Newberg Urban Reserve Area Expansion

2051 Buildable Lands Inventory & Lands Need Assessment

Yamhill County, Oregon

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Prepared for:
Brian and Kathy Bellairs
31544 NE Corral Creek Road
Newberg, Oregon 97132

Prepared by:
DOWL
720 SW Washington Street; Suite 750
Portland, Oregon 97205
Contact: Read Stapleton, AICP
Phone: 971.280.8646

DOWL

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1. Executive Summary

- DOWL's assessment of available data shows that the City of Newberg's (City) existing Urban Reserve Areas (URA) contains sufficient buildable lands to accommodate forecasted growth through the year 2041. Additional lands will be required to accommodate forecasted growth through 2051 in order to ensure that the City's URAs provide sufficient land for a minimum of a 30-year growth horizon per Oregon Administrative Rule (OAR) Section 660-021-0030.
- The City's existing URAs consists of 557 gross acres of land. DOWL's Buildable Lands Inventory Analysis for Newberg's Urban Reserve Areas (Section 3 of this report) shows that there are approximately 320 gross acres of buildable land within the City's existing URAs. Subtracting 25 percent for future public infrastructure and rights-of-way, there are approximately 240 acres of net buildable land within the City's existing URAs.
- DOWL reviewed the results of the City's 2021 – 2041 Housing Needs Analysis (HNA) and Economic Opportunities Analysis (EOA) to assess land sufficiency within the existing Urban Growth Boundary (UGB). These studies show that, over the period between 2021 to 2041, there is a land deficit within the City's UGB of approximately 245 gross acres, including 81 for residential land, 152 for industrial land, and 12 acres of industrial land for public and semi-public uses. (As discussed later in this document, semi-public uses include lands for churches, non-profit organizations, and related public institutional uses.)
- A comparison of the results of DOWL's Buildable Lands Analysis for Newberg's Urban Reserve Areas (Section 3 of this report) and the City's 2021 – 2041 HNA and EOA shows that there is a surplus of 75 acres within the existing URA to meet the City's land needs for the 2021 to 2041 period. However, issues such as land suitability for employment and residential uses and current development patterns may result in a greater land need within the City than what a quantitative buildable lands inventory assessment demonstrates.
- Using the methodology and assumptions from the City's 2021 – 2041 HNA, DOWL calculated the total buildable land needed in residential plan designations for the 2041 to 2051 time period and determined that 242 acres of buildable residential land is needed; including 116 acres for Low Density, 94 acres for Medium Density, and 32 acres for High Density residential.
- Using the methodology and assumptions from the City's 2021 – 2041 EOA, DOWL calculated the City's total land need for employment uses for the period between 2041 to 2051 to be 170 acres of new buildable land. This total includes 13 gross acres for retail land, 56 acres for office and commercial services, and 101 acres for industrial land.
- Using the methodology and assumptions from the City's Public and Semi-Public Land Need 2021 – 2041 Memorandum, DOWL determined that the City's total buildable land need for public and semi-public uses for the period between 2041 to 2051 is 63 acres. This total includes 9 acres for City uses, 1 acre for Yamhill County (County) uses, 35 acres for parks and 18 acres for semi-public lands.
- In total, the City will need 475 gross acres of new buildable land to satisfy the total land need projected for the 10-year period between 2041 to 2051. Of this projected need of 475-acres, 75 acres may be met through available buildable land within the City's current URA.

- These analyses show that the City will need to add land to its URA to accommodate an additional 400 acres of residential and employment land to ensure adequate land supply for the 30-year period between 2011 and 2051.

2. Introduction

This report has been prepared to assess the sufficiency of the City's existing URA to accommodate future growth within the City over the 30-year time period between 2021 and 2051. OAR Section 660-021-0030(1) states that "*Urban reserves shall include an amount of land estimated to be at least a 10-year supply and no more than a 30-year supply of developable land beyond the 20-year time frame used to establish the urban growth boundary*". The City's most recent available data on land needs, the Housing Needs Analysis (HNA), Economic Opportunities Analysis (EOA) and Public and Semi-Public Land Need Memorandum, were prepared by EcoNorthwest in 2021 and assesses land needs over the 20 year time period from 2021 through 2041. Therefore, additional analysis was required to determine sufficiency of the City's URA to accommodate the 30 year planning horizon pursuant to 660-021-0030(1).

DOWL has based its analysis on key findings and conclusions drawn from the City's most recent 2021 – 2041 HNA, EOA, and Public and Semi-Public Land Need Memorandum prepared by ECONorthwest in 2021. DOWL has summarized the results of these studies to describe the City's land needs for residential, commercial, industrial, and public lands for the period of 2021 through 2041. DOWL then used methodology from the 2021 – 2041 HNA, EOA, and Public and Semi-Public Land Need Memorandum to assess the additional forecasted need for the period between 2041 and 2051 to determine a total 30-year forecast of land need as allowed under OAR Section 660-021-0030.

DOWL has reviewed available data and studies to compare availability of buildable land within the URA with expected need for buildable land due to forecasted growth. This report contains three separate analyses. Section 3 is a buildable lands inventory (BLI), conducted by DOWL, of all parcels with the City's current URA to determine available buildable acreage. Section 4 is a review of the most recent available housing and economic data for the City to determine land deficit within the current UGB through the year 2041. Section 5 compares the results of Section 3 and 4 to summarize land sufficiency for the 2021 to 2041 time period. Section 6 is a forecast of housing and employment growth from 2041 to 2051, conducted by DOWL using methodology from the City's most recent housing and economic studies. The results of these analyses show that the City's existing URA contains sufficient buildable lands to accommodate forecasted growth through the year 2041, but additional land will be required to accommodate forecasted growth through 2051.

