Partially vacant tax lots are those occupied by a use but which contain enough land to be further partitioned or subdivided without need of rezoning. For instance, a single house on a 1-acre lot, where urban densities are allowed, is partially developed. To estimate partially-vacant land, we identified all single-family residential lots (property class 101) which are more than two times the minimum lot size for its zone.

- *Developed residential land* – Land that is developed at densities consistent with zoning and has an improvement-to-land-value ratio that makes it unlikely to redevelop during the analysis period. For

[7] The base date for the inventory was June 30, 2000.

purposes of this study, land that is not classified as vacant, partially vacant, or undevelopable is considered developed. Potentially redevelopable land is a subset of developed land.

- *Potentially redevelopable residential land* – Land on which development has already occurred but on which, due to present or expected market forces, there exists the potential that existing development will be converted to more intensive uses during the planning period. The potential placement of additional dwelling units on a residential parcel already improved with a residence may only occur on land zoned R-3 or R-4 as per McMinnville zoning ordinance. For purposes of this study, all R-3 and R-4 zoned tax lots with improvement-to-land value ratios of less than 1:1 that are not classified as vacant, undevelopable, partially vacant, or under-utilized are considered potentially redevelopable.

The inventory includes all lands designated for residential uses within the McMinnville UGB. Public and semi-public lands are considered unavailable for residential development (they are however considered available for either public or semi-public use if classified as vacant, partially vacant, or redevelopable). For purposes of this study, constrained land is land that is in areas with slopes of 25% or greater, land that is within the 100-year floodplain, and land that is identified as a wetland on the National Wetland Inventory map.

Table 3-1 shows all residential land by classification for June 2000 for the entire McMinnville UGB, and for the two subareas that compose it: the area within the city limits; and, the urban fringe (defined for this study as the area between the city limits and the UGB).

The data indicate that within the existing UGB, McMinnville has 3,743 acres in 6,942 tax lots designated for residential uses. Of this total, 2,797 acres are classified as either developed or as developed portions of tax lots, or exhibit physical or environmental constraints (see Appendix A), or are committed to other uses and therefore unavailable for future residential use. This provides about 935 gross vacant buildable acres available for future residential development. Of this total, about 805 acres are classified as vacant, and 130 acres are classified as partially vacant.

About 3,214 acres are within the city limit, while only 530 acres are located within the area between the city limit and UGB. The majority of vacant and partially-vacant land (641 gross vacant buildable acres) is within the city limit. An additional 293 gross vacant and partially-vacant acres are in the area between the city limit and UGB. All of the potentially redevelopable land (12 acres) is within the city limit.

Table 3-1. Residential land by classification and location, McMinnville UGB, June 2000

Classification	Number of Tax Lots	Total Acres	Acres Unavailable for Develop-ment	Gross Vacant Buildable Acres	Potentially Redevelop-able Acres
Inside the City Limits					
Committed to other uses	58	174.8	174.8	0.0	0.0
Developed	5,890	1,703.1	1,703.1	0.0	0.0
Partially Vacant	54	149.7	58.2	91.6	0.0
Potentially Redevelopable	62	16.3	4.3	0.0	12.0
Public	42	174.6	174.6	0.0	0.0
Semi-Public	146	299.0	299.0	0.0	0.0
Undevelopable	99	19.8	19.8	0.0	0.0
Vacant	527	676.8	127.0	549.7	0.0
Subtotal	**6,878**	**3,214.1**	**2,560.7**	**641.3**	**12.0**
Between the City Limits and UGB					
Committed to other uses	1	4.8	4.8	0.0	0.0
Developed	24	64.2	64.2	0.0	0.0
Partially Vacant	4	105.1	66.9	38.1	0.0
Vacant	32	341.2	86.0	255.2	0.0
Subtotal	**64**	**529.3**	**235.9**	**293.4**	**0.0**
Total	**6,942**	**3,743.3**	**2,796.7**	**934.6**	**12.0**

Source: Yamhill County Assessment data; field verification by the City of McMinnville; data analysis by ECONorthwest

Table 3-2 shows residential land by zoning and location within the McMinnville UGB. The results show the majority of gross buildable residential land within the city limit is in the R-1 zone (436 acres). In the area between the UGB and the city limit, 237 acres of the 293 available acres are in the EF-40 zone.

Table 3-2. Residential land by zoning and location, McMinnville UGB, June 2000

Zoning District	Number of Tax Lots	Total Acres	Acres Unavailable for Develop-	Gross Vacant Buildable Acres	Potentially Redevelop-able Acres
Within the City Limits					
A-H	6	53.9	28.2	25.7	0.0
EF-40	5	79.7	59.1	20.6	0.0
EF-80	1	4.6	0.0	4.6	0.0
R-1	1,689	1,177.5	741.8	435.6	0.0
R-2	3,278	1,003.9	920.5	83.4	0.0
R-3	1,099	380.9	343.3	30.7	7.0
R-4	797	506.3	464.2	37.0	5.1
VLDR-1	3	7.3	3.6	3.7	0.0
Subtotal	6,878	3,214.1	2,560.7	641.3	12.0
Between the City Limits and UGB					
A-H	1	0.6	0.6	0.0	0.0
AF-20	9	34.7	11.6	23.1	0.0
EF-40	26	364.4	127.6	236.8	0.0
EF-80	16	110.4	80.3	30.1	0.0
LDR-9000	3	6.5	6.5	0.0	0.0
VLDR-1	2	2.1	1.7	0.4	0.0
VLDR-2.5	7	10.5	7.5	2.9	0.0
Subtotal	64	529.3	235.9	293.4	0.0
Total	**6,942**	**3,743.3**	**2,796.7**	**934.6**	**12.0**

Source: Yamhill County Assessment data; field verification by the City of McMinnville; data analysis by ECONorthwest

GROSS VACANT BUILDABLE LAND

Table 3-3 shows gross vacant buildable land by zoning district for June 2000. Parcels shown in the tables are those identified as either vacant or partially vacant. Vacant means that a parcel has no significant improvements (improvements valued at $10,000 or more); partially vacant means that despite some improvements a parcel is judged large enough to have a buildable portion.[8] The table classifies land area in the following categories:

- Zoning district—zoning districts that have residential plan designations. City zoning districts are R-1 through R-4 and A-H; all other districts are County districts.

[8] To identify partially-vacant land, we identified all single-family residential tax lots on which exist significant improvements (property class 101) and are at least two times the minimum lot size for their respective zones.

The following rules were used to identify partially vacant lands. For R-1, lots over 18,000 sq. ft; for R-2, lots over 14,000 sq. ft.; for R-3, lots over 12,000 sq. ft.; and for R-4, lots over 10,000 sq. ft. ECO developed a list of lots that met these criteria. City staff then reviewed each lot to determine if it could be divided. This process of "shadow platting" considered the existing building footprint, lot dimensions, access, and minimum setbacks to determine whether additional development potential existed.

- Total (gross) acres—all land within parcels that are either fully vacant or partially vacant.[9]
- Less existing development—this category applies only to "partially vacant" parcels and is the portion of such parcels that is considered developed[10]
- Less 100-year floodplain—the area that falls within the 100-year floodplain based on FEMA FIRM maps. McMinnville, by ordinance, does not allow development within the 100-year floodplain.
- Less steep slope area—Consistent with OAR 660-008-0005(2), a recent LUBA opinion, and DLCD staff direction, lands with slopes of 25% or greater are excluded from the buildable land inventory.[11] This analysis considers lands of 25% or greater slope as unbuildable.
- Less acres committed to other uses—land in residential areas that has been committed to other uses. Examples of land in this category include land in public ownership.
- Acres unavailable for development—the sum of the previous four categories (existing development, 100-year floodplain, slope, and land committed to other use).
- Gross vacant buildable acres available for development—total gross acres minus total unavailable for development.

The analysis estimates that within the current UGB, McMinnville had about 935 gross vacant buildable acres available for residential development

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[9] This definition does not include potentially redevelopable acres. Potentially redevelopable land is addressed separately from vacant land in the next section.

[10] Rather than apply a blanket assumption to each parcel as to the amount of land that is "developed," staff employed a rigorous, parcel-specific review of each parcel to determine its ability to provide for future residential land needs. To determine the amount of land developed within each parcel, staff first used aerial photos and GIS data to plot the locations of existing improvements. Parcels with improvements situated in such a manner as to preclude access to the "vacant" portion(s) of the property were placed in the "developed" category. All remaining parcels were then "shadow platted" with the "developed" portion of the parcel containing the minimum area required by the applicable zone and as necessary to comply with minimum setback and other land division ordinance requirements. If the "vacant" portion of the parcel was less than the minimum lot size required by the applicable zone, the parcel was placed in the "developed" category. All other parcels were placed in the "partially vacant" category.

[11] A recent Land Use Board of Appeal (LUBA) opinion, Rogue Valley Association of Realtors vs. City of Ashland, sheds further light on the above definition as found in the following excerpts from that case:

> "Under the OAR 660-08-0005(2) definition of "buildable land," the city could map and distinguish between residentially zoned land that exceeds 25 percent slopes and land with lesser slopes, and rely exclusively on the latter to provide buildable land for needed housing." [. . .]
>
> "The city has included lands with slopes exceeding 25 percent in the lands included in the Buildable Lands Inventory that are required for needed housing; the fact that it was not required to do so is irrelevant."

The important observation here is LUBA's statement of the "fact" that including land with slopes of 25 percent or greater in a buildable lands inventory as being suitable for accommodating future growth is not required. Further, the local adoption of an ordinance addressing "slope" is not required in order to provide a buildable land inventory exclusive of those lands.

in June 2000. The majority of this land (805 acres) is considered fully vacant, while about 130 acres are considered partially vacant.

Table 3-3. Vacant and partially vacant land by zoning, McMinnville UGB, July 2000

Zoning District	Number of Tax Lots	Total Acres	Less Existing Develop-ment	Less 100-Year Flood-plain	Less Steep Slope Area	Less Acres Committed to Other Uses	Acres Unavailable for Develop-ment	Gross Vacant Buildable Acres	Average Parcel Size (acres)
Vacant Land									
Within the City Limits									
A-H	1	33.0	0.0	11.6	6.5	0.0	18.1	14.9	14.9
EF-40	2	18.8	0.0	3.3	0.0	0.0	3.3	15.5	7.7
EF-80	1	4.6	0.0	0.0	0.0	0.0	0.0	4.6	4.6
R-1	235	475.3	0.0	5.0	76.9	0.0	81.8	393.5	1.7
R-2	108	73.4	0.0	2.0	3.0	0.0	5.0	68.4	0.6
R-3	79	20.3	0.0	0.8	0.0	1.0	1.8	18.5	0.2
R-4	101	51.3	0.0	17.0	0.0	0.0	17.0	34.3	0.3
Subtotal	**527**	**676.8**	**0.0**	**39.7**	**86.3**	**1.0**	**127.0**	**549.7**	**1.0**
Between the City Limits and UGB									
AF-20	5	14.3	0.0	0.0	0.0	0.0	0.0	0.0	14.3
EF-40	19	275.3	0.0	29.7	25.2	0.0	9.0	63.9	211.5
EF-80	5	48.2	0.0	21.7	0.4	0.0	0.0	22.2	26.1
VLDR-1	1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4
VLDR-2.5	2	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Subtotal	**32**	**341.2**	**0.0**	**51.4**	**25.6**	**9.0**	**86.0**	**255.2**	**8.0**
Total Vacant	**559**	**1,018.0**	**0.0**	**91.1**	**111.9**	**10.0**	**213.0**	**805.0**	**1.4**
Partially Vacant Land									
Within the City Limits									
A-H	2	18.0	1.0	1.1	1.4	3.6	7.1	10.9	5.4
EF-40	1	5.3	0.2	0.0	0.0	0.0	0.2	5.1	5.1
R-1	12	62.5	7.5	12.2	0.8	0.0	20.4	42.1	3.5
R-2	19	30.0	7.5	7.0	0.5	0.0	15.0	15.0	0.8
R-3	9	19.5	4.9	1.7	0.9	0.0	7.4	12.1	1.3
R-4	9	8.7	1.6	4.5	0.0	0.0	6.1	2.7	0.3
VLDR-1	2	5.7	2.0	0.0	0.0	0.0	2.0	3.7	1.8
Subtotal	**54**	**149.7**	**24.6**	**26.5**	**3.5**	**3.6**	**58.2**	**91.6**	**1.7**
Between the City Limits and UGB									
AF-20	1	16.9	1.1	3.1	3.9	0.0	8.1	8.8	8.8
EF-40	2	82.4	0.4	55.9	0.8	0.0	57.1	25.3	12.7
EF-80	1	5.8	0.4	1.4	0.0	0.0	1.7	4.0	4.0
Subtotal	**4**	**105.1**	**1.9**	**60.4**	**4.7**	**0.0**	**66.9**	**38.1**	**9.5**
Total	**58**	**254.8**	**26.5**	**86.9**	**8.2**	**3.6**	**125.1**	**129.7**	**2.2**

Source: ECONorthwest, from City of McMinnville & Yamhill County Assessor

GROSS VACANT BUILDABLE LAND BY PARCEL SIZE

Parcel size and location are important factors in providing a balanced land supply. Table 3-4 shows gross buildable vacant land by residential zoning district and parcel size within the McMinnville UGB. The results show that while the majority (78%) of vacant or partially-vacant parcels are less than one acre; 69% of the vacant land is in parcels of 10 acres or larger in area. Notably, 570 acres (or 61% of total vacant buildable acres) are contained within 18 parcels that are 20 or more acres in area. Of further note

is that the average "vacant land" parcel size is 1.4 acres, the average "partially vacant land" parcel size is 2.2 acres, and the combined average parcel size is 1.5 acres.

Analysis of vacant and partially vacant residential land by ownership shows that about 45% of the buildable residential land in McMinnville (about 420 acres) is in five ownerships. Moreover, about 63% of the buildable residential land (about 592 acres) is in 10 ownerships, and 77% is in 20 ownerships (about 722 acres).

Table 3-4. Vacant and partially vacant parcels by size class inside the McMinnville UGB in 2000

Zoning District	Less than 0.5 acre	0.50-0.99 acre	1.00-1.99 acre	2.00-4.99 acre	5.00-9.99 acre	10.00-19.99 acre	20.00-49.99 acre	50.00 or more acre	Total
Number of tax lots									
Inside City Limits									
A-H					2		1		3
EF-40			1		1	1			3
EF-80				1					1
R-1	210	12	5	7	5	1	5	2	247
R-2	102	8	7	9			1		127
R-3	73	6	2	6	1				88
R-4	97	5	6	1			1		110
VLDR-1			1	1					2
Subtotal	**482**	**31**	**22**	**25**	**9**	**2**	**8**	**2**	**581**
Between City limits and UGB									
AF-20		1	1	2	1	1			6
EF-40			4	4	2	5	3	3	21
EF-80				1	3	2			6
VLDR-1	1								1
VLDR-2.5		1	1						2
Subtotal	**1**	**2**	**6**	**7**	**6**	**8**	**3**	**3**	**36**
Total	**483**	**33**	**28**	**32**	**15**	**10**	**11**	**5**	**617**
Acres									
Inside City Limits									
A-H					10.9		14.9		25.7
EF-40			1.3		5.1	14.2			20.6
EF-80				4.6					4.6
R-1	46.4	7.6	6.1	12.0	28.5	10.4	128.0	196.8	435.6
R-2	20.7	3.3	4.7	13.6			41.2		83.4
R-3	10.6	2.5	2.0	11.4	4.2				30.7
R-4	15.9	2.2	4.0	0.3			14.6		37.0
VLDR-1			0.9	2.8					3.7
Subtotal	**93.6**	**15.5**	**19.0**	**44.6**	**48.6**	**24.6**	**198.7**	**196.8**	**641.3**
Between City limits and UGB									
AF-20		0.5	1.0	7.8	5.0	8.8			23.1
EF-40			5.6	9.1	11.2	36.3	64.1	110.4	236.8
EF-80				3.1	19.1	7.9			30.1
VLDR-1	0.4								0.4
VLDR-2.5		1.0	2.0						2.9
Subtotal	**0.4**	**1.5**	**8.6**	**20.0**	**35.4**	**53.0**	**64.1**	**110.4**	**293.4**
Total	**94.0**	**17.0**	**27.6**	**64.6**	**84.0**	**77.5**	**262.8**	**307.2**	**934.6**
Avg. Parcel Size	0.2	0.5	1.0	2.0	5.6	7.8	23.9	61.4	1.5
% of Tax Lots	78%	5%	5%	5%	2%	2%	2%	1%	100%
% of Acres	10%	2%	3%	7%	9%	8%	28%	33%	100%

Source: ECONorthwest, from City of McMinnville & Yamhill County Assessor

REDEVELOPMENT POTENTIAL

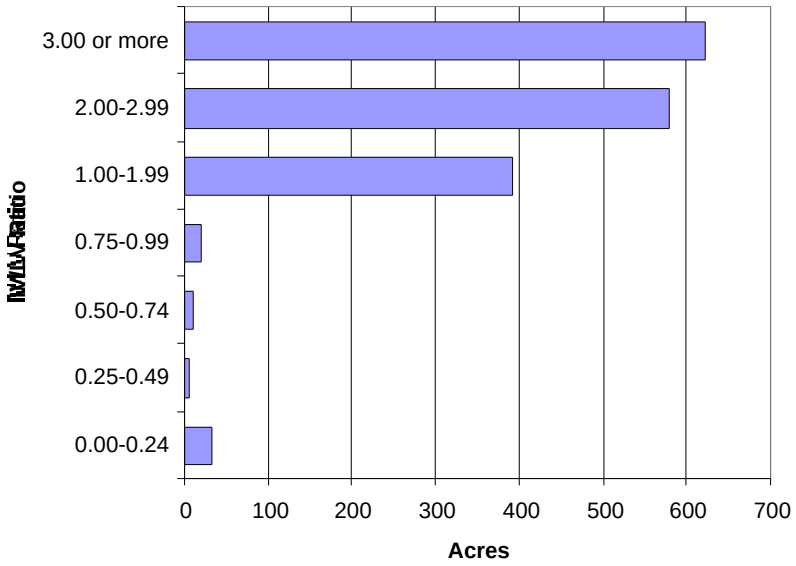
Redevelopment potential deals primarily with developed land zoned for two-family or multi-family residential use (zoning districts R-3 and R-4) where the ratio of improvement-to-land value is less than 1:1[12]. Not all, or even a majority of parcels that meet these criteria for redevelopment *potential* will be assumed to redevelop during the planning period. The issue of *how much* land might redevelop over the planning period is discussed in Chapter 6.

As a starting point, we plotted the distribution of improvement-to-land-value ratios for all residential parcels classified as developed.[13] Figure 3-1 shows the distribution of improvement-to-land values for all developed residential land in McMinnville (including lands in the R-1 and R-2 zoning districts). The figure shows that the largest category of land with improvement-to-land value ratios of less than 1:1 is in the 0.00-0.24 category. Because these parcels have improvement values that are less than one-quarter of the land value, they can be considered the most ripe for redevelopment.

[12] In the context of a buildable lands inventory, we are only interested in redevelopment that increases the density or intensity of use. For example, a demolition of a dilapidated single-family home in an R-1 district for a new single-family residence creates a new housing unit, but does not increase the number of residences on the site (or the density). Because we are only interested in development that increases residential density, the definition of potentially redevelopable land for this analysis includes only those developed parcels in zones that allow two-family or multiple family residential development (R-3, and R-4 districts).

[13] Developed parcels include parcels that are fully developed, and the developed portion of partially developed parcels.

Figure 3-1. All developed residential parcels by improvement-to-land value ratio, McMinnville UGB



Source: ECONorthwest, from City of McMinnville and Yamhill County Assessment Data

Table 3-5 shows a summary of potentially redevelopable parcels by improvement-to-land value ratio in 2000. A ratio of less than 1:1 is a typical, but arbitrary, standard for estimating lands with redevelopment potential.

