JOHNSON
ECONOMICS

NEED ANALYSIS
FOR RESIDENTIAL CAPACITY
BANKS, OREGON

AUGUST 2022

JOHNSON ECONOMICS, LLC
621 SW Alder St, Suite 506
Portland, Oregon 97205

JOHNSON ECONOMICS

TABLE OF CONTENTS

I. INTRODUCTION 1

II. EXECUTIVE SUMMARY 1

III. REGIONAL CONTEXT 2

IV. SOCIO-ECONOMIC TRENDS 3

V. PROJECTED RESIDENTIAL NEEDS, CITY OF BANKS 8

DEMAND 8

VI. CURRENT RESIDENTIAL CAPACITY 12

VII. RECONCILIATION OF FUTURE LAND NEED & CAPACITY 13

I. INTRODUCTION

HOLT HOMES RETAINED JOHNSON ECONOMICS to assess the need for additional residential capacity in the City of Banks, Oregon.

This study looks at demographic, economic, and market patterns and trends influencing the demand for residential units in the area. The study includes a forecast of residential need over a twenty-year planning horizon and reconciles demand with available residential capacity within the City.

II. EXECUTIVE SUMMARY

This analysis evaluated the need for additional residential housing capacity in the City of Banks, Oregon. Banks is located strategically within Washington County, within proximity to major employment concentrations in the county as well as the greater Portland metropolitan area.

While Banks has seen relatively little growth in base population and employment in the last decade, it is projected that growth will improve in the next 20 years. Growth in the broader Washington County market has seen a much stronger trend. Over the 2010s, Washington County has consistently outperformed the Portland metropolitan area in terms of employment growth. Given the robust expansion in Washington County, the City of Banks stands to be able to capture an increasing share of the County's growth as supply of available land becomes limited.

The primary reason that Banks has not seen a higher rate of growth over the last decade is that housing supply was not produced and made available in the market. The recent housing unit supply constraint in Banks is largely due to a shortage of municipal water supply that was identified around 2014 by the city. The City of Banks enacted a development moratorium in 2018, which halted single family residential development. Although the moratorium was recently lifted in March 2022, the growth in housing units throughout the 2010s was limited by this artificial constraint.

Regardless of Banks' recent flat growth in residential housing supply, it is expected that the area has a significant capacity to capture demand in the broader area. As seen in exurbs around the Portland metropolitan area that experienced similar historic trends in housing permit growth, exponential growth was experienced after development was undertaken to increase the current available residential housing supply to meet the demand. As is stands currently, the overall housing market in Washington County is undersupplied, thus introducing new development activity in Banks can help in capturing the demand for residential housing from the region.

The Banks area also benefits significantly from large and growing employment base in Washington County, much of which is oriented near Highway 26 and proximate to the Banks area with a convenient commute. Future industrial land supply is concentrated in this area, which should support ongoing employment growth as well as the associated workforce-related residential demand.

Our analysis indicates that there will be a significant shortage in the supply of residential housing units within Banks over the next 20 years. According to the baseline projections, there will be a need of roughly 280 acres of land for 2,275 additional housing units in Banks by 2042. Furthermore, the projected demand suggests that there will be the most need for ownership of single-family detached homes. Based on our supply estimations, there is currently only 66 acres of available supply of vacant, buildable land or 776 housing units in Banks. This translates to a sizable deficit considering the projected demand over the next 20 years.

Given the data, Banks would benefit greatly from increasing the available land supply for residential development. As evident in other cities within the region, increasing residential land supply induced significant growth in residential development and a city's overall economy. A viable solution to be considered to accommodate for such residential

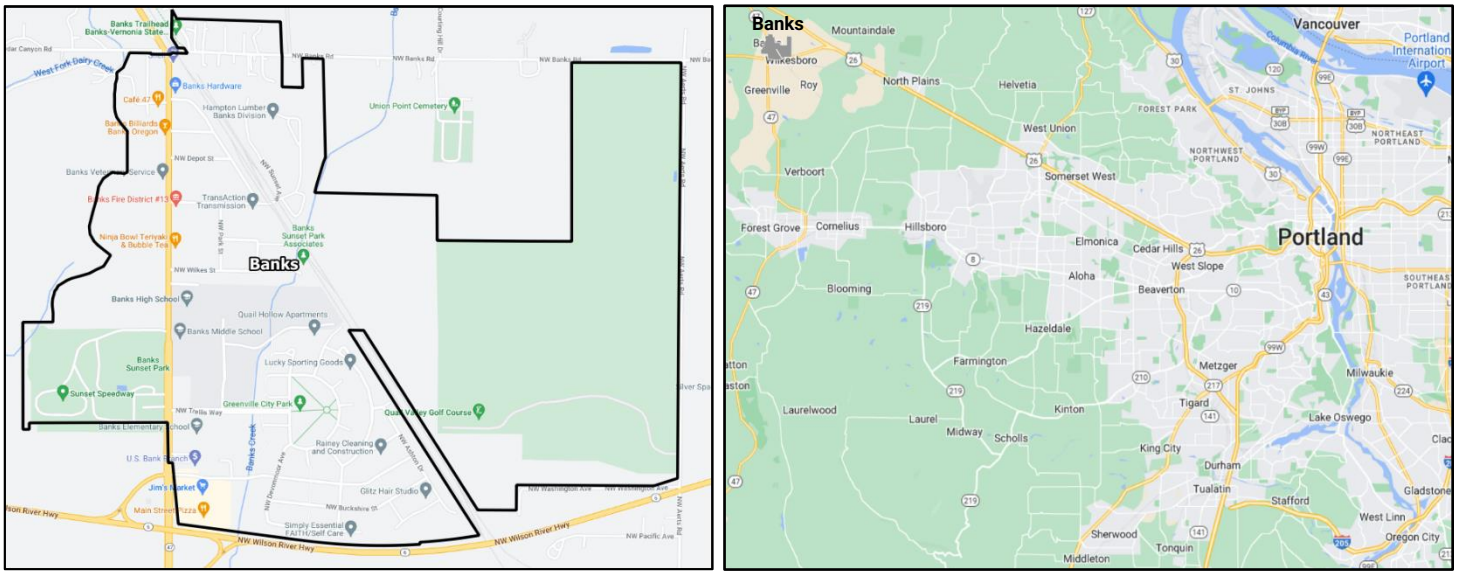
development in Banks is to rezone within the city. Rezoning effectively increases a city's available land supply without the need for expanding its urban growth boundaries.

Population forecasts generated by Portland State University's Population Research Center will be unlikely to correctly anticipate future demand in Banks due to their methodological approach. Their models use occupied housing units and household size assumptions to generate growth numbers and rely heavily on factors such as historical permit and growth patterns. The City of Banks artificially constrained new development, which is unlikely to be accurately recognized in PSU's models. The model is updated on a three year rolling schedule and is more likely to increase housing growth projections after they are observed.