3. Buildable Lands Inventory for Newberg's Urban Reserve Areas

3.1 Buildable Lands Inventory Methodology

The City has approximately 557 gross acres of land in its URAs. As shown on Map A, the City's URAs consists of four separate areas:

- North Hills URA – approximately 409 gross acres located north/northeast of the city boundary.
- Klimek Lane URA – approximately 29 gross acres located east of the city boundary.

- Springbrook Road South URA – approximately 69 gross acres located southeast of the city boundary.
- Wynooski Road URA – approximately 49 gross acres located southeast of the city boundary.

DOWL conducted a buildable lands analysis of the City's existing URAs to determine the net buildable area. The methodology for DOWL's URA BLI was based on the methodology used in the City's most recent 2021 – 2041 HNA conducted by ECONorthwest[1]. The general structure of ECONorthwest's BLI analysis was based on the Department of Land Conservation and Development (DLCD) HB 2709 workbook *Planning for Residential Growth – A Workbook for Oregon's Urban Areas*.

The steps and substeps in the ECONorthwest HNA supply inventory are:

1. Calculate the gross vacant acres by plan designation, including fully vacant and partially vacant parcels.
2. Calculate gross buildable vacant acres by plan designation by subtracting unbuildable acres from total acres.
3. Calculate net buildable acres by plan designation, subtracting land for future public facilities from gross buildable vacant acres.
4. Calculate total net buildable acres by plan designation by adding redevelopable acres to net buildable acres.

DOWL's analysis followed this methodology, with the exception of consideration of plan designations since the City does not currently have plan designations for URAs. DOWL's methodology is detailed below. DOWL's BLI for the existing URAs included a geospatial analysis using the data sources listed in Table 1 on the next page.

[1] This methodology was employed in ECONorthwest's 2019 and 2021 Housing Needs Analyses.

Table 1: Data sources for Newberg URA BLI

Data	Source	Description
Tax lots – Yamhill	Yamhill County Assessor	Tax lot boundaries for the entire County, including roads.
City Boundaries	Yamhill County Planning & Development	Includes City limits, UGB, and URAs
UGB	Yamhill County Planning & Development	2015 UGBs
Counties	Yamhill County Planning & Development	2015 County boundaries
Stream Corridors	City of Newberg	Perennial streams
Streams Centerlines	Oregon Spatial Data Library	Stream centerlines for the entire state
Zoning & Comprehensive Plan Designations	Yamhill County Planning & Development	Zoning & Comprehensive Plan Designations outside incorporated city boundaries
Landslide areas	DOGAMI SLIDO 3.2 database	DOGAMI mapped landslide areas
Special Flood Area	Oregon Spatial Explorer – statewide FEMA FIRM database	Areas of special flood hazard
Wetlands	National Wetland Inventory	Wetlands defined in the National Wetland Inventory
ODOT Bypass Interchange Overlay	City of Newberg	Area planned for the Newberg-Dundee Bypass

The steps of DOWL's BLI, adapted from the City's 2021 – 2041 HNA, are listed below.

- **Classify lands.** To determine gross buildable area, DOWL classified land into the categories using the methodology in the 2021 – 2041 HNA Residential Buildable Lands Inventory. Using the County Assessor's Real Estate Data file, each tax lot within the URA was classified into one of the following categories:
    - **Vacant land**. Lands were considered vacant where the improvement value equaled zero.
    - **Partially vacant land**. Partially vacant tax lots are those occupied by a use, but which contain enough land to be further subdivided without need of rezoning. This inventory used the methodology stated in Section 2 of the 2021 – 2041 HNA which *"uses the OAR 660-024-0050(2)(a) safe harbor: "The infill potential of developed residential lots or parcels of one-half acre or more may be determined by subtracting one-quarter acre (10,890 square feet) for the existing dwelling and assuming that the remainder is buildable land." "*
    - **Redevelopable land.** Land that was not considered vacant or partially vacant was classified as redevelopable where the ratio of improvement-to-land value is less than 1:1.
    - **Public land**. Lands in public ownership are mostly considered unavailable for residential uses. The only buildable land within the URA under public ownership, excluding streets, was owned by the Oregon Department of Transportation (ODOT). These properties

were removed from the BLI.

- **Unbuildable land.** Tax lots that are too small to practically have a dwelling unit (less than 3,000 square feet), buildable areas of a tax lots (after removing constraints) that are less than 3,000 square feet. These properties were removed from the BLI.

- **Identify constraints**. DOWL deducted portions of tax lots that fall within certain constraints from the vacant, partially vacant and redevelopable lands (e.g., wetlands and steep slopes). DOWL used the same categories used by the City's 2021 – 2041 HNA, which is consistent with OAR 660-008-0005(2):

  - **Lands within floodplains and floodways.** Yamhill County GIS Floodplain data was used to identify lands in floodways and 100-year floodplains.
  - **Land within natural resource protection areas.** Yamhill County GIS Wetlands data, which is derived from the National Wetlands Inventory, was used to identify wetland areas. Stream data from the City of Newberg was used to identify areas within the stream corridor. Since stream corridor data from the City of Newberg does not cover the entire URAs, DOWL also used stream centerline data from the Oregon Geospatial Data library, applying a 60-foot buffer to include the required 50-foot riparian buffer plus an estimated 10-foot wide stream.
  - **Land within landslide hazards.** The Department of Geology and Mineral Industries (DOGAMI) Statewide Landslide Information Database for Oregon (SLIDO) database and landslide susceptibility data sets were used to identify lands with landside hazards. DOWL included lands with "very high" or "high" susceptibility to landsides in the constrained area.
  - **Land with slopes over 25 percent.** Lands with slopes over 25 percent are considered unsuitable for residential development. These areas were calculated using DOGAMI Light Detection and Ranging (LIDAR) data.
  - **Land identified for future public facilities.** DOWL removed area planned for the Newberg-Dundee Bypass using GIS data obtained from the City of Newberg.