The results show that few residential parcels in the R-3, and R-4 zones have improvement-to-land value ratios of less than 1:1—only 62 parcels totaling 12 acres. Using improvement-to-land value ratios as an indicator of redevelopment potential suggests that little redevelopment potential exists in McMinnville at this time. Over time, that relationship can change in response to both market conditions and public policy. For example, a tight UGB or high system development charges could increase the value of land relative to the value of improvements, which would move in the direction of more redevelopment.

Table 3-5. Developed residential parcels by improvement/ land value ratio inside the McMinnville UGB in 2000

Improvement/ land value ratio	Number of tax lots	Potentially Redevelop-able Acres
0.00-0.24	10	3.2
0.25-0.49	7	1.1
0.50-0.74	17	2.5
0.75-0.99	28	5.2
Total	**62**	**12.0**

Source: ECONorthwest, from City of McMinnville and Yamhill County Assessment Data

SUMMARY

McMinnville has 3,743 acres of land designated for residential uses. Of those, about 934 acres are classified as gross vacant, buildable residential land within its UGB. About two-thirds of vacant, buildable residential land is within the city limits. Of the 935 acres, about 805 acres are classified as vacant, and 130 acres are classified as partially-vacant. In addition to the vacant buildable land, few developed parcels have low enough improvement values to suggest that they are likely to be redeveloped in large quantities (and, thus, be part of the land base that could support new development). Using the assumption (determined by the City and common in buildable land studies in Oregon) that any parcel where improvement value is less than land value suggests a ripeness for redevelopment, an additional 12 acres may have redevelopment *potential* during the planning period.

This assumes that *all* such parcels will redevelop to a higher intensity during the planning period. Not all of this land, however, is likely to build out during the planning period. A more detailed discussion of this issue is presented in Chapter 6.

Chapter 4 Historical Development Trends

Analysis of historical development trends provides insights into how the local housing market is working. The housing type mix and density are also key variables in forecasting future land need. Moreover, such an analysis is required by ORS 197.296. The specific steps are described in Task 2 of the DLCD HB 2709 Workbook:

1. Determine the time period for which the data must be gathered

2. Identify types of housing to address (all needed housing types)

3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types

ORS 197.296 requires the analysis of housing mix and density to include the past five years or since the most recent periodic review, whichever time period is greater. McMinnville initiated its most recent periodic review in September, 1988. Thus, the timeframe for the analysis of historical development trends presented in this chapter is for the period beginning September 1, 1988, through June 30, 2000.

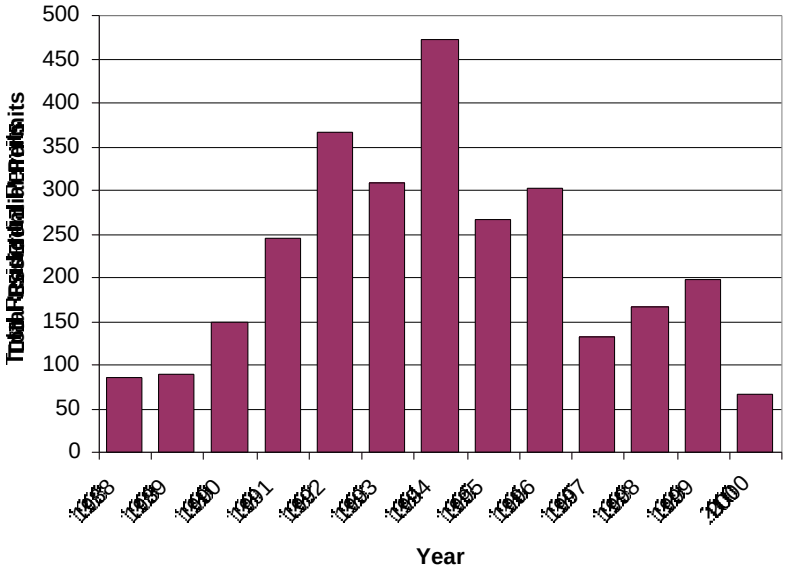
RESIDENTIAL DEVELOPMENT TRENDS

Between September 1, 1988, and July 30, 2000, McMinnville issued a total of 3,320 building permits for new residential construction. Figure 4-1 shows that the number of building permits issued varies from year to year and peaked during the period between 1992 and 1995. The rate of permit issuance was slower in 1998 and 1999, and during the first half of 2000.

Table 4-1 shows building permits issued for new residential construction by type within the McMinnville city limit. The data indicate that about 46% of residential building permits issued were for single-family detached dwellings, while about 22% were for multiple family dwellings. Manufactured homes accounted for about 20% of all permits issued. Combined, single-family attached and duplexes accounted for about 12% of total permits issued.[14]

[14] Single-family attached includes common wall and zero-lot line dwellings such as townhouses and condominiums. The City of McMinnville also classifies duplexes as a single-family attached housing type.

Figure 4-1. Building permits issued for new residential construction, McMinnville UGB, September 1, 1988 - July 30, 2000



Source: City of McMinnville Planning Department, 2000

Table 4-1. Building permits issued for new residential construction by type, McMinnville UGB, September 1, 1988 - July 30, 2000

Year	Single-family detached	Single-family attached	Duplex	Manufact-ured on Lots	Manufact-ured in Parks	Multiple family	Total
1988	33	10	6	4	14	32	85
1989	75	0	8	6	60	0	89
1990	124	4	20	2	59	0	150
1991	113	4	6	9	72	113	245
1992	119	2	16	12	44	218	367
1993	145	14	22	39	15	88	308
1994	192	20	12	48	45	201	473
1995	133	8	34	62	50	29	266
1996	191	58	42	8	19	3	302
1997	86	22	18	6	95	0	132
1998	125	24	14	4	0	0	167
1999	138	8	12	1	0	38	197
2000	58	4	4	0	0	0	66
Total	**1,532**	**178**	**214**	**201**	**473**	**722**	**3,320**
Annual average	**128**	**15**	**18**	**17**	**39**	**60**	**277**
Percent of total	**46.1%**	**5.4%**	**6.4%**	**6.1%**	**14.2%**	**21.7%**	**100.0%**

Source: City of McMinnville Planning Department, 2000

TRENDS IN HOUSING MIX

The housing mix by type (i.e., percentage of single family, multi-family, and mobile/manufactured home units) is an important variable in any housing needs assessment. Distribution of housing types is influenced by a variety of factors, including the cost of new home construction, area economic and employment trends, and amount of land zoned to allow different housing types and densities.

Table 4-2 shows changes in McMinnville's housing mix from 1980-90.[15] Between 1980 and 1990, residential development in McMinnville underwent a gradual yet noticeable change in character. In 1980, conventional single-family residences represented over 63 percent of McMinnville's housing stock. Ten years later, the percentage of single-family residences was down to 60 percent. Though nearly 600 single-family residential units were built from 1980 to 1990, new single-family housing stood for only 46 percent of total new residential development during this period.

In 1980, multiple-family and manufactured housing represented less than 37 percent of the housing stock. However, these more affordable housing types accounted for 54 percent of new residential development from 1980-1990, with nearly 700 units. In 1990, manufactured and multiple family dwellings accounted for 40% of McMinnville's housing stock.

Table 4-2. Dwelling units by type, 1980 and 1990

	1980		1990			
Housing Type	Total Units	Percent	Total Units	Percent	Units 1980-1990	Percent of new units 1980-1990
Single-family	3,493	63%	4,074	60%	581	46%
Multiple family	1,455	26%	1,908	28%	453	36%
Mobile/manufactured	565	10%	796	12%	231	18%
Total	**5,513**	**100%**	**6,778**	**100%**	**1,265**	**100%**

Source: U.S. Census of Population and Housing; summary by Missouri State Data Center, 1990

Note: multiple family includes duplexes; see footnote 12 for a detailed explanation

Table 4-3 summarizes actual housing development experienced in McMinnville from September, 1988, to July, 2000. For this analysis, housing development includes dwelling units for which building permits were issued including multiple family units, manufactured home set-up permits in parks, manufactured home set-up permits on individual lots, single-family attached, single family detached, and duplexes.[16] Of the 3,320 units approved during

[15] The 1980 Census data do not distinguish between single-family attached and detached dwelling units. Moreover, duplexes are lumped into a 2-9 dwelling units in structure category. Thus, duplexes are included in the multiple family housing type in Table 4-2.

[16] The definition of single-family attached requires more explanation. The Census defines single-family attached housing as follows:

this period, 46 percent were single family, 12 percent were commonwall or duplex, 22 percent were multi-family, and 20 percent were manufactured homes.

Table 4-3. Actual housing mix, McMinnville UGB, September 1, 1988 - July 30, 2000

Housing Type	Number of Permits Issued	Percent of Permits Issued
Single-family detached	1,532	46.1%
Single-family attached		
Common wall	178	5.4%
Duplex	214	6.4%
Manufactured		
On lots	201	6.1%
In Parks	473	14.2%
Multiple family	722	21.7%
Total	3,320	100.0%

Source: City of McMinnville building permit data

DENSITY

Table 4-4 summarizes approved lot densities by housing type from September 1988 through June 2000. During this period, 3,320 building permits were issued for residential development. This development consumed 709 gross vacant acres. About 151 acres (21.3% of gross acres) were committed to right-of-way, netting about 558 acres. New housing in McMinnville developed at an average net density of 5.9 dwelling units per net buildable acre between 1988 and 2000.

[16] "This is a 1-unit structure which has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof."

The City's definition includes only double houses. This presents difficulties in making assumptions about densities for single-family attached housing types. While technically defined as single-family units, single-family attached units generally have densities and characteristics that are more consistent with multiple family housing types. In McMinnville's system, single-family attached units are most similar to duplexes. Duplexes typically have densities ranging from 6-8 dwelling units per gross residential acre; we allocate these to the row/townhouse category in land need simulations.

Table 4-4. Residential density by housing type, McMinnville UGB, September 1, 1988 - July 30, 2000

Housing Type	Total Units (DU)	Percent of Total DU	Gross Acres	Net Acres	R-O-W %[a]	Net Density[b]
Single-Family Detached	1,532	46.1%	455.2	338.7	25.6%	4.5
Single-Family Attached	392	11.8%	57.3	43.1	24.7%	9.1
Manufactured Homes on Lots	201	6.1%	49.1	38.4	21.8%	5.2
Manufactured Homes in Parks	473	14.2%	98.9	94.8	4.1%	5.0
Multi-Family	722	21.7%	48.7	43.1	11.6%	16.8
Total	**3,320**	**100.0%**	**709.2**	**558.2**	**21.3%**	**5.9**

Source: City of McMinnville building permit data
[a] R-O-W percentages calculated as 1 - (net acres/gross acres)
[b] Net density means dwelling units per full acre of developable land, exclusive of streets and unbuildable area
Note: single-family attached includes duplexes

McMinnville has four residential zoning districts: R-1, R-2, R-3, and R-4. Each of these zones, however, allows a variety of housing types. The R-1 and R-2 zones allow single-family units, and duplexes on corner lots (with a minimum of 9,000 and 8,000 square feet, respectively). Multiple family development may occur in both of these zones through the planned development (PD) process. The R-3 zone allows small-lot single-family units, manufactured dwelling parks, and attached single-family units, as well as multiple family development through the PD process. The R-4 zone allows multiple family housing outright, as well as all of the above housing types.

Table 4-5 shows actual dwelling unit types and densities approved in McMinnville's four residential zoning districts during the analysis period. The R-1 District used 28% of total developed land area for 16% of the new dwelling units. By contrast, the R-4 District used 14% of total developed land area for 19% of the new dwelling units. Net densities in the districts generally perform as expected–densities increase as the allowable density increases.

The one exception to this trend is densities in the R-2 zone. Under most circumstances, actual housing density can be expected to increase in proportion to densities allowed under zoning. This pattern was observed in McMinnville–except in the R-2 District, which had much higher densities than would be expected. Analysis of the data and conversations with City staff indicate that the R-2 zone achieved densities that actually outperformed it's own maximum allowable potential density by 5%. In more typical circumstances, one would expect densities in the R-2 zone to be between 4.5 and 5.0 dwelling units per net acre rather than the 6.5 dwelling units per acres that was achieved. This density overachievement is due to the development of multiple family homes in the R-2 Zone as made possible through the flexibility afforded by application of the city's Planned Development review process.

Table 4-5. Residential density by zone, McMinnville UGB, September 1, 1988 - July 30, 2000

Zone	Total Units (DU)	Percent of Total DU	Gross Acres	Percent of Gross Acres	Net Acres	R-O-W %	Net Density[a]
R-1	531	16.0%	197.2	27.8%	145.7	26.1%	3.6
R-2	1,448	43.6%	293.9	41.4%	222.6	24.2%	6.5
R-3	716	21.6%	150.3	21.2%	131.2	12.7%	5.5
R-4	625	18.8%	67.8	9.6%	58.6	13.6%	10.7
Total	**3,320**	**100.0%**	**709.2**	**100.0%**	**558.2**	**21.3%**	**5.9**

Source: City of McMinnville building permit data
[a] Net density means dwelling units per full acre of developable land, exclusive of streets and unbuildable area

One method of evaluating the relative efficiency of land use is a comparison between *actual* densities and maximum *allowable* densities. This type of analysis, however, is an imperfect indicator of the relative efficiency of development by zone. One reason for that is that McMinnville's code allows for multiple housing types and densities in each zone.

Table 4-6 shows actual vs. allowable density by zone. The results indicate that land use is less than 100% efficient for all zoning districts – with the exception of the R-2 zone – which achieved 105% of its maximum density. This overall trend, however, is not surprising; many reasons exist for underbuild. Site factors such as wetlands, stream corridors, parcel shape, and steep slopes typically require lower densities. Additional factors such as neighborhood compatibility and market choice can also lower densities. Finally, because McMinnville does not have minimum density standards, developers do not have an obligation to develop at maximum allowable densities.

Table 4-6. Actual residential density compared to maximum allowable residential density, McMinnville UGB,

	R-1	R-2	R-3	R-4[a]
Actual residential density 1988-2000	3.64	6.50	5.46	10.66
Maximum allowable residential density	4.80	6.20	7.30	17.40
Percent of maximum allowable density	**76%**	**105%**	**75%**	**61%**

Source: City of McMinnville building permit data; analysis by ECONorthwest

Note: For multi-family development within the R-4 zone, the City ordinance requires a 25% landscape allocation, and on-site parking and circulation. Multiple family developments in the R-4 zone typically see around 15% of the site utilized for parking (includes aisle width requirement and 1.5 parking spaces for each units of less than 3 bedrooms). This leads us to a theoretical density maximum of about 17.4 units per acre in the R-4, assuming that 100% of all building in the R-4 zone is multifamily – which it is not. The City ordinance allows all dwelling types within this zone and this does occur as evidenced by the building permit data for 1988 – 2000.

PARTIALLY VACANT LAND

Partially vacant land, and its ability to serve the residential needs identified for the planning period, is an important issue in determining land supply. In Chapter 3, we indicated that McMinnville has about 130 gross buildable acres of partially vacant land within its present urban growth boundary; land that is occupied in part by residential development but is large enough to be partitioned or subdivided for additional housing.

By McMinnville zoning ordinance, lands zoned R-1, R-2, or R-3 are limited to one dwelling unit per parcel or lot. To construct a second dwelling on partially vacant lands these parcels would first need to be partitioned or subdivided, therein creating the additional parcel on which a home could be constructed. There is no other way to permit additional development of these partially vacant parcels, short of rezoning them to R-4 or amending the City's zoning ordinance to permit accessory dwelling units ("granny flats").

To develop an estimate of how much of the partially vacant land might develop over the course of the 20-year planning period, City staff reviewed residential land partitions in McMinnville for the period between January 1991 and June 2000.[17] Table 4-7 shows that during that time period McMinnville received 73 partition applications, or about 9 applications annually. Of these, the City granted tentative plat approval to 70 applications, of which only 55 were final platted and recorded with the Yamhill County Clerk's Office. Of these 55 partitions, 36 involved land on which there was existing residential development (partially vacant parcels). The partitioning of these 36 parcels resulted in the creation of 46 vacant buildable parcels (there were a total of 83 parcels created by these 36 partitions, 37 of which were already occupied by existing development, and 46 of which provided additional building sites). During the time period noted previously, 30 of the 46 vacant parcels saw new residential construction.

The partition data suggests that development of partially vacant land occurs relatively slowly. Based on the City's review, this equates to slightly less than four homes per year, or about 75 homes between 2000 and 2020.

[17] Partition data from 1991-2000 was used because complete records were are not available for the years 1988-1990.

Table 4-7. Partition approvals in McMinnville, 1991-June 2000

Category	Number	Average 1991-2000
Total Number of Partition Applications	73	9.1
Total Number Approved	70	8.8
Total Number Recorded	55	6.9
Of those partitions that were recorded on partially vacant land:		
Partially Vacant Parcels	36	
Total Number of Parcels Created	82	
Number of Vacant Parcels	46	5.8
Number of Parcels with Preexisting Development	37	
Number of Vacant Parcels Developed Between 1991-2000	30	3.8

Source: City of McMinnville partition data; analysis by ECONorthwest

CONCLUSION

Table 4-8 summarizes the average actual housing mix and density in McMinnville for the years 1988-2000. Overall, McMinnville has averaged 5.9 dwelling units per net buildable acre. Specific trends in housing mix and density include:

- Single-family housing (including single-family attached units and duplexes) accounted for about half of all new units in McMinnville between 1988 and 2000, and have been constructed in varying degrees in all four of McMinnville's zoning districts. The average actual single-family residential density was about 5 units per net buildable acre.

- Multi-family housing has accounted for about 22% of all new units in McMinnville since 1988, and has occurred in the R-2 and R-4 zoning districts. The average actual multi-family density in McMinnville has been 16.8 units per net buildable acre.[18]

- Manufactured housing has accounted for about 26% of all new units in McMinnville, and has occurred in all of McMinnville's residential zones. The average actual manufactured housing density has been about 5 units per net buildable acre.

Table 4-9 shows a cross-tabulation of residential building permits issued by zone. The results are generally what one would expect given the intent of each zoning district. Multiple family development, however, shows a high percentage of dwelling units in the R-2 district.

[18] For comparison, if McMinnville was to count the number of building permits issued for single-family attached dwelling units as multiple family units, the percentage of McMinnville's dwelling unit permits issued for multiple family units would be 34% (22% multiple family + 12% single-family attached = 34%).

