ORDINANCE NO. 2021-03

CITY OF CORNELIUS COMPREHENSIVE PLAN AMENDMENT CPA-01-21 CORNELIUS HOUSING NEEDS ANALYSIS

AN ORDINANCE ADOPTING AMENDMENTS TO CHAPTER IV OF THE CORNELIUS COMPREHENSIVE PLAN AND ADOPTING THE 2021 CORNELIUS HOUSING NEEDS ANALYSIS

WHEREAS, Oregon Statewide Planning Goal 10 requires the City to maintain and plan for an adequate supply of land to accommodate at least 20 years of future growth; and

WHEREAS, the method through which cities meet this requirement is the regular preparation of a Housing Needs Analysis, in conformance with ORS 197.628 and OAR 660-025; and

WHEREAS, the City received a Technical Assistance Grant from the Oregon Department of Land Conservation and Development to conduct the Housing Needs analysis work; and

WHEREAS, the City provided notice of the hearings consistent with Cornelius Municipal Code Chapter 18.15.030 and ORS 227.186; and

WHEREAS, the City provided notice of Ordinance 2021-03 to Metro as provided under Metro Code Section 3.08.610 (Compliance Procedures); and

WHEREAS, the City provided notice of Ordinance 2021-03 to the Oregon Department of Land Conservation and Development as provided under ORS 197.610; and

WHEREAS, pursuant to Chapter I of the Comprehensive Plan, a public hearing was held before the Planning Commission on March 23, 2021, related to the proposed amendment to the Comprehensive Plan and adoption of the Cornelius Housing Needs Analysis; and

WHEREAS, the Planning Commission and City Council have determined that the proposed Plan amendment meets the criteria set forth in the Comprehensive Plan justifying a proposed Plan amendment, that there is a public need for the proposed amendment, and that the proposed Plan amendment is in compliance with the applicable provisions and policies of the Plan and applicable state law.

NOW THEREFORE THE CITY OF CORNELIUS ORDAINS AS FOLLOWS:

SECTION 1. The City adopts amendments to Chapter IV of the Cornelius Comprehensive Plan and adopts the 2021 Cornelius Housing Needs Analysis and associated Appendices, attached as Exhibit A.

SECTION 2. The City Council adopts the findings set forth in the staff report dated March 24, 2021, attached as Exhibit B.

SECTION 3. This Ordinance takes effect 30 days after its adoption.

SUBMITTED to the Cornelius City Council and read into the record at a regularly scheduled meeting thereof on the 5th day of April 2021 and read for a second time by title only this same day.

City of Cornelius, Oregon

By: _____
Luis Hernandez, Council President

ATTEST:

By: _____
Debby Roth, MMC
City Recorder

ORDINANCE NO. 2021-03

Exhibit A

CHAPTER IV

HOUSING

Vision: *Citizens take pride in the quality and variety of residential neighborhoods and housing choices in Cornelius.*

Goal: *To provide for the housing needs of prospective as well as present Cornelius citizens.*

Having affordable, quality housing in safe neighborhoods with access to community services is essential for all Oregonians. Like other cities in Oregon, the City of Cornelius is responsible for helping to ensure that its residents have access to a variety of housing types that meet the housing needs of households and residents of all incomes, ages and specific needs. Towards that end, the City has undertaken and will continue to implement and update a variety of activities to meet current and future housing needs:

- Conduct and periodically update an analysis of current and future housing conditions and needs. The City most recently conducted this analysis in 2020. The results are summarized in this element of the Comprehensive Plan and described in more detail in a supporting Housing and Residential Land Need Assessment Report.
- Conduct and periodically update an inventory of buildable residential land to ensure that the City has an adequate supply of land zoned for residential use to meet projected future needs. The City most recently conducted this analysis in 2020. The results are summarized in this element of the Comprehensive Plan and described in more detail in a supporting Buildable Lands Inventory Report.
- Adopt a set of housing-related Comprehensive Plan policies to address future housing needs.
- Regularly update and apply regulations in the City's Zoning and Subdivision Ordinances to meet housing needs identified in the Comprehensive Plan and supporting documents.
- Implement additional strategies to address housing needs in partnership with state and county agencies and other housing organizations. Potential strategies are described in more detail in a Housing Strategies Report prepared as part of the Housing Needs Analysis in 2020-2021.

The remainder of this chapter summarizes these topics in more detail.

Demographic Trends

Following is a brief summary of demographic conditions and trends in Cornelius, along with accompanying tables and charts, as described in the *Housing Needs Analysis* prepared for the City in 2020. Additional information about demographic and housing conditions and trends can be found in that document, which is a supporting document of the Comprehensive Plan.

- Cornelius is a City of roughly 12,300 people (City) located mostly in Washington County near the western edge of the Portland metropolitan area.

- Based on the UGB population, Cornelius is the 42nd largest city in the state by population, similar in size to other the regional cities of St. Helens and Gladstone. Cornelius is roughly half the population of neighboring Forest Grove, and a tenth the population of Hillsboro to the east.
- Cornelius has experienced strong growth, growing an estimated 27% since 2000. In contrast, Washington County as a whole saw higher growth of 38%, while the state population grew by 23%. (US Census and PSU Population Research Center)
- Cornelius was home to an estimated 3,540 households in 2020, an increase of 660 households since 2000. The percentage of families has fallen slightly from 78% of all households in 2000 to 76% in 2020. The city has a larger share of family households than Washington County (66%) and the state (63%). Average household size is estimated to have fallen during this period but remains high compared to the county.
- Cornelius's estimated average household size is 3.42 persons. This is significantly higher than the Washington County average of 2.62 and greater than the statewide average of 2.47.

FIGURE 2.1: CORNELIUS DEMOGRAPHIC PROFILE

POPULATION, HOUSEHOLDS, FAMILIES, AND YEAR-ROUND HOUSING UNITS					
	2000 (Census)	**2010 (Census)**	**Growth 00-10**	**2020 (PSU)**	**Growth 10-20**
Population[1]	9,652	11,869	23%	12,265	3%
Households[2]	2,880	3,277	14%	3,537	8%
Families[3]	2,245	2,501	11%	2,685	7%
Housing Units[4]	3,003	3,467	15%	3,718	7%
Group Quarters Population[5]	116	162	40%	167	3%
Household Size (non-group)	*3.31*	*3.51*	6%	*3.42*	-3%
Avg. Family Size	*3.64*	*3.88*	7%	*3.84*	-1%
PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000 (Census)	**2010 (Census)**	**Growth 00-10**	**2020 (Proj.)**	**Growth 10-20**
Per Capita ($)	na	$16,739	na	$22,110	32%
Median HH ($)	na	$47,768	na	$62,786	31%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

1 From PSU Population Research Center, growth rate 2000-2019 extended to 2020

2 2020 Households = (2020 population - Group Quarters Population)/2020 HH Size

3 Ratio of 2020 Families to total HH is based on 2018 ACS 5-year Estimates

4 2020 housing units are the '10 Census total plus new units permitted from '10 through '20 (source: Census, City)

5 Ratio of 2020 Group Quarters Population to Total Population is kept constant from 2010.

Housing Conditions and Trends

- **Housing Tenure.** Cornelius has a much greater share of homeowner households than renter households. The 2018 American Community Survey estimates that 79% of occupied units were owner occupied, and only 21% renter occupied. The ownership rate has risen since 2000 (72%). During this period the statewide rate fell from 64% to 61%. Nationally, the homeownership rate has fallen towards the historical average of 65%, after having climbed to 69% from the late 1990s to 2004.

- **Housing Stock.** Cornelius had an estimated 3,718 housing units in 2020, with a vacancy rate of 4.9% (includes ownership and rental units). See Figure 4.1. The housing stock has increased by roughly 715 units since 2000, or growth of 24%. Detached single-family homes represent an estimated 72% of housing units. Units in larger apartment complexes of 5 or more units represent only 4% of units, and other types of attached homes represent 13% of units. (Attached single family generally includes townhomes, some condos, and 2 to 4-plexes which are separately metered.) Manufactured homes represent 10% of the inventory.

  As Figure 4.3 shows, a large share of owner-occupied units (82%) are detached homes or manufactured homes (13%). Renter-occupied units are much more distributed among a range of structure types. About 39% of rented units are estimated to be detached homes or manufactured homes, while the remainder are some form of attached unit. Nearly 20% of rental units are in larger apartment complexes.

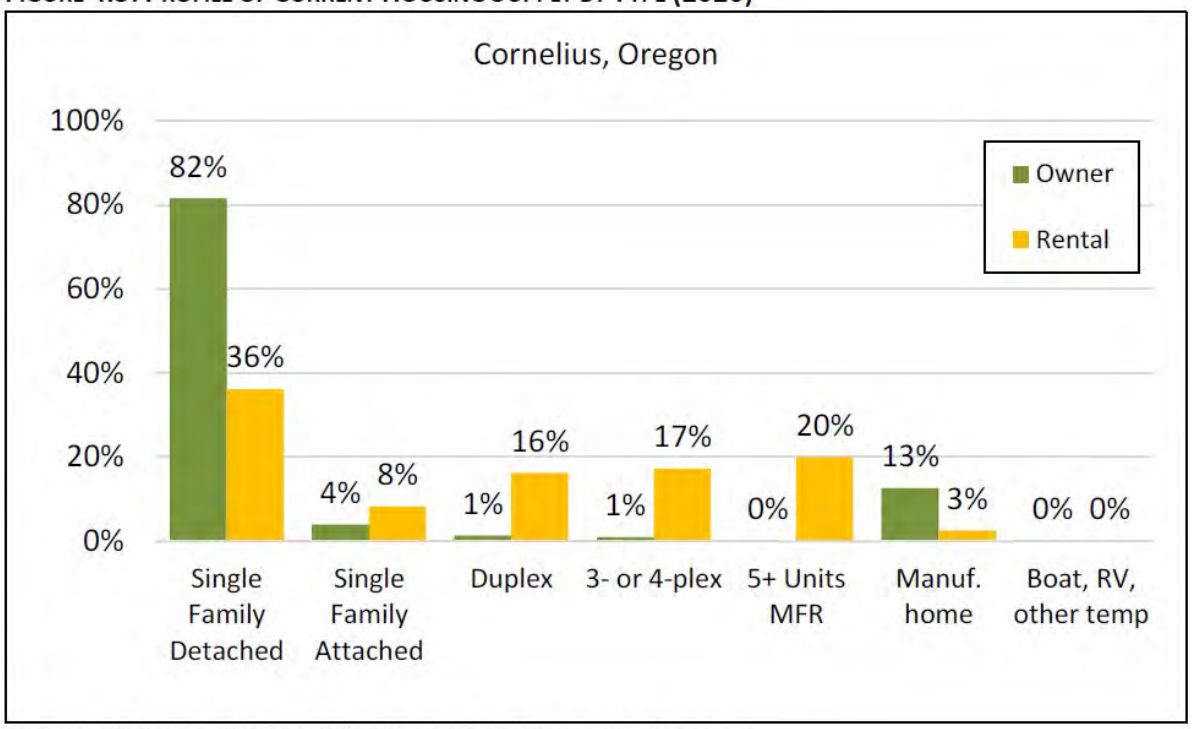
FIGURE 4.1: CURRENT HOUSING PROFILE (2020)

CURRENT HOUSING CONDITIONS (2020)			SOURCE
Total 2020 Population:	12,265		PSU Pop. Research Center
- Estimated group housing population:	167	(1.4% of Total)	US Census
Estimated Non-Group 2020 Population:	**12,098**	(Total - Group)	
Avg. HH Size:	3.42		US Census
Estimated Non-Group 2020 Households:	**3,537**	(Pop/HH Size)	
Total Housing Units:	**3,718**	(Occupied + Vacant)	Census 2010 + permits
Occupied Housing Units:	3,537	(= # of HH)	
Vacant Housing Units:	181	(Total HH - Occupied)	
Current Vacancy Rate:	4.9%	(Vacant units/ Total units)	

Sources: Johnson Economics, City of Cornelius, PSU Population Research Center, U.S. Census

*This table reflects population, household and housing unit projections shown in Figure 2.1

FIGURE 4.3: PROFILE OF CURRENT HOUSING SUPPLY BY TYPE (2020)



Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

Current and Projected Housing Needs

Following is a brief summary of current and projected housing needs in Cornelius, along with accompanying tables and charts, as described in the Housing Needs Analysis prepared for the City in 2020. Additional information related to current and projected housing needs can be found in that document, which is a supporting document of the Comprehensive Plan.

- **Current Housing Needs:**
  - A comparison of estimated current housing demand with the existing supply identifies the existing discrepancies between needs and the housing which is currently available. The estimated number of units outnumbers the number of households by roughly 180 units, indicating an average vacancy rate of 5%.
  - In general, the 2020 analysis indicates that there is support for more ownership housing at both lower and higher price ranges. This is because most housing in Cornelius is clustered at the low-middle to middle property values, while analysis of household incomes and ability to pay indicates that some households could afford housing at higher price points.
  - The analysis finds that the current market rates for most rental units are in the $700 to $1,600/month range. Therefore, this is where most of the rental unit supply is clustered. However, the greatest unmet need is found at the lowest end of the income scale, where many current renters pay more than 30% of their income in housing costs. There is an indication that some renter households could support more units at higher rental levels. Rentals at more expensive levels generally represent single family homes for rent.

