

Appendix "B"

Revised Buildable Land Analysis

May, 2003



City of McMinnville Planning Department

REVISED BUILDABLE LAND ANALYSIS

Background

The City of McMinnville is in the process of reviewing its Urban Growth Boundary (UGB). This review builds on several studies the City has completed or that are in process at this time. In April 2001, the McMinnville's City Council adopted the *McMinnville Residential Land Needs Analysis, May 2001*, which addressed the requirements of statewide planning Goal 10 and ORS 197.296. In February 2002, the City approved the *McMinnville Economic Opportunities Analysis, November 2001*, which addressed the requirements of statewide planning Goal 9 and OAR 660-009.

This appendix updates the buildable lands analysis presented in the *McMinnville Residential Land Needs Analysis* and the *McMinnville Economic Opportunity Analysis to bring them current to January 1, 2003*. It builds from the population and employment forecasts shown in Table 1.¹

Table 1. Population and employment growth, McMinnville UGB, 2003-2023

Year	Population	Employment	Pop/Emp
2000	26,499	13,865	1.91
2003 (Jan 1)	28,510	14,741	1.93
2023 (Jan 1)	44,057	22,161	1.99
Change 2003-2023			
Number	15,547	7,420	2.10
Percent	54.5%	50.3%	
AAGR	2.20%	2.06%	

Source: ECONorthwest, City of McMinnville

The remainder of this appendix is organized as follows: land needed for residential development, 2003-2023; land needed for employment, 2000-2003; and, comparison and conclusions. Additional supporting data is provided at the end of this appendix.

Land needed for residential development, 2003-2023

In April 2000, the McMinnville's City Council adopted the *McMinnville Residential Land Needs Analysis*. The study was intended to provide baseline data consistent with ORS 197.296(1-4). It did not, nor was it intended to, address the requirements of ORS 197.296(5-7).

This section presents a revised housing needs analysis based on (1) 2000 Census data that was released after the initial study was completed, (2) development activity that has

¹ A detailed discussion of population and employment projections is presented in Appendix "A."

occurred since the date of the initial buildable lands analysis (July 1, 2000) and January 1, 2003, and (3) efficiency measures the City proposes to adopt consistent with ORS 197.296(5).²

The revised housing needs analysis is organized into four sections as follows:

- Residential development trends—July 2000-December 2002
- Updated residential buildable land inventory
- Revised housing needs analysis
- Revised residential land need estimate

Residential development trends, July 2000-December 2002

ORS 197.296 requires cities to conduct an analysis of actual density and mix for the past five years or since the last periodic review—whichever is longer. The *McMinnville Residential Land Needs Analysis* included a detailed evaluation of residential development in McMinnville between September 1988 (the last periodic review) and July 2000.

McMinnville has experienced a significant amount of residential development since July 2000. Table 2 shows the number of building permits issued between July 1, 2000, and December 31, 2002, for residential development. The City's data show that 528 new dwelling units were approved using about 82 acres of residential lands. New residential development averaged 6.4 dwelling units per net residential acre during this period.

² Further detail regarding existing and proposed efficiency measures can be found in Chapter V.

Table 2. Residential building permits issued in residential zones, July 1, 2000 – December 31, 2002

Zone	New DU	Net Acres	Density (DU/net res ac)
R-1	113	22.4	5.0
R-2	199	33.2	6.0
R-3	74	10.0	7.4
R-4	142	16.5	8.6
Total	528	82.1	6.4

Source: City of McMinnville building permit database
 Note: McMinnville issued permits for an additional 64 residential units in the C-3 zone.
 This development used 4.1 acres at a net density of 15.6 du/net acre.

Table 3 shows residential building permits by type of dwelling issued in McMinnville between July 1, 2000, and December 31, 2002. The results show that 74% of building permits were issued for single-family detached units, 9% were issued for single-family attached units, and 17% were issued for multi-family units (totaling 26% for multi-family housing types).

Table 3. Residential building permits by type, July 1, 2000 – December 31, 2002

Housing Type	New DU	Percent	Net Acres	Density (DU/net res ac)
Single-family detached	393	74%	68.1	5.8
Manufactured	0	0%	0.0	na
Subtotal	393	74%	68.1	5.8
Multi-family				
Single-family attached	45	9%	4.5	10.0
Multi-family	90	17%	9.5	9.5
Subtotal	135	26%	14.0	9.7
Total	528	100%	82.1	6.4

Source: City of McMinnville building permit database
 Note: McMinnville issued permits for an additional 64 residential units in the C-3 zone.
 This development used 4.1 acres at a net density of 15.6 du/net acre.

Updated residential buildable land inventory

Chapter 3 of the *McMinnville Residential Land Needs Analysis* presented the residential buildable lands inventory. The inventory presented in the study was current as of June 2000. Residential development has occurred in McMinnville since the initial inventory was completed. Table 4 shows buildable residential lands by zone within the McMinnville UGB as of January 1, 2003. The June 2000 inventory identified almost 947 gross vacant buildable and redevelopable residential acres. Since June 2000,

residential development has consumed an additional 82 acres, leaving about 865 gross vacant buildable and redevelopable acres available for residential development.