Table 4-8. Summary of residential development by zoning district, McMinnville UGB, September 1, 1988 - July 30, 2000

Housing Type	Gross Acres	Percent of Total	Right-of-Way	Right-of-Way %	Net Acres[b]	Units	Percent of Total	Gross Density	Net Density
R-1	**197.2**	**27.8%**	**51.5**	**26.1%**	**145.7**	**531**	**16.0%**	**2.7**	**3.6**
Single Family Detached	191.3	27.0%	49.9	26.1%	141.3	495	14.9%	2.6	3.5
Single Family Attached	5.3	0.7%	1.4	26.1%	3.9	34	1.0%	6.4	8.7
Manufactured Homes on Lots	0.6	0.1%	0.2	26.1%	0.5	2	0.1%	3.1	4.2
R-2	**293.9**	**41.4%**	**71.3**	**24.2%**	**222.6**	**1,448**	**43.6%**	**4.9**	**6.5**
Single Family Detached	231.8	32.7%	59.1	25.5%	172.7	891	26.8%	3.8	5.2
Single Family Attached	32.6	4.6%	8.3	25.5%	24.3	228	6.9%	7.0	9.4
Manufactured Homes on Lots	6.1	0.9%	1.6	25.5%	4.5	12	0.4%	2.0	2.6
Multiple Family	23.4	3.3%	2.3	9.7%	21.1	317	9.5%	13.5	15.0
R-3	**150.3**	**21.2%**	**19.1**	**12.7%**	**131.2**	**716**	**21.6%**	**4.8**	**5.5**
Single Family Detached	18.4	2.6%	3.9	21.2%	14.5	77	2.3%	4.2	5.3
Single Family Attached	11.2	1.6%	2.4	21.2%	8.8	84	2.5%	7.5	9.5
Manufactured Homes on Lots	42.4	6.0%	9.0	21.2%	33.4	187	5.6%	4.4	5.6
Manufactured Homes in Parks [a]	78.3	11.0%	3.8	4.8%	74.5	368	11.1%	4.7	4.9
R-4	**67.8**	**9.6%**	**9.2**	**13.6%**	**58.6**	**625**	**18.8%**	**9.2**	**10.7**
Single Family Detached	13.8	1.9%	3.5	25.4%	10.3	69	2.1%	5.0	6.7
Single Family Attached	8.1	1.1%	2.1	25.4%	6.1	46	1.4%	5.7	7.6
Manufactured Homes in Parks [a]	20.6	2.9%	0.3	1.2%	20.3	105	3.2%	5.1	5.2
Multiple Family	25.3	3.6%	3.4	13.3%	21.9	405	12.2%	16.0	18.5
Total	**709.2**	**100%**	**151.0**	**21.3%**	**558.2**	**3,320**	**100.0%**	**4.7**	**5.9**

Source: City of McMinnville building permit data
[a] The category "Manufactured Homes in Parks" only addresses spaces where Mobile Home setup permits have been issued
[b] Net acres is gross buildable area less right-of-way and unbuildable land

Table 4-9. Percent of permits issued by type and zone, McMinnville, 1988-2000

Housing type	R-1	R-2	R-3	R-4	Total
Single-family					
Single-family detached	15%	27%	2%	2%	46%
Single-family attached	1%	7%	3%	1%	12%
Manufactured	0%	0%	17%	3%	20%
Total single-family	16%	34%	22%	7%	78%
Multiple Family					
Multiple Family	0%	10%	0%	12%	22%
Total multiple family	0%	10%	0%	12%	22%
Total	**15%**	**40%**	**23%**	**22%**	**100%**

Source: City of McMinnville building permit data; analysis by ECONorthwest

Chapter 5 Housing Demand and Need

Chapter 2 described the framework for conducting a housing "needs" analysis. ORS 197.296 (HB 2709) requires cities over 25,000 or fast growing cities to conduct a housing needs analysis. A recommended approach is described in Task 3 of the HB 2709 Workbook. The specific steps in the housing needs analysis are:

1. Project number of new housing units needed in the next 20 years.

2. Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix.

3. Describe the demographic characteristics of the population and, if possible, housing trends that relate to demand for different types of housing.

4. Determine the types of housing that are likely to be affordable to the projected households based on household income.

5. Estimate the number of additional needed units by structure type.

6. Determine the needed density ranges for each plan designation and the average needed net density for all structure types.

The remainder of this chapter is organized around the steps described above. This report presents two housing forecasts; both apply the assumptions described above.

- *Baseline forecast*. The baseline forecast is an extrapolation of *actual* housing mix and density trends between 1988 and 2000 for the period 2000-2020. The baseline forecast is consistent with Task 5, Step 1 of the Workbook (page 37).

- *Alternative forecast*. The alternative forecast considers demographic shifts, trends in national, state, and local housing markets, land development costs, as well as other variables. The alternative forecast is consistent with Task 3, Steps 1-6 (pages 24-34 of the *Workbook*). In the terminology of the Workbook, this is the *housing needs* forecast.

These forecasts are useful in answering the questions posed in Tasks 4 and 5 of the *Workbook*: Is *needed* density the same as or less than *actual* density? Is *needed* mix the same as *actual* mix? Does the UGB contain enough land at *actual* densities to accommodate future residential land need?

BASELINE FORECAST OF NEW HOUSING UNITS, 2000-2020

Step 1 in the housing needs analysis is to project the number of *new* housing units needed during the planning period. This section describes the key assumptions and estimates of new housing units needed in McMinnville between 2000 and 2020.

POPULATION

The population of the Willamette Valley grew considerably between 1980 and 1999. Table 5-1 shows population increases in selected Willamette Valley communities. As the table shows, during the 19-year period, McMinnville's population grew by 73%. This rate exceeded the rate for Yamhill County (50%) and the state (25%), but was slower than some cities in the Portland metropolitan area. During the last decade, the population growth of McMinnville exceeded the City's projections.

Table 5-1. McMinnville Population Change Compared with Other Jurisdictions

Area	1980	1990	% change (1980-90)	1999	% change (1990-99)
Oregon	2,633,156	2,842,321	7.9%	3,300,800	16.1%
Yamhill County	55,332	65,551	18.5%	83,100	26.8%
Tualatin	7,483	14,664	96.0%	21345	45.6%
Gresham	33,005	68249	106.8%	85,435	25.2%
West Linn	11,358	16,389	44.3%	22,835	39.3%
McMinnville	**14,080**	**17,894**	**27.1%**	**24,420**	**36.5%**
Newberg	10,394	13,086	25.9%	17,355	32.6%
Woodburn	11,196	13,404	19.7%	16,585	23.7%
Albany	26,511	29,540	11.4%	40,010	35.4%
Salem	89,233	107,793	20.8%	126,635	17.5%
Forest Grove	11,499	13559	17.9%	16,275	20.0%
Dallas	8,530	9,422	10.5%	12,530	33.0%
Oregon City	14,673	14,698	0.2%	23,405	59.2%
Milwaukie	17,931	18,670	4.1%	20,075	7.5%
Lebanon	10,413	10,950	5.2%	12,610	15.2%

Source: Center for Population Research and Census, Portland State University, August 2000

For the purposes of projecting population figures and rates, DLCD interprets the state requirement for a "coordinated" population forecast to mean a population projection coordinated by Yamhill County (in terms of dividing up the County-wide population projection), which in turn is consistent at the county level with the population projection for Yamhill County that is produced by the State Office of Economic Analysis (OEA) in Salem.

McMinnville's 1999 PSU population estimate was 24,420. Despite McMinnville's rapid growth rate over the last 17 years, McMinnville has accepted, for planning purposes, a much lower population projection for the

next 21 years. McMinnville's coordinated Year 2020 population projection is now 38,720. This amounts to a projected population increase of 14,300 between the years 1999 and 2020.

Table 5-2 shows the official state population forecast (developed by the Department of Administrative Services, Office of Economic Analysis) for Yamhill County, and the coordinated population for McMinnville between 2000 and 2020.[19] The forecasts indicate a population increase of about 13,567 people in McMinnville between 2000 and 2020. This is an overall increase of 54% or an average annual increase of about 2.2%. For purposes of comparison, during the timeframe used to inventory building activity within this analysis (1988 – 2000), the population increased an average of some 3.6 percent annually, or 53 percent overall. Additionally, McMinnville's average annual population increase for the 100-year period between 1900 and 2000 is 2.9 percent.

Table 5-2. Population forecast, 2000-2020, Yamhill County and McMinnville

Year	Yamhill County	McMinnville
1990	65,551	17,894
1999	83,100	24,420
Percent Change	26.8%	36.5%
AAGR	2.7%	3.5%
2000	83,826	25,153
2020	119,589	38,720
Percent Change	42.7%	53.9%
AAGR	1.8%	2.2%

Source: Office of Economic Analysis, Department of Administrative Services, ***Long-Term Population and Employment Forecasts for Oregon***, January 1999; City of McMinnville.
AAGR = Average Annual Growth Rate

PERSONS IN GROUP QUARTERS

Persons in group quarters do not consume standard housing units: thus, any forecast of new people in group quarters is typically backed out of the population forecast for the purpose of estimating housing need. Group quarters can have a big influence on housing in cities with colleges (dorms), prisons, or a large elderly population (nursing homes). In general, one assumes that any new requirements for these lodging types will be met by institutions (colleges, state agencies, health-care corporations) operating outside what is typically defined as the housing market.

[19] State policy as implemented by DLCD requires counties to develop "coordinated population forecasts" which generally means: (1) the total forecast for a county must be identical to the forecast made by the state economist (Department of Administrative Services), or meet a substantial evidentiary burden for justifying a different forecast; and, (2) each city in a county must agree to their allocation of the total county population growth.

Persons in group quarters, however, do require land. While the HB 2709 workbook backs this component of the population out of total population that needs housing, it does not otherwise make accommodations for land demand for new group quarters. For the purpose of this analysis, we assume that persons in group quarters require land at approximately the same density as multiple family housing.[20]

Table 5-3 show persons in group quarters for Yamhill County and McMinnville in 1980 and 1990.[21] According to Census data, more than 3,300 persons resided in group quarters in 1990 in Yamhill County. Dormitories on the Linfield College campus accounted for 709 persons, or about 64% of the persons in group quarters in McMinnville in 1990. Netting Linfield College out, McMinnville had about 2% (396 persons) of its population in group quarters in 1990.

Table 5-3. Persons in group quarters, Yamhill County and McMinnville, 1980 and 1990

	1980		1990		1980-90 Change	
Area	Number	% of total	Number	% of total	Number	Percent
Yamhill County						
Group Quarters	2,006	3.6%	3,314	5.1%	1,308	65.2%
Total Population	55,332	100.0%	65,331	100.0%	9,999	18.1%
McMinnville						
Group Quarters	950	6.7%	1,105	6.2%	155	16.3%
Total Population	14,080	100.0%	17,894	100.0%	3,814	27.1%

Source: 1980 and 1990 summary tape files STF-3, US Bureau of the Census

Demographic trends suggest that the number of persons in group quarters will increase for at least some groups between 2000 and 2020. No reliable data sources exist for developing a forecast of persons in group quarters, and so we are left to make reasoned estimates, based on available data.

Claritas, Inc., a market data forecasting service, estimates that the total number of persons living in group quarters in McMinnville in 2005 will be 1,047.[22] This figure is lower than the 1,105 figure in 1990. During the 1990s, McMinnville experienced development of several assisted living facilities.

[20] The DLCD Workbook is not explicit on how persons in group quarters should be allocated land need. Clearly some land is needed for expansion of group quarters facilities, however, the issue is whether that expansion occurs on land already considered developed, or on vacant residential land. For example, a new assisted living home would require vacant residential land. For the purpose of this analysis, we assume that half of the persons added in group quarters between 2000 and 2020 will locate on vacant land.

[21] No current estimates or forecasts of persons in group quarters exist in standard data sources. Group quarters include institutionalized persons (correctional institutions, nursing homes, mental institutions, etc) and non-institutionalized persons (college dormitories, military quarters, homeless shelters, homeless individuals, etc.).

[22] Claritas data provide current estimates of many demographic and market variables. Data from Claritas (or other market data companies) provide current estimates that are useful when Census or other data sources are outdated.

Over the next 20 years, however, we expect persons in group quarters to increase slightly. The key area where we expect changes in group quarters are in nursing homes. Consistent with the overall aging of the population, we expect persons in nursing homes to increase at a faster rate than the overall population.

According to Claritas, Inc., about 16% of persons in McMinnville were over age 65 in 2000. About 5% of persons over 65 were in group homes in 1990. If this ratio remains constant, we estimate the number of elderly persons in group homes will increase by 310 between 2000 and 2020.

Enrollment at Linfield College will also affect the number of persons in group quarters in McMinnville. According to College officials, Fall semester 1999-00 enrollment at Linfield reached 2,069 full time equivalent (FTE) students. This included 1,518 FTE on the McMinnville Campus, 301 FTE on the Portland Campus, and 250 FTE in the Adult Degree Program. According to the recently completed Linfield College Master Plan, Linfield assumes a 10-year potential increase in enrollment of up to 1,750 students, and an eventual student body of up to 1,900 students attending the local McMinnville campus. This could increase the number of persons in group quarters in McMinnville by as many as 400 individuals.

HOUSEHOLD SIZE AND COMPOSITION

Twenty years ago, traditional families (married couple, with one or more children at home) accounted for 29% of all households in Oregon. In 1990 that percentage had dropped to 25%. It will continue to fall, but probably not as dramatically. The average household size has decreased over the past five decades and is likely to continue decreasing. The average household size in Oregon was 2.60 in 1980 and 2.52 in 1990. One and two person households made up the majority of Oregon households in 1990. The direct impact of decreasing household size on housing demand is that smaller households means more households, which means a need for more housing units even if population were not growing.

Table 5-4 shows average household size for McMinnville between 1940 and 1990. Household sizes steadily decreased over the 50 year period, until the decade between 1980 and 1990. The increase in household sizes for this one decade is not unprecedented in the Willamette Valley, but is inconsistent with state and national trends, and McMinnville's own history, which suggest that household sizes continue to decrease.

Since 1940, the persons per dwelling unit figure for the twelve cities in Oregon of a similar population to McMinnville has, without exception, decreased (see Appendix D, Persons Per Household Analysis). In no decade did the figure increase. Statewide the persons per dwelling unit figure has decreased from 3.00 in 1940 to 2.46 in 1990, an average decrease in persons per dwelling unit of .1 per decade. McMinnville's history regarding the average persons per household parallels that of the State, decreasing from a 1940 high of 3.00 to the 1990 census figure of 2.54.

Moreover, McMinnville's increase in persons per dwelling unit from 1980 to 1990 is due, in part, to the fact that during that particular decade there were virtually no commercial apartments constructed within the city. All of the housing stock added during that decade was of a single-family or two-family type. Typically, this type of housing has a higher number of persons per dwelling unit than does an apartment, therefore the 0.8 increase in persons per dwelling unit between 1980 and 1990. Given the fact that nearly 600 dwelling units were constructed in McMinnville during the 1990's, the 2000 Census will likely show a noticeable decrease in the persons per dwelling unit.

Table 5-4. Average household size

Year	McMinnville	Change	Percent Change
1940	3.00		
1950	2.90	-0.10	-3.3%
1960	2.90	0.00	0.0%
1970	2.80	-0.10	-3.4%
1980	2.48	-0.32	-11.4%
1990	2.54	0.06	2.4%

Source: US Census, summary tape files STF-3

It is difficult to arrive at an empirically based assumption for household sizes. The HB 2709 workbook suggests using separate household size assumptions for single-family and multiple family dwellings.

Table 5-5 shows persons per occupied dwelling unit by type based on 1990 Census data. The data show that single-family dwelling units averaged 2.67 persons per occupied dwelling unit, while multiple family dwelling units averaged 2.03 persons per occupied dwelling unit. The average household size was 2.54 persons per occupied dwelling unit.

Table 5-5. Average household size by structure type, 1990

Units in structure	DU	Persons	Persons/ Occ DU
Single-family			
1 detached	3,665	10,523	2.87
1 attached	404	958	2.37
Duplex	391	845	2.16
Mobile home	790	1,703	2.16
Subtotal	**5,250**	**14,029**	**2.67**
Multiple family			
3-4	239	476	1.99
5-9	401	867	2.16
10-19	314	651	2.07
20-49	223	502	2.25
50+	128	154	1.20
Subtotal	**1,305**	**2,650**	**2.03**
Other housing types	**52**	**123**	**2.37**
Total	**6,607**	**16,802**	**2.54**

Source: US Census, 1990 summary tape files STF-3
Note: Duplexes are included as a single-family housing type because they are allowed in all residential zoning districts in McMinnville. See chapter 4 for a more detailed explanation.

If one takes the approach of using a different household size based on dwelling unit type, the aggregate household size then becomes a function of housing mix. For example, a housing mix assumption of 70% single-family and 30% multiple family will have a higher aggregate household size than an assumption of a 60%/40% housing mix.

Table 5-6 compares general household characteristics from the 1980 and 1990 US Census of Population and Housing. The number of households increased by about 25% between 1980 and 1990. Notably, the proportion of female-headed households without a husband increased by 3% (13 to 16 percent) in 1990, whereas the proportion of married couples decreased by 4% (84% to 80%). These figures are relevant because of the high correlation between these figures and income. They also correlate closely with decreasing household sizes.

Table 5-6. Household characteristics, McMinnville, 1980-1990

	1980		1990		
Characteristic	Number	Percent	Number	Percent	% Change (80-90)
Households	5,310	100%	6,632	100%	25%
Family households	3,736	70%	4,652	70%	25%
With 2+ workers	2,122	40%	2,581	39%	22%
Married couples	3,130	59%	3,711	56%	19%
With own children	1,389	26%	1,683	25%	21%
Female head, no husband	480	9%	731	11%	52%
With own children	327	6%	536	8%	64%
1 person households	1,328	25%	1,653	25%	24%

Source: 1980, 1990 US Census of Population and Housing

The data above suggest that housing demand in McMinnville will be driven by significant increases in population, steady or declining household sizes, and continued strong demand for single-family dwellings. Increases in single-parent households will increase demand for smaller, low-income units.

At a joint City Council/Planning Commission held on April 10, 2001, the Council instructed staff to hold the average aggregate persons per household size assumption constant with the 1990 average of 2.54 persons per household. This analysis assumes a constant household size of 2.54 persons per household for the period from 2000 to 2020.

INCOME AND POVERTY

The US Department of Housing and Urban Development began including Yamhill County in the Portland Metropolitan Statistical Area in 1984. Table 5-7 shows the median household income in the six county MSA from 1984 to 1997. The median household income for a family of four increased by 61 percent from $28,800 in 1984 to $46,300 in 1997.

Table 5-7. Median family income, Portland MSA 1984-1997

Year	Median household income	% change
1984	$28,800	--
1985	$28,800	0.00%
1986	$31,150	8.20%
1987	$32,900	5.60%
1989	$36,200	10.00%
1990	$37,100	2.50%
1991	$39,000	5.10%
1992	$39,400	1.00%
1993	$40,700	3.30%
1994	$42,300	3.90%
1995	$42,700	0.90%
1996	$44,400	4.00%
1997	$46,300	4.30%

Source: US Department of Housing and Urban Development
Note: the Portland Metropolitan Statistical Area (MSA) includes Clackamas, Multnomah, Washington, and Yamhill Counties in Oregon, and Clark County, Washington

Household income is increasing in McMinnville. Table 5-8 shows that the majority (66%) of McMinnville households earned between $15,000 and $74,999 annually, with a sharp increase occurring between 1990 and 2000 in the upper portion of that range. In 1990, 750 households indicated they made between $50,000-$74,999; in 2000 the number jumped to 1,998 households, a 166% increase. This trend also continues at the higher income levels, with the strongest increases seen in households making over $74,000. Conversely, households earning less than $15,000 are decreasing and are projected to so continue through 2005. Higher income levels are pushing the median household income up. McMinnville's 1990 median household income was $25,878, which has risen to $39,549, a 53% increase. Similarly the median family income is also increasing. It went from $31,856 in 1990 to $51,076 in 2000, a 60% increase.

Table 5-8. Household Income in McMinnville

	1990	2000 Estimtate		2005 Projection	
Household Income	Number	Number	% change (1990-00)	Number	% change (2000-05)
Less Than $5,000	375	283	-24.5%	245	-13.4%
$5,000-9,999	745	442	-40.7%	430	-2.7%
$10,000-14,999	784	673	-14.2%	602	-10.5%
$15,000-24,999	1,311	1,445	10.2%	1,559	7.9%
$25,000-34,999	1,063	1,223	15.1%	1,300	6.3%
$35,000-49,999	1,239	1,404	13.3%	1,587	13.0%
$50,000-74,999	750	1,998	166.4%	2,073	3.8%
$75,000-99,999	173	882	409.8%	1,239	40.5%
$100,000-149,999	142	489	244.4%	844	72.6%
More Than $150,000	25	312	1148.0%	465	49.0%
Median Household Income	$ 25,878	$ 39,549	52.8%	$ 43,490	10.0%
Median Family Income	$ 31,856	$ 51,076	60.3%	$ 56,480	10.6%

Source: Claritas Inc., August 2000
Note: figures not adjusted for inflation.

In addition to income, age of the householder is a significant determinant of housing need and demand. As households progress through the life cycle, the desire for specific types and costs of housing change. Householders under the age of 25 are more likely to rent apartments than own single-family homes. Householders between the ages of 25 and 65 typically own their own single-family homes. Home ownership tends to decline as householders get older than 65 years of age.