III. REGIONAL CONTEXT

The City of Banks is part of the Portland metro area. Besides Portland itself, primary employment and population concentrations in this region include the cities of Hillsboro, Beaverton, Gresham, and Vancouver in the state of Washington. The Portland metro area has enjoyed robust growth in past decades because of the rapidly expanding technology, manufacturing, and trading industries within the City of Portland. Washington County has accounted for a significant share of this growth, led by the Sunset Corridor technology concentration along the Highway 26 Corridor. While being relatively smaller compared to some of the other cities within the periphery of the region, the City of Banks is in a strategic area as it is along Highway 26, providing convenient access to the Sunset Corridor and other major employment concentrations in the Portland metro area.

FIGURE 3.1: CITY OF BANKS AND PORTLAND METRO AREA CONTEXT



SOURCE: Google Maps, JOHNSON ECONOMICS

IV. SOCIO-ECONOMIC TRENDS

Population

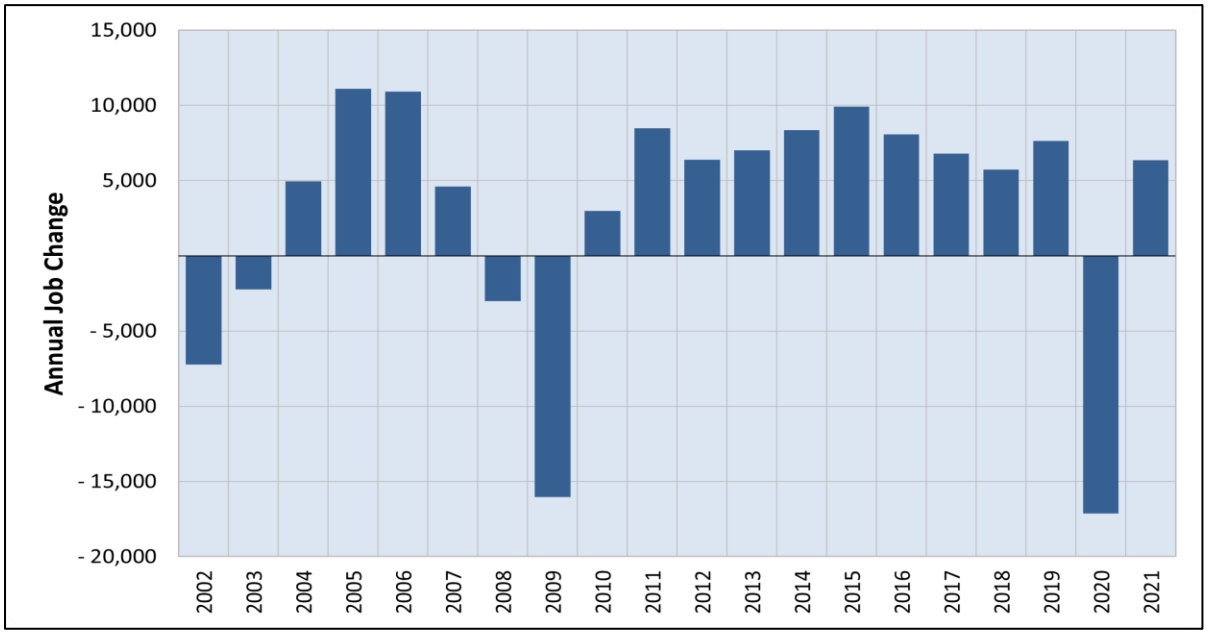
The City of Banks has experienced relatively flat growth in base population over the past decade. According to the 2020 census, Banks has only grown by 60 individuals (+3.4% change) since 2010. Comparatively, Washington County's population grew by 70,662 individuals (+13.3% change) during the same census period. Banks' moderate growth in recent years compared to the region does not indicate that the trend will remain moving forward, as growth in the city has been limited by new housing production as opposed to underlying demand. The city placed a moratorium on new residential development due to water constraints in 2018, which kept new production artificially low.

Forecasted population growth, based on estimates made by the PSU Population Research Center, suggests a much stronger, positive population growth trend over the next two decades for Banks that outpaces the city's past historic growth rate. PSU forecasts Banks to grow by 40.59% from 2020 to 2040. In comparison, Washington County is projected to grow by roughly 29.33% throughout the two decades. This is indicative of expectations of robust future growth potential in Banks.

Employment

Being within the Portland Metro area, Washington County can be considered part of a relatively high-growth economy. The industries that lead employment within the county are the trade, manufacturing, and business services sectors. The education, health services, and hospitality sectors also make considerable contributions to the job market within the county

FIGURE 4.1: ANNUAL JOB GROWTH, WASHINGTON COUNTY (2002 - 2021)