Table 4. Buildable residential lands by zone, McMinnville UGB, January 1, 2003

County Zones	Gross Buildable Acres (2000)	Acres Used (2000-2002)	Gross Buildable Acres (2003)
R-1	435.6	22.4	413.2
R-2	83.4	33.2	50.2
R-3	37.7	10.0	27.7
R-4	42.1	16.5	25.6
County Zones	347.8		347.8
Total	946.6	82.1	864.5

Source: City of McMinnville

Revised housing needs analysis

This section summarizes the results of modifications to the 2000 *McMinnville Residential Land Needs Analysis*. It also provides a summary of the provisions of ORS 197.296 that were not included in the initial study, with the exception of ORS 197.296(6). The requirements of ORS 197.296(6) are addressed in the findings that accompany the UGB expansion proposal.

The *McMinnville Residential Land Needs Analysis* concluded the following:

- McMinnville had about 935 gross buildable acres available for residential development. In addition, another 12 acres of developed land was classified as “potentially redevelopable.”
- McMinnville will need about 5,584 new dwelling units between 2000 and 2020.
- Based on a tax lot level residential capacity analysis, the 935 gross acres of vacant buildable residential land within the existing McMinnville UGB will accommodate 3,407 residential units resulting in a capacity deficit of 2,178 units. This calculation assumes no allocation of land for other residential uses such as schools, parks, churches, public and semi-public uses, and infrastructure.
- This translates into a need for an additional 449 gross buildable acres of land needed beyond the existing UGB to accommodate projected residential development. Added to this need are about 412 gross acres needed for development of public and semi-public uses that will also locate on residential land.

- At recent historical residential densities and housing mix, the total gross vacant buildable residential land need necessary to accommodate projected growth is 861 gross acres (449 gross acres for residential dwelling units, and 412 gross acres for public and semi-public uses).

The *McMinnville Residential Land Needs Analysis* posed several questions that were not fully answered in the study:

- Is *needed* density the same as or less than *actual* historic density?
- Is *needed* mix the same as *actual* historical mix?
- Does the UGB contain enough buildable land at *actual* historic densities?

These questions must be answered to provide a residential lands study that fully addresses the requirements of ORS 197.296. The following sections provide a response to these questions.

Is *needed* density the same as or less than *actual* historical density?

The *McMinnville Residential Land Needs Analysis* concluded that *needed* density is *higher* than *actual* historical density (pages 5-27 and 5-28). In short, in order to meet the requirements of Goal 10 and ORS 197.296, McMinnville must adopt measures that will “demonstrably increase the likelihood that residential development will occur at the housing types and density and at the mix of housing types required to meet housing needs over the next 20 years.”

The *McMinnville Residential Land Needs Analysis* concluded:

“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.” (page 5-24)

The alternative forecast of housing need presented in the *McMinnville Residential Land Needs Analysis* explicitly assumes that measures will be taken to achieve needed housing density and mix:

“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).” (page 5-25)

A review of the housing need forecast presented in the *McMinnville Residential Land Needs Analysis*, as well as new data available since the study was completed, led to several proposed modifications to the original housing need estimate.

Table 5 compares assumptions used for the baseline (adopted May 2001 analysis) and revised housing need analysis (the analysis provided in this memorandum).

Modifications were made in several areas:

- Persons in group quarters were increased from 310 to 800 to reflect new Census data, and growth in the student population at Linfield College.
- The housing mix was changed from an actual mix of 66% single-family to 60% single-family. Multiple-family housing was increased from 34% to 40%. This reflects changes in household types and other affordability issues.
- Average household size remained constant at 2.54 persons per occupied housing units, but household sizes by *type of dwelling* shifted slightly to reflect the new housing mix and additional persons in group quarters.
- Density assumptions for single-family attached and manufactured housing types were increased to reflect recent development trends.
- The planning period was adjusted from 2000-2020 to 2003-2023. This makes the population projections consistent with the buildable lands inventory and allows determination of lands needed to accommodate housing for 20 years as required by ORS 197.296.

The revised housing need analysis also considered single-family attached housing as a multi-family housing type. This is consistent with the approach many other housing needs analyses use.