Table 5-9 compares the age of the householder to household income in McMinnville in 2000 and demonstrates the life cycle of home-buying households. Householders under 25 years of age generally are making less money and rent apartments, while 25-34 year old householders are first-time homebuyers. As age increases so do incomes. Those earning the most are householders between the ages of 35 and who fill the mid- to high-cost housing market. The 65 and over householders demonstrate the transition from work to retirement, which includes reducing housing needs and living off of fixed incomes. This trend is seen in the percent of people living at or below the median income level, over half of householders younger than 34 and those older than 65 are making below the 2000 median income, now at $39,549.

Table 5-9. Age of householder by household income in McMinnville, 2000

Household Income	Under 25	25-34	35-44	45-54	55-64	65-74	Over 75
Less Than $5,000	58	44	16	40	22	63	40
$5,000-9,999	68	70	27	26	31	69	151
$10,000-14,999	111	124	60	44	49	61	224
$15,000-24,999	135	370	166	109	133	223	309
$25,000-34,999	89	351	221	181	81	142	158
$35,000-49,999	64	249	424	260	144	142	121
$50,000-74,999	86	240	532	525	353	146	116
$75,000-99,999	2	126	273	247	120	70	44
$100,000-149,999	3	21	116	206	78	37	28
More Than $150,000	0	12	85	139	35	33	8
Total Households	**616**	**1,607**	**1,920**	**1,777**	**1,046**	**986**	**1,199**
Percent of Households Below Median Income	75%	60%	26%	23%	30%	57%	74%

Source: Claritas Inc. 2000

Persons falling below the federal poverty level usually cannot afford expensive housing. Table 5-10 shows the percent of persons below poverty level in McMinnville in 1990. Just as Table 5-12 above, female-headed households stand out from other categories. Approximately 32% of all female-headed households, and 39% of female households with related children, are below the poverty level. In contrast, percentages for all other groups range from 8% to 15%.

Table 5-10. Persons below poverty level, McMinnville, 1990

Category	% below poverty
All Persons	13%
Persons 18 Years and Older	12%
Persons 65 Years and Older	8%
All Families	9%
With Related Children Under 18	15%
All Female Householder Families	32%
With Related Children Under 18	39%

Source: 1990 US Census of Population and Housing

VACANCY RATES

Vacant units are the final variable in the basic housing need model. Vacancy rates are cyclical and represent the lag between demand and the market's response to demand in additional dwelling units. Vacancy rates for rental and multiple family units are typically higher than those for owner-occupied and single-family dwelling units.

Table 5-11 shows vacancy rates by unit type based on the 1990 Census. The data show a vacancy rate of about 2.2% for single-family dwelling units and 3.7% for multiple family units.

Table 5-11. Vacancy rate by structure type, McMinnville, 1990

Units in structure	DU	Vacant DU	Vacancy Rate
1 detached	3,665	72	2.0%
1 attached	404	9	2.2%
2	391	14	3.6%
3-4	239	9	3.8%
5-9	401	19	4.7%
10-19	314	7	2.2%
20-49	223	2	0.9%
50+	128	9	7.0%
Mobile home	790	25	3.2%
Other	52	5	9.6%
Total	6,607	171	2.6%
Single-family	**4,859**	**106**	**2.2%**
Multiple family	**1,748**	**65**	**3.7%**

Source: 1980 and 1990 summary tape files STF-3, US Bureau of the Census.

These figures are probably representative of the long-term trend for single-family structures but may be slightly low for multiple family structures given that few multiple family units were built in the late 1980s.

For the purpose of our estimates, we use a vacancy assumption of 2.5% for single-family dwelling units, and 5.0% for multiple family dwelling units.

LOCAL RESIDENTIAL DEVELOPMENT TRENDS

Table 5-12 shows building permits issued by type of unit between September 1988 and June 2000 in McMinnville. For the purpose of the estimate of land need, we consider single-family attached, single-family detached, and manufactured as housing types that are typically built at single-family densities.[23] Multiple family housing types are allocated to multiple family densities.

The distribution of dwelling units form the base assumption for the forecast of units by type. The housing mix during the analysis period was approximately 78% single-family dwelling units, and 22% multiple family dwelling units (see table 4-8). As was previously noted for comparison, if McMinnville was to count the number of building permits issued for single-family attached dwelling units as multiple family units, the percentage of McMinnville's dwelling unit permits issued for multiple family units would be 34% (22% multiple family + 12% single-family attached = 34%). A number of Oregon cities combine these dwelling unit types in this fashion.

Table 5-12. Building permits issued for new residential construction, 1988-2000

Housing Type	Permits Issued	Percent of Total
Single-family		
Single-family detached	1,532	46.1%
Single-family attached	392	11.8%
Manufactured	674	20.3%
Total single-family	2,598	78.3%
Multiple family		
Multiple family	722	21.7%
Total multiple family	722	21.7%
Total	**3,320**	**100.0%**

Source: City of McMinnville
Note: single-family attached includes duplexes

This analysis provides a forecast of new housing units likely to be built in the McMinnville between 2000 and 2020. Table 5-13 summarizes the

[23] The definition of single-family attached requires more explanation. The Census defines single-family attached housing as follows:

This is a 1-unit structure which has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

The City's definition includes only double houses. This presents difficulties in making assumptions about densities for single-family attached housing types. While technically defined as single-family units, single-family attached units generally have densities and characteristics that are more consistent with multiple family housing types. In McMinnville's system, single-family attached units are most similar to duplexes. Duplexes typically have densities ranging from 6-8 dwelling units per gross residential acre; we allocate these to the row/townhouse category in land need simulations.

assumptions ECO used for the baseline forecast of new dwelling units. The housing mix data comes from Table 4-8.

Table 5-13. Summary of assumptions used for baseline forecast of new dwelling units, 2000-2020

Assumption	Value
New persons, 2000-2020	13,567
New persons in group quarters, 2000-2020	310
Housing Mix	
Single-family	78%
Multiple family	22%
Household size	
Single-family	2.66
Multiple family	2.10
Weighted average household size	2.54
Vacancy rate	
Single-family	2.5%
Multiple family	5.0%

Source: ECONorthwest, 2000

Table 5-14 shows ECO's baseline forecast of new housing demand between 2000 and 2020. The forecasted increase in population for the planning period is 13,567 people. Based on review of Census data, and review of local demographic data, we assume that about 310 of the new people will be housed in group quarters. Using a household size assumption of 2.66 persons per single-family dwelling unit and 2.10 persons per multiple family dwelling unit, McMinnville will need about 5,219 new occupied dwelling units between 2000 and 2020. In addition, 165 new dwelling units are required to account for assumed vacancy rates. Adding occupied and vacant dwelling units yields a total demand for new units of 5,384.

An additional 200 dwellings will be required to accommodate the anticipated group quarters housing need yielding a need for a total of 5,584 new dwelling units.[24]

[24] The DLCD Workbook makes no estimate of land needed for group quarters. Table 5-14 shows demand for new dwelling units independent of group quarters. We estimate an additional 200 group quarter units will be needed to house 310 new persons in group quarters. We assume persons per dwelling unit in group quarters will be about 1.5. The land need calculations assume group quarters will develop at the same densities as multiple family dwellings.

Table 5-14. Baseline forecast of new housing demand, McMinnville, 2000-2020

Variable	Value
Change in persons, 2000-2020	13,567
-Change in persons in group quarters	310
=Persons in households	13,257
Single-family dwelling units	
Percent single-family DU	78%
Persons in single-family households	10,846
÷Persons per occupied single family DU	2.66
New occupied single-family DU	4,071
Vacancy rate	2.5%
Total new single-family DU	4,175
Multiple family dwelling units	
Percent multiple family DU	22%
Persons in multiple-family households	2,411
÷Persons per occupied multiple family DU	2.10
New occupied multiple-family DU	1,148
Vacancy rate	5.0%
New multiple family DU	1,209
Totals	
=Total new occupied dwelling units	5,219
Aggregate household size (persons/occupied DU)	2.54
+ Vacant dwelling units	165
=Total new dwelling units	5,384
Dwelling units needed annually 2000-2020	269

Source: ECONorthwest, 2000

Note: single-family attached and duplexes are included in the single-family category.
See footnote 26 (pg. 5-11) for a more detailed discussion.
This does not include group quarters.

To develop our baseline forecast of new housing units by type, we looked at development trends and other factors. ORS 197.296 requires communities to consider the mix and density of housing types built in the last five years or since the last periodic review, whichever timeframe is longer. The baseline forecast uses data on the mix and density of housing units built between September 1988 (the last periodic review) and June 2000. That approach, however, does not explicitly recognize demographic trends, or policies the City may adopt to encourage a different mix of housing than was built in the past.

Table 5-15 shows the baseline forecast estimated units by type based on building permits issued in the region between 1988 and 2000. The estimates represent an extrapolation of historical trends and do not factor in future market conditions, demographic shifts, or public policy. In that sense they yield a preliminary forecast: one that is consistent with state requirements and mandated methods (the HB 2709 workbook), and one which gives us a starting point for adjustments that the more detailed analysis of housing market factors presented subsequently may suggest.

Table 5-15. Baseline forecast of new housing demand by type, 2000-2020, HB 2709 method

	Based on 1988-2000 Permits (HB 2709)			
Housing type	DU	Percent of DU	Density, DU/Gross Acre	Gross Acres Needed
Single-family	**4,175**	**78%**	**3.9**	**1,077**
Detached	**2,453**	46%	3.4	**721**
Manufactured	**1,052**	20%	4.1	**257**
Attached/Duplex	**670**	12%	6.8	**99**
Multi-family	**1,209**	**22%**	**14.8**	**82**
Apartment	**1,209**	22%	14.8	**82**
Total	**5,384**	**100%**	**4.7**	**1,158**

Source: ECONorthwest, 2000

Note: Total does not include group quarter dwellings

Using the historical mix of dwelling units with population forecasts and demographic data, we estimate McMinnville will need 5,384 new dwelling units between 2000 and 2020. An additional 200 group quarter units are needed for a total of 5,584 new dwelling units. Consistent with historical trends, about 78% of this demand will be for single-family housing types.

NATIONAL RESIDENTIAL DEVELOPMENT TRENDS

The second step of the housing needs section of the HB 2709 workbook states:

> "Identify relevant national, state, and local demographic and economic trends and factors that may affect the 20-year projection of structure type mix."

Appendix B describes national housing trends in detail. The key national findings from Appendix B are summarized below:

- Overall, young adult households and the elderly will continue to migrate to the South and West from the Northeast and Midwest.
- States that traditionally attract retirees—Arizona, Utah, Nevada, New Mexico, Colorado, Washington, Oregon, Georgia, North Carolina, and South Carolina—will see especially fast growth in their over-65 populations.
- The aging of the population, and of the baby boomers in particular, will drive changes in the age distribution of households in all are groups over 55 years.
- Baby boomers now reaching their 50s have moved, or are about to move, into the "empty nest" stage of life when their children leave home. The number of empty nesters will increase by about 3.2 million over the next decade.

- The number of people living alone will also increase.

- Single-parent households are headed for a slowdown.

- Married couples with children under the age of 18 will also decrease in number.

- With the over-85 population growing by 1.3 million during the first decade of the 21st century, housing suited to the health-related needs of the frail elderly will be increasingly in demand.

Key trends in housing development in the United States between 1987 and 1997 include:

- *Larger single-family units on smaller lots*—between 1987 and 1997 the median size of new single-family dwellings increased 13%, from 1605 sq. ft. to 1,975 sq. ft. During the same period, the median lot size decreased 2%, from 9,295 sq. ft. to 9,100 sq. ft. Moreover, the percentage of units under 1,200 sq. ft. decreased from 13% in 1987 to 8% in 1997. The percentage of units greater than 2,500 sq. ft. increased from 26% in 1987 to 31% in 1997.

- *Larger multifamily units*—between 1987 and 1997, the median size of new multiple family dwelling units increased 15%, from 920 sq. ft. to 1,055 sq. ft. Moreover, the percentage of units with less than 600 sq. ft. decreased from 8% to 5%, while the percentage with more than 1,200 sq. ft. increased from 18% to 27%.

- *More household amenities*—between 1987 and 1997 the percentage of single-family units built with amenities such as central air conditioning, fireplaces, brick exteriors, 2 or more car garages, or 2 _ or more baths increased. The same trend is seen in multiple family units: the percentage of units with two or more bathrooms increased from 39% to 49% between 1987 and 1997.

- *Homeownership rates have increased slightly over that past 25 years.* Homeownership rates increased from about 64.6% in 1974 to 66.3% in 1998. The increase is largely due to higher homeownership rates for homeowners over age 55.

These data suggest that demand for owner-occupied single-family units in subdivisions will continue to be strong. Demand for multiple family units will be for larger units with more amenities.

HOUSING NEEDS ASSESSMENT

The remaining steps described in the HB 2709 workbook necessary to analyze a community's housing needs are:

Step 3. Identify local demographic characteristics of the population and, if possible, household trends that relate to demand for different types of housing.

Step 4. Determine the types of housing that are likely to be affordable to the projected population based on household income.

Step 5. Estimate the number of additional needed units by structure type.

Step 6. Determine the needed density range for each [zoning] designation and the average needed net density for all designations.

These steps result in the *alternative* forecast of new housing units (or what can be thought of as the *housing* needs forecast). The remainder of this section addresses these steps as provided below.

EVALUATION OF HOUSING AFFORDABILITY

In this section we evaluate the relationship between income, housing cost, and housing affordability. A typical standard used to determine housing affordability is that a household should pay no more than 30% of its total monthly household income for housing, including utilities. According to the U.S. Census, nearly 1,450 households in McMinnville–nearly 22%–paid more than 30% of their income for housing in 1990. This figure increased to over 75% of households with incomes under $10,000, but this is not surprising as this annual income equates to a full-time wage of only $4.79 an hour ($1.71 an hour less than the current minimum wage rate). This income segment is representative of about three percent of McMinnville's households.

One way of exploring the issue of financial need is to review wage rates and housing affordability. Staff at the Oregon office of HUD conducted an analysis of wages and rents in 2000. Table 5-16 shows HUD analysis of affordable housing wage and rent gap for households in McMinnville at different percentages of median family income (MFI). The data are for a typical family of four. The results indicate that a household must earn about $13.50 an hour to afford a two-bedroom unit according to HUD's market rate rent estimate.

Table 5-16. Analysis of affordable housing wage and rent gap by HUD income categories, 2000

Value	Minimum Wage	30% MFI	50% MFI	80% MFI	100% MFI	120% MFI
Annual Hours	2086	2086	2086	2086	2086	2086
Minimum Wage	$6.50	$7.72	$12.87	$20.59	$25.74	$30.89
Annual Wage At Minimum Wage	$13,559	$16,100	$26,850	$42,950	$53,700	$64,440
Annual Affordable Rent	$4,068	$4,830	$8,055	$12,885	$16,110	$19,332
Monthly Affordable Rent	$339	$403	$671	$1,074	$1,343	$1,611
HUD Fair Market Rent(2 Bedroom)	$702	$702	$702	$702	$702	$702
Is HUD Fair Market Rent Higher Than The Monthly Affordable Rent?	Yes					
Rent Paid Monthly OVER 30% of Income	$363	$300	$31	na	na	na
Rent Paid Annually OVER 30% of Income	$4,356	$3,594	$369	na	na	na
Percentage of Income Paid OVER 30% of Income for Rent	32%	22%	1%	na	na	na
Total Spent on Housing	62%	52%	31%	20%	16%	13%
For this area what would the "Affordable Housing Wage" be?	$13.46	$13.46	$13.46	$13.46	$13.46	$13.46
The Affordable Housing Wage Gap IS:	$6.96	$5.74	$0.59	na	na	na

Source: HUD, Oregon office; analysis by ECONorthwest

MFI: Median family income

Table 5-17 shows sample occupations and wage levels for households in McMinnville. According to forecasts by the Oregon Employment Division, service-related employment will continue to increase its share of total employment in the region. The implication is that a significant number of jobs created in the region, and by extension, in McMinnville, will be lower wage jobs. Other things being equal, lower wage jobs will reduce households' ability to purchase housing and could increase the housing affordability gap.

Table 5-17. Sample occupations and HUD Section 8 program income limits for Yamhill County, 2000

Income Level	Hourly Wage	Annual Wage	Sample Occupations
Minimum Wage	$6.50	$13,559	Service station attendant, temporary work, convenience store clerk, dishwasher
30% of MFI	$7.72	$16,100	Fast food cooks, dining room attendants, service station attendants
50% of MFI	$12.87	$26,850	Retail clerks, home health aides, electronic assemblers, carpenters
80% of MFI	$20.59	$42,950	Electronic engineering tech, real estate sales/broker, accountants
120% of MFI	$30.89	$64,440	Physician, Attorneys, Dentists, Professors, Engineers

Source: HUD, Oregon Region Office, Oregon Employment Department (sample occupations), analysis by ECONorthwest, 1998

MFI: Median family income

The Department of Housing and Urban Development (HUD) uses a standard formula to determine whether a household is considered "low income," "very low income," and "extremely low income" for purposes of program eligibility. The HUD standards define households as "low income" if total household income is 80% or less than the median income of the area; as "very low income" if household income is 50% or less than the median; and as

"extremely low income" if household income is 30% or less than the median. Households that fall below the 50% median family income standard are eligible for the Section 8 housing assistance program.

Table 5-18 applies the basic income standards to McMinnville based on year 2000 median family income for a family of four. We derived an estimate of the number of households in each category using a year 2000 income distribution from Claritas, Inc. Comparing the HUD standards to the Claritas income data indicate that 4,810 households in McMinnville were considered low-income (53% of all households), 3,069 were considered very low-income (34% of all households), and 1,556 were considered extremely low-income (17% of all households). This approach has a significant limitation in that it does not factor in household size; however, it is instructive as a general measure of how much households' can afford to spend on housing.

Table 5-18. Estimate of low-income households in McMinnville, 2000

Variable	Value	Percent of Households
Total Households	9,151	100%
2000 Median Family Income (Claritas)	$53,076	
2000 Median Family Income (HUD, 4 persons)	$53,700	
Low Income (80% MFI)	$42,950	
Est. Number of Households	4,810	53%
Very Low Income (50% MFI)	$26,850	
Est. Number of Households	3,069	34%
Extremely Low Income (30% MFI)	$16,100	
Est. Number of Households	1,556	17%

Source: Claritas Inc, U.S. Department of Housing and Urban Development, Calculations by ECONorthwest.

The total amount a household spends on housing is referred to as cost burden. Total housing expenses are generally defined to include payments and interest or rent, utilities, and insurance. HUD guidelines indicate that households paying more than 30% of their income on housing experience "cost burden" and households paying more than 50% of their income on housing experience "severe cost burden." Using cost burden as an indicator is consistent with the Goal 10 requirement of providing housing that is affordable to all households in a community.

Table 5-19 shows a rough estimate of affordable housing cost and units by income levels for McMinnville in 2000. Several points should be kept in mind when interpreting this data:

- Because all of the affordability guidelines are based on median family income, they provide a rough estimate of financial need and may mask other barriers to affordable housing such as move-in costs, competition for housing from higher income households, and availability of suitable units. They also ignore other important factors such as

accumulated assets, purchasing housing as an investment, and the effect of down payments and interest rates on housing affordability.

- Households compete for housing in the marketplace. In other words, affordable housing units are not necessarily *available* to low income households. For example, if McMinnville has a total of 1,000 dwelling units that are affordable to households earning 30% of median family income, 50% of those units may already be occupied by households that earn more than 30% of median family income.