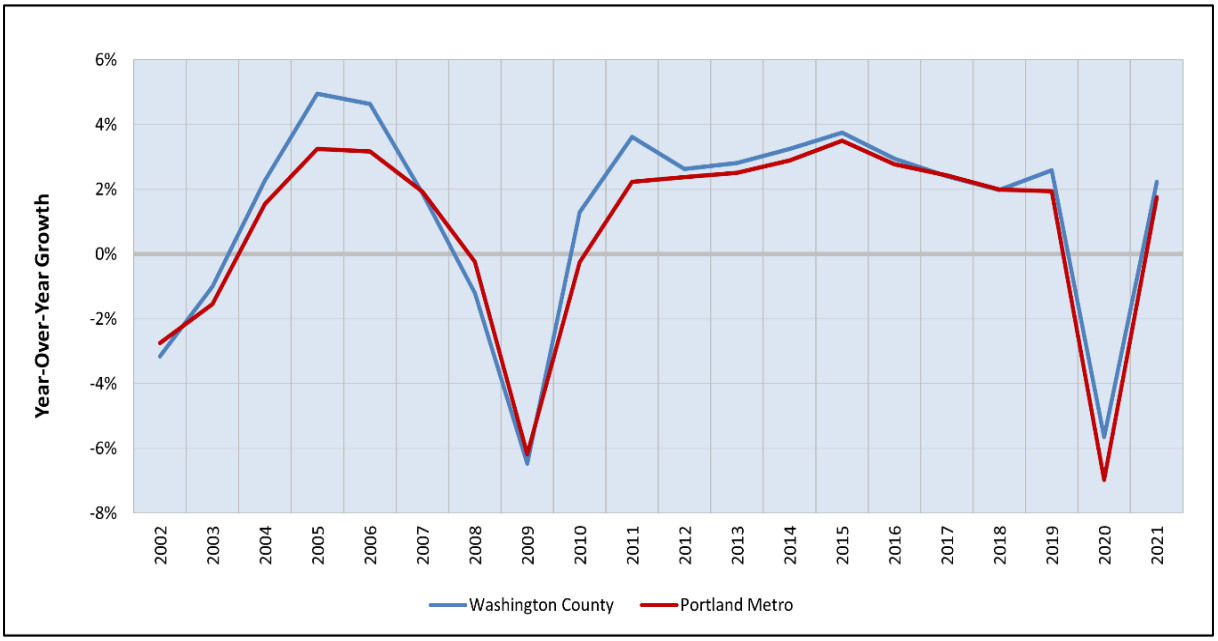


Source: Oregon Employment Department, JOHNSON ECONOMICS

Following the 2008 - 09 recession, Washington County has experienced steady and positive job growth. The county's growth rate accelerated the most during the recovery period where employment growth rate grew from -6.49% in 2009 to a high of 3.61% in 2011. Following 2011, the county's growth rate decelerated although it remained relatively better than the overall regional growth rate. Throughout the 2010s, Washington County's employment base added roughly 7,000 jobs annually, peaking in 2015 with 10,000 new jobs. Washington County's job growth then proceeded

to decelerate in the years following 2015, with only 6,000 new jobs in 2018, before slightly improving in 2019 with approximately 7,500 new jobs. The seemingly oncoming positive trend from 2018 to 2019 was thwarted by the 2020 Covid pandemic when the county lost roughly 17,000 jobs, only regaining about 6,000 of those jobs in 2021.

FIGURE 4.2: YEAR-OVER-YEAR EMPLOYMENT GROWTH
WASHINGTON COUNTY & PORTLAND METRO AREA (2002 – 21)



Source: Oregon Employment Department, JOHNSON ECONOMICS

When comparing Washington County's employment growth to the Portland Metro Area, the county has consistently outperformed the region since 2009. From 2010 to 2019, Washington County's employment growth rate hovered around a low of 1.29% and a high of 3.74%. Comparatively, the Portland Metro Area's employment growth rate hovered around a low of -0.29% to a high of 3.49% for the same years. Furthermore, the county's peaks in terms of the growth rate from the past decade in 2011, 2015, and 2019, all outperformed the region by roughly 1 percentage point on average.

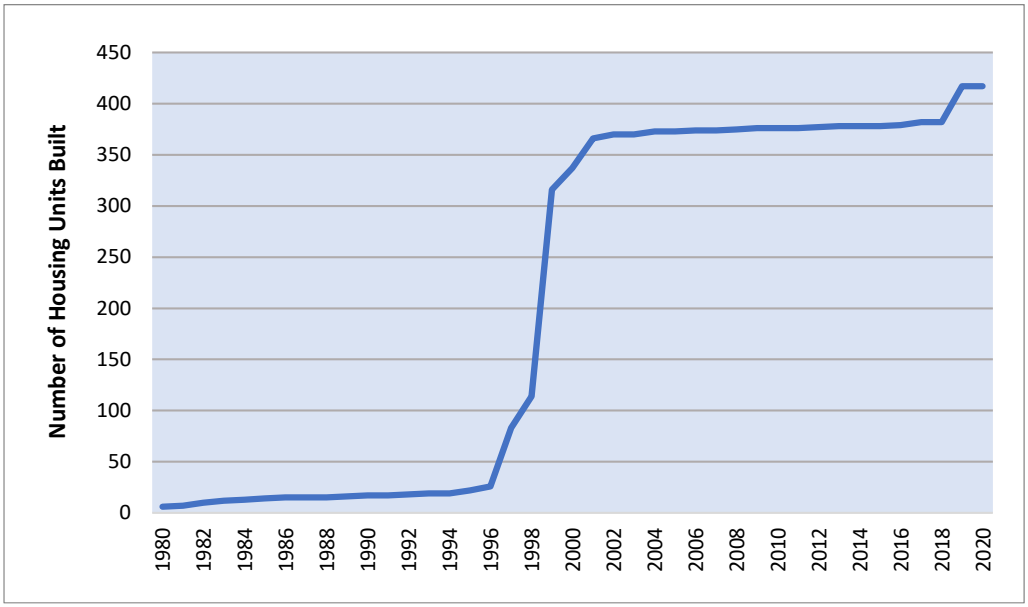
Washington County took a negative hit to employment during the onset of the 2020 COVID pandemic; however, the county did not experience a shock as large as what the overall region experienced. During the 2020 calendar year, the county's employment base declined by 5.7% while the region's base dropped by 7.0%. The less severe negative shock experienced by the county can be largely attributed to the presence of less restaurant and hospitality businesses within the county.

Overall, the Washington County has displayed relatively healthy growth in employment over the past decade. As evident from the data, the county has been able to outperform the overall region consistently. Even during the 2020 pandemic, Washington County retained a better employment growth rate relative to the overall region. As more people begin entering and re-entering the job market post-pandemic, it is realistic to expect Washington County to continue experiencing the positive job growth trend it was on the cusp of experiencing pre-Covid.

Housing Units in Banks

According to the US Census data, the City of Banks has 617 residential housing units as of 2020. This is a 6.6% change in the number of housing units since the 2010 census. Of the 617 housing units, only 3.9% of them are currently vacant (24 housing units). This growth is in-line with growth in housing nationally. From 2010 to 2020, the US Census indicated that housing units throughout the nation grew by roughly 6.7%.

FIGURE 4.3: CUMULATIVE HOUSING UNITS BUILT IN BANKS, 1980 - 2020



Source: Oregon Metro RLIS, JOHNSON ECONOMICS

Data acquired from the Oregon Metro Regional Land Information System (RLIS) on the year that housing units were built tells us that Banks has experienced relatively stagnant annual growth in terms of residential housing in the past two decades. From 1980 to 1996, Banks saw relatively flat growth in the amount of housing units built. During this period only 30 units were permitted. Then from 1997 to 2002, the number of housing units built increased exponentially, with roughly 200 units built in 1998 and an additional 50 in 2000, before tapering off and flattening again for better part of the next two decades until 2018 where roughly 35 more units were built.

The data indicates that residential housing demand has been limited by housing unit production. In other words, the primary reason that Banks has not seen a higher rate of growth is that housing supply was not produced and made available in the market. The recent housing unit supply constraint in Banks is largely due to a shortage of municipal water supply that was identified around 2014 by the city. The City of Banks enacted a development moratorium in 2018 until the water shortage issue was addressed. The moratorium halted further real estate development on projects that were not developing multi-family housing, industrial zones, or projects that provided a non-municipal source of water. Although the moratorium was recently lifted in March 2022 with the completion of the city's water transmission line replacement project, the growth in housing units throughout the 2010s was limited by this artificial constraint. Household growth into the future will be a function of new development activity, with the overall residential market in Washington County currently significantly undersupplied with housing.