Table 5. Comparison of assumptions for baseline (from 2000 Residential Land Needs Study) and revised housing need (2003-2023)

Assumption	Revised Need	Baseline (2000 Report)
New persons, 2000-2020		13,567
Average Annual Population Growth Rate (2000-2020)		2.2%
New persons, 2003-2023	15,545	
Average Annual Population Growth Rate (2003-2023)	2.2%	
New persons in group quarters, 2000-2020		310
New persons in group quarters, 2003-2023	800	
Housing Mix		
Single-family	60%	66%
Multiple family	40%	34%
Household size		
Single-family	2.76	2.66
Multiple family	2.21	2.10
Weighted average household size	2.54	2.54
Vacancy rate		
Single-family	2.5%	2.5%
Multiple family	5.0%	5.0%
Density Assumptions (DU/Net Res Acre)		
Single family detached (R-1)	4.5	4.5
Single-family detached (other zones)	5.5	na
Single family attached	10.0	9.1
Multiple family	17.0	16.8
Manufactured in subdivisions	5.5	5.1
Net-to-Gross Acres Factor		
Single family detached	25.6%	25.6%
Single family attached	24.7%	24.7%
Multiple family	11.6%	11.6%
Manufactured	10.0%	10.0%

Consistent with the methods described in the DLCD workbook (*Planning for Residential Growth, 1997*), the following tables that summarize housing and land need address population in group quarters separately. The revised housing need analysis assumes 800 new persons in group quarters between 2003 and 2023. This equates to about 5.1% of the total population—a slightly lower ratio of persons in group quarters than as reported by the 2000 Census figure of 6.0%. Analysis of historical Census data shows the percentage of persons in group quarters has steadily decreased in McMinnville since 1980. The analysis assumes an average of 2.0 persons per group quarter dwelling unit and that group quarter dwelling units will develop at the same density as multiple family housing (17.0 du/net residential acre). McMinnville will need approximately 400 group quarter units. However, the analysis only assigns need for vacant land to 50% of those units. The remaining units are allocated to land already

classified as developed at Linfield College. Thus, McMinnville will require approximately 13 gross buildable residential acres for group quarter dwellings.

Table 6 shows the allocation of needed housing units by type and zoning designation (the *need* forecast). The need forecast is based on estimates of how needed housing units will be distributed by zone. More specifically, the forecast 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 multi-family zone) as well as measures the city proposes to adopt to meet identified housing needs as stated in the *McMinnville Residential Land Needs Analysis*.

The forecast predicts a need for 60% single-family housing types and 40% multiple-family housing types. This need forecast classifies single-family attached units and duplexes as multi-family housing types and makes a distinction between manufactured homes in subdivisions and manufactured homes in parks. The revised need forecast also recognizes the creation of a new exclusive multi-family residential zone (R-5). Eighteen percent of all housing need is allocated to this new zone.

Table 6. Forecast of needed housing units by type and zoning designation, McMinnville, 2003-2023

Housing type	Plan Designation					Total
	R-1	R-2	R-3	R-4	R-5	
Single-family						
Detached (R-1)	10%	0%	0%	0%	0%	10%
Detached (Other zones)	0%	25%	5%	0%	0%	30%
Manufactured in subdivisions	2%	8%	0%	0%	0%	10%
Manufactured in parks	0%	0%	4%	6%	0%	10%
Single-family Total	12%	33%	9%	6%	0%	60%
Multi-family						
Row/townhouse	0%	0%	5%	7%	0%	12%
Apartment	0%	0%	0%	10%	18%	28%
Multi-family Total	0%	0%	5%	17%	18%	40%
Total	12%	33%	14%	23%	18%	100%

Source: ECONorthwest

Is needed mix the same as actual historical mix?

The next step in the housing needs analysis (Step 6 in the Workbook) is to determine the needed density ranges for each plan designation and the average needed net density for all structure types (see Table B-7).

Table 5-15 in the *McMinnville Residential Land Needs Analysis* shows the baseline forecast of new dwelling units and land need by type for the 2000-2020 period. The results are based on development trends observed between 1988 and 2000 and the 2000-2020 population forecast. The baseline forecast indicated McMinnville needed a mix of 66% single-family and 34% multi-family at an overall density of 4.7 dwelling units per gross residential acre.

Table 7 shows that the new need forecast generates different results than the previous baseline forecast in terms of housing mix and density. The key difference between the baseline forecast and the new need forecast shown in Table B-7 is the allocation of additional housing units to multiple family housing types in the alternative forecast. The need forecast requires 6,014 dwelling units (increase from prior count due primarily to increased population estimate) and decreases land need by more than 240 gross buildable acres, primarily due to proposed land use efficiency measures that increase residential density. The density increases from 4.7 du/gross residential acre in the baseline (historical trend) forecast, to 5.7 du/gross residential acre—an 18% increase. Net density under the need forecast is 7.2 du/net residential acre.

Table 7. Forecast of *needed* new dwelling units and land need by type, McMinnville, 2003-2023

Housing type	Number of DU	Needed DU by Type	Density (DU/ Net Res Acre)	Density (DU/Gross Res Acre)
Single-family	3,607	60.0%	5.4	4.3
Detached (R-1)	601	10.0%	4.5	3.3
Detached (Other)	1,804	30.0%	5.5	4.1
Manufactured in subdivisions	601	10.0%	5.5	5.0
Manufactured in parks	601	10.0%	6.5	5.9
Multi-family	2,407	40.0%	14.0	11.6
Row/Townhouse/Duplex	722	12.0%	10.0	7.5
Apartment	1,685	28.0%	17.0	15.0
Total	6,014	100.0%	7.2	5.7

Source: ECONorthwest

Note: Group quarters not included in number or percent of dwelling units

Table 8 shows residential land needed for housing 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 7.