- **Projected Housing Needs:**
  The projected future (20-year) housing profile in the study area is based on the current housing profile (2020), multiplied by an assumed projected future household growth rate. The projected future growth is the forecasted 2040 population for the City of Cornelius included in the most recent Metro Urban Growth analysis and Regional Transportation Plan analysis (1.8%).

  This profile of future housing demand was compared to the current housing inventory to determine the total future need for new housing units by type and price range (see Figure 5.3).

  - The results show a need for 1,854 new housing units by 2040.
  - Of the new units needed, roughly 51% are projected to be ownership units, while 49% are projected to be rental units. This represents more renters than the estimated tenure split, but it is projected that more rental units will be needed to address future needs for a greater proportion of rental units, given demographic and housing market trends, including age and income characteristics of future residents.
  - There is some new need for ownership housing at the low-end of the pricing spectrum. But income trends suggest that the greatest demand will remain in the middle and upper-middle price ranges ($200k to $400k). This is because some of the city's current housing is found at lower value levels due to age and condition. Therefore, there may be support for some units at higher price points. The $250,000 to $350,000 price point (in current dollars) is projected to remain the greatest share of demand.
  - The greatest need for rental units is found at the lowest and some higher price points. Market rents are currently clustered in the $700 to $1,600 range in current dollars. Therefore, most units are to be found in this range. There is insufficient rental housing for the lowest income households making $25,000 or less, and there may also be some support for higher rent units, which may be in new apartment complexes, townhomes or detached single-family homes for rent.

FIGURE 5.3: PROJECTED FUTURE NEED FOR NEW HOUSING UNITS (2040), CORNELIUS

OWNERSHIP HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	719	64	30	8	0	118	0	939	50.7%
Percentage:	76.5%	6.9%	3.2%	0.9%	0.0%	12.5%	0.0%	100%	

RENTAL HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	211	93	167	175	246	23	0	915	49.3%
Percentage:	23.1%	10.2%	18.2%	19.1%	26.9%	2.5%	0.0%	100%	

TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	

Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

Comparison of Projected Need and Buildable Land Supply

There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).

- The results find sufficient capacity for all housing types in the three housing categories: low-density housing; medium -density housing; and higher-density housing. The estimated "surplus" land capacity in each of these categories is fairly similar, ranging from 248 to 296 of each, with acreage surpluses ranging from 19 to 32 acres (see Figure 6.3).
- Under recently adopted state rules (HB2001, 2019), Cornelius as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit "cottage cluster" developments. At the same time, there is capacity in the MDR zones to accommodate demand for most of these attached types as well.
- These findings assume that under newly adopted state rules, 2% of available buildable parcels in the LDR zone will be used for the various types of attached units (single-family attached townhomes, duplex – fourplex). This amounts to a total of 42 attached units, plus 930 detached units in the LDR zone.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	159.4	1,220	7.7	972	248	32
Med-Density	SF attached; Manufact. home; 2-4 plexes	108.5	906	8.4	636	270	32
High-Density	Multi-family apartments	35.7	542	15.2	246	296	19
	TOTALS:	*303.5*	*2,668*	*8.8*	1,854	814	84

Sources: Angelo Planning Group, Johnson Economics

More detail on these findings is included in the "Housing and Residential Land Needs Assessment Report" and the Buildable Lands Inventory (BLI) maps prepared for the city.

Strategies to Accommodate Future Housing Needs

The City can consider a variety of other strategies in the future to provide opportunities for a wide range of housing choices, efficient land use, and development of housing affordable to people with low and moderate incomes. Potential strategies are summarized in the following table and described in more detail in the "*Housing Strategies Report"* prepared by the City as part of its Housing Needs Analysis project in 2020-2021. The ability to implement specific strategies will largely depend on staffing and financial resources available to the City at any given time.

Strategy	Initial Priority
LAND SUPPLY STRATEGIES	
1. UGB Amendments and Planning Amend the city's UGB if the supply of land within the UGB cannot accommodate the amount needed for future development. Prior to pursuing an expansion, the City must consider measures to improve the efficiency of future land use within the existing boundary.	Planning: High Amendments: Low
2. Rezone Land Re-designate land from other residential designations and/or from commercial, industrial, or institutional designations if needed to meet specific housing needs, assuming there is an adequate supply of land available to meet non-residential needs. Also remove the R-10 zoning designation.	Rezone: Low Remove R-10: High

Strategy	Initial Priority
POLICY AND DEVELOPMENT CODE STRATEGIES	
3. Increase Allowed Density in Existing Zones Increase the allowed density or reduce the minimum allowed size of lots in one or more zones to allow for more compact development and/or a wider range of housing types in specific areas.	High / Low (depending on zone)
4. Facilitate "Missing Middle" Housing Types in All Residential Zones Allow duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing in a broader range of zones.	High
5. Promote Accessory Dwelling Units (ADUs) Update ADU standards to remove barriers; encourage development though reduced fees, exemptions from selected planning requirements, use of pre-approved site or building plans, or other measures. Balance with strategies to ensure that homeowners have adequate capacity to manage and afford ADUs.	High
6. Zoning Incentives for Affordable and Workforce Housing Create incentives for developers to provide a community benefit (such as affordable housing), in exchange for the ability to build a project that would not otherwise be allowed by the development code.	Medium
7. Streamline Off-Street Parking Requirements Reduce the number of required off-street parking spaces for certain types of housing, allow for credit for on-street spaces, and/or encourage shared parking in mixed use developments.	Low
INCENTIVES	
8. System Development Charge Exemptions or Deferrals Deferral of SDCs for affordable housing. Can be applied to regulated affordable housing and/or specific housing types (such as ADUs).	Medium
9. Tax Abatements Tax abatements are reductions in property taxes for housing and may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable or other desired housing types (such as mixed-use).	Medium
10. Land Use Permit Fee Reductions Reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), in order to reduce the upfront cost of development.	Medium
11. Expedited Development Review Strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff.	Low
FUNDING SOURCES AND PROGRAMS	
12. Tax Increment Financing (TIF)	High

Strategy	Initial Priority
TIF is a funding mechanism in which future tax revenues in targeted development or redevelopment areas are diverted to finance infrastructure improvements and/or development—potentially including affordable and/or market-rate housing.	
13. Land Acquisition and Banking Land acquisition is a tool to secure sites for affordable housing. Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be used for affordable housing.	High
14. Construction Excise Tax (CET) A one-time tax on new construction of between 1% and 3% to help pay for affordable housing strategies identified here. State law requires it to be spent on specific types of programs and activities.	Low
15. Public-Private Partnerships (PPPs) and Community Land Trusts Arrangements between public and private entities to create more and/or affordable housing. PPPs can promote a variety of affordable housing programs or projects and include partnerships from multiple entities (public, private, and non-profit), including Community Land Trusts.	Medium
16. Financial Assistance Programs A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.	Low

POLICIES

1. Ensure that adequate land is available to meet the housing needs of current and future Cornelius residents.
2. Promote and encourage a variety of housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race.
3. Employ strategies that support the Fair Housing Act and affirmatively further fair housing.
4. Provide the opportunity for a wider range of rental and ownership housing choices in Cornelius, including additional middle housing types, such as duplexes, triplexes, quadplexes, townhouses, and cottage clusters, in low- and medium-density zones.
5. Allow and support the development of Accessory Dwelling Units in all residential zones as required by State law.
6. Encourage residential uses mixed with other compatible uses in the same building or on the same site within the City's mixed-use zones.
7. Support the maintenance and development of manufactured homes as an affordable housing choice in appropriate locations.
8. Promote and encourage open spaces and buffers in new subdivisions and other housing developments.
9. Develop minimum density standards that comply with regional mandates.

10. Continue to maintain and expand partnerships with non-profit housing developers and other affordable housing providers and agencies that preserve or provide new low- to moderate-income housing units, create opportunities for first-time homeownership, and help vulnerable homeowners maintain and stay in their homes.
11. Encourage maintenance and rehabilitation of the existing housing stock, including through support for local or regional programs and partner organizations.
12. Work with other jurisdictions as well as regional and state agencies to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.
13. Encourage development of residential land within the Urban Growth Boundary at densities and for housing types consistent with those identified in the City's *Housing Needs Analysis*.
14. Ensure that the city has an adequate housing supply with enough land to support the community's growth.

IMPLEMENTATION ACTIONS

1. All subdivision requests within the Urban Growth Boundary shall be reviewed administratively to ensure policy enforcement. The Planning Commission will determine the suitability of developments outside the City limits but within the urban growth boundary through master planning. The subdivision process shall be divided into two steps. Preliminary plats and final plats shall be reviewed administratively. If a subdivision request involves a discretionary decision it shall be reviewed at a public hearing before the Planning Commission.
2. The City shall seek to accommodate the full scope of the population and employment allocations assigned to Cornelius by METRO and Washington County.
3. The City will work with the Washington County Housing Authority, non-profit housing developers, other affordable housing providers, and appropriate federal and state agencies in identifying and providing for housing at various rent and price ranges to ensure low- and moderate-income needs are appropriately addressed.
4. The City will work with METRO in implementing its Housing Goals and Objectives.
5. The City will prepare, regularly monitor, and periodically update an inventory of buildable residential land and prepare and update Housing Production Strategies to provide a sufficient amount of residential land to accommodate residential growth, consistent with state requirements.

EXHIBIT "B"

CITY OF CORNELIUS, OR

HOUSING AND RESIDENTIAL LAND NEEDS ASSESSMENT
(OREGON STATEWIDE PLANNING GOAL 10)

20-YEAR HOUSING NEED
2020 - 2040

January 2021

JOHNSON ECONOMICS

Acknowledgments

Johnson Economics prepared this report for the City of Cornelius. Johnson Economics and the City of Cornelius thank the many people who helped to develop this document.

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Consultants
Angelo Planning Group
Johnson Economics

This report was prepared in accordance with the requirements of OAR 660 Division 8: Interpretation of Goal 10 Housing. This project is funded by the State of Oregon through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

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TABLE OF CONTENTS

I. INTRODUCTION

This analysis outlines a forecast of housing need within the City of Cornelius. Housing need and resulting land need are forecast to 2040 consistent with 20-year need assessment requirements of Oregon Revised Statutes.[1] This report presents a housing need analysis (presented in number and types of housing units) and a residential land need analysis, based on those projections.

The primary data sources used in generating this forecast were:

- Portland State University Population Research Center
- Metro
- U.S. Census
- Environics Analytics Inc.[2]
- Oregon Employment Department
- City of Cornelius
- Washington County
- Other sources are identified as appropriate.

This analysis relies heavily on Census data from both the Decennial Census, and the American Community Survey (ACS). Generally, data from the ACS has a larger statistical margin of error than the 10-year Census. This analysis relies whenever possible on the most recent ACS 5-year estimates. The 5-year estimates have the lowest margin of error in comparison to the ACS 3-year and 1-year estimates. All Census data feature some margin of error but remain the best source of data available on many demographic and housing subjects.

II. CITY OF CORNELIUS DEMOGRAPHIC PROFILE

SUMMARY

The following table (Figure 2.1) presents a profile of City of Cornelius demographics from the 2000 and 2010 Census. It also reflects the estimated population of this area as of 2019 from PSU estimates, forecasted forward to 2020 using the growth rate since 2010.

- Cornelius is a City of roughly 12,300 people (City) located mostly in Washington County near the western edge of the Portland metropolitan area.
- Based on the UGB population, Cornelius is the 42nd largest city in the state by population, similar in size to other the regional cities of St. Helens and Gladstone. Cornelius is roughly half the population of neighboring Forest Grove, and a tenth the population of Hillsboro to the east.
- Cornelius has experienced strong growth, growing an estimated 27% since 2000. In contrast, Washington County as a whole saw higher growth of 38%, while the state population grew by 23%. (US Census and PSU Population Research Center)
- Cornelius was home to an estimated 3,540 households in 2020, an increase of 660 households since 2000. The percentage of families has fallen slightly from 78% of all households in 2000 to 76% in 2020. The city has a larger share of family households than Washington County (66%) and the state (63%). Average household size is estimated to have fallen during this period but remains high compared to the county.

[1] ORS 197.628; OAR 660-025

[2] Environics Analytics Inc. is a third-party company providing data on demographics and market segmentation. It licenses data from the Nielson Company which conducts direct market research including surveying of households across the nation. Nielson combines proprietary data with data from the U.S. Census, Postal Service, and other federal sources, as well as local-level sources such as Equifax, Vallassis and the National Association of Realtors. Projections of future growth by demographic segments are based on the continuation of long-term and emergent demographic trends identified through the above sources.

- Cornelius's estimated average household size is 3.42 persons. This is significantly higher than the Washington County average of 2.62 and greater than the statewide average of 2.47.