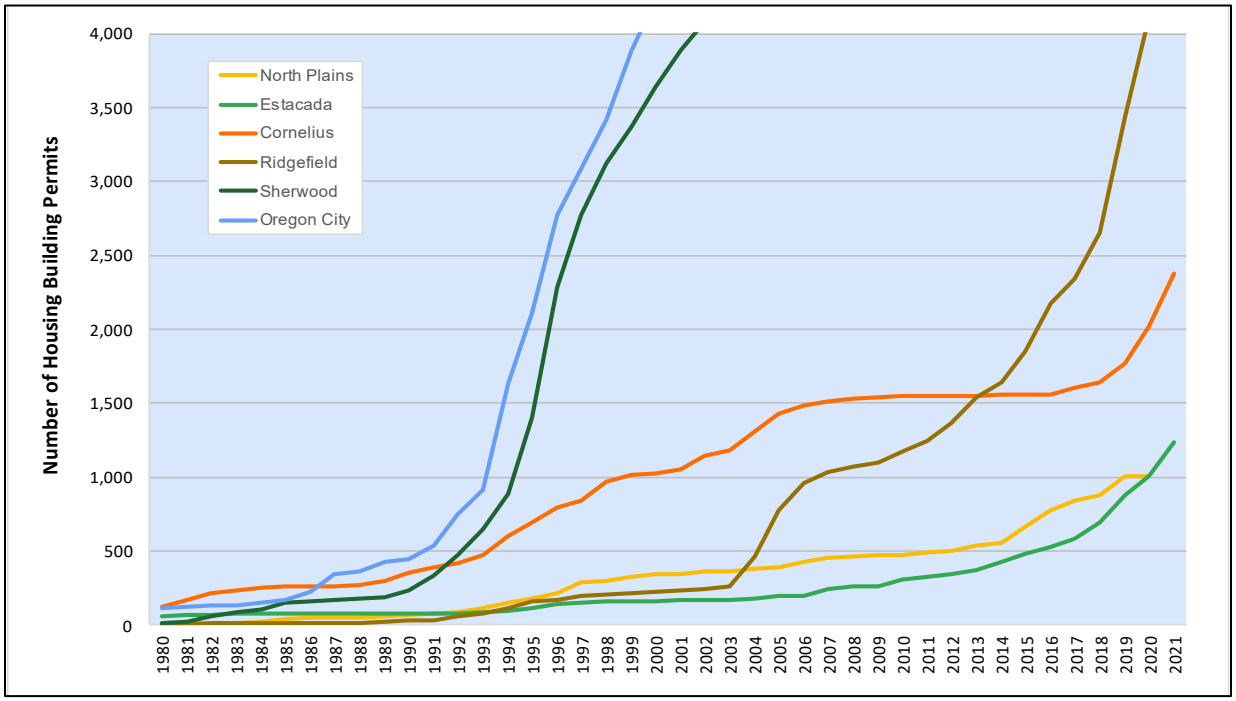
Housing Units in the Portland Metro Area

As mentioned before the Portland Metro Area has been a relatively high growth economy over the last several decades. The Portland metropolitan area's growth has spilled over to the surrounding exurbs in recent years. As the metropolitan area expanded, more people became incentivized to move to the surrounding cities to enjoy the benefits of lower living costs at the expense of commuting distances. Hillsboro has emerged as a major importer of labor within

the region, with over 67,000 workers commuting into Hillsboro for employment. An estimated 23.3% of workers living in Banks commuted to Hillsboro in 2019.[1]

According to the Oregon Metro Regional Government, the urban growth boundary (UGB) of the Portland metropolitan area has expanded over three dozen times since the 1970s. The most notable years where there were larger expansions are 1998, 1999, 2002, 2004, 2005, 2011, and 2018. Following each of these expansions, impacted communities experienced robust growth within their economy, especially in the number of available housing units and business units. For example, in 2002 the Metro Council expanded the urban growth boundary by 18,867 acres, providing 38,657 new housing units while expanding an additional 2,671 acres for new jobs.

FIGURE 4.4: CUMULATIVE ISSUED HOUSING PERMITS IN SELECT CITIES, 1980 - 2020



Source: U.S Department of Housing and Urban Development, Oregon Metro RLIS, JOHNSON ECONOMICS

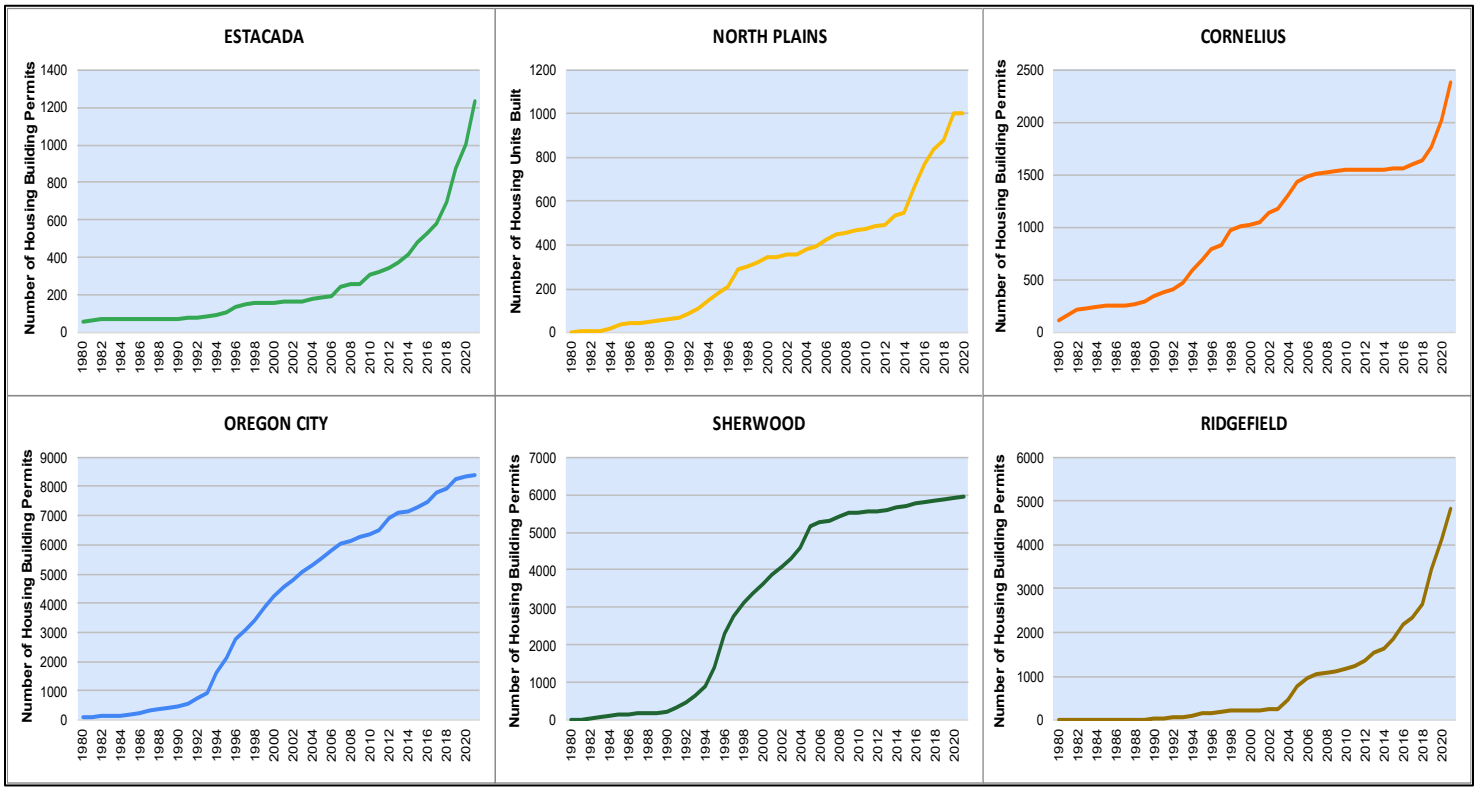
Note: Data for North Plains was taken from Oregon Metro RLIS data on the years housing units were built due to discrepancies in HUD data