  After deducting constraints, vacant, partially vacant, and redevelopable lands greater than 3,000 square feet were classified as "buildable lands."

3.2 Results

The results of DOWL's BLI analysis showed that there are approximately 320 gross acres of buildable land within the City's existing URAs, including 47.7 acres of vacant buildable land, 271.4 acres of partially vacant buildable land and 1.4 acres of redevelopable buildable land. The low total for redevelopable buildable land is due to the fact that most lots within the URA are greater than one half acre and therefore were categorized as partially vacant. Subtracting 25 percent of the land area for public infrastructure and rights of way, consistent with Newberg's Comprehensive Plan Policy I.1.b[2], there are approximately 240 acres of net buildable land within the City's existing URAs.

[2] The Target Densities stated in The Newberg Comprehensive Plan Housing Policies (I.1.b) include a 25 percent allowance for streets, walkways and other rights-of-way, utilities, small open spaces, preservation of resources, and similar features

Table 2: Newberg Urban Reserves Area Buildable Land Inventory

Category	Buildable Land (ac.)
Vacant	48
Partially Vacant	271
Redevelopable	1
Total	**320**
Right-of-way deduction	*25%*
Total Net Buildable	**240**

Source: DOWL GIS Analysis

4. Newberg Land Needs – 2021 to 2041

After determining the buildable acreage within the City's URAs, DOWL reviewed available information on the City's land needs to determine if there is a need to expand the City's URA. First, DOWL looked at existing data available for the 2021-2041 time period, using the 2021 – 2041 HNA and EOA prepared by ECONorthwest in 2021. The results of those studies are summarized below.

4.1 Residential Land Needs

The 2021 – 2041 HNA shows that the City, including areas within the UGB, has a surplus of land within the 20-year growth horizon for Low Density residential plan designations and a deficit of land for development in Medium and High-Density residential plan designations. There is a surplus of 31 gross acres for Low Density residential land. There is a deficit of 37 gross acres for Medium Density residential land and 44 acres for High Density land; these EcoNorthwest calculations for Medium and High Density land include what is needed for group quarters housing, employment, and public and semi-public uses in residential districts.

4.2 Employment Land Needs

The 2021 – 2041 EOA shows that the City, including areas within the UGB, has a surplus of land for commercial uses and a deficit of land industrial uses. There is a surplus of 21 gross acres of land for commercial uses, including office and retail. The City has a deficit of 96 sites or 152 acres of land for industrial uses. Additionally, the City will need an additional 2.9 acres of commercial land and 12.3 acres of industrial land for public and semi-public uses. DOWL's assessment of the results of the 2021 – 2041 EOA assumes that the 2.9 acres of commercial land for public and semi-public uses can be accommodated in the 21 acres of commercial surplus land. Therefore, the deficit in employment land consists of 164 acres, including 152 acres of private industrial land and 12 acres of industrial land for public and semi-public uses.

4.3 2021 to 2041 Land Needs Analysis Results

An assessment of the most recent 2021 – 2041 HNA and EOA shows the City, including areas in the UGB, have a deficit of 37 gross acres for Medium Density Residential Land, 44 acres for High Density land and 164 acres for Industrial land over the 2021 to 2041 time period. Table 3 below shows a summary of the land sufficiency analysis results of the aforementioned studies; land deficit is shown in with negative numbers.

Table 3: Newberg Land Sufficiency 2021-2041

Plan Designation	Land Surplus or Deficit (gross ac.)
Residential	
Low Density	31
Medium Density	-37
High Density	-44
Employment	
Commercial	18
Industrial	-164
Total Deficit	-245

Source: City of Newberg Housing Needs Analysis and Economic Opportunities Analysis for 2021 to 2041.

Table 3 shows the total deficit of land within the City's UGB for the 2021 to 2041 period is 245 gross acres in Medium and High-Density residential and Industrial plan Designations. The following section compares the most up to date land needs data with DOWL's buildable lands inventory for the City's URA.

5. Newberg Land Sufficiency Conclusions – 2021 to 2041

As demonstrated in the Section 4 of this report, the total deficit of land within the City's UGB for the 2021 to 2041 period is 245 gross acres. DOWL inventoried the buildable acreage within City's URAs to determine how much of the 20-year land deficit can be accommodated within existing URA. DOWL's BLI showed there are 320 gross acres of unconstrained buildable land within the existing URA. This leaves a surplus of 75 acres within the URA over the 2021-2041 time period. This analysis shows that growth in the 20-year time period may be accommodated within the City's existing URAs, but future growth beyond 2041 may require an expansion of the URA.

Furthermore, some areas within the URA are not suitable to meet specific land needs. For instance, the North Hills URA contains steep slopes and hillsides that are not suitable for industrial uses, which generally require land on slopes of seven percent or less. Additionally, the Wynooski Road URA is fragmented with environmental constraints and would not be suitable for uses that require larger sites, such as certain industrial uses identified as potential growth industries in the 2021 – 2041 EOA.[3] Therefore, even where sufficient acreage exists, the City may need additional land brought into the UGB to meet the site needs of future employment uses. Additionally, based on conversations with City planning staff (Doug Rux, Community Development Directory, March 3rd, 2021), DOWL understands that some areas in commercial plan designations are currently being developed as residential and industrial, and these development patterns could result in a shortage of commercial land within an estimated five year timeframe. Therefore, this BLI is a conservative quantitative estimate that does not show the full picture of land need in the City. Issues such as land suitability for employment and residential uses and current development patterns may result in a greater land need within the City than a quantitative assessment can show.