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SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

1 From PSU Population Research Center, growth rate 2000-2019 extended to 2020

2 2020 Households = (2020 population - Group Quarters Population)/2020 HH Size

3 Ratio of 2020 Families to total HH is based on 2018 ACS 5-year Estimates

4 2020 housing units are the '10 Census total plus new units permitted from '10 through '20 (source: Census, City)

5 Ratio of 2020 Group Quarters Population to Total Population is kept constant from 2010.

A. POPULATION GROWTH

Since 2000, Cornelius has grown by roughly 2,600 people within the UGB, or 27% in 20 years. This was less than the countywide rate of growth. In comparison, the population of Forest Grove grew by an estimated 42% during this period.

B. HOUSEHOLD GROWTH & SIZE

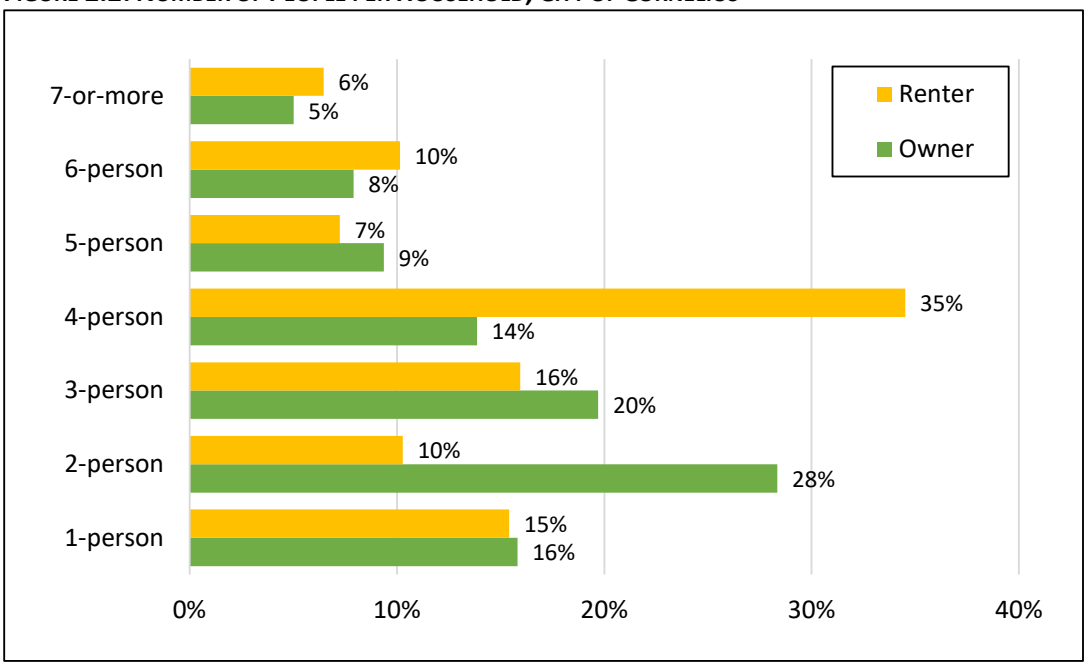
As of 2020, the city has an estimated 3,540 households. Since 2000, Cornelius has added an estimated 660 households. This is an average of roughly 32 households annually during this period. The growth since 2000 has roughly kept pace with the growth in new housing units, which have been permitted at the rate of roughly 35 units per year.

There has been a general trend in Oregon and nationwide towards declining household size as birth rates have fallen, more people have chosen to live alone, and the Baby Boomers have become empty nesters. While this trend of diminishing household size is expected to continue nationwide, there are limits to how far the average can fall.

Cornelius's average household size of 3.4 people, with 76% family households, is still much higher than Washington County (2.62; 66%).

Figure 2.2 shows the share of households by the number of people for renter and owner households in 2018 (latest data available), according to the Census. Renter households are more likely to have four persons, or larger family sizes. Owner households are more likely to have two persons or three persons. Household size correlates to housing needs.

FIGURE 2.2: NUMBER OF PEOPLE PER HOUSEHOLD, CITY OF CORNELIUS



SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: B25009 (2018 ACS 5-yr Estimates)

C. FAMILY HOUSEHOLDS

As of the 2010 Census, 76% of Cornelius households were family households, slightly lower than 2000 (78%). But the total number of family households in Cornelius is estimated to have grown by roughly 440 since 2000. The Census defines family households as two or more persons, related by marriage, birth or adoption and living together. In 2020, family households in Cornelius had an average size of 3.8 people.

D. GROUP QUARTERS POPULATION

The City of Cornelius has an estimated group quarters population of 1.4% of the total population, or 167 persons. Group quarters include such shared housing situations as nursing homes, prisons, dorms, group residences, military housing, or shelters. For the purposes of this analysis, these residents are removed from the estimated population total, before determining the amount of other types of housing that are needed for non-group households. (The share of group quarters population is assumed to remain steady over the 20-year forecast period.)

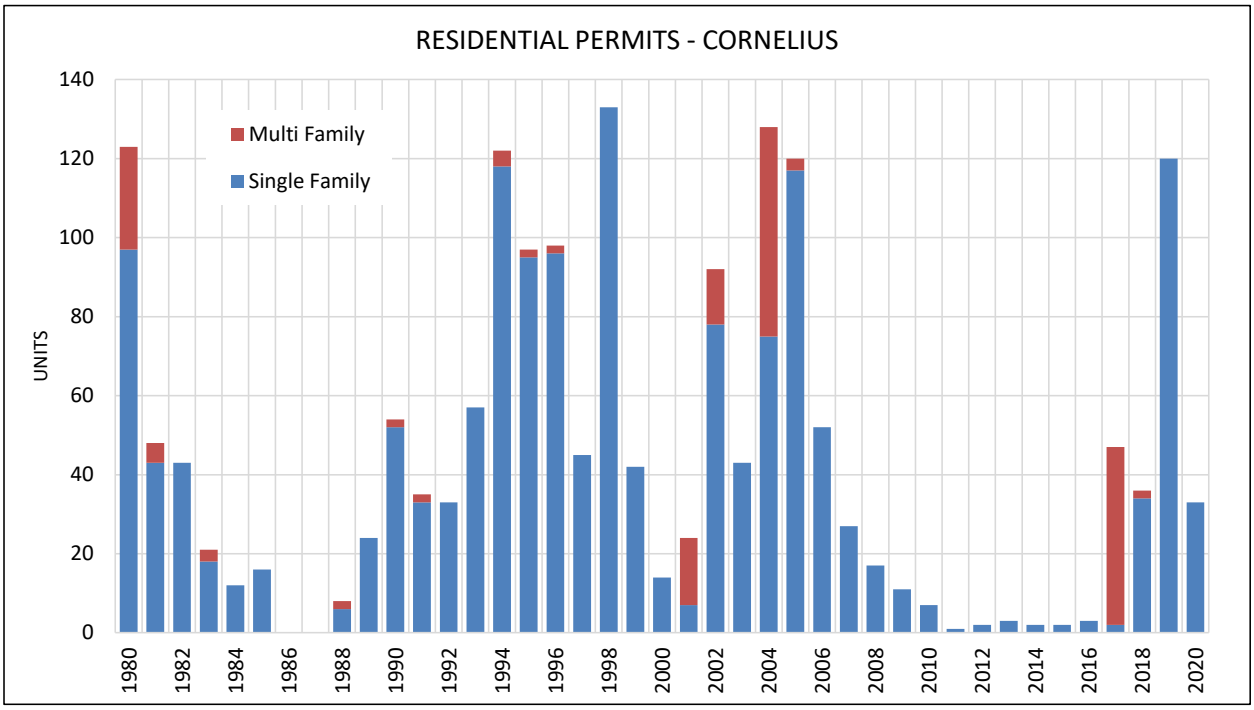
E. HOUSING UNITS

Data from the City of Cornelius and the US Census indicate that the city added roughly 715 new housing units since 2000, representing 24% growth in the housing stock. This number of new units is slightly higher than the growth in new households estimated during the same period (660), indicating that housing growth has kept pace with growing need.

As of 2020, the city had an estimated housing stock of roughly 3,718 units for its 3,537 estimated households. This translates to an estimated average vacancy rate of 4.9%.

Residential Permits: The city of Cornelius has accounted for just over 1% of the total county residential permits since 2000. An average of 35 units have been permitted annually since 2000, with 17% being multi-family units.

FIGURE 2.3: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, CITY OF CORNELIUS

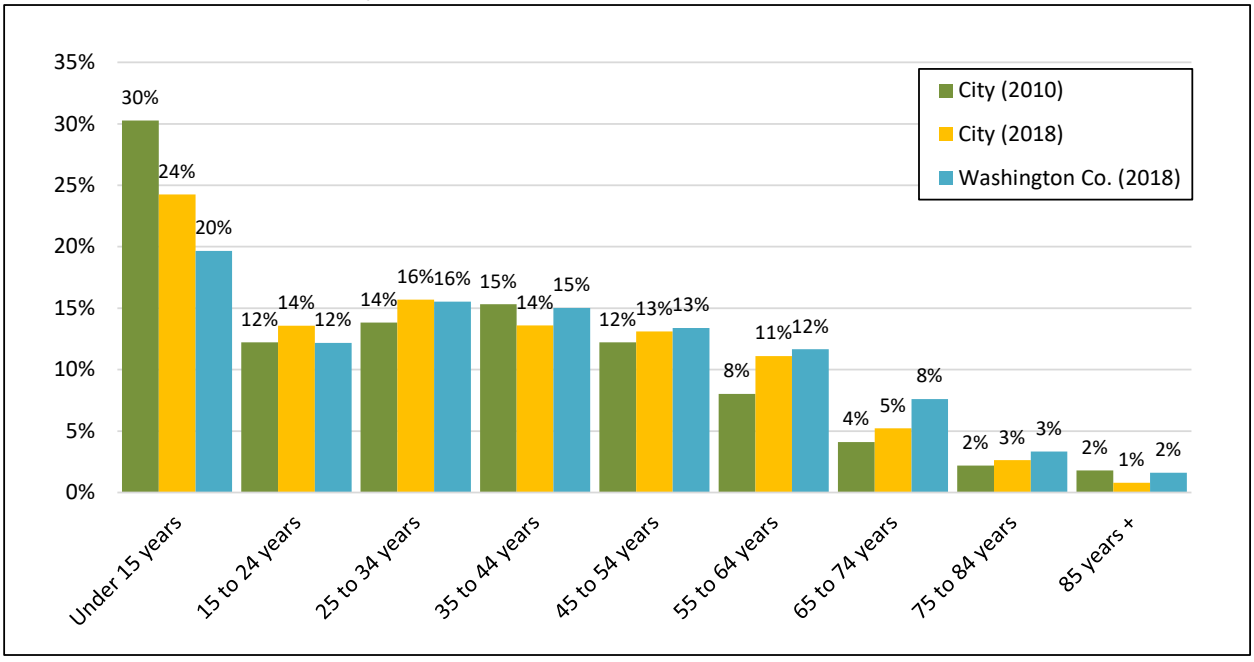


SOURCE: HUD

F. AGE TRENDS

The following figure shows the share of the population falling in different age cohorts between the 2000 Census and the most recent 5-year American Community Survey estimates. As the chart shows, there is a general trend for middle age and young cohorts to fall as share of total population, while older cohorts have grown in share. This is in keeping with the national trend caused by the aging of the Baby Boom generation. Overall, Cornelius has a younger population than the county, with a greater share of children.

FIGURE 2.4: AGE COHORT TRENDS, 2000 - 2018

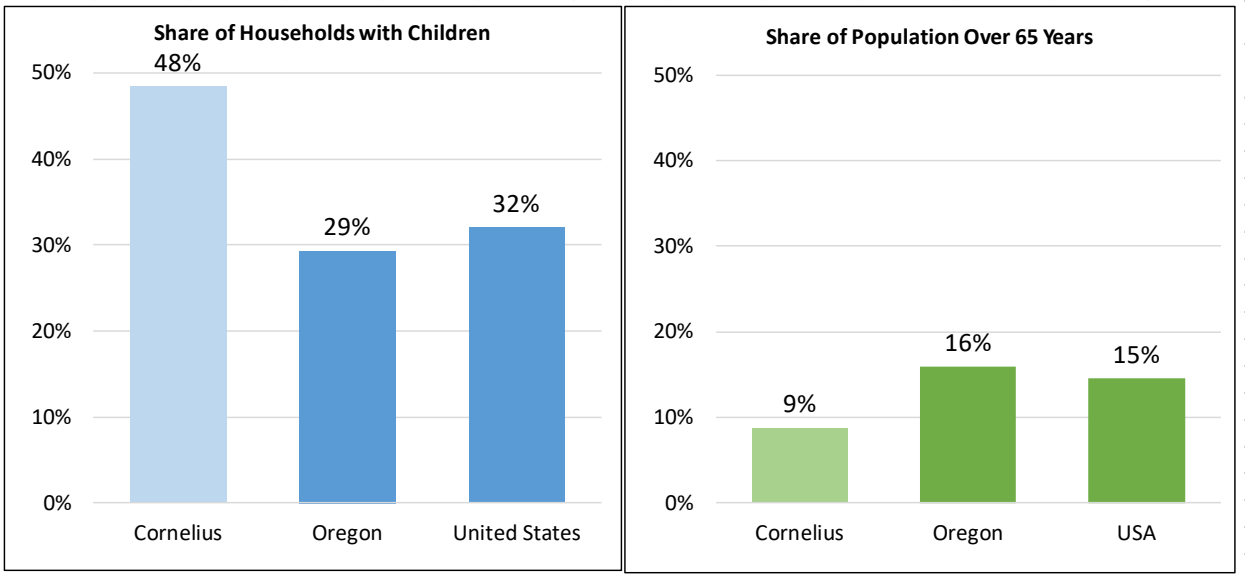


SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: QT-P1 (2000); S0101 (2018 ACS 5-yr Estimates)

- The cohorts which grew the most in share during this period were those aged 55 to 74 years. Still, an estimated 91% of the population is under 65 years of age.
- In the 2018 ACS, the local median age was an estimated 32 years, compared to 38 years in Oregon.