The data acquired from the U.S Department of Housing and Urban Development, shows that several cities on the periphery of the Portland metro area experienced moderate growth in housing building permits followed by sharp increases as development occurred. As depicted in Figure 4, all the observed cities had a relatively flat trend of growth in building permits for different lengths of time when compared to each other.

Much like the City of Banks, Figure 4.5 shows that growth in housing building permits was relatively stagnant in cities on the periphery of the metropolitan area. Oregon City and Sherwood grew exponentially around 1992, while Ridgefield experienced exponential growth a decade later in 2002. Due to having a larger overall scale, the volume of housing permits in Oregon City, Sherwood, and Ridgefield, are outright larger than the smaller cities of Estacada, King City, and Cornelius. The pattern however remains quite similar throughout all the observed cities.

1 US Census Bureau, LEHD Data

FIGURE 4.5: CUMULATIVE ISSUED HOUSING PERMITS BY CITY, 1980 - 2020



SOURCE: U.S Department of Housing and Urban Development, Oregon Metro RLIS, JOHNSON ECONOMICS

Note: Data for North Plains was taken from Oregon Metro RLIS data on the years housing units were built due to discrepancies in HUD data

Although the smaller cities (e.g., Estacada, North Plains, and Cornelius) also experienced inflection points where growth boomed, the smaller cities displayed characteristic plateaus after momentary periods of exponential increase. These plateaus usually happened after growth was experienced from shifting market share within the metro area. In these cities, the introduction of new residential product induced a commensurate shift in the household growth to absorb that product.

Peripheral communities in the metropolitan area are also expected to benefit from the increasing shift to work from home and hybrid solutions. These reduce the need to commute and decrease transportation cost penalty associate with greater distance from employment. Higher wage earners are also more likely to be able to work remotely, which may shift the demographics of future demand towards a more affluent mix.

The Portland Business Journal recently published an article entitled "Hottest 'Hoods Q2 2022: The 25 Most Exclusive Portland-Area Neighborhoods". The approach they took was to track Portland-area zip codes where the fewest sales were made, homes fetched the highest prices, and where homes sold the fastest. They compiled these statistics into a "Heat Index" to identify neighborhoods with the most overall activity. The data was tweaked to include The nearby community of North Plains was rates as the most exclusive neighborhood in the metro area using this index. The community (defined as zip code 97133) reported only 31 homes sold in the second quarter, with an average sales price of $661,289, median price of $595,000, and a median days on market of 4. North Plains and Banks are similar communities in terms of size, location within the metro area, and current pricing for equivalent product.

From the evidence presented, the ability of a city to develop residential housing can be a catalyst to introducing more growth to its overall economy. Given the historic regional data and its location within the Portland metro area, it is expected that the City of Banks can expand its residential base rapidly if development occurs to facilitate this growth.

V. PROJECTED RESIDENTIAL NEEDS, CITY OF BANKS

DEMAND

In this section we estimate housing need in Banks (city limits) over the next 20 years. We evaluate the need for both rental and ownership housing, categorized by multifamily, single-family attached, and single-family detached formats.

JOHNSON ECONOMICS projects future housing need by segmenting the existing household base by age and income – the two most important determinants of housing preferences – and modeling growth in each segment (70 segments) based on economic and demographic trends. The model is informed by forecasts of the Oregon and Washington County populations by the PSU Population Research Center and assumes a transfer of growth from land-constrained portions of the county – similar to what took place in the cities discussed in the previous sections. Note that the goal is for the estimates to reflect underlying need rather than realized household growth, which can be constrained by supply.

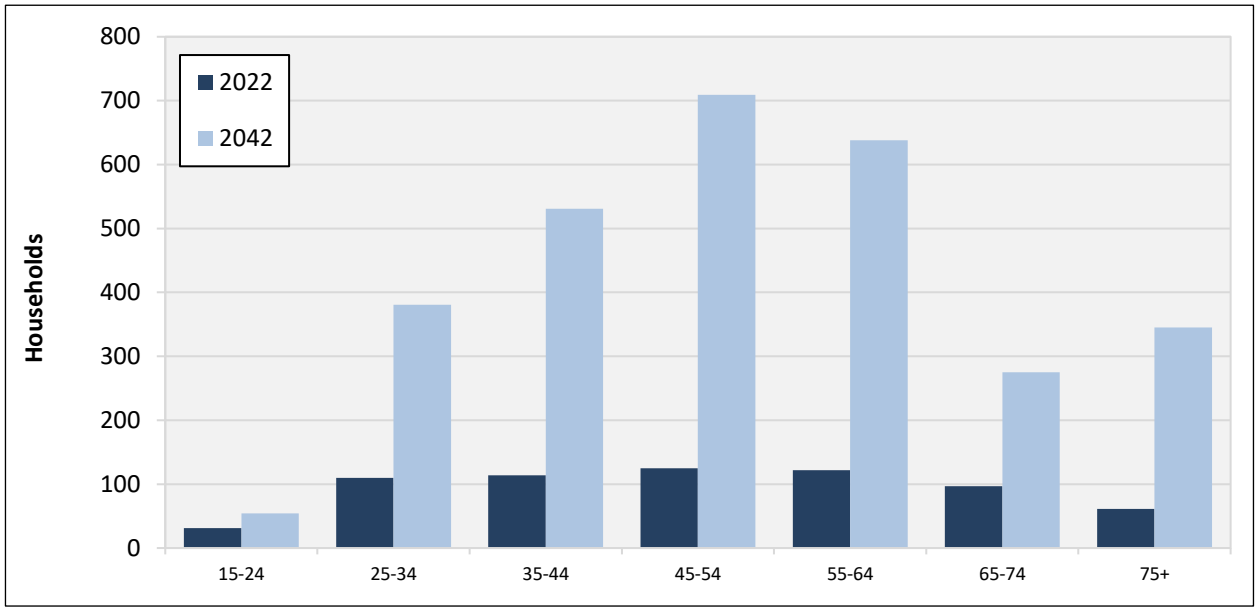
After developing a segmented projection of overall housing need by age and income, we use data from the Census Bureau (including ACS Microdata samples) to establish local, segment-specific rates of housing tenure (owners/renters) and housing type (detached/attached/multifamily). The assumed future propensity rates consider ongoing shifts related to credit requirements and affordability – factors that in recent years have increased the share of renters, especially in multifamily structures.