The data in Table 5-19 indicate that:

- Nearly 25% of McMinnville households cannot afford a studio apartment according to HUD's estimate of $463 as fair market rent;

- More than 35% of McMinnville households cannot afford a two-bedroom apartment at HUD's fair market rent level of $702;

- A median family household can afford a home valued up to about $133,000;

Table 5-19. Rough estimate of housing affordability, McMinnville, 2000

Income Level	Number of HH	Percent	Affordable Monthly Housing Cost	Crude Estimate of Affordable Purchase Owner-Occupied Unit	Notes
Under $10,000	725	7.9%	$0 to $250	$0 to $25,500	
$10,000-$19,999	1,475	16.1%	$250 to $500	$25,000 to $50,000	HUD FMR studio: $463
$20,000-$24,999	643	7.0%	$500 to 625	$50,000 to $62,500	HUD FMR 1 bedroom: $569
$25,000-$29,999	607	6.6%	$625 to $750	$62,500 to $75,000	HUD FMR 2 bedroom: $702
$30,000-$34,999	616	6.7%	$750 to $875	$75,000 to $87,500	
$35,000-$39,999	538	5.9%	$875 to $1,000	$87,500 to $100,000	HUD FMR 3 bedroom: $976
$40,000-$49,999	866	9.5%	$1,000 to $1,250	$100,000 to $125,000	HUD FMR 4 bedrrom: $1,060
Yamhill County Median: $53,076			$1,327	$132,690	
$50,000-$74,999	1,998	21.8%	$1,250 to $1,875	$125,000 to $187,500	
$75,000-$99,999	882	9.6%	$1,875 to $2,450	$187,500 to $245,000	
$100,000-$149,999	489	5.3%	$2,450 to $3,750	$245,000 to $375,000	
$150,000 and over	312	3.4%	More than $3,750	More than $375,000	
Total	9,151	100.0%			

Sources: Claritas, Inc, and Oregon Housing & Community Services. Housing Strategies Workbook***: Your Guide to Local Affordable Housing Initiatives***, 1993.

Notes: FMR-Fair market rent

The preceding discussion underscores that household income is a key indicator of a household's ability to pay for housing. Income, however, is affected by a variety of factors that are difficult, and sometimes impossible, for local public policy to influence. Our analysis of income data for McMinnville led to a number of conclusions:

- McMinnville had a slightly greater percentage of persons in poverty than did the state as a whole in 1990. About 12% of Oregon residents fell below the federal poverty line in 1990, compared to more than 13% of residents in the McMinnville.

- Poverty rate[25] varies by household type. Female householder families experienced higher poverty rates than other household types: more than one-third of the female householder families fell below the poverty level in 1990. This increased to more than 60% for female households with children age 5 or under.

- Elderly individuals experienced the lowest poverty rates in 1990. Less than 8% of persons age 65 and over in McMinnville fell below the poverty level.

The other key variable in the affordability equation is housing cost. Current data on the distribution of housing values or local rent, however, were unavailable for this study. Such data would allow a comparison of incomes with housing cost. This would identify where gaps exist in affordable units. Thus, we rely on assessment data and other sources that are

Table 5-20 shows the market value of single-family housing in the McMinnville UGB as reported by the Yamhill County Assessor in June 2000. The data only include single-family residences (property classification 101) with both improvement and land values. The results do not include mobile homes; mobile homes are assessed as personal property.

The results show that about 22 percent of the city's single-family housing is valued at under $100,000, while about 25% is valued between $100,000 and $125,000. About 42% of the city's housing is valued between $125,000 and $187,500. Eleven percent is valued above $187,500.

Table 5-20. Market value of single-family housing, McMinnville UGB, June 2000

Value	Number of DU	Percent of DU	Cumulative Percent
< 30k	16	0.3%	0.3%
30k <50k	68	1.2%	1.5%
50k <75k	312	5.7%	7.2%
75k <100k	797	14.6%	21.8%
100k <125k	1,377	25.1%	46.9%
125k <187.5k	2,301	42.0%	89.0%
187.5k+	605	11.0%	100.0%
Total	**5,476**	**100.0%**	

Source: Yamhill County Assessment data; analysis by ECONorthwest, 2000

Table 5-21 shows average rental rates by housing type from the Yamhill County Housing Authority. While the data provide a general indication of rental rates, they do not provide the number of units in each category or a distribution of rental rates.

[25] The poverty thresholds are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index. The average poverty threshold for a family of four persons was $12,674 in 1989.

Table 5-21. Average rental rates by housing type, McMinnville, 2000

Housing type	Rent range
Apartments	
1 Bedroom – older units	$350 - $465
1 Bedroom – built in 90's	about $500
2 Bedrooms – older units	$425 - $575
2 Bedrooms – built in 90's	$560 - $630
3 Bedrooms – older units	$605 - $650
3 Bedrooms – built in 90's	$690 - $750
Duplexes	
1 Bedroom – mostly converted 30's & 40's homes	$400 - $500
2 Bedrooms – mostly built in 70's	$525 - $550
2 Bedrooms – built in 90's, & others	$495 - $700
3 Bedrooms – all years	$650 - $885
3 Bedrooms – built in early 90's	$725 - $750
Single-family detached	
1 Bedroom	$350 – $500
2 Bedrooms	$450 - $775
3 Bedrooms	$500 - $950
4 Bedrooms – mostly "older" ? Homes	$800 - $950
Mobile homes	
Running about $100 less than that of Single Family Detached rents	

Source: Yamhill County Housing Authority

As a final step in our housing affordability analysis, we performed a rough correlation of income with needed housing types as defined by ORS 195.303. This analysis is also consistent with guidance provided in the Workbook.[26] Table 5-22 shows ECO's evaluation for market segments, incomes, and financially attainable housing products. We use the HUD income guidelines as the market segments and Claritas data for the income distribution. The table provides an estimate of financially attainable housing types by income and tenure. Households in the upper-middle and high-income segments will be able to afford new housing.

[26] Specifically, Step 4, page 29 and the figure on page C-11.

Table 5-22. Financially attainable housing type by income range

Market Segment by Income	Income range	Number of Households	Percent of Households	Financially Attainable Products: Owner-occupied	Financially Attainable Products: Renter-occupied	
High (120% or more of MFI)	$64,000 or more	1,295	14%	All housing types; higher prices	All housing types; higher prices	↑ New Housing
Upper Middle (80%-120% of MFI)	$43,000 to $64,000	3,135	34%	All housing types; lower values	All housing types; lower values	
Lower Middle (50%-80% of MFI	$27,000 to $43,000	1,634	18%	Manufactured on lots; single-family attached; duplexes	Single-family attached; detached; manufactured on lots; apartments	↓ Used Housing
Low (25%-50% or less of MFI)	$16,000-$27,000	1,531	17%	Manufactured in parks	Apartments; manufactured in parks; duplexes	
Very Low (Less than 25% of MFI)	Less than $16,000	1,556	17%	None	Apartments; government assisted housing	

Source: Estimates by ECONorthwest

ALTERNATIVE HOUSING FORECAST BY DENSITY AND TYPE MIX

The preceding discussion provides a general sense of the relationship between income and housing cost. The available data sources, however, do not allow crosstabulation of income, housing cost, and key demographic variables such as age of household head and household size. Thus, we are left with task of determining current housing affordability gaps using an incomplete base of data. The Census provides such a database, however, the most recent Census data are from 1990 making this data source unacceptable for the purpose of determining housing affordability.

The 1990 Census provides some insight into the relationship between housing type and tenure. Table 5-23 shows the relationship between tenure and housing type for McMinnville in 1990. The results are not surprising: some people rent single-family housing types; few households owned duplexes or multiple-family housing types.

Analyzed by housing type, 76% of owners lived in single-family units and 18% lived in mobile or manufactured units. In other words, very few owners lived in multiple family units. About 27% of renters lived in single-family units, while about 10% lived in manufactured units, and 45% lived in apartments.

Table 5-23. Tenure by housing type, McMinnville, 1990

Housing Type	Owner-Occupied	Renter-Occupied	Total DU
Single-family detached	76%	27%	3,665
Single-family attached	3%	10%	404
Duplex	1%	13%	391
Apartment	1%	45%	1,305
Mobile/Manufactured	18%	4%	790
Other	0%	1%	52
Total	100%	100%	6,607
1990 Tenure Split	58%	42%	

Source: U.S. Census, 1990

The data in Table 5-24, as well as more recent regional data suggest the needed housing mix by tenure in McMinnville is 58% owner-occupied and 42% renter occupied. The data also suggest that nearly all owners will need single-family housing types, while about 50% of renters will need single-family housing types (including duplexes).

The difficulty arises in making a long-range forecast of housing need. As the data presented in this report imply, many factors affect housing affordability. Thus, one is ultimately left with the need to make a qualitative assessment of the future housing market. Following are a set of assumptions, consistent with the factors affecting housing choice described in this appendix, that we think are reasonable for making a 20-year forecast of future housing demand in McMinnville.

- *On average, the types of future housing products will be similar to past housing products.* That is the assumption that underlies any trend forecast, and one that allows some quantification of the composition of demand for new housing. As a first approximation, the next five years, and maybe the first 10 years, of residential growth will look a lot like the past five years. This is due, in part, to inertia in housing markets, customer expectations, lending policies, existing land use and transportation policies, and residential development projects under review. If these factors hold true, then using the past trends and current composition of housing as a first approximation of the composition of new housing is a reasonable first approximation.

- *If the future differs from the past, it is likely to move in the direction (on average) of smaller units and less expensive construction techniques.* Underlying demand and supply conditions may change gradually over time, and will cause households to satisfy their housing preferences in different ways than they would have had those conditions not changed. Most of the evidence suggests that the bulk of the change will be in the direction of smaller average house and lot sizes for single-family housing, and for an increase in the percentage of new housing that is manufactured housing. Factors contributing to this shift are more single-person households, households reaching the

"empty-nest" life stage, and housing cost.[27] Some data suggest these trends are already emerging in McMinnville. Multiple family and manufactured housing is playing a larger role in the housing stock. *If population and employment are assumed to grow, average incomes will probably grow also.* Though median incomes in McMinnville and Yamhill County are still below the US median, the long run trends in Oregon have been for average inflation-adjusted (real) incomes to grow slightly relative to average real incomes in the US. Oregon, and the Willamette Valley in particular, now has one of the most diverse economies in the nation. Recessions—with increases in interest rates, drops in national housing construction, and drops in timber prices and production—are less likely to hit Oregon's economy the way they did in the early 1980s. Due to the uncertainty of future economic conditions, the best assumption for long-run forecasting of housing is that real incomes in McMinnville and Yamhill County will stay constant.

It is reasonable to assume the general relationship shown in Table 5-22 will continue. Unfortunately, this analysis introduces a third dimension for which no complete local data exist: rental rates and housing value. Unfortunately, existing housing value and rental rates tell us little about what the distribution of housing costs will be in the future.[28] Thus, we are left to make assumptions about the relationship between housing cost, tenure, and type.

Based on the data available, however, a general trend becomes evident: households with lower incomes tend to have much higher incidence of renting, and lower cost units have a higher percentage of renters than higher cost units.

The data in Table 5-23 showed that owners almost exclusively choose to live in single-family housing types (including manufactured). Thus, we assume that all of the owner-occupied need will be met through single-family and manufactured housing.

Table 5-24 shows an alternative forecast of the distribution of housing by type and tenure based on the distribution shown in Table 5-23. The alternative forecast shows about 50% of rental housing need met by single-family housing types (including manufactured homes).

[27] A more detailed discussion of demographic trends affecting housing choice is presented in Appendix C (see page C-1).

[28] To our knowledge, no forecasting service provides forecasts of housing value.

Table 5.24. Alternative forecast of housing units by type and tenure, McMinnville, 2000-2020

Housing type	Owner-Occupied	Renter-Occupied	Total Needed DU 2000-2020
Single-family			
Detached	50%	10%	1,884
Manufactured	40%	25%	1,481
Row/townhouse	10%	15%	673
Single-family Total	**100%**	**50%**	**4,038**
Multi-family			
Apartment	**0%**	**50%**	**1,346**
Group Quarters	**0%**	**100%**	**200**
Total	**100%**	**100%**	**5,584**
Tenure Mix	**60%**	**40%**	

Source: ECONorthwest

Table 5-25 shows the alternative forecast of housing units by type and zoning designation. The alternative forecast is based on estimates of how needed housing units will be distributed by zone. More specifically, the alternative considers national, regional, and local demographic trends, an assessment of income levels and housing affordability, and a move towards more efficient land use (e.g., that no single-family development occurs in the R-4 zone). The alternative forecast results in a need for 75% single-family housing types and 25% multiple-family housing types. This alternative forecast classifies single-family attached units and duplexes as single-family housing types. If these housing types are considered as multiple-family housing types, the city would achieve a 60% single-family and 40% multiple-family housing mix.

It is important to note that the McMinnville Zoning Ordinance, through the use of the Planned Development Ordinance, allows multi-family housing in zones other than the R-4 (Multi-Family Residential) zone. This is done, in part, to permit a greater mix of housing types in a given area; to provide a more even distribution of multi-family units throughout the city (consistent with current city policy); and to create more efficient land use patterns. Table 4-6 offers clear evidence of this fact where the R-2 (Single-Family Residential) zone is shown to have achieved a density some 5 percent greater than its maximum allowable density. In large part this is due to the fact that nearly 44% of all multi-family units constructed since 1988 have occurred on R-2 zoned land. The alternative forecast detailed in Table 5-25 reflects this in its allocation of multi-family housing.

For manufactured housing, the alternative forecast allocates the majority of this housing type to the R-3 zone, where it has historically occurred. In addition, as noted previously, this alternative forecast assumes a movement toward an arguably more efficient use of the R-4 (Multi-Family Residential) zone in that no single-family housing is forecast to occur here.

Table 5-25. Alternative forecast needed housing units by type and zoning designation, McMinnville, 2000-2020

Housing type	Plan Designation R-1	R-2	R-3	R-4	Total
Single-family					
Detached	15%	15%	5%	0%	35%
Manufactured	5%	5%	17%	0%	27%
Duplex/Attached	0%	0%	10%	3%	13%
Single-family Total	20%	20%	32%	3%	75%
Multi-family					
Apartment	0%	5%	5%	15%	25%
Total	20%	25%	37%	18%	100%

Source: ECONorthwest

The final step in the housing needs process (Step 6) is to determine the needed density ranges for each plan designation and the average needed net density for all structure types (see Table 5-26). The needed density ranges for the needed housing described in the previous section are notably similar to those used in the demand-based analysis (Table 5-15).

Table 5-15 shows the baseline forecast of new dwelling units and land need by type. The results are based on development trends observed between 1988 and 2000. The baseline forecast indicates McMinnville needs about 5,584 new dwelling units; 200 of which are group quarters. At an average density of about 4.7 dwelling units per gross acre, those 5,584 dwellings will consume about 1,158 acres of buildable residential land.

The key difference between the baseline forecast and the alternative forecast is the allocation of additional housing units to multiple family housing types in the alternative forecast. The alternative forecast requires 1,116 gross acres at 5.0 dwelling units per gross acres.

Table 5-26. Alternative forecast of new dwelling units and land need by type, McMinnville, 2000-2020

Housing type	DU	Percent of DU	Density, DU/Gross Acre	Gross Acres Needed
Single-family	**4,038**	**75%**	**4.0**	**1,012**
Detached	**1,884**	35%	3.4	554
Manufactured	**1,454**	27%	4.1	355
Attached/Duplex	**700**	13%	6.8	103
Multi-family	**1,346**	**25%**	**14.8**	**91**
Apartment	**1,346**	25%	14.8	91
Group Quarters	200		14.8	14
Total	**5,584**	**100%**	**5.0**	**1,116**

Source: ECONorthwest
Note: Group quarters not included in percent of dwelling units

Table 5-27 shows land need by zone designation. This table addresses step 6 of the HB 2709 workbook requiring that cities "determine the needed

density ranges for each plan designation and the average needed net density for all structure types." The results are based on the housing need mix shown in Table 5-25.

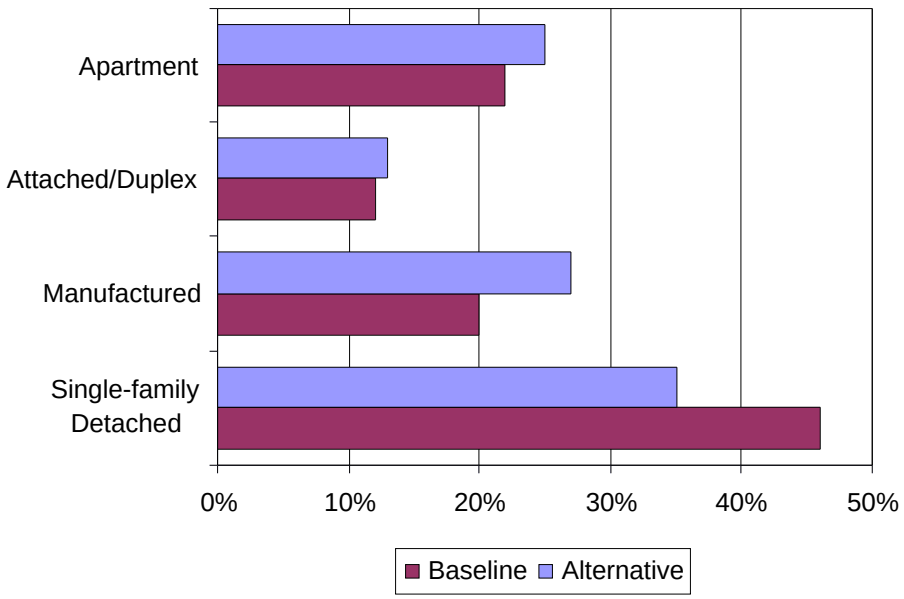
Table 5-27. Alternative forecast of land need (gross acres) by zoning and housing type, 2000-2020

	Zoning				
Housing type	**R-1**	**R-2**	**R-3**	**R-4**	**Total**
Single-family					
Detached	237	238	79	-	554
Manufactured	131	197	26	-	355
Row/townhouse	-	-	78	25	103
Multi-family					
Apartment	-	-	36	55	91
Group quarters			7	7	14
Total	**368**	**435**	**227**	**86**	**1,116**

Source: ECONorthwest

Figure 5-1 shows a comparison of housing demand and housing need for the period between 1990 and 2020. The table shows some notable differences between demand by housing type and need by housing type. While the overall mix, between single-family and multiple-family is relatively constant between the two analyses, significant differences exist by housing types. The demand analysis has a significantly higher percentage of units in the single-family detached category. The need analysis indicates McMinnville needs a higher percentage of all other housing types.

Figure 5-1. Comparison of baseline forecast and alternative forecast of new housing units, 2000-2020



HOUSING NEEDS OF SPECIAL POPULATIONS

In its *Housing Strategies Workbook,* the Oregon Department of Housing and Community Services identifies several "special populations" that have housing needs distinctly different than the general population. These include runaway youth, elderly and frail individuals, large families, farmworkers, persons recently released from state institutions, and persons infected with the HIV virus, among others.

The housing needs of these special populations are highly dependent on individual circumstances. Moreover, it is not uncommon for the same individual to be classified into two or more of the categories. As such, it is very difficult to develop an estimate of the number and type of housing units needed for these special populations. In this section we estimate the number of persons with such disabilities and provide projections based on anticipated population growth in Yamhill County. For reasons stated above, we do not attempt to estimate the number or types of units needed to house individuals with special housing needs.

Table 5-28 summarizes the number of persons statewide and in Yamhill County who fall within each of the special population categories.[29] Although the need varies by group, collectively, these groups have significant housing needs. Please refer to the *Housing Strategies Workbook* for a detailed discussion of issues and special considerations for these populations.

[29] Data were not available at the City level.