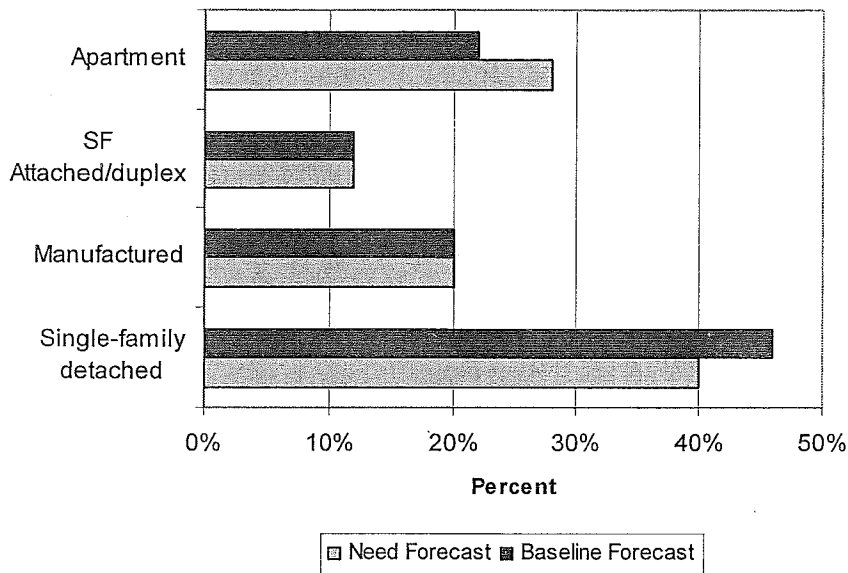
Table 8. Need forecast of housing, land need (gross acres), and needed density by zoning and housing type, 2003-2023

Housing type	Zoning					Total
	R-1	R-2	R-3	R-4	R-5	
Number of Dwelling Units						
Single-family	721	1,985	540	360	-	3,607
Detached (R-1)	601	-	-	-	-	601
Detached (Other)	-	1,504	300	-	-	1,804
Manufactured in subdivisions	120	481	-	-	-	601
Manufactured in parks	-	-	240	360	-	601
Multi-family	-	-	301	1,023	1,083	2,407
Row/townhouse	-	-	301	421	-	722
Apartment	-	-	-	602	1,083	1,685
Total	721	1,985	841	1,383	1,083	6,014
Land Need (Gross Acres)						
Single-family						
Detached (R-1)	180	-	-	-	-	180
Detached (Other)	-	368	74	-	-	441
Manufactured in subdivisions	24	97	-	-	-	122
Manufactured in parks	-	-	41	62	-	103
Multi-family						
Row/townhouse	-	-	40	56	-	96
Apartment	-	-	-	40	72	112
Total	204	465	155	158	72	1,053
Implied Density (DU/Gross Acre)	3.5	4.3	5.4	8.8	15.0	5.7

Source: ECONorthwest

Figure 1 shows a comparison of housing demand and housing need for the period between 2003 and 2023. The figure shows some notable differences between demand (the baseline forecast) by housing type and need by housing type. The overall mix between single-family and multiple-family shifts from 66% single-family (baseline) to 60% single-family (need). The need forecast shows a significantly lower need for single-family detached housing (decreasing from 45% to 35%) and a higher percentage for all other housing types.

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



ORS 197.303 includes government-assisted housing as a needed housing type. McMinnville allows government-assisted housing outright in all of its residential zones. Moreover, the City of McMinnville does not have a program to construct or finance government-assisted housing. From a land use perspective, there is little more McMinnville can do to facilitate government-assisted housing development.

The Yamhill County Housing Authority and other agencies develop government-assisted housing throughout Yamhill County. According to assessment records, about 200 government-assisted housing units have been developed in McMinnville by various organizations. According to staff at the Yamhill County Housing Authority, they expect to build approximately 50 government-assisted housing units annually in Yamhill County in the next 20 years, or 1,000 units over the planning period. Approximately 300-400 of the government-assisted units would be located in McMinnville.

The Yamhill County Housing Authority manages the HUD Section 8 rental assistance program in Yamhill County. According to staff, approximately 1,200 households receive Section 8 assistance in Yamhill County. Staff estimates that approximately 400 households receive Section 8 assistance in McMinnville. Housing Authority staff do not anticipate expanding the Section 8 program in the foreseeable future because their allocation of Section 8 vouchers is relatively high on a per household basis compared to other areas.