[3] The 2021 – 2041 EOA identified a site size of 5-100 acres for Tech and High Tech Manufacturing and 5-25 acres for Advanced General Manufacturing, Food/ Beverage Processing and Agricultural Products, Forestry and Wood Products, and Aviation related industries.

6. Newberg Land Needs – 2041 to 2051

To determine land sufficiency within the City's URA beyond the 20-year time frame, DOWL used the Portland State University (PSU) Population Research Center (PRC) Forecast for Newberg to calculate land needs for the City for the 30-year timeframe. Since the most recent available data from ECONorthwest runs through the year 2041, and PSU population forecasts are only available at 5-year intervals, DOWL's assessment calculated population forecasts for the years 2041 and 2051 using the forecasts for 2040, 2045, 2050 and 2055 and PSU's Population Forecast Interpolation Template (for forecasting single-year time intervals). DOWL then calculated the average annual growth rate (AAGR) for population between 2041 and 2051 and used this growth rate to calculate land needs for the period between 2041 and 2051. The methodology for this analysis is detailed below.

6.1 Land Needs Methodology summary

To calculate land need for the 30-year time period, DOWL calculated average annual growth rates for population and employment, then used the same calculations and assumptions employed by ECONorthwest in the City's most recent 2021 – 2041 HNA and EOA to calculate employment and housing land needs for the 2041 to 2051 time period.

Population Forecast for 2041 through 2051

Based on the most recent PSU population forecast for the City's UGB, released in 2020, and PSU's Population Forecast Interpolation Template, the City's UGB is expected to have a population of 33,199 by 2041 and 37,764 by 2051. The average annual growth rate (AAGR) for the period between 2041 and 2051 is 1.37 percent. The growth rate between 2041 and 2051 is slightly lower than the AAGR of 1.39 percent for the period between 2021 and 2041, which was used to calculate land needs in the most recent 2021 – 2041 HNA and EOA. This shows that population growth is expected to slow slightly in the longer term.

Table 4: Newberg UGB Population Growth 2041-2051

PSU Population Forecast		Change 2041-2051 (number)	Change 2040-2050 (percent)	Average Annual Growth Rate (AAGR)
2041	2051			
33,199	37,764	4,565	13.7	1.37 %

Source: Portland State University 2020 Population Forecasts for years 2040, 2045, 2050, and 2055, PSU's Population Forecast Interpolation Template, DOWL calculations

Consistent with the methodology in the City's most recent 2021 – 2041 HNA and EOA, DOWL used the change in population from 2041 to 2051 to calculate the demand for new residential land and the 1.37 percent AAGR to calculate employment land needs for the 2041 and 2051 time period.

6.2 Residential Land Needs

Calculating new land required for residential uses between 2041 and 2051 requires the determination of population change between this time period. Based on the PSU population forecasts in Table 4, the population of the City is expected to grow by 4,565 between 2041 and 2051. This number was then used to calculate the demand for new residential units, using the same methodology and assumptions used in the 2021 – 2041 HNA.

Table 5 below calculates the forecasted demand for new dwelling units between 2041 and 2051. The calculations shown in Table 5 were derived using the same assumptions for percentage of persons in group quarters housing, household size and aggregate vacancy rate as was used in the 2021 – 2041 HNA to calculate new dwelling unit demand for 2021 through 2041 (shown in Exhibit 47 of the HNA). The result of these calculations shows that the City's UGB will need to meet demand for 1,809 new dwelling units over the period of 2041 to 2051, or 181 new units per year.

Table 5: Forecast of Demand for New Dwelling Units, Newberg UGB, 2041 to 2051

Variable	New Dwelling Units (2041-2051)
Change in persons	4,565
minus Change in persons in group quarters	-89
equals Persons in households	4,476
Average household size	2.61
New occupied DU	1715
times Aggregate 5.5% vacancy rate	.055
equals Vacant dwelling units	94
Total new dwelling units (2041-2051)	**1809**
Annual average of new dwelling units	**181**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 HNA, Exhibit 47

DOWL then calculated the demand for new dwelling units that would be met through redevelopment or accessory dwelling units (ADU), using the ratio demand for ADUs and redevelopment to total demand for new dwelling units assumed in the 2021 – 2041 HNA (shown in Exhibit 50 and 51 of the HNA). The 2021 – 2041 HNA assumed 3.8 percent of the total new dwelling unit demand would be met through ADUs or redevelopment. Using that same percentage, DOWL assumes that demand for 69 of the 1,809 units would be met through ADUs or redevelopment and the remaining demand of 1,740 new units would be met through new residential development.