Figure 2.5 presents the share of households with children, and the share of population over 65 years for comparison. Compared to state and national averages, Cornelius has a higher share of households with children. At 9%, the share of population over 65 is much lower than the state and national figures.

FIGURE 2.5: SHARE OF HOUSEHOLDS WITH CHILDREN/ POPULATION OVER 65 YEARS (CORNELIUS)



SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: B11005; S0101 (2018 ACS 5-yr Estimates)

G. INCOME TRENDS

The following figure presents data on Cornelius's income trends. (2000 Census data on income is not available for Cornelius.)

FIGURE 2.6: INCOME TRENDS, 2000 – 2020

PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000 (Census)	2010 (Census)	Growth 00-10	2020 (Proj.)	Growth 10-20
Per Capita ($)	na	$16,739	na	$22,110	32%
Median HH ($)	na	$47,768	na	$62,786	31%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

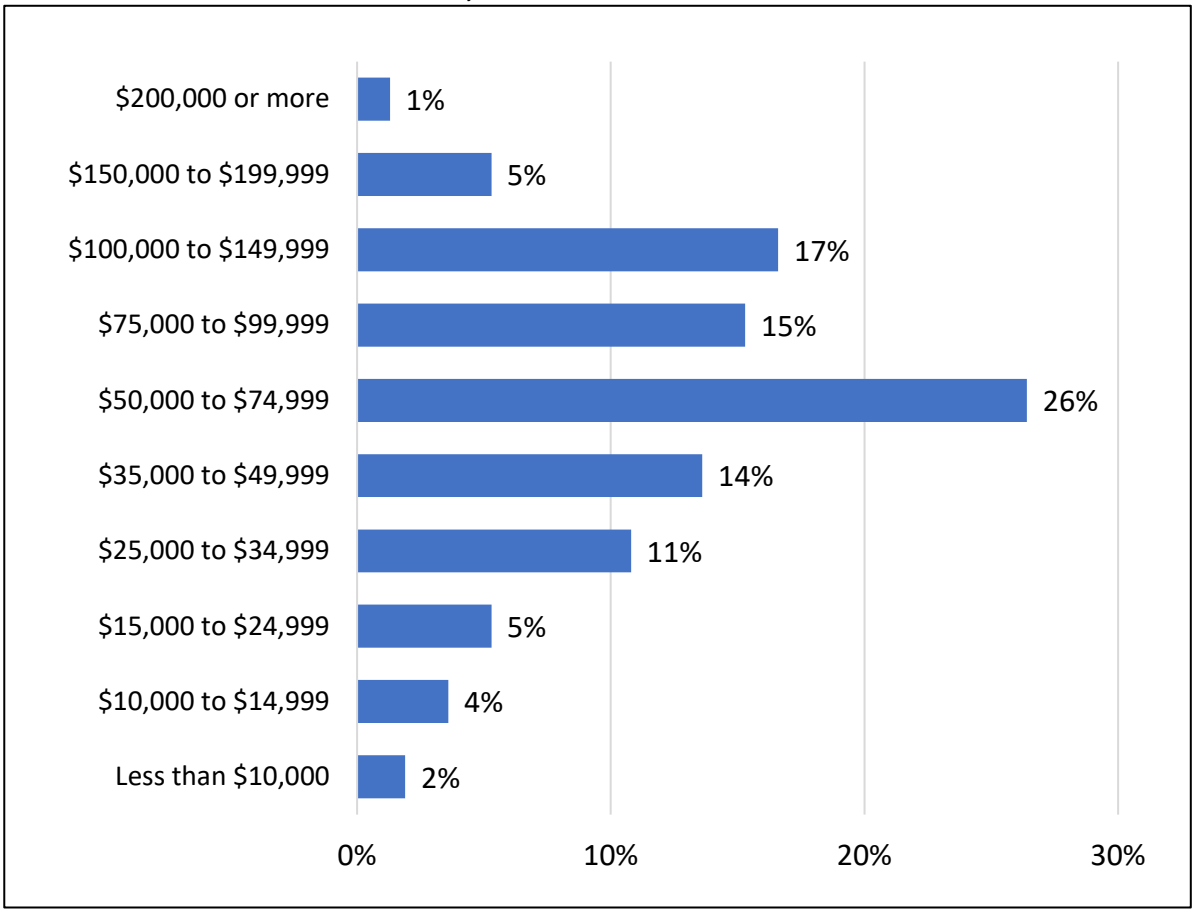
Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

- Cornelius's estimated median household income was $63,000 in 2020. This is 24% lower than the Washington County median of $83,000, but still well above the statewide median of $56,000.
- Cornelius's per capita income is roughly $22,000.
- Median income has grown an estimated 32% between 2010 and 2019, in real dollars. Inflation was an estimated 18% over this period, so the local median income has well exceeded inflation. This is not the case in many regions and nationally, where income growth has not kept pace with inflation.

Figure 2.7 presents the estimated distribution of households by income as of 2018. The largest income cohorts are those households earning between $50k and $75k, followed by households earning between $75,000 and $149,000. Fifty-five percent of households earn between $35,000 and $100,000.

- 35% of households earn less than $50k per year, while 65% of households earn $50k or more.
- 11% of households earn less than $25k per year.

FIGURE 2.7: HOUSEHOLD INCOME COHORTS, 2018



SOURCE: US Census, Census Tables: S1901 (2018 ACS 5-yr Est.)

H. POVERTY STATISTICS

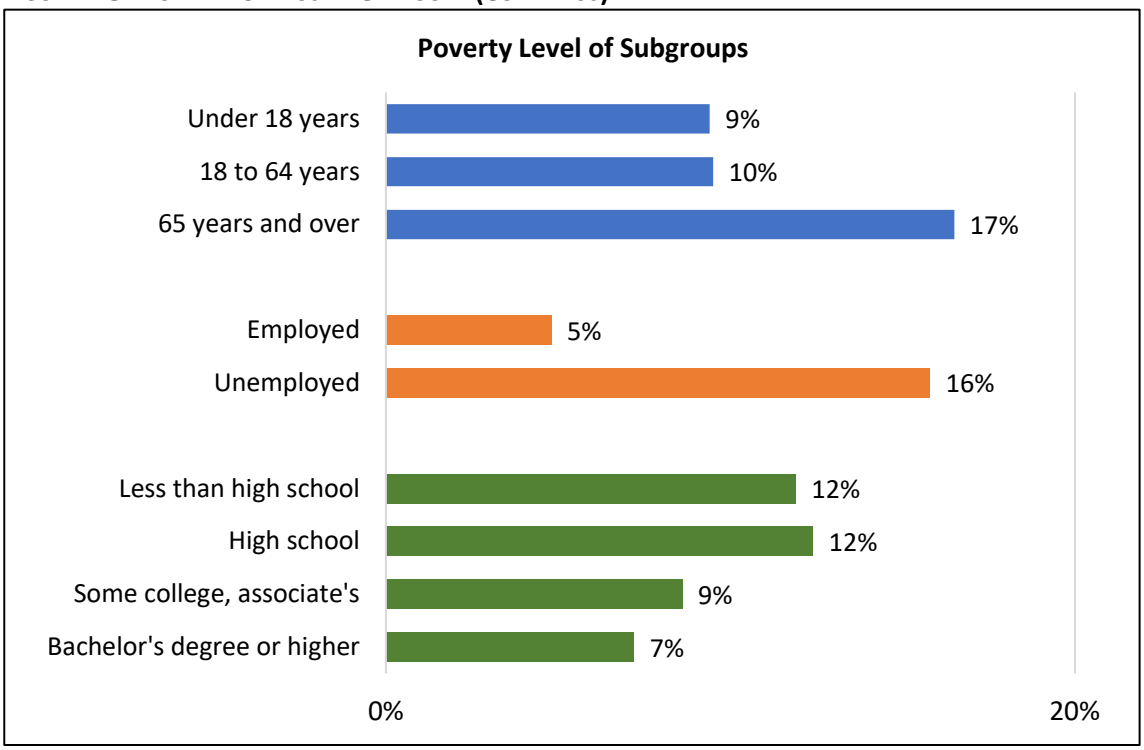
According to the US Census, the official poverty rate in Cornelius is an estimated 10% over the most recent period reported (2018 5-year estimates).[3] This is roughly 1,250 individuals in Cornelius. In comparison, the official poverty rate in Washington County is 9%, and at the state level is 17%. In the 2014-18 period:

- The Cornelius poverty rate is highest among those over 65 years of age at 17%. The rate is 10% among those between 18 and 64 years of age. The estimated rate is lowest for children at 9%.
- For those without a high school diploma, and with only a high school diploma, the poverty rate is 12%.
- Among those who are employed the poverty rate is 5%, while it is 16% for those who are unemployed.

Information on affordable housing is presented in Section II F of this report.

[3] Census Tables: S1701 (2018 ACS 5-yr Estimates)

FIGURE 2.8: POVERTY STATUS BY CATEGORY (CORNELIUS)



SOURCE: US Census
Census Tables: S1701 (2018 ACS 5-yr Est.)

I. EMPLOYMENT LOCATION TRENDS

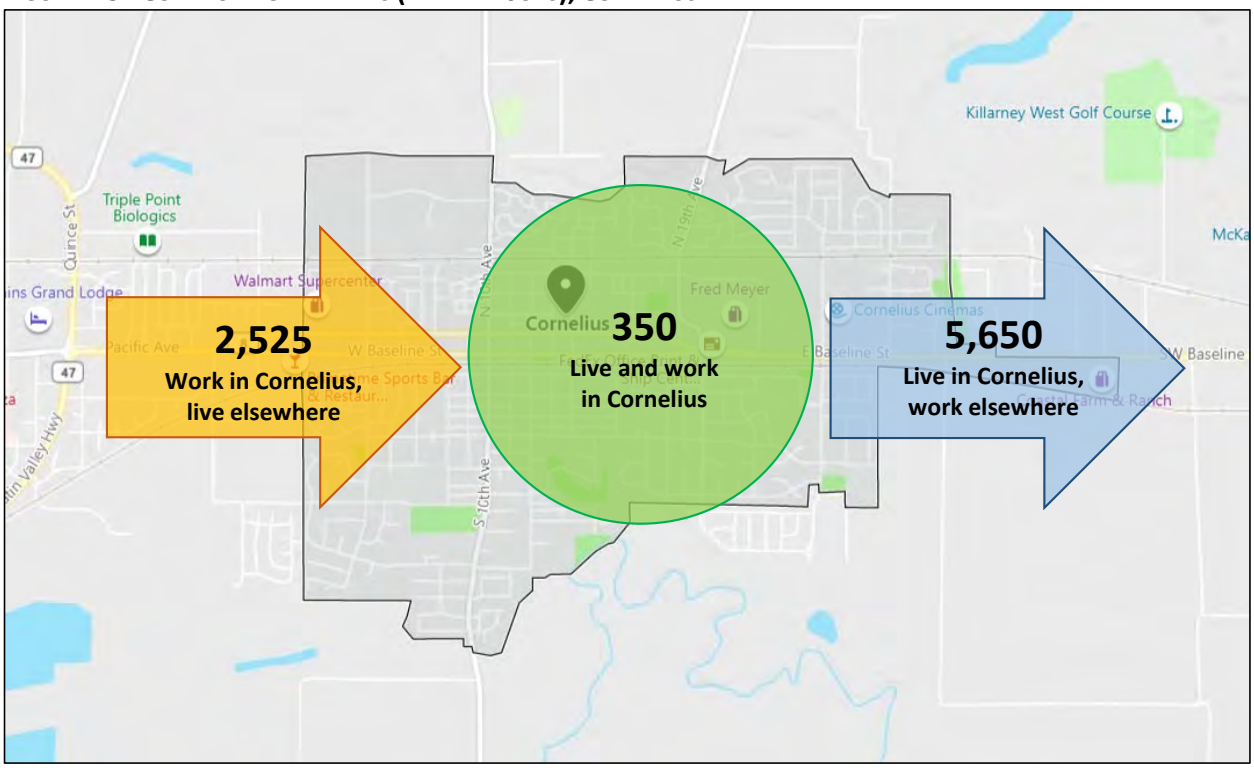
This section provides an overview of employment and industry trends in Cornelius that are related to housing.