Total residential land need, 2003-2023³

This section estimates total residential land need for the period between 2003 and 2023. In addition 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.

The revised population forecast creates need for additional public and semi-public lands that will locate in residential zones. The revised public and semi-public land needs are presented in Appendix A of this memorandum.

Table 9 shows total residential land need from 2003 to 2023. Including parks and schools, Total need for land designated for residential uses is approximately 1,538 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. The need forecast, which accounts for existing and some proposed efficiency measures, reduces total residential land need by 242 acres—or about 15%.

Table 9. Total residential land need-Housing Need and Baseline (historical densities) Forecast 2003-2023

Category	Needed Gross Acres	
	Need Forecast	Baseline
New housing	1053.2	1,295.0
Parks	314.0	314.0
Schools	96.0	96.0
Private Schools	1.5	1.5
Religious	47.6	47.6
Government	0.9	0.9
Semi-Public Services	22.5	22.5
Infrastructure	2.6	2.6
Total	1,538.4	1,780.2

Source: City of McMinnville, ECONorthwest

Comparison of Supply and Demand: Does the UGB contain enough buildable land at actual densities? (Task 5 of the workbook)

This section compares residential land supply and demand. It begins with an evaluation of residential land capacity. It then compares supply and demand to answer the question of whether McMinnville has enough land to accommodate needed housing at actual densities as posed in the DLCD HB 2709 workbook.

³ Total residential land need includes land needed for new housing during the planning period, and residential land needed for public and semi-public uses.

In brief, the previous section found that 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. This is further described in the discussion below.

Residential land capacity

The buildable lands inventory 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. Data for development that occurred between July 1, 2000 and December 31, 2002 indicate that an additional 83 acres of residential land was developed since the *McMinnville Residential Land Needs Analysis* was completed leaving about 865 gross buildable residential acres as of January 1, 2003.

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 10 shows the development capacity of all vacant, partially vacant, and redevelopable residential tax lots within the McMinnville UGB by zone and land classification as of January 1, 2003. The *McMinnville Residential Land Needs Analysis* found a total capacity of 3,477 dwelling units within the UGB. A total of 528 new dwelling units were built between July 2000, and January 2003, reducing residential capacity by that number of units. Assuming all partially vacant and potentially redevelopable land will develop over the 20-year planning period, McMinnville has a residential capacity of 2,949 dwelling units within its current UGB.

Table 10. Estimated residential development capacity (in dwelling units) inside the current McMinnville UGB, by zone and land classification at full build-out

Zone	Vacant	Partially-Vacant	Potentially Redevelopable	Total
R-1	831	98	0	929
R-2	109	26	0	135
R-3	18	27	24	69
R-4	164	12	26	202
R-5	na	na	na	na
All Other Zones	1,346	268	0	1,614
Total	2,469	430	50	2,949

Source: ECONorthwest, 2000

Analysis of land partitions, however, suggests that development of partially vacant land occurs relatively slowly (see partition history discussion in Chapter 4 of the *McMinnville Residential Land Needs Analysis*). At the resulting average rate of approximately 3 dwelling units per year, a total of 60 new dwelling units would be built on partially developed land that is too small to subdivide between 2003 and 2023.⁴ 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. Despite the fact that many of these partially vacant parcels have been held in their current configuration for decades and will likely not be partitioned—or subdivided—during this planning period, **this analysis assumes that all of the partially-vacant land will develop over the next 20 years.** This is a very aggressive assumption, and one that may overestimate the amount of land available for projected land needs.

Revised residential land need estimate

The housing need forecast estimates that McMinnville will need 6,014 new dwelling units between 2003 and 2023. Subtracting out the estimated residential capacity of lands within the current McMinnville UGB of 2,949 dwelling units yields a need for land capable of accommodating an additional 3,065 dwelling units.

Table 11 shows land needed to accommodate the additional 3,065 units at the *needed* residential densities shown in Table 5. The results show a **need for 537 gross buildable residential acres** beyond existing buildable land (e.g., outside the present McMinnville UGB) to accommodate new residential development.

⁴ Staff review of the partition data presented in Chapter 4 of the *McMinnville Residential Land Needs Analysis* indicates that it included partitions over a 10-year period, but calculated averages over an 8-year period. Thus, the average number of partitions per year dropped from the 3.75 reported in the *McMinnville Residential Land Needs Analysis* to the 3.0 reported in this memorandum.

Table 11. Additional land needed for housing outside the present McMinnville UGB, 2003-2023

Zone	Additional Dwelling Unit Need	Gross Density	Needed Gross Res Acres
R-1	368	3.5	104.1
R-2	1,011	4.3	236.8
R-3	429	5.4	78.9
R-4	705	8.8	80.4
R-5	552	15.0	36.7
All Other Zones	na	na	na
Total	3,065	5.7	536.9

Source: ECONorthwest, 2003

Table 12 shows total residential land need from 2003 to 2023. Including parks and schools, we estimate total need for land designated for residential, public, and semi-public uses at 1,035 gross residential acres.