DOWL then calculated the percentage of new dwelling units needed for the 2041 to 2051 period by housing type, based on the percentages used in Exhibit 49 of the 2021 – 2041 HNA. Of the 1,740 new dwelling units needed for 2041 to 2051, 60 percent, or 919 units, are allocated to single-family detached housing, 8 percent or 123 units are allocated to single-family attached, and 32 percent of 490 units are allocated to multifamily**.**

Table 6: Forecast of Demand for New Dwelling Units by type, Newberg UGB, 2041 to 2051

Housing Type	Percent of New Dwelling Units	Number of New Dwelling Units
Single-family detached	60	919
Single-family attached	8	123
Multifamily	32	490
Total	**100**	**1740**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 HNA, Exhibit 49

The next step is to allocate the remaining needed housing units (after accounting for ADUs and redeveloped units) to plan designations in the City. This allocation is based on the types of housing allowed in the zoning designations in each plan designation, as described in the 2021 – 2041 HNA (page 72-73 and

Exhibit 52). The 2021 – 2041 HNA divided the total demand for each housing type category between Low, Medium, and High-Density residential plan designations (LDR, MDR, and HDR respectively), as well as the Northwest Newberg Specific Plan area and the Springbrook District. DOWL's analysis assumes buildout for the Northwest Newberg Specific Plan area and the Springbrook District are accommodated within the UGB in the 2021 to 2041 time period, and therefore only considered the Low, Medium, and High-Density categories. To replicate the allocation assumptions from the 2021 – 2041 HNA Exhibit 52, minus the plan areas, DOWL subtracted the number of units allocated to the plan areas from the total new dwelling units (3049-1413=1636), then calculated the number of units for each housing type allocated to LDR, MDR, and HDR as a percent of the remaining total (1,636). DOWL then used these 'Percent of Units' calculations, shown in Table 7 below, to allocate housing types to residential plan designations for the 2041 to 2051 period.

Table 7: Allocation of Needed Housing that Requires Vacant and Partially Vacant Lands, by Housing Type and by Plan Designation, Newberg UGB, 2041 to 2051

Comprehensive Plan Designation	Residential Plan Designations			Total
	Low Density	Medium Density	High Density	
Dwelling Units				
Single-family detached	513	486	0	999
Single-family attached	0	13	6	19
Multifamily	10	162	551	722
Total	**522**	**660**	**557**	**1740**
Percent of Units				
Single-family detached	29.5%	27.9%	0.0%	57.4%
Single-family attached	0.0%	0.7%	0.4%	1.1%
Multifamily	0.6%	9.3%	31.7%	41.5%
Total	**30.0%**	**38.0%**	**32.0%**	**100.0%**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 HNA Exhibit 52, after subtracting dwelling units allocated to plan areas.

As shown in Table 7 above, for the 2041 to 2051 time period, the City will need to accommodate 522 units in Low Density plan designations, 660 units in Medium Density plan designations, and 557 units in High Density plan designations. DOWL then calculated the acreage that will be required to meet this demand, using the density assumptions from the 2021 – 2041 HNA, as shown on Exhibit 53 of that report. Assuming an additional 25 percent for rights-of-way[4], these calculations result in a gross density of 4.5 dwelling units per acre for LDR, 7 for MDR, and 17 for HDR plan designations.

[4] The EcoNorthwest HNA for 2021 to 2041 assumed 20 percent for rights-of-way in Low and Medium Density residential areas, and 17 percent in High Density residential areas. However, City of Newberg staff (Doug Rux, Community Development Director, January 22, 2021) recommended using a 25 percent allowance for consistency with the Target Densities of the Newberg Comprehensive Plan Housing Policies, (I.1.b), which includes a 25 percent allowance for streets, walkways and other right-of-ways, utilities, small open spaces, preservation of resources, and similar features.

Table 8. Land Need for New Dwelling Units, by Plan Designation, Newberg UGB, 2041 to 2051

Residential Plan Designations	Total New Units	Avg. Net Density (DU/net ac.)	% for Rights-of-Way	Avg. Gross Density (DU/ gross ac.)	Total acres needed
LDR	522	6	25	4.5	116
MDR	660	9.5	25	7	94
HDR	557	22.6	25	17	32
Total	**1740**				**242**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 HNA, Exhibit 53.

The total acres of land needed to accommodate housing on vacant and partially vacant land for the 2041 to 2051 time period is therefore 242 acres; including 116 in Low Density areas, 94 in Medium Density areas, and 32 in High Density areas.

6.3 Employment Land Needs

Employment Growth

DOWL calculated employment land needs for the City's UGB for the 2041 to 2051 time period, using the methodology and assumptions in the City's 2021 – 2041 EOA. The employment projections in the 2021 – 2041 EOA rely on the safe harbor provision described in OAR 660-024-0040(9)(a)(B), which allows the City to assume that the current number of jobs in the City's UGB will grow during the 20-year planning period at a rate equal to the population growth rate provided in the most recent forecast published by Portland State University's Oregon Population Forecast Program. As stated in that report, a 1.39 percent AAGR was used to calculate the City's employment growth for the 2021 to 2041 time period. As demonstrated in section 6.1 of this report, the AAGR for the 2041 to 2051 time period is 1.37 percent; this number was used for employment growth calculations for this time period.

The baseline employment estimate used for DOWL's employment growth calculations is 18,486 employees as of 2041; this was the estimate City's 2021 – 2041 EOA arrived at, as is shown in Exhibit 8 of the 2021 – 2041 EOA. Using an AAGR of 1.37 percent, the City can expect a total of 21,181 employees, including 2,695 new employees by 2051.

DOWL then used the same employment share percentages used in Exhibit 9 of the 2021 – 2041 EOA to determine the employment mix of new employment growth through 2051. The 2021 – 2041 EOA assumed 32 percent of new employment growth would be in industrial jobs, 9 percent for retail, 53 percent of office and commercial services and 6 percent for government jobs. Using these same percentages, DOWL assumes over the 2041 to 2051 time period, the City will grow by 862 industrial jobs, 243 retail jobs, 1428 jobs in office and commercial services and 162 government jobs.