Commuting Patterns: The following figure shows the inflow and outflow of commuters to Cornelius according to the Census Employment Dynamics Database. These figures reflect "covered employment" as of 2017, the most recent year available. (Covered employment refers to those jobs where the employee is covered by federal unemployment insurance.) This category does not include many contract employees and self-employed and therefore is not a complete picture of local employment. The figure discussed here is best understood as indicators of the general pattern of commuting and not exact figures.

As of 2017, the most recent year available, the Census estimated there were roughly 2,870 covered employment jobs located in Cornelius. Of these, an estimated 350 or 12%, are held by local residents, while over 2,500 employees commute into the city from elsewhere. This pattern is fairly common among most communities. The most common homes of local workers commuting into the city are Hillsboro and Forest Grove.

Of the estimated 5,985 employed Cornelius residents, 94% of them commute elsewhere to employment. The most common destinations for Cornelius commuters are Hillsboro, Portland and Beaverton. Smaller shares work elsewhere in the Portland metro or in the mid-Willamette Valley.

FIGURE 2.9: COMMUTING PATTERNS (PRIMARY JOBS), CORNELIUS



Source: US Census Longitudinal Employer-Household Dynamics

Jobs/Household Ratio: Cornelius features a fairly-low jobs-to-households ratio. There are an estimated 2,875 jobs in the city of Cornelius (including covered and non-covered), and an estimated 3,537 households in Cornelius. This represents 0.8 jobs per household. There is no standard jobs-to-households ratio that is right for all communities, but it can provide a guide to the balance between employment uses and residential uses in the city.

There is an average of 1.7 jobs held for each Cornelius households, a majority of which are located outside the city.

III. CURRENT HOUSING CONDITIONS

This section presents a profile of the current housing stock and market indicators in Cornelius. This profile forms the foundation to which current and future housing needs will be compared.

A. HOUSING TENURE

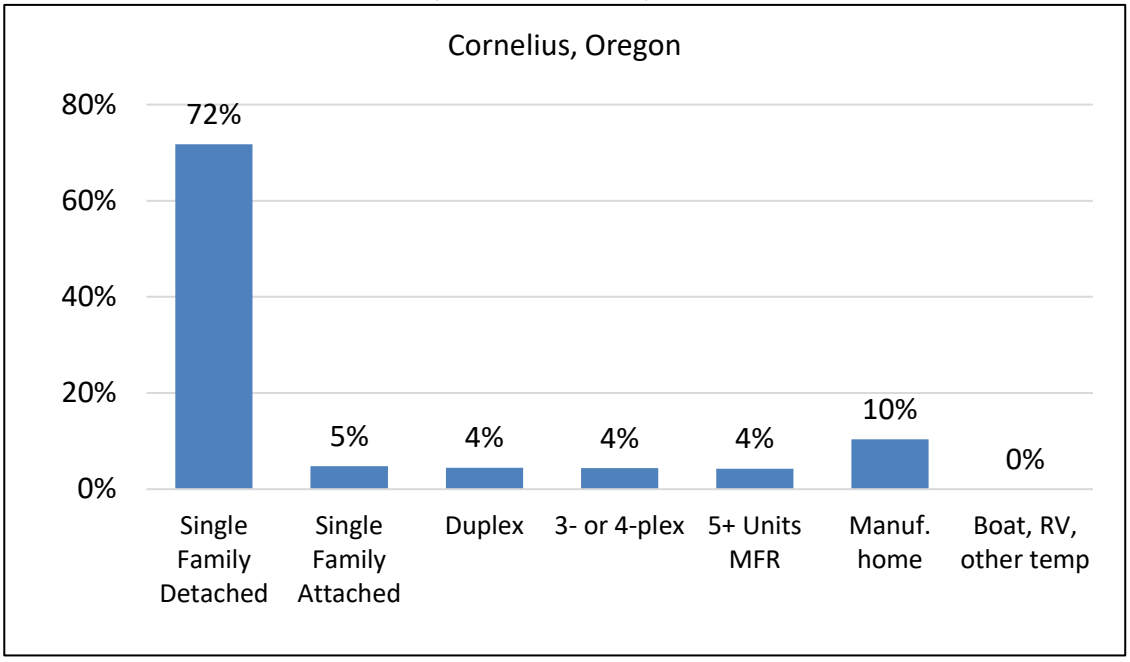
Cornelius has a much greater share of homeowner households than renter households. The 2018 American Community Survey estimates that 79% of occupied units were owner occupied, and only 21% renter occupied. The ownership rate has risen since 2000 (72%). During this period the statewide rate fell from 64% to 61%. Nationally, the homeownership rate has fallen towards the historical average of 65%, after having climbed to 69% from the late 1990's to 2004.

The estimated ownership rate is much lower across Washington County (62%) and statewide (61%).

B. HOUSING STOCK

As shown in Figure 2.1, Cornelius had an estimated 3,718 housing units in 2020, with a vacancy rate of 4.9% (includes ownership and rental units). The housing stock has increased by roughly 715 units since 2000, or growth of 24%.

FIGURE 3.1: ESTIMATED SHARE OF UNITS, BY PROPERTY TYPE, 2018



SOURCE: US Census, City of Cornelius

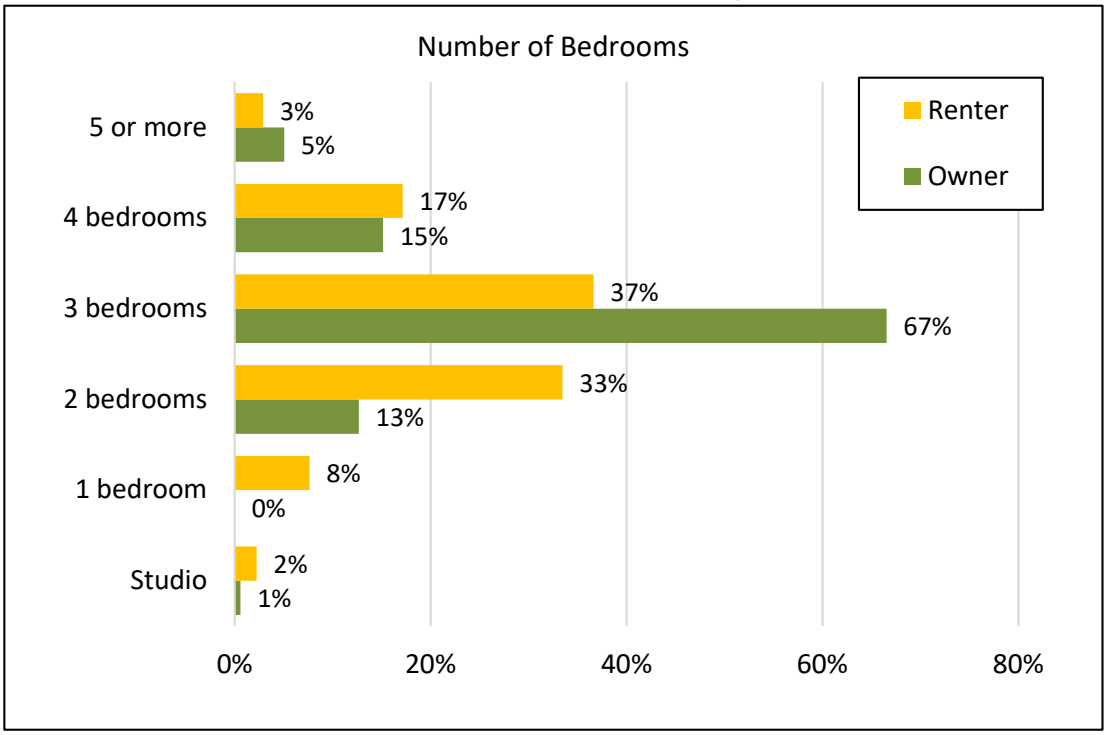
Figure 3.1 shows the estimated number of units by type in 2020 based on US Census. Detached single-family homes represent an estimated 72% of housing units.

Units in larger apartment complexes of 5 or more units represent only 4% of units, and other types of attached homes represent 13% of units. (Attached single family generally includes townhomes, some condos, and 2 to 4-plexes which are separately metered.) Manufactured homes represent 10% of the inventory.

C. NUMBER OF BEDROOMS

Figure 3.2 shows the share of units for owners and renters by the number of bedrooms they have. In general, owner-occupied units are much more likely to have three or more bedrooms, while renter-occupied units are much more likely to have three or fewer bedrooms.

FIGURE 3.2: NUMBER OF BEDROOMS FOR OWNER AND RENTER UNITS, 2018



SOURCE: US Census
Census Tables: B25042 (2018 ACS 5-year Estimates)

D. UNIT TYPES BY TENURE

As Figure 3.3 and 3.4 show, a large share of owner-occupied units (82%) are detached homes, which is related to why owner-occupied units tend to have more bedrooms, as do manufactured homes (13%). Renter-occupied units are much more distributed among a range of structure types. About 39% of rented units are estimated to be detached homes or manufactured homes, while the remainder are some form of attached unit. Nearly 20% of rental units are in larger apartment complexes.

FIGURE 3.3: CURRENT INVENTORY BY UNIT TYPE, FOR OWNERSHIP AND RENTAL HOUSING

OWNERSHIP HOUSING

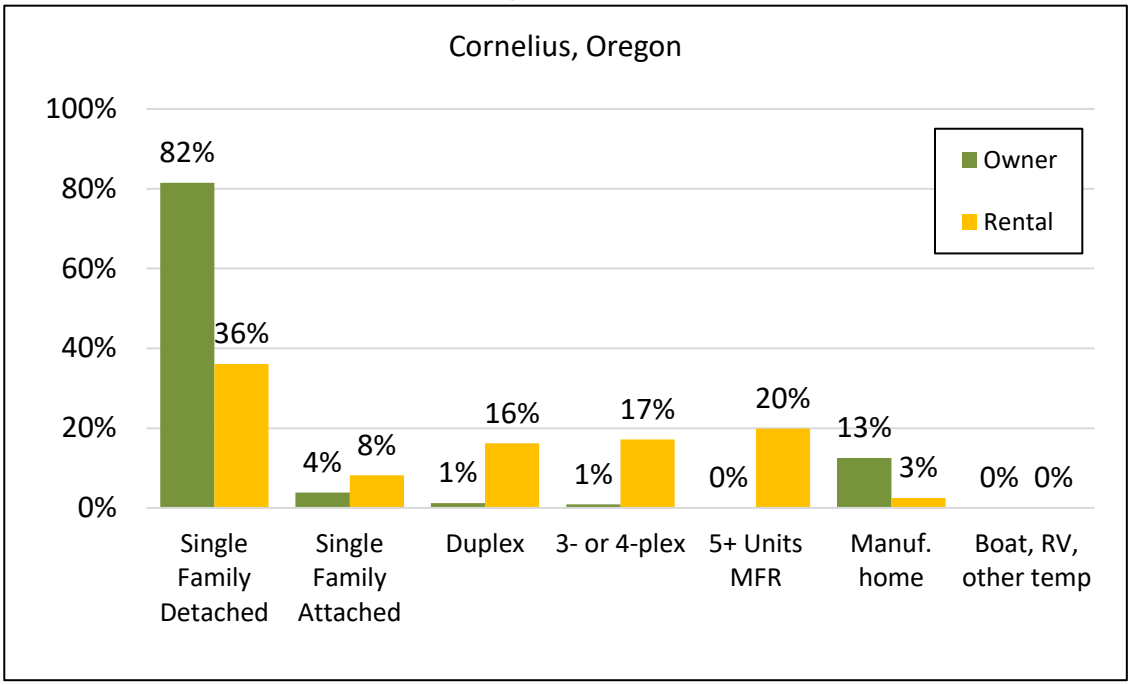
OWNERSHIP HOUSING								
Price Range	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	2,377	113	36	25	0	366	0	2,917
Percentage:	81.5%	3.9%	1.2%	0.9%	0.0%	12.5%	0.0%	100%

RENTAL HOUSING

RENTAL HOUSING								
Price Range	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	289	65	130	137	159	20	0	801
Percentage:	36.1%	8.2%	16.2%	17.1%	19.9%	2.5%	0.0%	100%