Table 12. Total additional acres needed in the McMinnville UGB, 2003-2023

Category	Needed Gross Res Acres
New housing	536.9
Group Quarters	13.3
Parks	314.0
Schools	96.0
Private Schools	1.5
Religious	47.6
Government	0.9
Semi-Public Services	22.5
Infrastructure	2.6
Total	1,035.4

Source: City of McMinnville, ECONorthwest

Note: Parkland need assumes the City standard of 14.0 acres per 1,000 residents will be met. The recent \$9 million park bond is a strong indication of the City's commitment to this standard.

Summary of residential land need

Based on population forecasts, assumptions about household size, persons in group quarters, and vacancy rates, McMinnville will need about 6,014 new dwelling units between 2003 and 2023. At needed densities, this translates into a buildable land need of 1,053 acres for residential development. Parks and other public and semi-public facilities are expected to require an additional 485 buildable residential acres for a total residential land need of about 1,538 acres.

As of December 31, 2002, McMinnville had an estimated 865 gross buildable residential acres within its UGB. Based on a tax lot level residential capacity analysis, the 865 gross acres of buildable residential land within the existing McMinnville UGB will accommodate 2,949 residential units. This results in a capacity deficit of 3,065 units. This translates into a need for an additional 537 buildable acres of land needed beyond the existing UGB to accommodate projected residential development (Table 12). Added to this need are about 485 acres needed for development of public and semi-public uses that will also locate on residential land and 13 acres for group quarters housing. **Thus, the total gross vacant buildable residential land need outside the present McMinnville UGB, according to analysis and findings consistent with ORS 197.296 and the DLCD *Planning for Residential Growth* workbook, necessary to accommodate projected growth is 1,035 gross acres (537 acres for residential dwelling units, 13 acres for group quarters, and 485 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?

No. 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 need forecast estimates *needed* density at 5.7 dwelling units per gross acre or 7.2 dwelling units per net acre. The assumption here is that a combination of shifting demand and new policies (measures) can increase the average density of new construction by almost 20% over the next 20 years.

- Is *needed* mix the same as *actual* historic mix?

No. Figure B-1 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 higher percentage of multiple-family units and a corresponding decrease in single-family detached housing.

- Does the UGB contain enough buildable land at *actual* historic densities?

No. The data presented in chapters 5 and 6 of the *McMinnville Residential Land Needs Analysis, May 2001, as revised in this analysis*, indicate the UGB will not accommodate the number of new dwelling units between 2003 and 2023 at actual historic, or needed, densities.

These results assume McMinnville will adopt measures to increase housing density and shift the housing mix to a greater percentage of multi-family dwellings. Residential efficiency measures are described in the memorandum titled *Review of Land Use Efficiency Measures*.

Land needed for employment, 2003-2023⁵

Table 13 shows total employment growth by land use type in McMinnville for 2003, and 2023. The forecast of employment is derived from employment data shown in Table A-4 of the memorandum titled "*Justification for Population and Employment Projections.*" The employment projection indicates McMinnville will add 7,420 new employees between 2003 and 2023.

Table 13. Total employment growth by land use type in McMinnville UGB, 2003–2023

Land use category	Growth			
	2003	2023	2003-2023	Percent
Commercial	2,793	5,540	2,747	37%
Office	5,031	7,978	2,947	40%
Industrial	5,427	6,870	1,443	19%
Public	1,490	1,773	283	4%
Total	14,741	22,161	7,420	100%

Source: ECONorthwest.

The land need estimates that follow are based on the same set of assumptions described in Chapter 6 of the *McMinnville Economic Opportunities Analysis*.

Table 14 shows the amount of new land and built space needed for each land use type in McMinnville over the 2003–2023 period. The results indicate McMinnville will need approximately 367 gross acres to accommodate employment for the 2003-2023 period. An additional 122 acres of commercial and industrial land is needed for public and semi-public uses in addition to those needed for employment shown in Table 14.⁶

⁵ Land need includes lands designated for commercial and industrial uses needed for employment and for public and semi-public uses that will locate on commercial and industrial lands.

⁶ ECO estimates land needed for public and semi-public uses (not including parks) at 197.2 total acres. Not all of this land need will occur on commercial and industrial lands. ECO estimates that public and semi-public uses will require 75.2 residential acres. Thus, $197.2 - 75.2 = 122.0$ non-residential acres).

Table 14. McMinnville vacant land and new built space needed for employment by land use type, 2003–2023

Type	Acres of land		Sq. Ft. of building space	
Commercial	88.9	24%	684,398	24%
Office	83.6	23%	643,984	23%
Industrial	173.8	47%	1,242,836	44%
Public	20.4	6%	285,578	10%
Total	366.7	100%	2,856,796	100%

Source: ECONorthwest.