TOTAL HOUSING DEMAND

Based on the outlined approach, our baseline projection indicates a need of around 2,275 additional housing units in Banks over the next 20 years to accommodate the spillover growth from land-constrained cities within Washington County. This represents average annual household growth of 7.7%. Over this 20-year period the number of households is projected to increase by 340%. Although this would be very high for a large, land-constrained city, it is not unusual for cities on the periphery of metropolitan areas. Similar growth was seen in the cities discussed on the previous page. For reference, household growth in Sherwood during the 1990s was roughly 300% over a 10-year period. Considering this evidence, the projected growth of 340% in Banks over a 20-year period does not seem unrealistic.

The following chart displays the anticipated distribution of housing demand across age segments over the forecast period. The projections indicate growth concentrations among the cohorts of ages 35-44, 45-54, and 55-64. Rapid growth in the middle-aged segment is in line with the aging millennial cohort which will move into the family stage over the next 20 years.

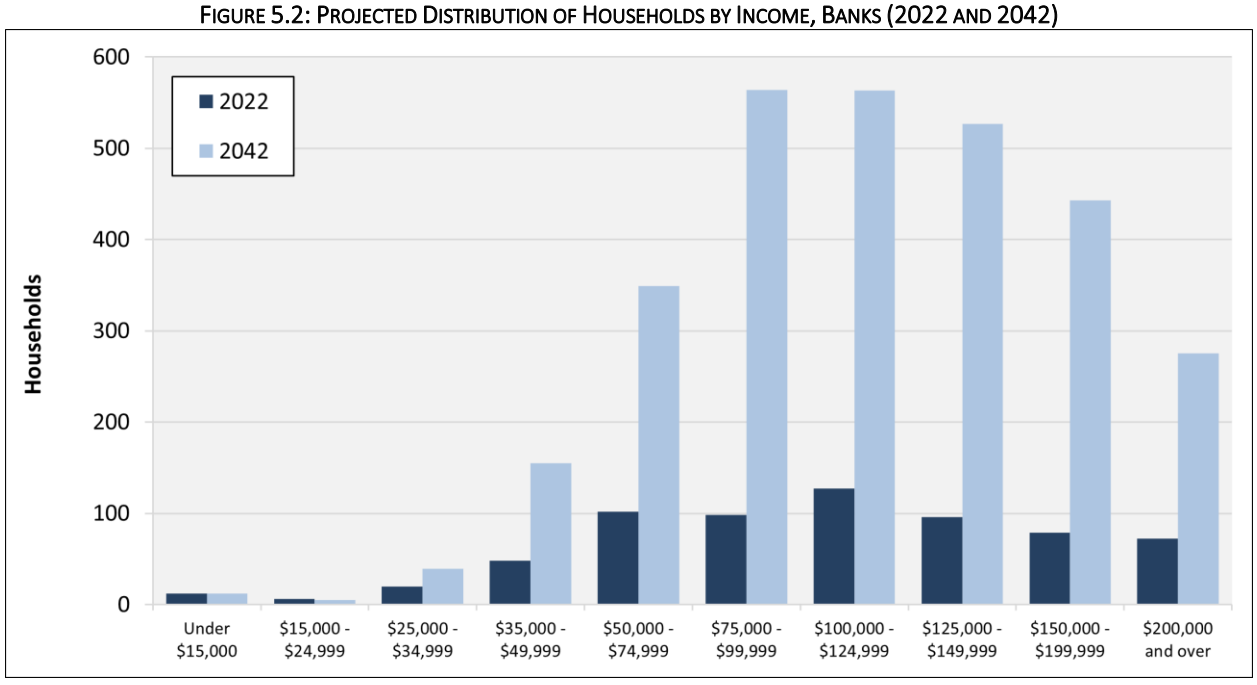
FIGURE 5.1: PROJECTED DISTRIBUTION OF HOUSEHOLDS BY AGE, BANKS (2022 AND 2042)



SOURCE: Neustar, JOHNSON ECONOMICS

With respect to income, the demand growth is anticipated to be concentrated among upper-middle and high-income segments, with declines at the lowest income levels. In part, this shift to higher income levels reflects recent demographic and housing trends, where supply constraints have led to increased rent and price levels, which in turn have forced low-income households to double up with families or friends rather than occupy their own unit. The projections indicate a concentration of growth between $75,000 and $150,000.

FIGURE 5.2: PROJECTED DISTRIBUTION OF HOUSEHOLDS BY INCOME, BANKS (2022 AND 2042)



SOURCE: Neustar, JOHNSON ECONOMICS

DEMAND BY HOUSING TYPE

The following table summarizes our demand projections by housing type and ownership form over the next 20 years. The projections are baseline estimates, representing what we regard as the most likely scenario. The projections should be thought of as ranges, with high and low estimates 30% above and below the baseline figures. Additional detail is provided over the following pages.