Sources: US Census, JOHNSON ECONOMICS, CITY OF CORNELIUS

FIGURE 3.4: CURRENT INVENTORY BY UNIT TYPE, BY SHARE

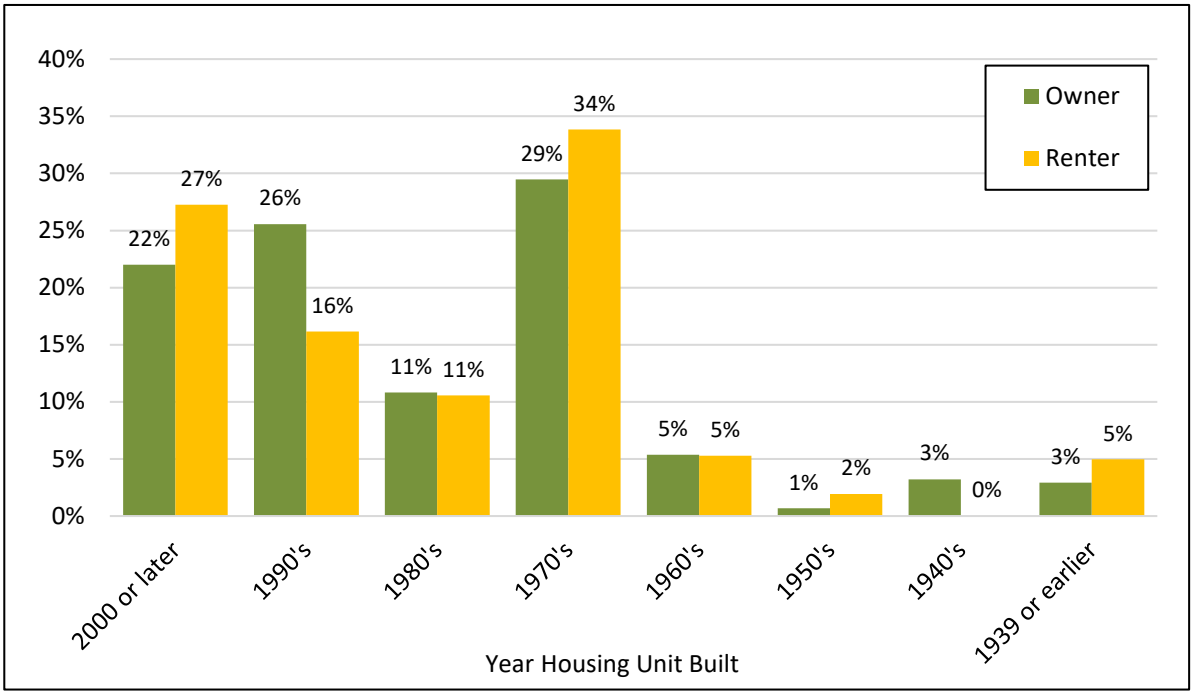


Sources: US Census, JOHNSON ECONOMICS, CITY OF CORNELIUS

E. AGE AND CONDITION OF HOUSING STOCK

Cornelius's housing stock reflects the pattern of development over time. Almost three-fourths, or 74%, of the housing stock is pre-2000 with the remainder being post-2000. The single largest share of housing stock was built in the 1970's. Only 12% of the housing stock dates from the 1960's or earlier, which is low compared to many Oregon communities.

FIGURE 3.5: AGE OF UNITS FOR OWNERS AND RENTERS



SOURCE: US Census
Census Tables: B25036 (2018 ACS 5-year Estimates)

- Unfortunately, good quantitative data on housing condition is generally unavailable without an intensive on-site survey of all local housing that is beyond the scope of this analysis. Census categories related to housing condition are ill-suited for this analysis, dealing with such issues as units without indoor plumbing, which was more common in the mid-20th Century, but is an increasingly rare situation. Age of units serves as the closest reliable proxy for condition with available data.
- For ownership units, older homes may be in poor condition, but are also more likely to have undergone some repair and renovation over the years. Rental units are more likely to degrade steadily with age and wear-and-tear, and less likely to receive sufficient reinvestment to keep them in top condition, though this is not universally true.

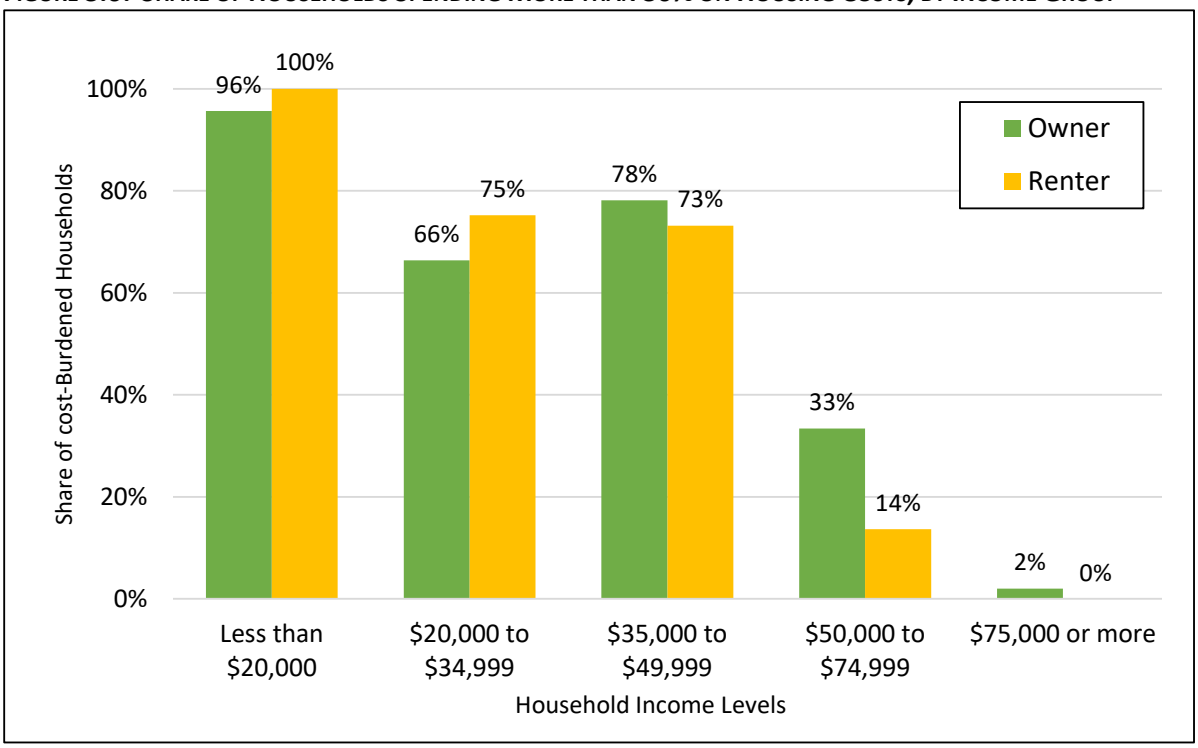
F. HOUSING COSTS VS. LOCAL INCOMES

Figure 3.6 shows the share of owner and renter households who are paying more than 30% of their household income towards housing costs, by income segment. (Spending 30% or less on housing costs is a common measure of "affordability" used by HUD and others, and in the analysis presented in this report.)

As one would expect, households with lower incomes tend to spend more than 30% of their income on housing, while incrementally fewer of those in higher income groups spend more than 30% of their incomes on housing costs. Of those earning less than $20,000, an estimated 96% of owner households spend more than 30% of income on housing costs and 100% of renters.

In total, the US Census estimates that over 36% of Cornelius households pay more than 30% of income towards housing costs (2018 American Community Survey, B25106)

FIGURE 3.6: SHARE OF HOUSEHOLDS SPENDING MORE THAN 30% ON HOUSING COSTS, BY INCOME GROUP



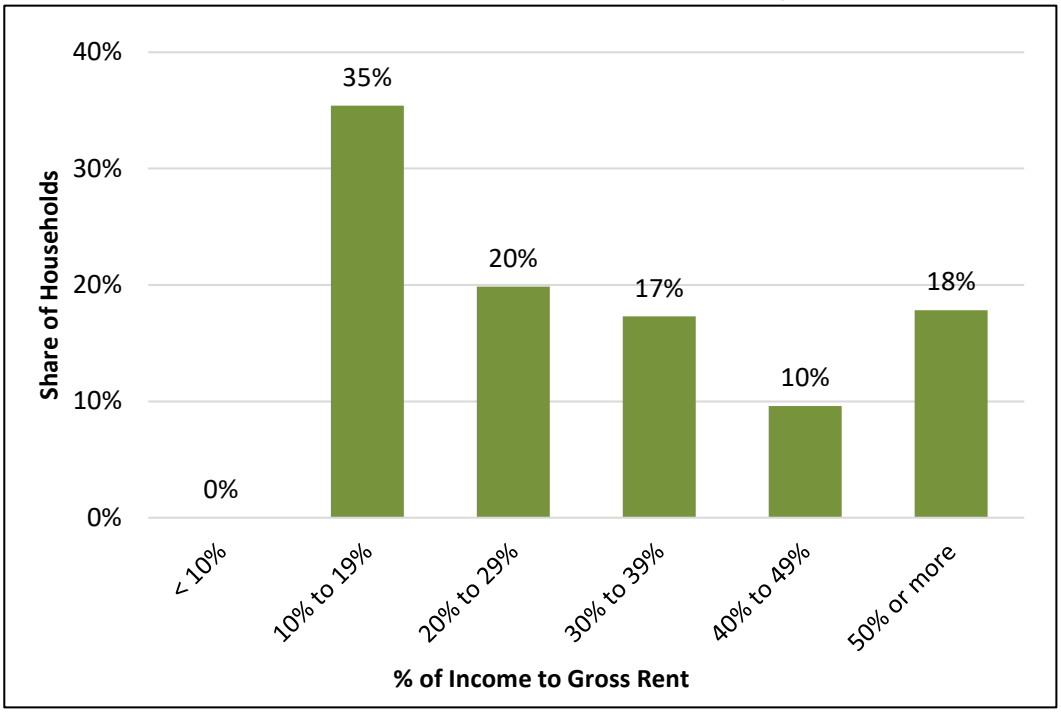
Sources: US Census, JOHNSON ECONOMICS
Census Table: B25106 (2018 ACS 5-yr Estimates)

Housing is generally one of a household's largest living costs, if not the largest. The ability to find affordable housing options, and even build wealth through ownership, is one of the biggest contributors to helping lower income households save and build wealth. Even if renting, affordable housing costs, allow for more household income to be put to other needs, including saving.

The following figures shows the percentage of household income spent towards gross rent[4] for local renter households only. This more fine-grained data shows that not only are 45% of renters spending more than 30% of their income on gross rent, but an estimated 18% of renters are spending 50% or more of their income on housing and are considered severely rent-burdened.

Renters are disproportionately lower income relative to homeowners. Housing cost burdens are felt more broadly for these households, and as the analysis presented in a later section shows there is a need for more affordable rental units in Cornelius, as in most communities.

FIGURE 3.7: PERCENTAGE OF HOUSEHOLD INCOME SPENT ON GROSS RENT, CORNELIUS RENTER HOUSEHOLDS



Sources: US Census, JOHNSON ECONOMICS
Census Table: B25070 (2018 ACS 5-yr Estimates)

G. PUBLICLY ASSISTED HOUSING

Cornelius has an estimated 79 rent-subsidized housing units, found in 12 properties, according to Oregon Housing and Community Development (OHCS). These properties are funded through HUD programs, tax credits and other programs which guarantee subsidized rents for qualified households. This includes the recently completed Cornelius Place, which features 45 affordable senior housing units.

The estimated 79 subsidized housing units in Cornelius represents 2% of total local households, and 8% of local renter households. The high number of renters paying over 30% of their income towards housing costs indicates that there is an ongoing need for rental units at the lowest price points.

Agricultural Worker Housing: Cornelius is home to one property that provides 20 units dedicated to agricultural workers (included in the above total). This population may also be served by other available affordable units.

Homelessness: The most recent (2019) Point-in-Time count of homeless individuals in Washington County[5] found 503 homeless individuals on the streets, in shelters, or other temporary and/or precarious housing; this includes 81 children. Of these, 298 were sheltered, and 232 were unsheltered.

[4] The Census defines Gross Rent as "the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else)." Housing costs for homeowners include mortgage, property taxes, insurance, utilities and condo or HOA dues.

[5] Figures are for the entire County

H. STUDENT HOUSEHOLDS

The neighboring city of Forest Grove is home to Pacific University, a private liberal arts college with nearly 2,000 undergraduate and graduate students. As with many universities, most upperclassmen tend to live off campus in a variety of housing options in the Forest Grove and Cornelius areas. The university does not track the exact numbers of Pacific students living in Cornelius. The 2018 ACS estimates that there are 655 enrolled college students in the community. 76% of these are estimated to be enrolled in public colleges, including community college, and public distance learning. 23% are enrolled in private college, including Pacific University. College students who live on their own are more likely to have low incomes and be renters. These are captured in the estimates of current housing needs in the next section.

IV. CURRENT HOUSING NEEDS (CITY OF CORNELIUS)

The profile of current housing conditions in the study area is based on Census 2010, which the Portland State University Population Research Center (PRC) uses to develop yearly estimates through 2019. The 2019 estimate is forecasted to 2020 using the estimated growth rate realized since 2010.