Table 5-28. Historic and Forecast Persons with Special Housing Needs, Yamhill County and Oregon

Special Population	Oregon	Yamhill County	
		Historic	2020 Estimated
1993 Runaway Youth (0-17 years)	3,559	53	97
1993 Elderly, Frail (Served by Area Agencies)	13,638	na	na
1990 Large Families (Households)	103,848	2,967	5,413
1989 Farmworkers [1]			
Seasonal	49,549	1,150	2,098
Migrant	100,726	2,597	4,738
Homeless in 1990	5,397	na	na
1992 Persons Being Released from Correctional Institutions	5,845	75	137
1992 Persons with Psychiatric Disabilities [2]	22,101-66,304	498-1495	1195-3587
1992 Persons with Physical Disability			
Persons 18-59 needing assistance in ADL or IADL[3]	27,339	596	1,087
Persons 18-59 unable to work	66,653	1,454	2,653
1990 Persons 16-64 with self-care or mobility limitation	3.30%	2.60%	2.60%
1996 Teen Mothers (birth mothers 19 and under)	5,767	55	100
1990 Single Parent Households	141,040	2,015	3,676

Sources: ***Housing Strategies Workbook***, Oregon Department of Housing and Community Resources, 1993 except large families (households) and single parent households from 1990 U.S. Census 3A, persons with self-care or mobility limitation from ***Oregon: A Statistical Overview 1996***, Southern Oregon State College, and teen mothers from ***Oregon Vital Statistics Annual Report 1996 Volume 1***, Oregon Health Division.
[1] Includes family members.
[2] ODHCS estimates that between one and three percent of the population have psychiatric disabilities. The figures represent an estimated range of persons with psychiatric disabilities
[3] ADL is Activities of Daily Living such as dressing and eating. IADL is Instrumental Activities of Daily Living such as shopping and cooking.

The data reviewed in this chapter suggest that McMinnville has both demand and need for housing. The next section provides estimates of land demand for *new* residential development. Some new development will be needed housing types as defined in Goal 10. Our discussion of special needs housing and housing affordability suggests that housing *need* in McMinnville is considerable. Moreover, new housing built will free some existing housing that are consistent with the Goal 10 definition of needed housing types. The available data, however, did not allow us to estimate the difference between demand and need. The land need estimates in the next section are for *new* housing only.

TOTAL RESIDENTIAL LAND NEED, 2000-2020

This section estimates total residential land need for the period between 2000 and 2020. In additional to land needed for new residential units, it estimates land needed for parks, public facilities, and other semi-public uses

to arrive at an estimate of total need for land designated for residential purposes.

LAND NEEDED FOR NEW RESIDENTIAL DWELLING UNITS

Table 4-4 (Chapter 4) shows average density by housing type between 1988 and 2000. The density assumptions were applied to needed housing by type to develop a preliminary estimate of land need based on HB 2709 requirements.[30]

One approach to projecting the amount of land needed for different types and densities of housing is to base the projection on the densities being built (based on building permits issued or subdivision approvals) during some time period. This approach is modeled after the HB 2709 requirements.

Using HB 2709 requirements, Table 5-29 shows residential land need by zoning based on the housing needs assessment in the previous section. The results show a total gross residential land need of about 1,116 acres between 2000 and 2020.

Table 5-29. Land needed for residential use by zone designation (in acres), 2000-2020

	R-1		R-2		R-3		R-4		Total	
Housing type	**DU**	**Acres**	**DU**	**Acres**	**DU**	**Acres**	**DU**	**Acres**	**DU**	**Acres**
Single-family										
Detached	773	237	778	238	259	79	0	0	1,810	554
Manufactured	518	131	778	197	104	26	0	0	1,400	355
Attached/Duplex	0	0	0	0	518	78	164	25	682	103
Multi-family										
Apartment	0	0	0	0	518	36	778	55	1,296	91
Group Quarters	na	0	na	0	na	4	na	4	200	14
Total	**1,291**	**368**	**1,555**	**435**	**1,400**	**227**	**942**	**86**	**5,388**	**1,116**

Source: ECONorthwest, 2001
Note: Numbers are slightly different than Table 5-25 due to rounding errors

RESIDENTIAL LAND NEEDED FOR PUBLIC AND SEMI-PUBLIC USES

McMinnville presently has no public land plan designation. Thus, public and semi-public (churches, fraternal organizations, etc.) uses commonly locate on residential land. Specifically, public and semi-public uses include:

- Public Schools
- Private Schools
- Religious Uses
- Parks
- Government
- Semi-Public Services

[30] The results of the housing needs simulator developed by ECONorthwest are presented in Appendix E.

· Infrastructure

While land needed for public schools and parks are addressed in the following sections, Table 5-30 shows acres in public use for all other classifications. McMinnville has about 1099 net acres (acres in tax lots) in public and semi-public uses. About 575 of those acres are in the McMinnville Airport. The percentage of each use located on land designated for residential use is shown in the final column and ranges from 100% for "other private schools" to 0% for the airport.

Table 5-30. Summary of existing public and semi-public uses

Use Type	Net Acres	Net Acres on Residential Land	Net Acres on Non-Residential Land	Percent on Residential Land
Airport	575.8	0.0	575.8	0%
Private Schools	206.9	171.8	35.1	83%
Linfield College	204.0	168.9	35.1	83%
Other Private Schools	2.9	2.9	0.0	100%
Religious	89.7	77.1	12.6	86%
Government	130.9	1.5	129.4	1%
Semi-Public Services	71.5	36.4	35.2	51%
Infrastructure	24.1	4.3	19.8	18%
Total	**1,098.9**	**291.1**	**807.8**	**na**

Source: City of McMinnville, October 2000

Note: table does not include lands for public schools and parks.

LAND NEEDED FOR PARKS

The adopted McMinnville Parks, Recreation, & Open Space Master Plan (1998) identifies seven types of local park facilities and describes the local residents' and Council's vision for the future of the City's parks, recreation services, trails and open space facilities. The adopted master plan provides recommended acreage standards for three of the Plan's seven types, stated as an acres-per-thousand-population ratio. The three types of park facilities within the master plan that are provided with adopted acreage standards are Neighborhood Parks, Community Parks, and Greenspace/Greenway Parks; this is demonstrated in Table 2 of the Plan. It is important to note that while future acreage needs exist for each of the remaining four park types (Mini-Parks/Playlots, Linear Parks, Special Use Parks, and Trails and Connectors), such standards were not adopted as part of the master plan and are therefore not part of this analysis or projection of future park needs.

As is shown through local park development, not all park types need to be entirely located on land identified as buildable. Specifically, a portion of future Greenway and Greenspace parks may be located partially within the boundaries of the 100-year floodplain. Analysis of local park locations and

topography shows that some 34 percent of all Greenway/Greenspace park acres are so located, as provided in Table 5-31 below.

Table 5-31. McMinnville Greenway and Greenspace parkland inventory

Name	Net Acreage	Floodplain Acres
Airport Park	22.0	0.0
Angela Court	2.2	0.2
Ashwood/Derby	0.3	0.3
Barber Property	11.8	4.6
Brookview	0.7	0.7
Carlsons	1.6	1.6
Crestwood	1.7	1.5
Davis Street Fill	1.5	1.5
Dayton River Access	0.5	0.4
Elmwood	3.0	2.3
Fir Ridge	0.7	0.6
Heather Hollow	3.0	1.9
Irvine Street	5.1	4.8
Meadowridge	0.7	0.7
Tall Oaks	11.2	5.7
Tice Property	33.9	7.0
Wildflower Area	2.7	1.3
Total	**102.5**	**35.2**
Percent in Floodplain		34%

Source: City of McMinnville, October 2000

Applying this combined 34 percent floodplain factor to future Greenspace/Greenway park needs results in a reduction of needed park acres by some 41 acres (34 percent of the total need). The total number of projected and needed parkland acres for each of the three park types mentioned above are provided in Table 5-32 below and yield a need for an additional 244 vacant, buildable park acres. The City assumes all parkland need will be met on residential land as parks are not permitted in non-residential zones.

Table 5-32. Estimated parkland need, 2000-2020

Park Type	Current Net Acres	Adopted Standard	Acres Needed for 38,720 Population	Projected Acreage Deficit (Need)
Neighborhood Parks	0	2.0 acres / 1000	77.44	77.44
Community Parks	145.49[a]	6.0 acres / 1000	232.32	86.83
Greenways/ Greenspaces/ Natural Areas[b]	102.50	6.0 acres / 1000	232.32	85.68
Subtotals	**247.99**		**542.08**	**249.95**
			Total Projected Need	**250 Acres**

Source: City of McMinnville, October 2000

[a] This includes the 21.03 acre Walker/Kraemer property purchased by the City after the adoption of the Parks Master Plan

[b] This includes an acreage reduction of 44.14 acres representing a 34% floodplain usage factor found in other parkland of this type

LAND NEEDED FOR SCHOOLS

To project future School District No. 40 enrollment, an average annual student enrollment growth rate (AAGR) of 2.2 percent was used[31]to provide an indicator of the future land needs of the District through the year 2020. Application of this growth rate to the year 2000 enrollment figure of approximately 5,500 yields a year 2020 district enrollment projection of 8,499 students.

According to School District No. 40 officials, to accommodate these anticipated students within District facilities, a number of new schools will be needed[32]. The District's Director of Business Services has stated that an additional High School is projected to become necessary within approximately eight to ten years. The District currently owns a 32 acre site (identified as R4432AC00701) located along Hill Road that was purchased for the purpose of constructing a second local high school. It is estimated that development of this school site would accommodate approximately 1,400 high school students. However, as this site is located outside of the current UGB, this acreage may not be counted toward meeting any the school district's future land use needs. The size of the site was specifically negotiated by the School District for this purpose and therefore is a good indicator of the acreage necessary to accommodate a second high school within the existing UGB.

[31] An average annual student enrollment growth rate of 2.2 percent is utilized to be consistent with the City's coordinated citywide AAGR through the year 2020. This growth rate is not tied to actual student enrollment cohort survival rates as such an approach produces AAGRs higher than 2.2 percent. While the District is utilizing this AAGR only to provide input to the City relevant to the coordinated AAGR, the District's utilization of this rate is in no way obligated.

[32] Need estimates are based on nominal enrollment size of 400 students for an elementary school, 600 students for a middle school, and 1,400 students for a high school.

In addition, it is also understood that two additional middle-schools will be needed within this timeframe, with the first middle school anticipated to be needed within approximately six to eight years. One such middle school is envisioned to be constructed on the 16-acre site currently under District ownership (identified as R440902500) and located north of and adjacent to the existing Grandhaven Elementary School. This future middle-school site lies within both the current McMinnville UGB and city limits. A second middle-school site of 16 acres is still needed to meet future enrollment projections of this educational tier. Four elementary schools will also become necessary within the planning period. These four future school sites will require approximately 12 acres each to enable adequate siting and facilities development.

With the exception of the one future middle-school site, the District owns no other undeveloped land within the current UGB. Therefore, 96 acres (48 Elementary School acres, 16 Middle School acres, and 32 High-School acres) of additional, vacant residential buildable land is needed to accommodate projected year 2020 District needs.

OTHER PUBLIC/SEMI-PUBLICLAND NEED

Other public and semi-public land uses in McMinnville include: the airport; private schools, religious uses, government, semi-public services, and infrastructure. With the exception of the McMinnville Airport, all of these uses will require additional residential land as McMinnville grows.[33]

We used *net* acres per 1000 persons as the basis for estimates of other public and semi-public land needs (Table 5-28).[34] The acres per 1000 persons assume a year 2000 population of 25,153 persons and the acreages presented in Table 5-33. Acres per 1000 persons was then multiplied by projected population growth (13,567 persons) to develop total land need, which was then multiplied by the percent on residential land to estimate residential acres needed.

[33] The McMinnville Airport has no long-range expansion plans and is located entirely on land designated for industrial use.

[34] Using net acres as the basis for estimating future land need results in an underestimate of land need because right-of-way and other uses are not considered. We use net acres as the basis because detailed information was not available on total lot sizes, precluding the development of a net-to-gross factor for public and semi-public lands.

Table 5-33. Other public/semi-public land needs, 2000-2020

Use Type	Acres/1000 Persons	Total Need, 2000-2020	Percent on Residential	Residential Acres Needed, 2000-2020
Private Schools	0.1	1.6	83%	1.3
Religious	3.6	48.4	86%	41.6
Government	5.2	70.6	1%	0.8
Semi-Public Services	2.8	38.6	51%	19.6
Infrastructure	1.0	13.0	18%	2.3
Total	**12.7**	**172.1**	**na**	**65.6**

Source: City of McMinnville; analysis by ECONorthwest, 2000

Note: Private school land need assumes Linfield College does not need additional land beyond their current campus holdings.

ESTIMATE OF TOTAL LAND NEED FOR RESIDENTIAL DEVELOPMENT

Table 5-34 shows total residential land need from 2000 to 2020. Including parks and schools, we estimate total need for land designated for residential uses at 1,527 gross acres. Note that estimates for land need for public and semi-public uses (which are part of this estimated need) are based on net acres and may underestimate total land need.

Table 5-34. Total residential land need-Alternative Forecast 2000-2020

Category	Gross Residential Acres
New housing	1116.0
Parks	250.0
Schools	96.0
Private Schools	1.3
Religious	41.6
Government	0.8
Semi-Public Services	19.6
Infrastructure	2.3
Total	**1,527.6**

Source: City of McMinnville, ECONorthwest

Chapter 6 Comparison of Supply and Demand

This chapter compares residential land supply and demand. It begins with an evaluation of residential land capacity. It then compares supply and demand to answer two questions posed in the DLCD HB 2709 workbook *Planning for Residential Growth*:

- Is the needed density the same as or less than actual density? (Task 4 of the workbook)

- Does the UGB contain enough buildable land at actual densities? (Task 5 of the workbook)

In brief, the needed residential density is *not* the same as the actual residential density, and the present McMinnville UGB does not contain enough buildable land at actual densities to provide for residential needs as identified in Chapter 5. This is further described in the discussion below.

METHODS

As stated previously in this report, the purpose of this effort is to present a residential buildable lands and housing demand and need analysis consistent with ORS 197.296 and to forecast future need for residential land by actual density and housing type. To determine whether McMinnville has a sufficient 20-year supply of buildable residential land within the existing UGB, we must compare residential land demand and need with current residential capacity. The method we used for this analysis answers the following questions: (1) how many units or acres do we need?; (2) how many units or acres can we accommodate?; and (3) what is the surplus or deficit?

Thus, the comparison begins with an evaluation of residential land need. In Chapter 5 we estimated that McMinnville needs about 5,584 new dwelling units between 2000 and 2020 (Table 5-24). We then estimate residential capacity in dwelling units on a tax lot basis, which is then aggregated to provide total residential land capacity in the McMinnville UGB. The total residential capacity in dwelling units is compared to the total number of new dwelling units needed during the planning period. The difference between these numbers identifies the residential dwelling unit surplus or deficit within the existing UGB for the planning period. Dwelling units are then converted into acres using actual densities recorded from 1988 to 2000 (Table 5-29) to determine the additional acres of land needed to satisfy future residential forecasts. Because the present capacity is less than the number of needed dwelling units, McMinnville will need to take one of the actions

prescribed by ORS 197.296(4)[35]. The direction(s) taken will be determined through future public review.

RESIDENTIAL LAND CAPACITY

The buildable lands inventory presented in chapter 3 built up from a tax lot database. Moreover, the method classified buildable residential lands into three categories: vacant, partially vacant, and potentially redevelopable. That inventory identified 935 gross acres of vacant or partially vacant residential land and about 12 gross acres of potentially redevelopable land. A method that simply divides total buildable land by a density assumption will overestimate the amount of residential capacity because it does not consider the size of each individual tax lot. For example, if a platted 10,000 square foot lot exists in a district with a minimum lot size of 7,500 square feet, the theoretical potential would be 1.25 dwelling units. The actual potential is one dwelling unit.

To evaluate residential development capacity in McMinnville, ECONorthwest applied the actual residential density recorded between 1988 and 2000 to each vacant and partially-vacant parcel in the R-1 to R-4 zones. For all other zones, we applied the overall average density recorded between 1988 and 2000. This method is consistent with the requirements of ORS 197.296.

Table 6-1 shows the development capacity of all vacant, partially vacant, and redevelopable residential tax lots within the McMinnville UGB by zone and land classification. Assuming **all** partially vacant and potentially redevelopable land will develop over the 20-year planning period, McMinnville has a residential capacity of 3,477 dwelling units.

[35] ORS 197.296(4) states such options to be: (1) amend its UGB to include sufficient buildable lands to accommodate housing needs for 20 years at the actual developed density; (2) amend its comprehensive plan, [...], or land use regulations to include new measures that demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for 20 years without expansion of the UGB; or, (3) adopt a combination of (1) and (2) above.

Table 6-1. Estimated residential development capacity (in dwelling units) by zone and land classification at full build-out

	Dwelling Units			
Zone	Vacant	Partially-Vacant	Potentially Redevelop-able	Total
R-1	932	110	0	1,042
R-2	270	64	0	334
R-3	38	55	50	143
R-4	280	20	44	344
All Other Zones	1,346	268	0	1,614
Total	**2,866**	**517**	**94**	**3,477**

Source: ECONorthwest, 2000

The analysis of McMinnville's partition data, however, suggests that development of partially vacant land occurs relatively slowly (see partition history discussion in Chapter 4). At the resulting average rate of approximately 3.75 dwelling units per year, a total of 75 new dwelling units would be built on partially developed land that is too small to subdivide between 2000 and 2020. Analysis of the size of partially vacant parcels indicates that 26 of the 58 partially vacant parcels are too small to subdivide. Development of these parcels to permit additional housing would therefore require partitioning. **Thus, we assume all of the partially-vacant land will develop** over the next 20 years.

Not all of the potentially redevelopable land is likely to redevelop over the 20-year period. According to City staff, few residential demolitions have occurred in the R-3 and R-4 zones since 1988. Moreover, single-family dwelling units are allowed in R-3 and R-4 districts. For the purpose of the supply/demand comparison, we assume that **25% of the potentially redevelopable land will redevelop** over the next 20 years.

The residential development capacity by zone and land classification after adjustments for the redevelopment rate land is reduced by about 70 dwelling units. **We estimate the capacity of all buildable residential land in McMinnville during this planning period at about 3,407 dwelling units.**

REVISED RESIDENTIAL LAND NEED ESTIMATE

In Chapter 5 we estimated a need for 5,584 new dwelling units in McMinnville between 2000 and 2020. Subtracting out the estimated residential capacity of lands within the current McMinnville UGB of 3,438 dwelling units yields a need for land capable of accommodating an additional 2,178 dwelling units.

Table 6-2 shows land needed to accommodate the additional 2,178 units at actual gross densities recorded between 1988 and 2000. The results show a **need for 449 gross buildable residential acres** beyond existing buildable

land to accommodate new residential development. McMinnville will **need about 369 net acres of residential land** at 5.9 dwelling units per net acre between 2000 and 2020.

Table 6-2. Additional land needed for housing in the McMinnville UGB, 2000-2020

Zone	Additional Dwelling Unit Need	Gross Density	Needed Gross Acres	Net Density	Needed Net Acres
R-1	348	2.7	129.0	3.6	95.6
R-2	588	4.9	120.0	6.5	90.4
R-3	653	4.8	136.1	5.5	119.7
R-4	588	9.2	63.9	10.7	55.1
All Other Zones	0	na	na	na	na
Total	**2,178**	**4.8**	**449.0**	**5.9**	**369.1**

Source: ECONorthwest, 2000

Table 6-3 shows total residential land need from 2000 to 2020. Including parks and schools, we estimate total need for land designated for residential uses at 861 gross acres.

Table 6-3. Total additional acres needed in the McMinnville UGB, 2000-2020

Category	Needed Gross Acres
New housing	449.0
Parks	250.0
Schools	96.0
Private Schools	1.3
Religious	41.6
Government	0.8
Semi-Public Services	19.6
Infrastructure	2.3
Total	**860.6**

Source: City of McMinnville, ECONorthwest

COMPARISON AND CONCLUSIONS

McMinnville currently has about 935 gross buildable acres available for residential development. Based on population forecasts, assumptions about household size, persons in group quarters, and vacancy rates, McMinnville will need about 5,584 new dwelling units between 2000 and 2020. At densities observed between 1988 and 2000, this translates into a land need of 449 additional acres for residential development. Parks and other public facilities are expected to require an additional 412 acres for a total land need of about 861 acres.