FIGURE 5.3: SUMMARY OF HOUSING DEMAND PROJECTIONS, BANKS (2022-42)

	NET NEW DEMAND (2022-42)		
	Owners	**Renters**	**Total**
Single-family detached	1,354	212	1,566
Single-family attached	320	112	432
Multi-family	21	256	276
Total	1,695	580	2,275

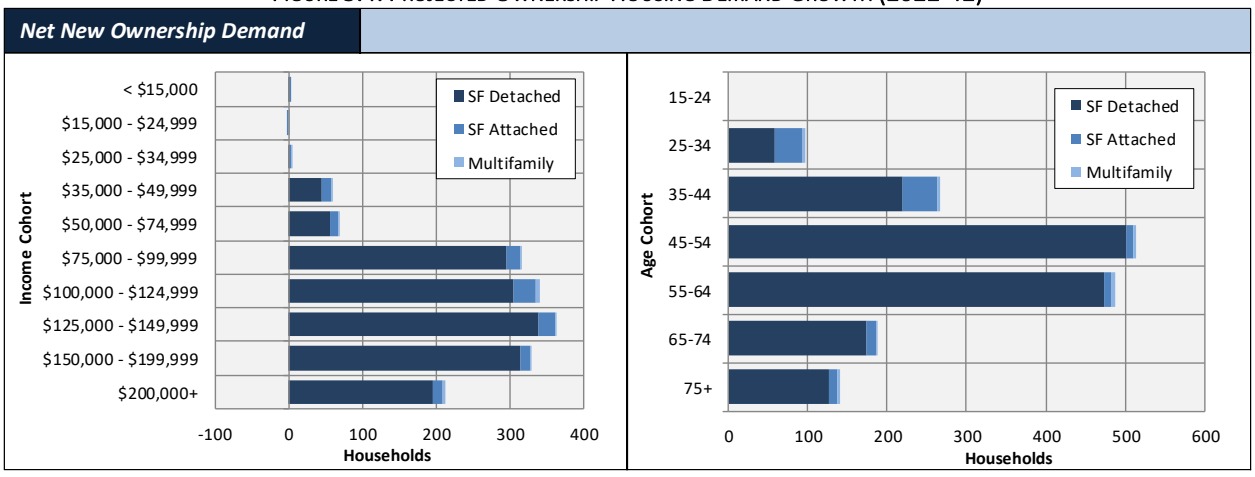
SOURCE: Neustar and JOHNSON ECONOMICS

OWNERSHIP DEMAND

JOHNSON ECONOMICS projects net growth in demand for ownership homes of around 1,700 units over the next 20 years. This reflects a homeownership rate of 75% among the net new households. The current homeownership rate in Banks, in comparison, is 74%.

Most of the new ownership demand will be for single-family detached homes. In the baseline scenario, our model indicates that roughly 1,350 homeowner households (80% of net new owners) will have a propensity for this product type, while around 300 (19%) will have a propensity for attached single-family units (duplexes, townhomes), and 20 (1%) for condominium flats.

FIGURE 5.4: PROJECTED OWNERSHIP HOUSING DEMAND GROWTH (2022-42)

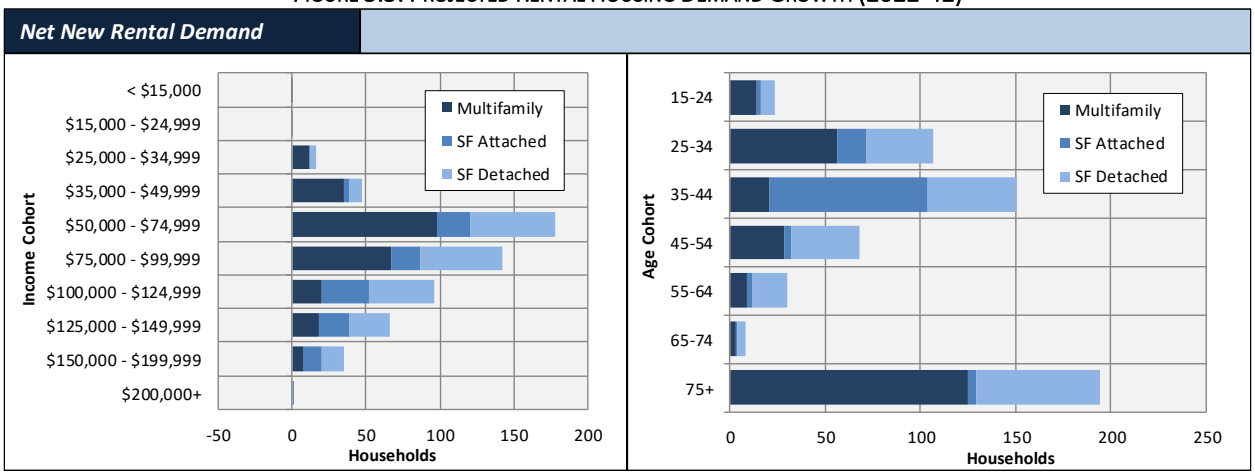


SOURCE: Neustar and JOHNSON ECONOMICS

RENTAL DEMAND

For rental housing, we have a baseline demand projection for around 600 units over the 20-year forecast horizon. Of these, roughly 250 units (44%) are expected to be apartment units, while roughly 100 units (19%) are expected to be single-family attached, and around 200 units (37%) single-family detached. The demand growth is anticipated to be concentrated among young, middle-income households and seniors.

FIGURE 5.5: PROJECTED RENTAL HOUSING DEMAND GROWTH (2022-42)