Table 9: Newberg New Employment and Employment Mix, 2041 to 2051

Employment Type	Percent of New Employment	Number of New Employment
Industrial	32	862
Retail	9	243
Office/ Commercial Services	53	1,428
Government	6	162
Total	**100**	**2,695**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 EOA, Exhibit 9.

Retail and Commercial Employment Growth

Next DOWL estimated the need for new land to accommodate new employment growth over the 2041 to 2051 time period, using the methodology and assumptions from Section 3 of the City's 2021 – 2041 EOA. For retail and office and commercial services, the methodology for determining need for new vacant land was based solely on density. The 2021 – 2041 EOA assumed 74 percent of new employment growth for retail and office and commercial services would require vacant land, with the remaining growth being accommodated through employment in residential plan designations or in existing built space (EOA pages 34-5 and Exhibit 10). The 2021 – 2041 EOA then calculated new employment land needs under the assumption that retail will have an average of 16 employees per acre and office and commercial services will have an average of 22 employees per acre.

Using this same methodology, the net land need for 2041 to 2051 is 11 acres for retail and 48 acres for office and commercial services. DOWL then used the net-to-gross conversion factor of 16 percent for commercial uses, as was used in the 2021 – 2041 EOA, to account for land needed for public right-of-way.

Table 10: Newberg New Commercial Employment and Land Need 2041 to 2051

Employment Type	New Employment	New Employment on Vacant Land	Density (Employees per ac.)	Land Demand (Net ac.)	Land Demand (Gross ac.)
Retail	243	180	16	11	13
Office & Commercial Services	1,428	1,057	22	48	56
Total	**1,671**	**1,237**		**59**	**69**

Source: DOWL calculations using assumptions from City of Newberg 2021 – 2041 EOA, Exhibits 10 and 11.

Using these assumptions, the forecasted growth of 1,237 new commercial employees will result in the demand for 69 gross acres of vacant and partially vacant commercial employment land, including 13 acres of retail commercial land and 56 gross acres of office and commercial services land.

Industrial Employment Growth

The 2021 – 2041 EOA categorized industrial land needs by site size, then totaled the acreage needed for all industrial site sizes; this analysis determined 281 acres of industrial land is needed for the period between 2021 to 2041, which is just under .12 acres per employee. DOWL used this ratio to determine industrial land needs for the 2041 to 2051 time period. For the 862 new industrial employees projected for the 2041 to 2051 time period, approximately 101 acres of industrial land will be needed.

Total Employment Land Needs 2041 to 2051

Using the methodology and assumptions from the 2021 – 2041 EOA, DOWL calculated the total land need for employment uses for the City's UGB for the period between 2041 to 2051. These calculations show that 170 acres of new vacant or partially vacant employment land will be needed with the City's UGB by 2051, which includes 13 acres for retail, 56 acres for office and commercial services, and 101 acres for industrial uses.

6.4 Public Land Needs

The need for public facilities such as schools, governments, churches, parks, and other non-profit organizations will expand as population increases. This analysis calculates public land needs for the 2041 to 2051 time period using methodology from the City's Public and Semi-Public Land Need Memorandum prepared by EcoNorthwest in January 2021. The discussion of public land needs is divided into three sections—municipal, parks, and public schools.

Municipal

Municipal land includes needs for the City, County, the State of Oregon, and the U.S. Federal Government. The City does not have any existing federal facilities, other than post offices, in the existing UGB. Consistent with EcoNorthwest's January 2021 Public and Semi-Public Land Need Memorandum, this analysis provides an estimate of land needs for city, county, and state land and assumes the City will not need land for new federal facilities.

City

Between 2021 and 2041, the City estimated that it will need about 15.4 acres of new land for City uses including public works, library, city hall, and parking. This land need equates to a ratio of 1-acre of City land per 519 new residents, given that the City is expected to grow by 7,995 residents over that 20-year period. Assuming this same ratio of public land need per resident will continue as currently exists, the City will need an additional approximately 9 acres of land for city public uses from 2041 to 2051.

County

The Public and Semi-Public Land Need Memorandum concluded that the County will need an additional 2 acres for transit facilities. Assuming this same ratio of land need will continue, the City will need approximately 1 acre of land for county public uses from 2041 to 2051.

State

ODOT anticipates needing land for the Newberg-Dundee Bypass. DOWL used ODOT GIS data of the Bypass boundary in the Buildable Lands Inventory, removing land for the Bypass as well as ODOT-owned properties in the URA from the buildable land calculations. Therefore, ODOT land need was not included in this public land needs assessment to avoid duplication.

Parks

The Comprehensive Plan includes level of service standards for two types of parks: Neighborhood and Community Parks. Neighborhood Parks have a level of service standard of 2.5 acres per 1,000 residents and Community Parks have a level of service standard of between five and eight acres per 1,000 residents. This analysis assumed 5 acres per 1,000 residents for Community Parks, consistent with EcoNorthwest's

Public and Semi-Public Land Need Memorandum. The City is expected to grow by 4,565 residents between 2041 to 2051. Using the level of service calculations for the expected population growth, the City will need approximately 35 acres for parks including 11.5 acres for Neighborhood Parks and 23 acres for Community Parks. Consistent with the Public and Semi-Public Land Need Memorandum, this analysis assumes that future park areas will be located on land designated as residential, evenly distributed among all plan designations.

Schools

The Newberg School District does not foresee needing additional land from 2041-2051.[5] The School District currently owns three reserve properties including two parcels of land on the east side of town along Wilsonville road and an unused field and former school site in the middle of town. The School District plans to expand into those when the need for additional land arises.