Based on a tax lot level residential capacity analysis, the 935 gross acres of buildable residential land within the existing McMinnville UGB will accommodate 3,407 residential units. This results in a capacity deficit of 2,178 units. This translates into a need for an additional 449 buildable acres of land needed beyond the existing UGB to accommodate projected residential development (Table 6-3). Added to this need are about 412 acres needed for development of public and semi-public uses that will also locate on residential land. Thus, the total gross vacant buildable residential land need, according to analysis and findings consistent with ORS 197.296 and the DLCD *Planning for Residential Growth* workbook, necessary to accommodate projected growth is 861 gross acres (449 acres for residential dwelling units, and 412 acres for public and semi-public uses).

Finally, the Workbook poses several questions that can be answered by the analysis in this report:

- Is *needed* density the same as or less than *actual* historic density? Actual density of residential development in McMinnville between 1988 and 2000 was 4.7 dwelling units per gross acre or 5.9 dwelling units per net acre. The alternative forecast estimates *needed* density at 5.0 dwelling units per gross acre or 6.3 dwelling units per net acre.

- Is *needed* mix the same as *actual* historic mix? Figure 5-1 (pg 5-28) indicates that needed and actual mix as shown by comparing the baseline and alternative forecasts is different. The alternative forecast (needed mix) indicates the City will need a slightly higher percentage of multiple-family units and a significantly higher percentage of manufactured homes.

- Does the UGB contain enough buildable land at *actual* historic densities? No. The data presented in chapters 5 and 6 indicate the UGB will not accommodate the number of new dwelling units between 2000 and 2020 at actual historic, or needed, densities.

Appendix A Land Supply Data

This appendix describes the methods, definitions, and results of the residential buildable lands analysis.

METHODS

This section summarizes the steps in the land supply analysis. It includes a proposed table structure that will facilitate a summary of land supply that can be cross-referenced geographically, by zone designation, and other variables. The general structure is based on the DLCD HB 2709 workbook, which specifically addresses residential lands.

As outlined in the Workbook, the steps and sub-steps in the supply inventory are:

1. Calculate the gross vacant acres by zoning district[36], including fully vacant and partially vacant tax lots.
2. Calculate gross buildable vacant acres by zoning district by subtracting unbuildable acres from total acres.
3. Calculate net buildable acres by zoning district by subtracting land for future public facilities from gross buildable vacant acres.
4. Calculate total net buildable acres by zoning district by adding redevelopable acres to net buildable acres.

Because McMinnville does not have detailed GIS data available on all land constraints and partially vacant land, ECO initially classified land using a rule-based methodology for land classification. The rules applied by ECO to classify land are described in the definitions section. City staff then followed up the database work with extensive field verification and, where available, GIS analysis.

ECO began the buildable lands analysis with a tax lot database provided by the City of McMinnville. The database originated from the Yamhill County Assessor and was current as of July 1, 2000. The supply analysis builds from a parcel-level database to estimates of buildable land by zoning (e.g., R-1 through R-4).[37] For other generalized land use types, each parcel was classified into one of the following categories:

- Vacant

[36] Buildable lands analyses typically summarize data by both plan designation and zoning district. McMinnville, however, has only one residential plan designation category. Thus, the tables presented in this report are summarized by zoning district.

[37] The parcel-level database was based on information from the Yamhill County Assessor. The base data was supplemented with additional land use data and field work provided by City staff. This database is voluminous and is available for review in the McMinnville Planning Department.

- Partially Vacant
- Potentially Redevelopable
- Undevelopable
- Developed

There are many ways that "vacant land" and "buildable land" can be defined. We have to pick a set of definitions that are mutually-exclusive and provide as fine a classification as possible given the base data. Figure A-1 shows an organization that is as good as any, and better than most, in that it is internally consistent.

Figure A-1: Classification scheme for urban land

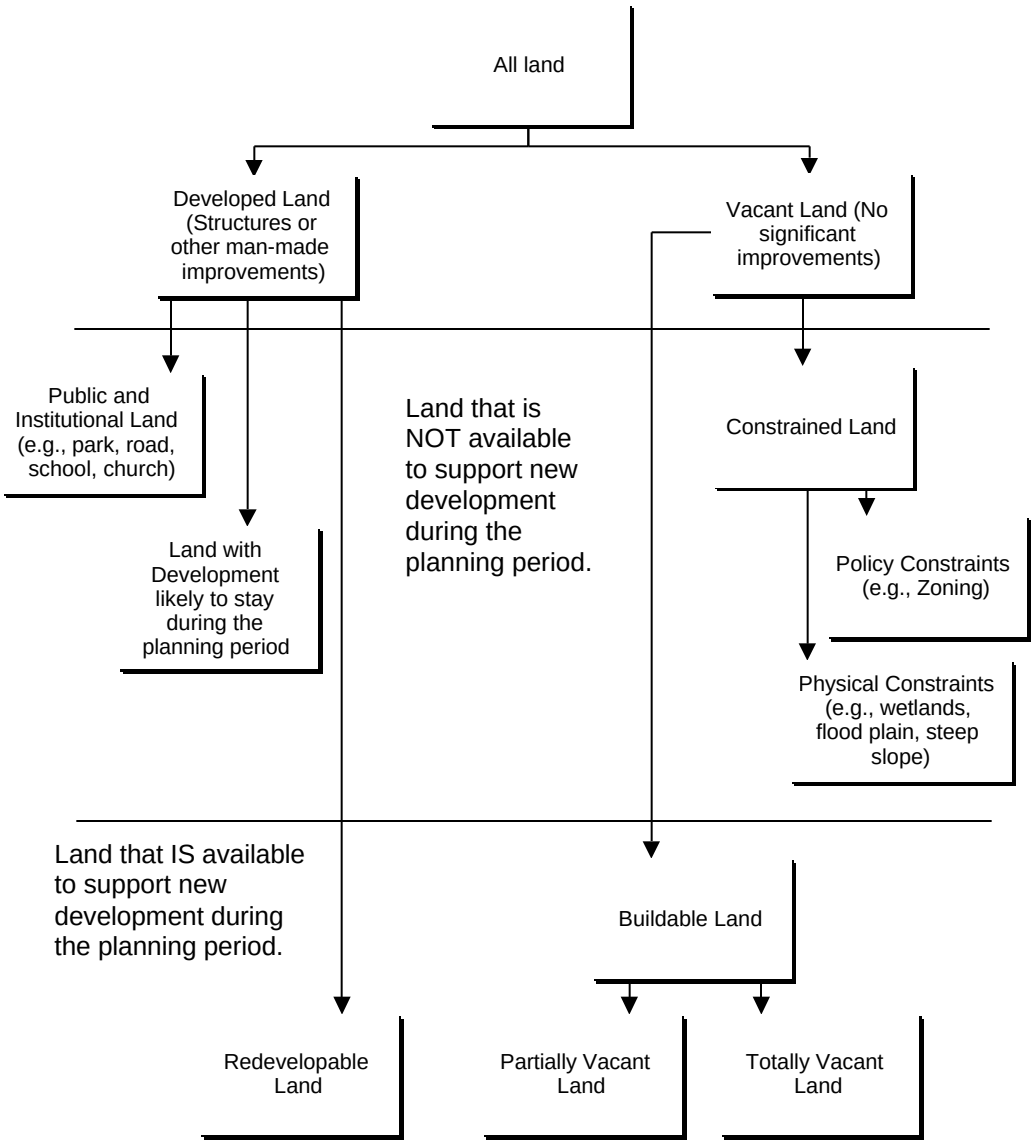


Figure A-1 illustrates that:

- Vacant land means land without structures or other significant man-made improvements (improvement valuation assessed at $10,000 or more). In general, "vacancy" is not a difficult determination to make: most people walking the land or looking at an aerial photograph could agree on what land was covered by significant structures that constituted existing development (and thus precluded new development unless the existing development were demolished).
- The portion of vacant land that is constrained (either physically or legally) is not buildable.
- Complications occur when the physical assessment of vacancy gets overlaid on tax lot boundaries. If tax lot boundaries did not have to be considered, then every square foot of land can be characterized as vacant or developed. Tax lot boundaries, however, often lump developed and vacant land together on the same tax lot (e.g., one house on a three-acre lot). Thus, on a tax lot vacant land that is not constrained (i.e., buildable land) comes in two varieties: totally vacant (no significant improvements on the tax lot) and partially vacant.
- Redevelopable land is not vacant, but it is available to support some of the new development demanded by increasing population and employment. Redevelopment occurs on developed land on which the property value to land value ratio is such that redevelopment of the property to a higher density is likely to occur.
- Thus, there are three types of land that can support new development: buildable vacant land, buildable partially-vacant land, and redevelopable land.

Figure A-1 gives general definitions of different types of land; those definitions must be more specific, however, about measurement and thresholds. For example, how much vacant land must a developed tax lot have to allow the tax lot to switch from "developed" status to "partially vacant" status? The details of the definitions for this project follow.

The assessment data used for the supply analysis is current as of July 2000. The value data used for this analysis was current as of October 1999.

Another key issue is the development pipeline. Lands with approved developments are generally classified as committed for development. We used approved building permits to address the pipeline issue. Therefore, lands approved for development as evidenced by building permit issuance were classified as developed in the database.

DEFINITIONS

The definitions that follow provide the rules for land classification. The rules were applied to the assessment data at the tax lot level.

- *Vacant residential land* – Tax lots that have no structures or have buildings with very little value. For the purpose of this study, vacant residential land is land that is designated for residential uses and has a market improvement value less than $10,000.

- *Undevelopable residential land* – For purposes of this study, land that is in areas with slopes of 25% or greater, land that is already committed to other uses by policy, lots under 4,000 square feet in size, and lots with no existing or potential for future automobile access are considered undevelopable for residential uses.

- *Partially vacant (under-utilized) residential land* – Partially vacant tax lots are those occupied by a use but which contain enough land to be further partitioned or subdivided without need of rezoning. For instance, a single house on a 1-acre tax lot, where urban densities are allowed, is partially developed. To estimate partially-vacant land, we identified all single-family residential tax lots (property class 101) with an improvement and which are more than two times the minimum lot size for its zone.

  The following rules were used to identify partially vacant lands. For R-1, lots over 18,000 sq. ft; for R-2, lots over 14,000 sq. ft.; for R-3, lots over 12,000 sq. ft.; and for R-4, lots over 10,000 sq. ft. ECO developed a list of lots that met these criteria. Rather than applying a blanket assumption to each parcel as to the amount of land that is "developed," city staff employed a rigorous, parcel-specific review of each parcel to determine its ability to provide for future residential land needs.

  To determine the amount of land developed within each parcel, staff first used aerial photos and GIS data to plot the locations of existing improvements. Parcels with improvements situated in such a manner as to preclude access to the "vacant" portion(s) of the property were placed in the "developed" category. All remaining parcels were then "shadow platted" with the "developed" portion of the parcel containing the minimum area required by the applicable zone and as necessary to comply with setback and other land division ordinance requirements. If the "vacant" portion of the parcel was less than the minimum lot size required by the applicable zone, the parcel was placed in the "developed" category. All other parcels were placed in the "partially vacant" category.

- *Developed residential land* – Land that is developed at densities consistent with zoning and improvements that make it unlikely to redevelop during the analysis period. For purposes of this study, land that is not classified as vacant, partially vacant, or undevelopable is considered developed. Potentially redevelopable land is a subset of developed land.

- *Potentially redevelopable residential land* – Land on which development has already occurred but on which, due to present or expected market forces, there exists the potential that existing development will be converted to more intensive uses during the planning period. The potential placement of additional dwelling units on a residential parcel already improved with a residence may only occur on land zoned R-3 or R-4 as per McMinnville zoning ordinance. For purposes of this study, all tax lots with improvement-to-land value ratios of less than 1:1 that are not classified as vacant, undevelopable, or partially vacant are considered potentially redevelopable.

Appendix B National Housing Trends

BACKGROUND

Appendix B summarizes trends in the national housing market. It draws from several studies which describe housing and demographic trends. Such an analysis is recommended in the HB 2709 workbook.

EXPECTATIONS FOR NATIONAL HOUSING MARKETS

The report *Emerging Trends in Real Estate 1999*, published by Pricewaterhouse-Coopers and Lend Lease Real Estate Investments, is based on interviews with 150 leading commercial real estate investors, and describes conditions that may affect commercial real estate markets in the coming year.[38] This report describes several long-run national trends that may affect the real estate market in the mid-Willamette Valley:

- *Cities should continue to benefit from demographic trends.* Both Generation Xers and aging baby boomers are migrating back to urban cores—young people for excitement and empty nesters for convenience and amenities. The suburbs are less attractive to these groups because single family homes are more trouble to maintain than apartments, and suburban traffic congestion has become more aggravating.

- *Increased demand for senior housing.* An aging population will increase demand for independent living residences, which cater to healthy seniors, and assisted-living centers, which have care facilities for residents who become ill or begin to fail.

- *People want to live closer to where they work and play.* Hectic lifestyles demand convenience. Whatever the orientation, commercial real estate markets are much more likely to thrive if they have attractive adjacent residential districts. Areas cut off from good neighborhoods, or showing residential deterioration, will suffer.

- *Lifestyle trends will encourage redevelopment of obsolete or underutilized space in desirable core city or inner-ring suburban areas.* More developers will convert dinosaur malls into multi-use projects with urban features—apartments, stores, restaurants, office—or turn past-its-prime CBD office into lofts and condominiums. Some 1960s-era corporate campus sites may be rebuilt. Smart local governments should encourage this activity with tax and other incentives, fostering environments that meld residential seamlessly with commercial uses.

[38] A copy of this report can be found at http://www.lendleaserei.com.

- *Investors see fast-growing Sunbelt markets with limited growth controls as chancier investment plays in the current real-estate cycle.* Fewer barriers to new construction leads to greater overbuilding risk, which makes these markets more volatile.

The Joint Center for Housing Studies of Harvard University analyzes the ways in which housing policy and practices are shaped by economic and demographic trends. *The State of the Nation's Housing* is the Center's annual report that identifies and analyzes demographic, economic and social trends that affect housing.[39]

According to the Center, the important demographic trends that will shape housing demand over the next decade are the increasing diversity of the population, the aging of the baby boomers, the higher propensity of people to live alone, and the growth in the elderly population. Specifically:

- Where migrating households choose to settle usually has a bigger effect on the rate and composition of local population growth than natural increase. Most of these mobile households are young adults, although the elderly also make up a substantial share. In keeping with long-term geographic shifts, young adult households and the elderly will migrate on net to the South and West from the Northeast and Midwest.

- States that traditionally attract retirees—Arizona, Utah, Nevada, New Mexico, Colorado, Washington, Oregon, Georgia, North Carolina, and South Carolina—will see especially fast growth in their over-65 populations.

- The aging population, and aging baby boomers in particular, will drive changes in the age distribution of households. As the leading edge of the baby boom enters the 55-to-64 age range, the number of households in this age group will grow by about 7 million. Meanwhile, the trailing edge of the baby boom will add approximately 3.5 million households to the population of 45-to-54 year-olds. And with life expectancies rising, the number of 65-to-74 year-old household heads will increase by about 2 million, and the number of over-75 household heads by more than 1 million.

- Baby boomers now reaching their 50s have moved, or are about to move, into the "empty nest" stage of life when their children leave home. As a result, couples without children under the age of 18 will be the fastest-growing family type in the years ahead. Assuming that the share of households aged 45 to 64 without children at home remains constant, the number of empty nester households will increase by about 3.2 million over the next decade.

[39] A copy of the annual report can be found on-line at http://www.gsd.harvard.edu/jcenter/Publications.

- The number of people living alone will also increase. The average age at first marriage continues to increase, and the share of single-person households with persons born after 1940 is climbing. The number of single-person households age 65 and over will grow by 1.7 million. At the same time, the number under the age of 45 will decline by over a quarter million as the baby-boom generation moves into its late 40s and early 50s.

- Single-parent households are headed for a slowdown. With the number of women in their mid-20s to mid-30s declining by nearly 2 million between 1995 and 2005, growth of this household type will decrease before picking up again after 2005.

- Married couples with children under the age of 18 will also decrease in number, both because fewer women will be in their late 20s and early 30s, and because the last of the baby boomers will be leaving their childbearing years.

- With the over-85 population growing by 1.3 million during the first decade of the 21st century, housing suited to the health-related needs of the frail elderly will be increasingly in demand. By the time people reach their late 60s and 70s, about one in ten of those living in the community (outside of nursing homes and group quarters) requires assistance in performing the activities of daily life. As they advance into their 80s and 90s, disabilities become much more common and the share needing help increases to one in three.

- An overwhelming majority of seniors want to remain in their existing home. A large number of households with a disabled senior have a need for structural modifications to their homes to make them function safely and comfortably, such as handrails, ramps, and modifications to the bathroom and kitchen. An aging population will increase demand for home modifications in the future, and demand for these features in new residential construction.

These demographic trends have important implications for housing markets at the national level. According to the Center, household growth should average close to 1.1 to 1.2 million annually over the next decade—about the same as in the 1990s. Because the number of households is the primary determinant of housing demand, the expected stability of household growth should translate into residential construction rates that are roughly comparable to today's rates.

The Center also identifies an aging housing stock as an issue. Over the past decade, lower levels of housing construction and a greater emphasis on conservation have pushed the average age of the stock from 23 years in 1985 to 28 years.

Although it is difficult to predict how housing demand will sort itself out by structure type, the age and regional distribution of the population suggest gains in the multifamily and manufactured housing shares. With demand for

multifamily and manufactured housing strengthening, the single-family share of new construction is likely to decrease slightly in the years ahead.

We reviewed data from the U.S Bureau of Census *Current Construction Reports* to identify national trends in the characteristics of new housing. Nationally, several shifts in the characteristics of housing are evident:

- *Larger single family units on smaller lots.* Between 1987 and 1997 the median size of new single family dwellings increased 13%, from 1605 sq. ft. to 1,975 sq. ft. During the same period, the median lot size decreased 2%, from 9,295 sq. ft. to 9,100 sq. ft. Moreover, the percentage of units under 1,200 sq. ft. decreased from 13% in 1987 to 8% in 1997. The percentage of units greater than 2,500 sq. ft. increased from 26% in 1987 to 31% in 1997.

- *Larger multifamily units.* Between 1987 and 1997, the median size of new multiple family dwelling units increased 15%, from 920 sq. ft. to 1,055 sq. ft. Moreover, the percentage of units with less than 600 sq. ft. decreased from 8% to 5%, while the percentage with more than 1,200 sq. ft. increased from 18% to 27%.

- *More household amenities.* Between 1987 and 1997 the percentage of single family units built with amenities such as central air conditioning, fireplaces, brick exteriors, 2 or more car garages, or 2 or more baths increased. The same trend is seen in multiple family units: the percentage of units with two or more bathrooms increased from 39% to 49% between 1987 and 1997.

There has been a national movement over the past 15 years promoting higher-density housing in mixed-use development patterns as an alternative to typical suburban development and the problems those patterns are alleged to generate. This alternative development pattern is known by a variety of names: neo-traditional development, new urbanism, transit-oriented development (TOD), and traditional neighborhood development (TND). While the different names refer to differences in design and setting, these development share some common characteristics:

- Higher-density housing: building and lot size are smaller than typical development, and there is a larger share of multi-family housing

- Narrow streets that link residential areas to mixed-use commercial centers

- Emphasis on walkability and alternatives to the automobile

- Traditional design

- Transit orientation

- Mixed-use commercial centers.