Revised employment land need estimate

This section compares land demand and supply. The comparison is based on data presented in this chapter and does not consider local policies or economic development strategies that may imply different site requirements and land needs. OAR 660-009-0025 (2) requires cities to designate sufficient land in each site category to accommodate, at a minimum, the projected land needs for each category during the 20-year planning period.

Table 15 shows a comparison of land demand and supply for the McMinnville UGB for the period 2003-2023. The results show that McMinnville has an overall deficit of buildable non-residential land of about 47 acres.⁷ When analyzed by plan designation, however, the results indicate the City has a commercial land deficit of about 117 acres, and an industrial surplus of 70 acres.

⁷ This deficit assumes that the City would redesignate some industrial lands for commercial uses. The City's proposed industrial land retention policy would not typically allow such redesignations to occur. The City proposes to redesignate a small amount of industrial lands to commercial and residential uses. This is essentially a housekeeping measure that reflects more appropriate uses of certain industrial lands. The redesignations are *not* reflected in Table B-15.

Table 15. Comparison of commercial/industrial land demand and supply, McMinnville UGB, 2003-2023

	Plan Designation		Total
	Commercial	Industrial	
Buildable Acres	101.9	339.8	441.7
Vacant Land Demand			
Commercial	192.9		192.9
Industrial		173.8	173.8
Other uses	26.2	95.8	122.0
Surplus (deficit)	(117.2)	70.2	(47.0)

Source: ECONorthwest.

Note: we did not allocate any land demand to the mixed use plan designation.

Comparison and conclusions

The housing and economic technical reports present land supply and demand estimates. The population and employment forecasts presented in the reports are for the period 2000-2020. These figures were updated to the 2003-2023 period for this analysis.

The land supply data in both the reports were more than one year old. City staff updated the buildable lands inventory to December 31, 2002—a date which corresponds to the 2003-2023 forecasting period.

Land supply

Table 16 summarizes buildable land supply by plan designation in the McMinnville UGB. The second column (Gross Acres, July 1, 2000) summarizes land inventory data presented in the *McMinnville Residential Land Needs Analysis* and the *McMinnville Economic Opportunities Analysis*. As of July 1, 2000 McMinnville had about 1,420 gross buildable acres. Between July 1, 2000, and December 31, 2002, an additional 114 acres were developed. The majority of this land (82 acres) was developed in residential uses. Subtracting land developed between July 1, 2000, and December 31, 2002, from the initial inventory leaves approximately 1,310 acres available for development in the McMinnville UGB.

Table 16. Buildable land supply, McMinnville UGB, December 2002

Plan Designation	Gross Acres (July 1, 2000)	Acres	
		Developed (July 1, 2000- Dec 31, 2002)	Gross Buildable Acres (Jan 2003)
Residential	947.0	82.1	864.9
Commercial	115.4	13.5	101.9
Industrial	358.1	18.3	339.8
Mixed Use	2.9	0.0	2.9
Total Buildable Land	1,423.4	113.9	1,309.5

Source: City of McMinnville

McMinnville also proposes to redesignate a number of parcels as part of the land use efficiency measures required by Goal 10 and Goal 14. Table 17 summarizes the impacts of land redesignations. The redesignations add commercial and residential designations, and remove land from the industrial and mixed-use designations.

Table 17. Effect of proposed land redesignations on buildable land supply

Plan Designation	Change in buildable acres
Commercial	0.49
Industrial	(13.82)
Mixed Use	(2.85)
Residential	16.18

Source: City of McMinnville

Table 18. Revised buildable land supply with land redesignations, McMinnville UGB, December 2002

Plan Designation	Gross	Proposed land redesignations	Gross Buildable
	Buildable Acres (Jan 2003)		Acres (w/ redesignations; Jan 2003)
Residential	864.9	16.2	881.1
Commercial	101.9	0.5	102.4
Industrial	339.8	-13.8	326.0
Mixed Use	2.9	-2.9	0.0
Total Buildable Land	1,309.5	0.0	1,309.5

Source: City of McMinnville

The land redesignations shown in Tables 17 and 18 will add approximately 16 acres of buildable land to residential uses. At an average density of 5.9 dwelling units per gross residential acre, the proposed land redesignations would accommodate approximately 95 new dwelling units.

Table 19 provides a detailed summary of land needed, by plan designation, to accommodate forecast population and employment growth between 2003 and 2023. The estimates indicate that McMinnville will need about 2,027 acres of buildable land under the assumptions implicit in the provisional estimate. The majority of this land (1,538 acres) will be needed for residential uses.

McMinnville will need about 219 acres of commercial land, which will support commercial uses as well as public and semi-public uses that will locate on commercial land. McMinnville will need about 270 acres of industrial land, including industrial uses as well as public and semi-public uses that will locate on industrial land.