FIGURE 4.1: CURRENT HOUSING PROFILE (2020)

CURRENT HOUSING CONDITIONS (2020)			SOURCE
Total 2020 Population:	12,265		PSU Pop. Research Center
- Estimated group housing population:	167	(1.4% of Total)	US Census
Estimated Non-Group 2020 Population:	**12,098**	(Total - Group)	
Avg. HH Size:	3.42		US Census
Estimated Non-Group 2020 Households:	**3,537**	(Pop/HH Size)	
Total Housing Units:	**3,718**	(Occupied + Vacant)	Census 2010 + permits
Occupied Housing Units:	3,537	(= # of HH)	
Vacant Housing Units:	181	(Total HH - Occupied)	
Current Vacancy Rate:	4.9%	(Vacant units/ Total units)	

Sources: Johnson Economics, City of Cornelius, PSU Population Research Center, U.S. Census

*This table reflects population, household and housing unit projections shown in Figure 2.1

We estimate a current population of roughly 12,265 residents, living in 3,537 households (excluding group living situations). Average household size is 3.4 persons.

There are an estimated 3,715 housing units in the city, indicating an estimated vacancy rate of 4.9%. This includes units vacant for any reason, not just those which are currently for sale or rent.

ESTIMATE OF CURRENT HOUSING DEMAND

Following the establishment of the current housing profile, the current housing demand was determined based upon the age and income characteristics of current households.

The analysis considered the propensity of households in specific age and income levels to either rent or own their home (tenure), in order to derive the current demand for ownership and rental housing units and the appropriate housing cost level of each. This is done by combining data on tenure by age and tenure by income from the Census American Community Survey (tables: B25007 and B25118, 2018 ACS 5-yr Estimates).

The analysis takes into account the average amount that owners and renters tend to spend on housing costs. For instance, lower income households tend to spend more of their total income on housing, while upper income households spend less on a percentage basis. In this case, it was assumed that households in lower income bands would *prefer* housing costs at no more than 30% of gross income (a common measure of affordability). Higher income households pay a decreasing share down to 20% for the highest income households.

While the Census estimates that most low-income households pay more than 30% of their income for housing, this is an estimate of current *preferred* demand. It assumes that low-income households prefer (or demand) units affordable to them at no more than 30% of income, rather than more expensive units.

Figure 4.2 presents a snapshot of current housing demand (i.e. preferences) equal to the number of households in the study area (3,537). The breakdown of tenure (owners vs. renters) reflects data from the 2018 ACS.

FIGURE 4.2: ESTIMATE OF CURRENT HOUSING DEMAND (2020)

Ownership				
Price Range	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0k - $80k	97	Less than $15,000	3.7%	3.7%
$80k - $130k	114	$15,000 - $24,999	4.4%	8.1%
$130k - $180k	115	$25,000 - $34,999	4.4%	12.5%
$180k - $230k	391	$35,000 - $49,999	15.0%	27.6%
$230k - $340k	591	$50,000 - $74,999	22.7%	50.3%
$340k - $430k	420	$75,000 - $99,999	16.2%	66.4%
$430k - $510k	310	$100,000 - $124,999	11.9%	78.3%
$510k - $590k	215	$125,000 - $149,999	8.3%	86.6%
$590k - $750k	230	$150,000 - $199,999	8.8%	95.5%
$750k +	118	$200,000+	4.5%	100.0%
Totals:	**2,602**		**% of All:**	**73.6%**

Rental				
Rent Level	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0 - $400	90	Less than $15,000	9.6%	9.6%
$400 - $700	95	$15,000 - $24,999	10.2%	19.7%
$700 - $900	182	$25,000 - $34,999	19.5%	39.2%
$900 - $1100	91	$35,000 - $49,999	9.8%	49.0%
$1100 - $1600	170	$50,000 - $74,999	18.2%	67.1%
$1600 - $2000	168	$75,000 - $99,999	18.0%	85.1%
$2000 - $2400	72	$100,000 - $124,999	7.7%	92.8%
$2400 - $2800	30	$125,000 - $149,999	3.2%	96.0%
$2800 - $3500	25	$150,000 - $199,999	2.7%	98.7%
$3500 +	13	$200,000+	1.3%	100.0%
Totals:	**935**		**% of All:**	**26.4%**

All Households
3,537

Sources: PSU Population Research Center, Environics Analytics., Census, JOHNSON ECONOMICS
Census Tables: B25007, B25106, B25118 (2018 ACS 5-yr Estimates)
Environics Analytics: Estimates of income by age of householder

The estimated home price and rent ranges are irregular because they are mapped to the affordability levels of the Census income level categories. For instance, an affordable home for those in the lowest income category (less than $15,000) would have to cost $80,000 or less. Affordable rent for someone in this category would be $400 or less.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5% (significantly more than the current rate, but in line with historic norms), with 15% down payment. These assumptions are designed to represent prudent lending and borrowing levels for ownership households. The 30-year mortgage commonly serves as the standard. In the 2000's, down payment requirements fell significantly, but standards have tightened somewhat since the 2008/9 credit crisis. While 20% is often cited as the standard for most buyers, it is common for homebuyers, particularly first-time buyers, to pay significantly less than this using available programs.

Interest rates are subject to disruption from national and global economic forces, and therefore impossible to forecast beyond the short term. The 5% used here is roughly the average 30-year rate over the last 20 years. The general trend has been falling interest rates since the early 1980's, but coming out of the recent recession, many economists believe that rates cannot fall farther and must begin to climb as the Federal Reserve raises its rate over the coming years.

During the 2020 Covid-19 emergency, the Federal Reserve has again cut their benchmark funds rate to near zero, which has reduced mortgage rates moderately, but not dramatically. The economic uncertainty has the effect of making lenders more cautious, and this can balance the effect of a lower federal rate.

CURRENT HOUSING INVENTORY

The profile of current housing demand (Figure 4.2) represents the preference and affordability levels of households. In reality, the current housing supply (Figures 4.3 and 4.4 below) differs from this profile, meaning that some households may find themselves in housing units which are not optimal, either not meeting the household's own/rent preference, or being unaffordable (requiring more than 30% of gross income).

A profile of current housing supply in Cornelius was estimated based on permit data from the City of Cornelius and Census data from the most recently available 2018 ACS, which provides a profile of housing types (single family, attached, manufactured home, etc.), tenure, housing values, and rent levels. The 5-year estimates from the ACS were used because 3-year and 1-year estimates are not yet available for Cornelius geography.

- An estimated 78% of housing units are ownership units, while an estimated 22% of housing units are rental units. This is different than the estimated demand profile shown in Figure 4.2, which estimated a somewhat higher demand for rental units. This is likely due to the high number of mobile homes in the community. These households would normally tend to rent in many communities, but are able to own homes in Cornelius, due to the higher stock of affordable options. The inventory includes vacant units.

- 82% of ownership units are detached homes, and 13% are manufactured homes. Thirty-nine percent of rental units are either single family homes or manufactured homes, while 20% are in structures of 5 units or more.

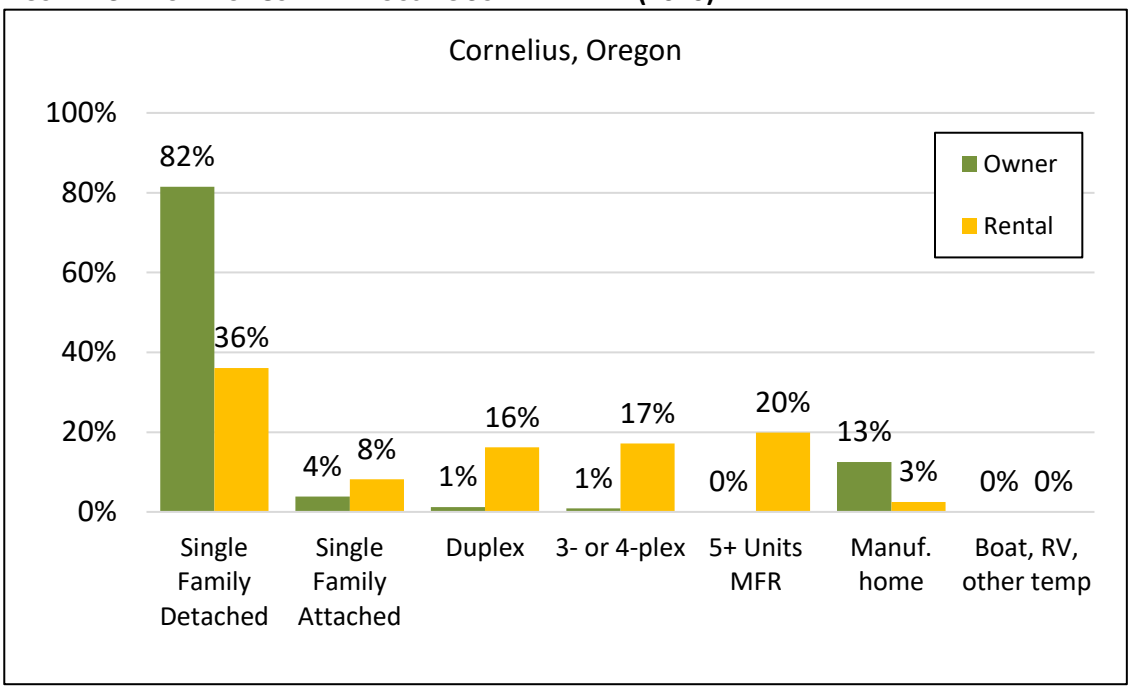
- Of total housing units, an estimated 72% are detached homes, and 10% are manufactured homes. Eighteen percent are some sort of attached unit type. There are also a small share of households living in RV units.

- The affordability of different unit types is an approximation based on Census data on the distribution of housing units by value (ownership) or gross rent (rentals).

- Most subsidized affordable housing units found in the city are represented by the inventory at the lowest end of the rental spectrum.

- Ownership housing found at the lower end of the value spectrum generally reflect mobile homes, older, smaller homes, or homes in poor condition on small or irregular lots. **It is important to note that these represent estimates of current *property value or current housing cost to the owner*, not the current market pricing of homes for sale in the city.** These properties may be candidates for redevelopment when next they sell but are currently estimated to have low value.

FIGURE 4.3: PROFILE OF CURRENT HOUSING SUPPLY BY TYPE (2020)



Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

FIGURE 4.4: PROFILE OF CURRENT HOUSING SUPPLY, ESTIMATED AFFORDABILITY (2020)

Income Range	Ownership Housing		Rental Housing		Share of Total Units
	Affordable Price Level	Estimated Units	Affordable Rent Level	Estimated Units	
Less than $15,000	$0k - $80k	354	$0 - $400	37	11%
$15,000 - $24,999	$80k - $130k	22	$400 - $700	12	1%
$25,000 - $34,999	$130k - $180k	322	$700 - $900	214	14%
$35,000 - $49,999	$180k - $230k	587	$900 - $1100	183	21%
$50,000 - $74,999	$230k - $340k	1,107	$1100 - $1600	209	35%
$75,000 - $99,999	$340k - $430k	363	$1600 - $2000	81	12%
$100,000 - $124,999	$430k - $510k	95	$2000 - $2400	30	3%
$125,000 - $149,999	$510k - $590k	22	$2400 - $2800	21	1%
$150,000 - $199,999	$590k - $750k	44	$2800 - $3500	15	2%
$200,000+	$750k +	2	$3500 +	0	0%
	78%	2,917	22%	801	0% 10% 20% 30% 40%

Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

COMPARISON OF CURRENT HOUSING DEMAND WITH CURRENT SUPPLY

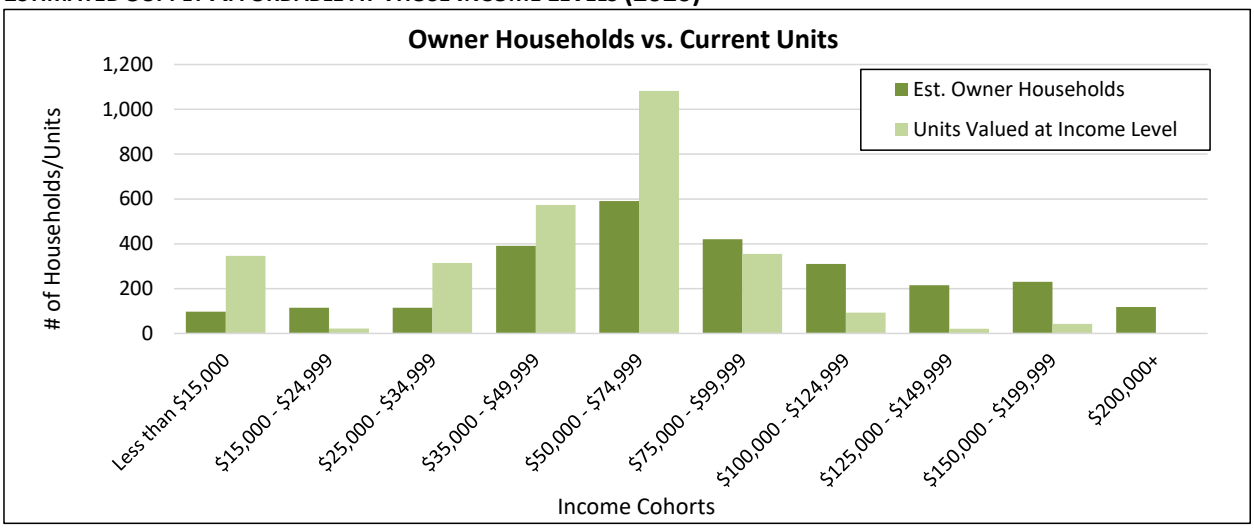
A comparison of estimated current housing *demand* with the existing *supply* identifies the existing discrepancies between needs and the housing which is currently available. The estimated number of units outnumbers the number of households by roughly 180 units, indicating an average vacancy rate of 5%.