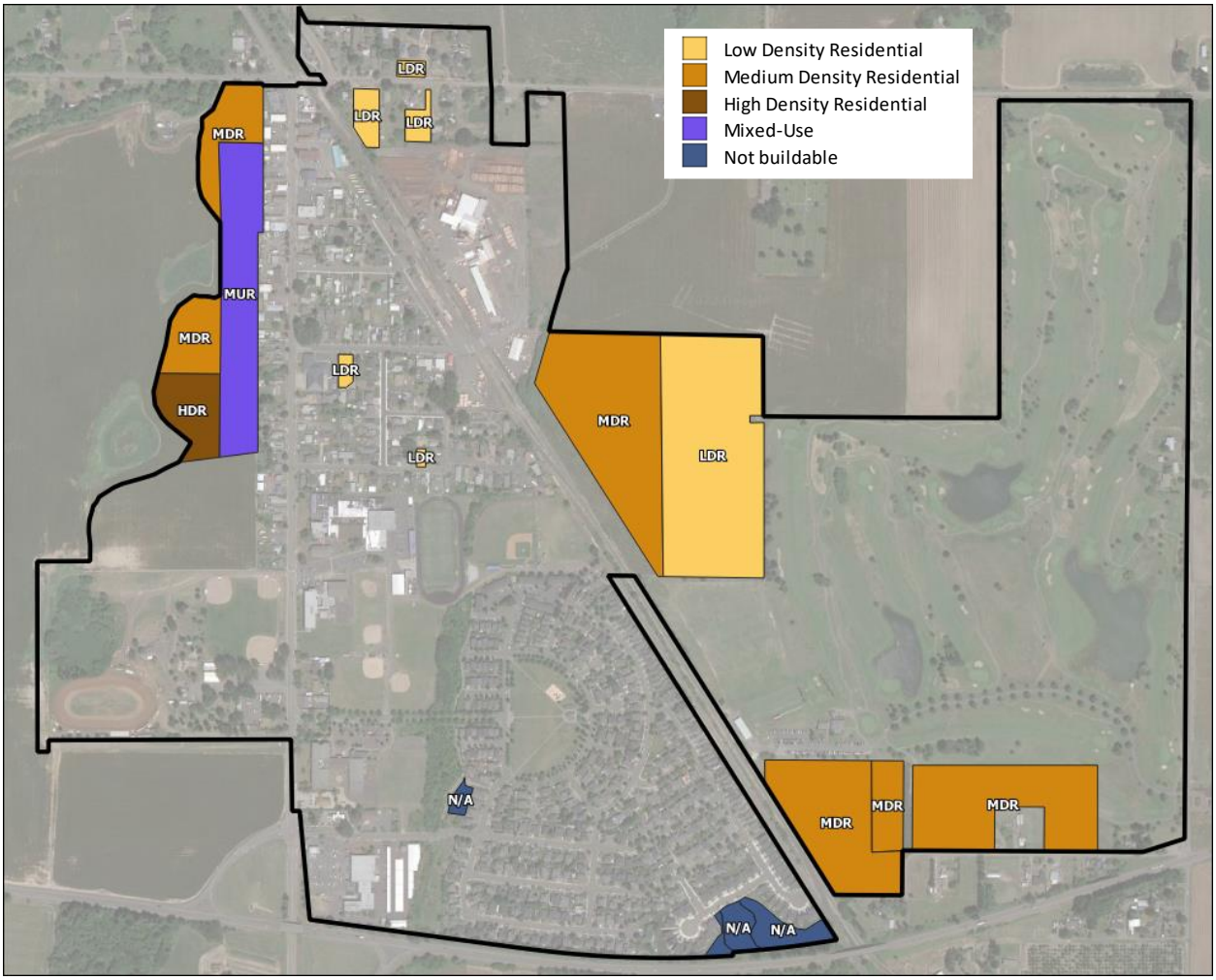
SOURCE: Neustar and JOHNSON ECONOMICS

VI. CURRENT RESIDENTIAL CAPACITY

Johnson Economics inventoried the residential land capacity in Banks using assessor data and GIS files from Washington County and Metro. Sites categorized as vacant in the assessor data were verified through a visual inspection of satellite imagery from Google. The following map displays the results of this analysis, showing all vacant residential sites within the city. Four parcels affected by wetlands were considered unbuildable. These unbuildable sites are in the south end of the city and displayed in dark blue fill color below. The other sites are displayed in fill colors indicative of zoning/density category.

As shown on the map, there are several large medium-density parcels in the current land supply in Banks. There is also significant capacity for high-density development, both in the high-density residential and mixed-use zones. However, the supply of buildable low-density residential land is limited.

FIGURE 6.1: VACANT RESIDENTIAL LAND, CITY OF BANKS



SOURCE: Metro, Washington County, Google, JOHNSON ECONOMICS

The table below depicts the aggregate acreage for the vacant parcels by zoning type and in total. Furthermore, it includes assumptions of the associated density and housing units for the different zoning types. The density assumptions are based on the average of minimum and maximum density by zone type as established by the Banks Zoning Code.

FIGURE 6.2: VACANT LAND CAPACITY, CITY OF BANKS

	Acres	Density	Units
LDR	18.2	7.0	127
MDR	36.6	12.7	465
HDR	3.0	23.5	72
MUR	8.3	13.5	112
TOTAL	**66.2**	**11.7**	**776**

SOURCE: Metro, Washington County, City of Banks, JOHNSON ECONOMICS

This land inventory reflects the maximum capacity and has not been reduced to account for buildable land constraints outline in OAR 660-008-005(2)'s definition. This allows for adjustments to account for factors such as natural hazards, slopes, flood plains, and no public facilities.

The density assumptions do not factor in code revisions related to HB2001. While these will increase the theoretical residential capacity there is limited evidence to-date of widespread utilization of these provisions.

VII. RECONCILIATION OF FUTURE LAND NEED & CAPACITY

This section discusses the projected future need for housing units and relates it to the current available supply of land within the City of Banks. As mentioned in previous sections, Banks is likely to see robust growth in the future considering the historical expansion of similarly positioned cities in the periphery of the Portland Metro Area.

The table below provides a summary of the estimated current vacant land capacity and future land need for residential housing in the City of Banks. Furthermore, the table also depicts the deficit between said capacity and future need. The summary is categorized by low-density, medium-density, and a combination of high-density and mixed-use residential parcels. As with previous assumptions, the density estimates are calculated based on an average of the minimum and maximum density for different zone types as determined by the Banks Zoning Code.

FIGURE 7.1: VACANT LAND CAPACITY, CITY OF BANKS

	VACANT LAND CAPACITY			LAND NEED			LAND DEFICIT		
	Acres	Density	Units	Acres	Density	Units	Acres	Density	Units
LDR	18.2	7.0	127	225.4	7.0	1,566	207.1	7.0	1,439
MDR	36.6	12.7	465	34.0	12.7	432	-2.6	12.7	-33
HDR	3.0	23.6	72	3.1	23.6	74	0.1	23.6	2
MUR	8.3	13.4	112	15.1	13.4	202	6.7	13.4	90
TOTAL	**66.2**	**11.7**	**776**	**277.6**	**8.2**	**2,275**	**211.3**	**7.1**	**1,499**

* Average of min. and max. density, Banks Zoning Code

SOURCE: Neustar, Metro, Washington County, City of Banks, JOHNSON ECONOMICS

From the table, we see that the City of Banks currently has a total of 66 acres of vacant residential land, while there will be an estimated 278 acres of residential land needed in the next 20 years. This translates into a deficit of 211 acres. In terms of housing units, Banks currently has the capacity for roughly 776 housing units, while the projected 20-year need for housing is 2,275 units. The deficit between the future need for housing units and Banks' current capacity is roughly 1,500 units.

As for the types of residential zoning, it is projected that the greatest need will be for low-density residential housing units (single-family detached). The deficit for low-density residential units is projected to be 1,439 units. The need for low-density units makes up 96% of the total projected deficit for housing units within the next 20 years. There is also a deficit of 92 units for a combination of high-density and mixed-use units, but this only makes up 6% of the total projected deficit. As for medium-density units, it is estimated that there will be a slight surplus of land relative to the projected need.

Overall, the estimates provided above indicate that the current supply of vacant, buildable residential land in Banks is inadequate for the anticipated growth over the next 20 years. A solution to meeting these future demands would be to increase the supply of residential land through rezoning. As displayed by other exurbs around the Portland metro area, growth was experienced exponentially when residential development was stimulated through increasing the available supply of land. This further strengthens the argument that rezoning to allow further residential development would be a viable solution for the City of Banks to meet these projected demands.