In the 1990s this type of development has moved from concept to reality with the construction of numerous projects around the nation. These projects range in scale from single buildings to entire communities, and occur in a variety of settings: urban infill, suburban subdivisions, transit rail stations, and ex-urban greenfields. The *New Urban News* tracks the number of traditional neighborhood developments—large-scale developments with residential areas and a commercial center—that are planned, under construction, or built in the United States. Its last survey included almost 100 projects built or under construction, and another 100 projects in the planning phase.[40] Some examples:

- *Northwest Landing* is a suburban greenfield development near Tacoma, Washington. Plans for this 3,000-acre development call for 4,300 homes, businesses, stores, and parks to be developed over 20 years. Northwest Landing currently has more than 550 occupied homes and apartments, and 200 new homes were sold in 1998, making it the best-selling new-home neighborhood in Pierce County. Several large employers have located in Northwest Landing, including Intel with 1,200 employees and State Farm Insurance with 750 employees.[41]

- *East Bay at Sloan Lake* is a dense infill development of single-family homes near downtown Denver. These homes were built with 10-foot setbacks (with porches allowed to encroach) on narrow lots (40 feet by 65 feet), on relatively narrow 35' wide streets. The result was a total of 111 homes on 13 acres, or a gross density of 8.5 units/acre. Home sizes were 1,150 to 1,776 sq. ft., and sales opened in 1995 at prices of $130,000 to $150,000. The homes sold at a pace of three per week, making this one of the hottest subdivisions in the Denver market.[42]

- *Orenco Station* is a transit-oriented development near a light rail station in suburban Portland, Oregon. When fully built, this 190-acre development will have 1,834 residential units and 500,000 sq. ft. of commercial space in the town center and office district. Since opening in 1997, the developer has sold 8–10 units/month, and units are selling at a significant premium compared to competing developments.[43]

- *Pleasant View Gardens* in Baltimore, is a HUD-funded urban infill development with 228 townhomes and 110 apartments for the elderly. This development used 19th century Baltimore townhomes as the model for the basic housing units, and includes a central green, community building, and relatively narrow streets with wide

[40] Steuteville, Robert. 1998. "Year of growth for New Urbanism." *New Urban News* 3 (5): 1-7.

[41] New Urban News. 1999. "New Urban Update." *New Urban News* 4 (1): 23. Shaw, Linda. 1998. "Small-town USA." *Seattle Times*, April 4.

[42] New Urban News. 1998. "Denver Project Sells Quickly." *New Urban News* 3 (4): 6.

[43] Halloran, Sean. 1999. "Transit Villages Coming On Line Nationwide." *New Urban News* 4 (4): 5.

sidewalks. Pleasant View Gardens was built under the HUD Hope VI program that seeks to replace high-rise super-block style projects with more human-scale development that incorporates many elements of new urbanism.[44]

Like any real estate product, the success of TNDs varies with implementation. Requirements for a successful project include good design, savvy market research, efficient implementation, timely project approval without major compromises, a strong real estate market, and good judgement on the part of the developer.[45] Home and lot sales in TNDs often start out slow but pick up as the projects mature, offering more amenities in place and improved streetscapes.[46]

Developers have found that more affordable units are more popular, and have adjusted their development plans to provide more smaller houses on smaller lots, reducing their cost.[47] Affordability is critical for TNDs because they must compete for sales with typical subdivisions, which are cheaper to build. TNDs are more expensive because they usually include neighborhood greens, town squares, alleys, front porches, and quality detailing of facades. Successful developers of TNDs focus on the advantages offered by TND designs to reduce costs. The primary advantage is that not having an attached garage allows designers to simplify the design of interior space. Developers can lower costs by sticking with simple designs and applying the production techniques used by typical developments, rather than a custom-built approach. But developers cannot sacrifice quality to reduce costs, because TND marketing often emphasizes high-quality construction to offset the smaller lot size and living space.[48]

[44] New Urban News. 1998. "Hope VI: Emerging Examples of Inner City New Urbanism." *New Urban News* 3 (1): 1-7.

[45] Steuteville, Robert. 1998. "Year of growth for New Urbanism." *New Urban News* 3 (5): 1-7.

[46] New Urban News. 1998. "New Urbanist Projects Post Solid Sales." *New Urban News* 3 (4).

[47] New Urban News. 1998. "Tweaking Lot Sizes to Meet Consumer Demand." *New Urban News* 3 (4).

[48] New Urban News. 1998. "Taking Advantage of TND Efficiencies to Add Quality." *New Urban News* 3 (1).

Appendix C Population Forecasts

Oregon law requires counties to coordinate population forecasts with cities located within the county[49]. This appendix presents the following documents in support of the City of McMinnville's coordinated population forecast.

- Table C-1 – Coordinated Population Forecast , 2000-2020 – This spreadsheet is based on an assumption that there be an increasingly greater proportion of countywide growth directed to occur within urban growth boundaries. Consistent with the goals of the Oregon planning and land use system. Thus, it is expected that the proportional share of population growth in unincorporated, rural, areas will continue to decrease while various local jurisdictions continue to increase their respective shares of county-wide population allocations as determined by the Office of Economic Analysis. The result of this effort is a year 2020 McMinnville population projection of 38,720.

- Letter from Yamhill County supporting the coordinated year 2020 population projection.

- Letter from DLCD staff stating support for a year 2019 projection as shown within the table referenced above. In addition, a meeting was held with both City and DLCD staffs to discuss, in part, this population projection, wherein it was agreed by Urban Community Services Manager, Anna Russo, that the program period of this projection be adjusted to the year 2020 as provided within the referenced spreadsheet.

[49] ORS 195.025

Table C-1. Coordinated population forecast, 2000-2020

1	2	3	4	5	6	7	Not Numbered	8	9	10	11
Year	**Yamhill County Population Projection**	**Yamhill County Annual Growth Rate**	**Unincorporated County Population Allocation**	**Unincorporated County: Percent of County Total**	**Unincorporated County Population Allocation**	**Unincorporated County Annual Growth Rate**	**McMinnvilles 1997 proportion of yamhill county population**	**McMinnville Population Allocation**	**McMinnville Population: Percent of County Total**	**McMinnville Population Allocation**	**McMinnville Annual Growth Rate**
Sources & Assumptions	OEA (Annualized by McMinnville Staff)	OEA (Annualized by McMinnville Staff)	Based on ~~Existing~~ Unincorporated Share (27.97%)	Based on ~~Declining~~ Annual Unincorporated Share (-0.4%)	Based on ~~Declining~~ Annual Unincorporated Share (-0.4%)	Based on ~~Declining~~ Annual Unincorporated Share (-0.4%)	Present for calculation purposes only	Based on ~~Exisitng~~ Incorporated City Share (29.65%)	Proportional* to ~~Declining~~ Unincorporated Annual Share (0.4%)	Based on ~~Increasing~~ Incorporated Annual Share	Based on ~~Increasing~~ Incorporated Annual Share
July 1, 1997	79,200		22,152	27.97 %	22,152	--	29.7%	23,485	29.7%	23,483	--
July 1, 1998	80,006	1.01 %	22,378	27.57 %	22,058	-0.43 %	29.7%	23,722	29.8%	23,817	1.40 %
July 1, 1999	81,894	2.31 %	22,906	27.17 %	22,251	0.87 %	29.7%	24,282	29.9%	24,476	2.69 %
July 1, 2000	**83,826**	**2.30 %**	**23,446**	**26.77 %**	**22,440**	**0.85 %**	**29.7%**	**24,854**	**30.0%**	**25,153**	**2.30 %**
July 1, 2001	85,480	1.93 %	23,909	26.37 %	22,541	0.45 %	29.7%	25,345	30.1%	25,750	1.93 %
July 1, 2002	87,167	1.94 %	24,381	25.97 %	22,637	0.42 %	29.7%	25,845	30.2%	26,362	1.94 %
July 1, 2003	88,887	1.94 %	24,862	25.57 %	22,728	0.40 %	29.7%	26,355	30.4%	26,988	1.94 %
July 1, 2004	90,640	1.93 %	25,352	25.17 %	22,814	0.38 %	29.7%	26,875	30.5%	27,627	1.93 %
July 1, 2005	**92,429**	**1.94 %**	**25,852**	**24.77 %**	**22,895**	**0.35 %**	**29.7%**	**27,405**	**30.6%**	**28,282**	**1.94 %**
July 1, 2006	94,111	1.79 %	26,323	24.37 %	22,935	0.18 %	29.7%	27,904	30.7%	28,908	1.79 %
July 1, 2007	95,824	1.79 %	26,802	23.97 %	22,969	0.15 %	29.7%	28,412	30.8%	29,548	1.79 %
July 1, 2008	97,568	1.79 %	27,290	23.57 %	22,997	0.12 %	29.7%	28,929	31.0%	30,202	1.79 %
July 1, 2009	99,344	1.79 %	27,787	23.17 %	23,018	0.09 %	29.7%	29,455	31.1%	30,869	1.79 %
July 1, 2010	**101,152**	**1.79 %**	**28,292**	**22.77 %**	**23,032**	**0.06 %**	**29.7%**	**29,992**	**31.2%**	**31,551**	**1.79 %**
July 1, 2011	102,910	1.71 %	28,784	22.37 %	23,021	-0.05 %	29.7%	30,513	31.3%	32,222	1.71 %
July 1, 2012	104,699	1.71 %	29,284	21.97 %	23,002	-0.08 %	29.7%	31,043	31.4%	32,906	1.71 %
July 1, 2013	106,518	1.71 %	29,793	21.57 %	22,976	-0.12 %	29.7%	31,583	31.5%	33,604	1.71 %
July 1, 2014	108,370	1.71 %	30,311	21.17 %	22,942	-0.15 %	29.7%	32,132	31.7%	34,317	1.71 %
July 1, 2015	**110,253**	**1.71 %**	**30,838**	**20.77 %**	**22,900**	**-0.19 %**	**29.7%**	**32,690**	**31.8%**	**35,044**	**1.71 %**
July 1, 2016	112,060	1.61 %	31,343	20.37 %	22,827	-0.32 %	29.7%	33,226	31.9%	35,751	1.61 %
July 1, 2017	113,897	1.61 %	31,857	19.97 %	22,745	-0.36 %	29.7%	33,770	32.0%	36,472	1.61 %
July 1, 2018	115,764	1.61 %	32,379	19.57 %	22,655	-0.40 %	29.7%	34,324	32.1%	37,207	1.61 %
July 1, 2019	117,661	1.61 %	32,910	19.17 %	22,556	-0.44 %	29.7%	34,886	32.3%	37,956	1.61 %
July 1, 2020	**119,589**	**1.61 %**	**33,449**	**18.77 %**	**22,447**	**-0.48 %**	**29.7%**	**35,458**	**32.4%**	**38,720**	**1.61 %**

* Overall, the declining unincorporated county share scenario assumes that by 2019 10,354 fewer people will live outside of incorporated cities than assumed in the existing unincorporated share scenario (Column 4 (32,910) minus Colu

By the Year 2019, we assume that these 10,354 people will be annexed to one of Yamhill County's 10 cities. We further assume that each City's share is proportionally equivalent to its existing share of Yamhill County's population.

Thus, under the declining unincorporated county share scenario, McMinnville's 2019 population allocation will increase by 3,070 over the existing unincorporated county share scenario (Column 10 (37,956) minus Column 8 (34,886)).

Column 10 shows that McMinnville's 2019 population will reach 37,956 ((29.65% of 10,354 equals 3,070) plus 34,886 equals 37,956.

Appendix D

Persons Per Household Analysis

A key variable in determining demand for new housing units is persons per household. Chapter 5 provides an overview of household size trends and assumptions used for estimating the number of new housing units needed. Table D-1 compares average persons per household for selected Oregon cities between 1940 and 1990.

Table D-1. Average persons per household for selected Oregon cities, 1940-1990

		AVERAGE PERSONS PER HOUSEHOLD (APPH)						
CITY	1990 POPULATION	1940	1950	1960	1970	1980	1990	AVERAGE CHANGE PER DECADE IN APPH
Oregon City	14,698	3.00	2.90	2.90	2.90	2.66	2.62	0.08
Tualatin	15,013	NA	NA	NA	NA	2.63	2.63	0.00
Ashland	16,234	2.90	2.90	2.90	2.70	2.34	2.22	0.14
West Linn	16,367	NA	3.10	3.20	3.20	2.89	2.80	0.08
Roseburg	17,032	2.90	3.00	3.00	2.90	2.48	2.40	0.10
Grants Pass	17,488	2.90	2.90	2.80	2.70	2.42	2.34	0.11
Klamath Falls	17,737	3.10	2.90	2.80	2.60	2.37	2.36	0.15
McMinnville	**17,894**	**3.00**	**2.90**	**2.90**	**2.80**	**2.48**	**2.54**	0.09
Milwaukee	18,692	NA	3.40	3.20	3.10	2.47	2.35	0.26
Bend	20,469	3.20	3.00	3.00	2.90	2.42	2.34	0.17
Keizer	21,884	NA	NA	NA	NA	2.69	2.59	0.05
Tigard	29,344	NA	NA	NA	2.90	2.48	2.42	0.16
Lake Oswego	30,576	NA	3.00	3.30	3.20	2.64	2.43	0.14
CITY AVERAGE:	**19,494**	**3.00**	**3.00**	**3.00**	**2.90**	**2.54**	**2.46**	**0.11**
State Average		3.1	3.1	3.1	2.9	2.6	2.52	0.12

NOTES:

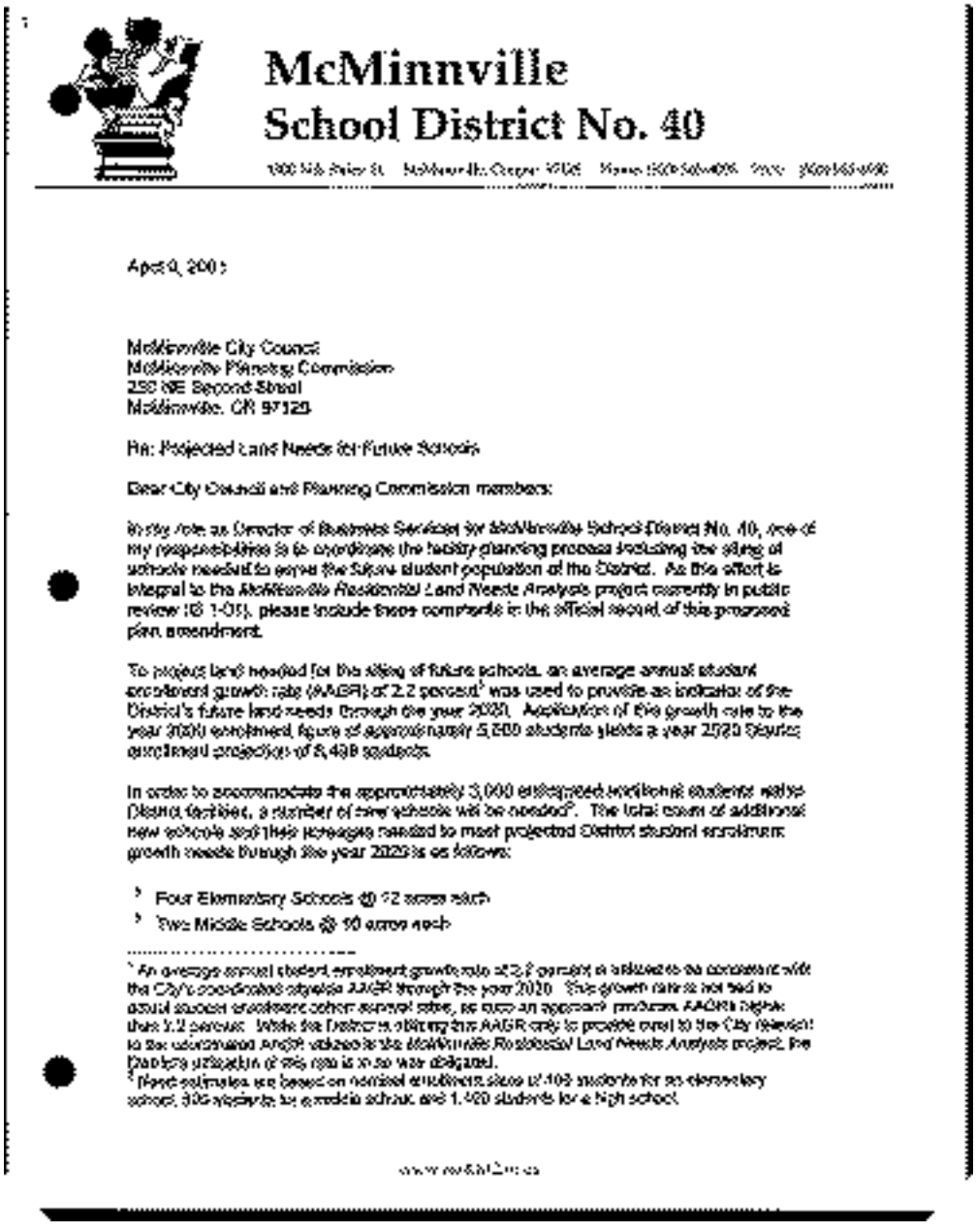
1. Figures for the years 1940, 1950, 1960, and 1970 were obtained from the "1940-1970 Population and Housing Trends, Cities and Counties of Oregon", Bureau of Governmental Research and Service, University of Oregon.

2. Figures for 1980 were obtained from the 1980 Census of Housing, Volume 1, Bureau of the Census, U.S. Department of Commerce, August 1982.

3. Figures for 1990 were obtained from the 1990 Census, Summary of Population and Housing Characteristics.

Appendix E: Land Needs for Public Schools

Attached is a letter from the McMinnville School District #40 on future lands needed for schools.



McMinnville
School District No. 40

[illegible]

April 9, 2001

McMinnville City Council
McMinnville Planning Commission
230 NE Second Street
McMinnville, OR 97128

Re: Projected Land Needs for Future Schools

Dear City Council and Planning Commission members:

In my role as Director of Business Services for McMinnville School District No. 40, one of my responsibilities is to coordinate the facility planning process including the siting of schools needed to serve the future student population of the District. As this effort is integral to the *McMinnville Residential Land Needs Analysis* project currently in public review (ID 1-01), please include these comments in the official record of this proposed plan amendment.

To project land needed for the siting of future schools, an average annual student enrollment growth rate (AAGR) of 2.2 percent[1] was used to provide an indicator of the District's future land needs through the year 2020. Application of this growth rate to the year 2000 enrollment figure of approximately 5,200 students yields a year 2020 District enrollment projection of 8,498 students.

In order to accommodate the approximately 3,000 anticipated additional students within District facilities, a number of new schools will be needed[2]. The total count of additional new schools and their acreages needed to meet projected District student enrollment growth needs through the year 2020 is as follows:

- Four Elementary Schools @ 12 acres each
- Two Middle Schools @ 30 acres each

[1] An average annual student enrollment growth rate of 2.2 percent is believed to be consistent with the City's coordinated citywide AAGR through the year 2020. This growth rate is not tied to actual student enrollment cohort survival rates, as such an approach produces AAGRs higher than 2.2 percent. While the District is utilizing this AAGR only to provide input to the City relevant to the aforementioned AAGR utilized in the *McMinnville Residential Land Needs Analysis* project, the practice utilization of this rate is in no way obligated.

[2] Need estimates are based on nominal enrollment sizes of 400 students for an elementary school, 800 students for a middle school, and 1,400 students for a high school.

[illegible]

- One High School @ 52 acres

Land needed to accommodate future school needs through the year 2020 is projected to total 104 buildable acres. The District currently owns one parcel of land, 16 acres in size, within the McMinnville city limits. This parcel is located north of Grandhaven School, and will be developed as one of the two needed middle school sites. Therefore, the future land need is effectively reduced from 112 acres to 96 acres.

However, the most immediate priority is at the elementary school level. Planning efforts are now underway for an additional elementary school with an anticipated opening date of September 2003 or 2004 depending on land availability. In addition, a second high school, with the ability to accommodate some 1,400 students, is projected to become necessary within approximately eight to ten years. One of the two new middle schools is anticipated to be needed within approximately six to eight years.

The McMinnville School District is encouraged by the City's efforts to address the future land needs of this community. Thank you again for the opportunity to comment on and provide input as regard the *McMinnville Residential Needs Analysis* project.

Sincerely,

Janet E. Fenstermaker,
Director of Business Services

Cc: Elaine Taylor, Superintendent
Margie Taylor, Board Chair