Table 19. Demand for land by plan designation and use, McMinnville, 2003-2023

Planned Land Use	Gross Acres
Residential Plan Designation	
New Housing	1,053.2
Parks	314.0
Public Schools	96.0
Private Schools	1.5
Religious	47.6
Government	0.9
Semi-Public Services	22.5
Infrastructure	2.6
Residential Subtotal	1,538.4
Commercial Plan Designation	
New Commercial	192.9
Public Schools	0.0
Private Schools	0.3
Religious	7.8
Government	13.7
Semi-Public Services	3.5
Infrastructure	0.9
Commercial Subtotal	219.1
Industrial Plan Designation	
New Industrial	173.8
Public Schools	0.0
Private Schools	0.0
Religious	0.0
Government	66.3
Semi-Public Services	18.1
Infrastructure	11.5
Industrial Subtotal	269.7
Total Projected Land Need	2,027.2

Source: McMinnville Residential Lands Study; McMinnville Economic Opportunities Analysis

Table 20 compares land supply and demand in the McMinnville UGB for the period 2003-2023. The comparison shows that, in the absence of changes in plan designations, McMinnville will require approximately 1,125 acres of buildable land

beyond the supply presently in the City's UGB. Deficits exist in land designated for residential and commercial uses. McMinnville has a surplus of about 46 acres of buildable industrial land. The industrial land is not factored against the deficits because the City needs the industrial sites to support its economic development strategy.

Table 20. Comparison of land supply and demand, McMinnville UGB, 2003-2023

Plan Designation	Land Need (2003-2023)	Gross Buildable Acres (Jan 2003)	Deficit (Surplus)
Residential ^a	1,538.4	881.1	1,019.2
Commercial	219.1	102.4	106.0
Industrial	269.7	326.0	(44.7)
Total Buildable Land Need Outside UGB	2,027.2	1,309.5	1,125.2

Source: ECONorthwest, 2003

^a Application of residential carrying capacity analysis produces an unmet residential need of 537 acres and does not allow a simple supply/demand calculation to occur. See Table 11.

Notes:

Commercial land need is reduced by 11.7 acres. The City estimates that some commercial development will occur on industrial lands. See Industrial Land Measures in Chapter 6. The industrial land surplus is reduced by a similar amount. Total buildable land deficit does not include the surplus of industrial land. McMinnville will maintain a 45 acre surplus of industrial land during the planning period.

Supporting Data: Residential land needed for public and semi-public uses

This section updates the section of the *McMinnville Residential Land Needs Analysis* that discusses residential land needed for public and semi-public uses. The update is required because the revised population projection results in 15,545 new persons in the McMinnville UGB between 2003 and 2023.

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
- Infrastructure

While land needed for public schools and parks are addressed in the following sections, Table 21 shows acres in public use for all other classifications. McMinnville has about 1,099 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 21. 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 only 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 22 below.

Table 22. 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 23 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 23. Estimated parkland need, 2000-2020

Park Type	Current Net Acres	Adopted Standard	Acres Needed for 44055 Population	Projected Acreage Deficit (Need)
Neighborhood Parks	0	2.0 acres / 1000	88.11	88.11
Community Parks	145.49 ^a	6.0 acres / 1000	264.33	118.84
Greenways/ Greenspaces/ Natural Areas ^b	102.50	6.0 acres / 1000	264.33	106.81
Subtotals	247.99		616.77	313.76
			Total Projected Need	314 Acres

Source: City of McMinnville, 2003

^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 55.02 acres representing a 34% floodplain usage factor found in other parkland of this type

Land needed for schools

No adjustments were made for land needed for schools. The *McMinnville Residential Land Needs Analysis* presented the following conclusion with respect to land needed for schools:

“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-public land 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.⁸

The City used *net* acres per 1,000 persons as the basis for estimates of other public and semi-public land needs.⁹ The acres per 1,000 persons assume a year 2000 population of 25,153 persons and the acreages presented in Table 21. Acres per 1,000

⁸ The McMinnville Airport has no long-range expansion plans and is located entirely on land designated for industrial use.

⁹ 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, and physical land features are not considered. We use net acres as the basis because detailed information was not available on “parent” lot sizes, precluding the development of a net-to-gross factor for public and semi-public lands.

persons was then multiplied by projected population growth (15,545 persons) to develop total land need, which was then multiplied by the percent on residential land to estimate residential acres needed.

Table 24. Other public/semi-public land needs, 2003-2023

Use Type	Acres/1000 Persons	Total Need, 2003-2023	Percent on Residential	Residential Acres Needed, 2003- 2023	Non-Res Acres Needed, 2003-2023
Private Schools	0.1	1.8	83%	1.5	0.3
Religious	3.6	55.4	86%	47.6	7.8
Government	5.2	80.9	1%	0.9	80.0
Semi-Public Services	2.8	44.2	51%	22.5	21.7
Infrastructure	1.0	14.9	18%	2.6	12.2
Total	12.7	197.2	na	75.2	122.0

Source: City of McMinnville; analysis by ECONorthwest, 2003

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