Semi-Public Lands

Land needed for semi-public uses includes land for churches, non-profit organizations, and related public institution uses. The analysis for 2021 through 2041 showed that the City currently has 4 acres of land used for semi-public uses per 1,000 residents and assumed the City will continue to need 4 acres of land per 1,000 people for semi-public uses in the future. Therefore, with a population growth of 4,565 people between 2041 to 2051, the City will need an additional 18 acres of land for semi-public uses over this time period.

Public and Semi-public Land Conclusions

Table 11 below shows that the City will need approximately 63 more acres of land for public and semi-public uses for the 2041 to 2051 time period. Additional public land will be required for the Newberg-Dundee bypass, if the City expands their UGB in the area planned for the Bypass (east of the Klimek Lane URA).

Table 11: Public and Semi-public Land Needs 2041 to 2051

Use	Acres Needed
City	9
County	1
Parks	35
Semi-Public Lands	18
Total	**63**

7. Conclusion

OAR Section 660-021-0030(1) states that "Urban reserves shall include an amount of land estimated to be at least a 10-year supply and no more than a 30-year supply of developable land beyond the 20-year time frame used to establish the urban growth boundary". The City's most recent available studies on land needs, the 2021 – 2041 Housing Needs Analysis, Economic Opportunities Analysis and Public and Semi-Public Land Need Memorandum, were prepared by EcoNorthwest in 2021 and assesses land needs over the 20 year time period from 2021 through 2041. Therefore, additional analysis was required to

[5] Based on communication with Joe Morelock, Newberg Public Schools Superintendent, on February 27, 2020.

determine sufficiency of the City's URAs to accommodate the 30 year planning horizon pursuant to 660-021-0030(1). DOWL prepared this memorandum to assess the City's land needs over this 30 year period.

DOWL's assessment of available data shows that the City's existing URAs contain sufficient buildable lands to accommodate forecasted growth through the year 2041, but additional land is necessary to accommodate forecasted growth through 2051. As evidenced in the findings of this report, DOWL has concluded that there are currently approximately 320 acres of buildable land within the City's URAs. A review of the City's 2021 – 2041 HNA and EOA show that, during the 2021 to 2041 time period, the City will need an additional 245 gross acres of buildable; including 37 acres for Medium Density residential land, 44 acres for High Density residential land, and 152 acres for industrial land and 12 acres of industrial land for public and semi-public uses. Therefore, the demand for land through the year 2041 may be met within the City's existing URAs, leaving a surplus of 75 buildable acres for subsequent years.

DOWL's forecast for the 2041 to 2051 time period shows that the City will need an additional 242 gross acres of buildable land in residential plan designations; including 116 acres for Low Density, 94 acres for Medium Density, and 32 acres for High Density residential. The City will need 170 buildable acres of employment land, including 13 acres for retail, 56 acres for office and commercial services, and 101 acres for industrial uses. Additionally, the City will need 63 acres of buildable land for public and semi-public uses, including 9 acres for City uses, 1 acre for County uses, 35 acres for parks and 18 acres for semi-public lands. In total, it is estimated that the City will need approximately 475 gross acres of buildable land to satisfy growth demands projected for the period between 2041 and 2051.

Table 12: City of Newberg Total Land Needs 2041 to 2051

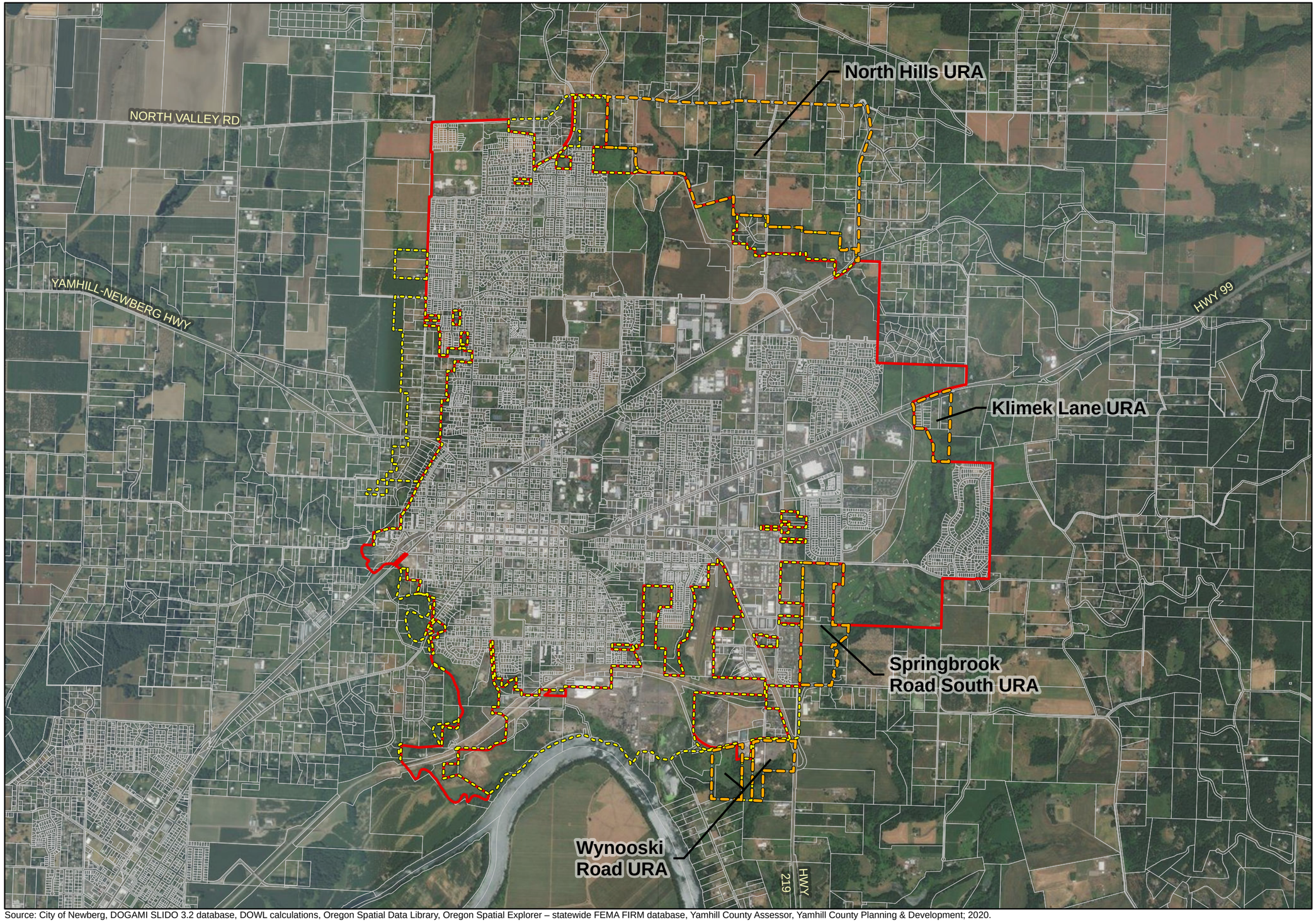
Use	Land Need (Gross ac.)
Residential Uses	
Low Density	116
Medium Density	94
High Density	32
Total Residential	**242**
Employment Uses	
Retail	13
Office and Commercial Services	56
Industrial	101
Total Employment	**170**
Public and Semi-Public Uses	
City	9
County	1
Parks	35
Semi-Public Lands	18
Total Public and Semi-Public Uses	**63**
Total Land Need 2041-2051	**475**

Of this 475-acre land need, 75 acres may be met through available buildable land within the City's current URA, resulting in a land deficit of 400 acres. Pursuant to Oregon Administrative Rule (OAR) Section 660-021-0030, "Urban reserves shall include an amount of land estimated to be at least a 10-year supply and no more than a 30-year supply of developable land *beyond the 20-year time frame used to establish the urban growth boundary*." As stated under OAR 660-021-0030, a 30-year growth horizon is the minimum required for accommodation within URAs. Consistent with this provision and based on DOWL's findings

in this analysis, the City will need to add an additional 400 acres of residential, employment, public and semi-public land to its URA to accommodate the forecasted demand for the 2041 to 2051 time period.

Lastly, it should be noted that DOWL's assessment of forecasted land need is entirely based on quantitative land supply and demand metrics, consistent with state statues and with City analyses conducted to date. A qualitative assessment of *appropriateness* of certain URA lands for specific land uses was not conducted. For example, buildable land for employment uses included in the supply totals might not offer the specific site characteristics desired for employment use (e.g. moderately sloped terrain, larger aggregated land parcels, access to major transportation arterials and utility infrastructure, etc.). A more nuanced qualitative assessment of buildable lands was beyond the scope of this analysis but would most certainly result in findings that would only increase the land need numbers.

Further, OAR 660-021-0030 specifies that URAs shall include land for between a 30-year and 50-year time frame (e.g. between 10 years and 30 years beyond the 20-year time period used to establish the urban growth boundary). Because DOWL has limited its analysis to a 30-year horizon and has not extended that analysis to a 50-year time frame, the findings of this report should be considered a conservative assessment of lands needed for the City to maintain URAs consistent with OAR 660-021-0030.



Legend

- Current Urban Reserve Area
- Urban Growth Boundary
- Newberg City Boundary
- Tax Lots

DOWL

0 1,250 2,500 5,000 Feet

N

Source: City of Newberg, DOGAMI SLIDO 3.2 database, DOWL calculations, Oregon Spatial Data Library, Oregon Spatial Explorer – statewide FEMA FIRM database, Yamhill County Assessor, Yamhill County Planning & Development; 2020.

Newberg Urban Reserves Area

Map A: Urban Reserve Area Map

Newberg, OR

5/5/2021

North A
North B
Northeast A
Northeast B
Northwest A
Northwest B
Southwest A
Southwest B
Southwest C
Southwest D
Southeast A
Southeast B
Southeast C
East A
East B
North Hills URA
Klimeck Lane URA
Springbrook Road URA
Wynooski Road URA
NORTH VALLEY RD
YAMHILL-NEWBERG HWY
HILLSBORO HWY
COLLEGE ST
MAIN ST
1ST ST
HWY 99W
ST PAUL HWY
HWY 219
WILSONVILLE RD

Legend

- Study area
- Current Urban Reserve Area
- Newberg City Boundary
- Urban Growth Boundary
- Tax Lots

Constraints

- Stream Corridor
- Floodplain
- Wetlands
- ODOT Bypass
- Slopes > 25%

Statewide Landslide Susceptibility

- High
- Very High

DOWL

0 1,500 3,000 6,000 Feet

N

Source: City of Newberg, DOGAMI SLIDO 3.2 database, DOWL calculations, Oregon Spatial Data Library, Oregon Spatial Explorer – statewide FEMA FIRM database, Yamhill County Assessor, Yamhill County Planning & Development; 2020.

Newberg Urban Reserves Area

Map B: Buildable Lands Inventory Constraints Map

Newberg, OR

4/23/2021