In general, this identifies that there is currently support for more ownership housing at both lower and higher price ranges. This is because most housing in Cornelius is clustered at the low-middle to middle property values, while analysis of household incomes and ability to pay indicates that some households could afford housing at higher price points.

The analysis finds that the current market rates for most rental units are in the $700 to $1,600/month range. Therefore, this is where most of the rental unit supply is currently clustered. However, the greatest unmet need is found at the lowest end of the income scale, where many current renters pay more than 30% of their income in housing costs. There is an indication that some renter households could support more units at higher rental levels. Rentals at more expensive levels generally represent single family homes for rent.

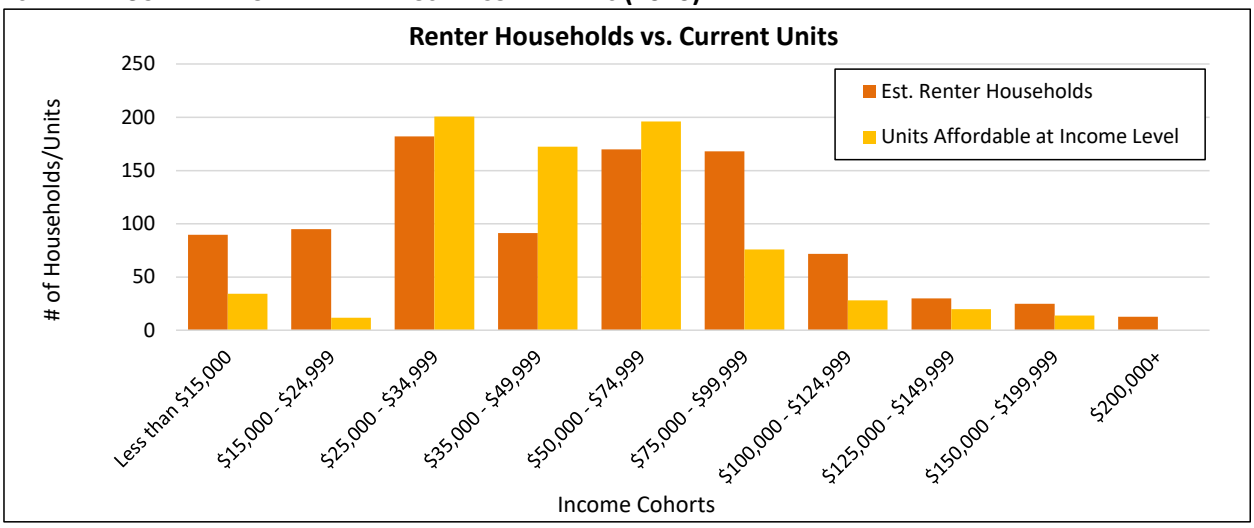
Figures 4.5 and 4.6 present this information in chart form, comparing the estimated number of households in given income ranges, and the supply of units currently valued (ownership) or priced (rentals) within those income ranges. The data is presented for owner and renter households.

FIGURE 4.5: COMPARISON OF OWNER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of Cornelius, Census, JOHNSON ECONOMICS

FIGURE 4.6: COMPARISON OF RENTER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of Cornelius, Census, JOHNSON ECONOMICS

The home value and rent segments which show a "surplus" in Figures 4.5 and 4.6 illustrate where current property values and market rent levels are in Cornelius. Housing prices and rent levels will tend to congregate around those levels. These levels will be too costly for some (i.e. require more than 30% in gross income) or "too affordable" for others (i.e. they have income levels that indicate they could afford more expensive housing if it were available).

In general, these findings demonstrate that there are some lower-value housing opportunities for many owner households, and potential support for some more expensive ownership housing. There is a need for more rental units at lower rent levels (<$700/mo.), and modest support for some rental units at higher rent levels as well.

HOME SALE PRICES

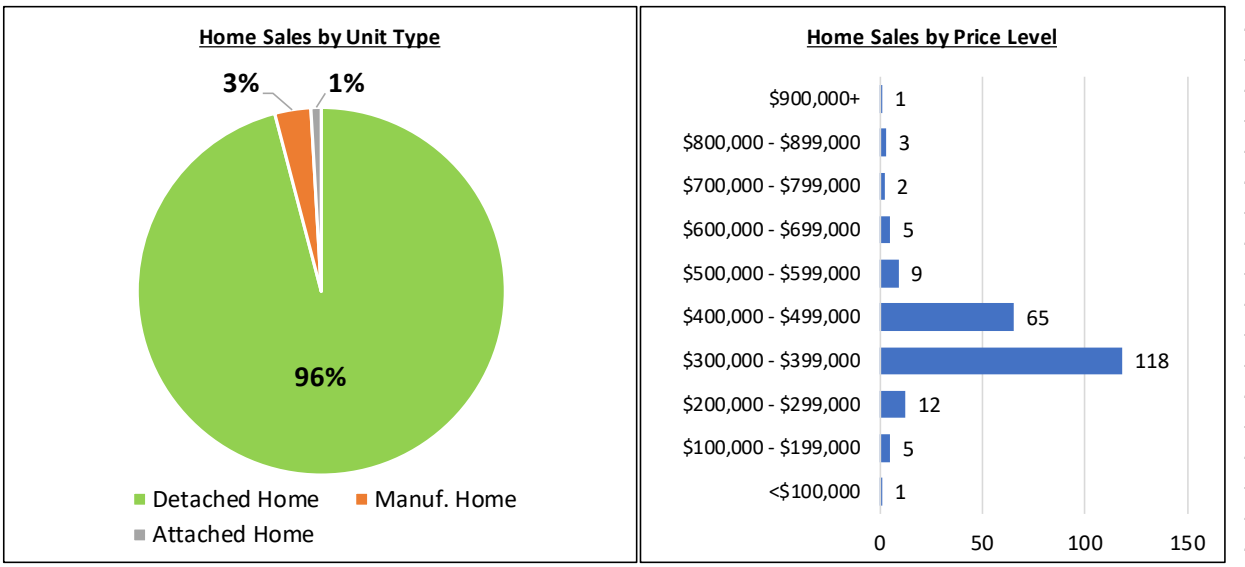
It is important to note that the figures presented in the prior section represent estimates of current *property value or current housing cost to the owner*, not the current market pricing of homes for sale in the city. For instance, a household living in a manufactured home that has been paid off over many years may have relatively low housing costs. This indicates that one owner household is living in a "lower value" unit. It does **not** indicate that units at this price point are available on the current market.

If this hypothetical household were to sell their home, it would sell at a higher price reflecting inflation and current achievable market prices. For this reason, many of the lower value or lower rent units found in the previous section will actually become higher-priced units when they are sold or become vacant.

For reference, this section presents home sales data from 2019 to indicate housing costs for new entrants into the market (Figure 4.7).

- The median sale price was $380,000.
- The average (mean) sale price was $400,000.
- The average price per square foot was $220/s.f.
- The median square footage was 1,675 s.f.

FIGURE 4.7: CORNELIUS HOME SALES (12 MONTHS)



Sources: RMLS, JOHNSON ECONOMICS

- 5.5% of sales were priced between $200,000 and $299,000.
- 53% of sales were priced between $300,000 and $399,000.
- 38.5% of sales were priced at $400,000 or more.
- 3% of sales were priced below $200,000.

Affordability: As indicated, 88% of recent sales in Cornelius took place within the $200,000 to $500,000 price range. Homes in this range should be affordable to many households earning from roughly $45,000 to $125,000 per year. An estimated 55% of local households fall within these income segments.

Roughly 28% of households earn less than $45,000 per year, meaning that the bulk of housing supply on the current for-sale market is likely too expensive for most of these households.

* * *

The findings of current need form the foundation for projected future housing need, presented in the following section.

V. FUTURE HOUSING NEEDS - 2040 (CITY OF CORNELIUS)

The projected future (20-year) housing profile (Figure 5.1) in the study area is based on the current housing profile (2020), multiplied by an assumed projected future household growth rate. The projected future growth is the forecasted 2040 population for the City of Cornelius included in the most recent Metro Urban Growth analysis and Regional Transportation Plan analysis (1.8%).

FIGURE 5.1: FUTURE HOUSING PROFILE (2040)

PROJECTED FUTURE HOUSING CONDITIONS (2020 - 2040)			SOURCE
2020 Population (Minus Group Pop.)	12,098		PSU
Projected Annual Growth Rate	1.8%	Metro UGR Forecast Program	Metro
2040 Population (Minus Group Pop.)	17,188	(Total 2040 Population - Group Housing Pop.)	
Estimated group housing population:	244	Share of total pop. (1.4%)	US Census
Total Estimated 2040 Population:	**17,432**		
Estimated Non-Group 2040 Households:	**5,294**	(2040 Non-Group Pop./Avg. Household Size)	
New Households 2020 to 2040	1,756		
Avg. Household Size:	3.25	Projected household size	US Census
Total Housing Units:	**5,572**	Occupied Units plus Vacant	
Occupied Housing Units:	5,294	(= Number of Non-Group Households)	
Vacant Housing Units:	279	(= Total Units - Occupied Units)	
Projected Market Vacancy Rate:	5.0%	(Vacant Units/ Total Units)	

Sources: PSU Population Research Center, Metro, Census, JOHNSON ECONOMICS LLC
*Projections are applied to estimates of 2020 population, household and housing units shown in Figure 2.1

The model projects growth in the number of non-group households over 20 years of nearly 1,800 households, with accompanying population growth of 5,200 new residents. (The number of households differs from the number of housing units, because the total number of housing units includes a percentage of vacancy. Projected housing unit needs are discussed below.)

PROJECTION OF FUTURE HOUSING UNIT DEMAND (2040)

The profile of future housing demand was derived using the same methodology used to produce the estimate of current housing need. This estimate includes current and future households *but does not include a vacancy assumption*. *The vacancy assumption is added in the subsequent step.* Therefore, the need identified below is the total need for actual households in occupied units (5,294).

The analysis considered the propensity of households at specific age and income levels to either rent or own their home, in order to derive the future need for ownership and rental housing units, and the affordable cost level of each. The projected need is for *all* 2040 households and therefore includes the needs of current households.

The price levels presented here use the same assumptions regarding the amount of gross income applied to housing costs, from 30% for low income households down to 20% for the highest income households.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5%, with 15% down payment. Because of the impossibility of predicting variables such as interest rates 20 years into the future,

these assumptions were kept constant from the estimation of current housing demand. Income levels and price levels are presented in 2020 dollars.

Figure 5.2 presents the projected occupied future housing demand (current and new households, without vacancy) in 2040.

FIGURE 5.2: PROJECTED OCCUPIED FUTURE HOUSING DEMAND (2040)

Ownership				
Price Range	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0k - $80k	132	Less than $15,000	3.6%	3.6%
$80k - $130k	156	$15,000 - $24,999	4.2%	7.8%
$130k - $180k	149	$25,000 - $34,999	4.1%	11.8%
$180k - $230k	548	$35,000 - $49,999	14.9%	26.7%
$230k - $340k	827	$50,000 - $74,999	22.4%	49.2%
$340k - $430k	603	$75,000 - $99,999	16.3%	65.5%
$430k - $510k	447	$100,000 - $124,999	12.1%	77.6%
$510k - $590k	315	$125,000 - $149,999	8.5%	86.2%
$590k - $750k	337	$150,000 - $199,999	9.1%	95.3%
$750k +	173	$200,000+	4.7%	100.0%
Totals:	**3,687**		**% of All:**	**69.6%**

Rental				
Rent Level	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0 - $400	148	Less than $15,000	9.2%	9.2%
$400 - $700	158	$15,000 - $24,999	9.8%	19.0%
$700 - $900	295	$25,000 - $34,999	18.3%	37.4%
$900 - $1100	173	$35,000 - $49,999	10.7%	48.1%
$1100 - $1600	311	$50,000 - $74,999	19.4%	67.5%
$1600 - $2000	278	$75,000 - $99,999	17.3%	84.8%
$2000 - $2400	124	$100,000 - $124,999	7.7%	92.5%
$2400 - $2800	52	$125,000 - $149,999	3.3%	95.8%
$2800 - $3500	45	$150,000 - $199,999	2.8%	98.6%
$3500 +	23	$200,000+	1.4%	100.0%
Totals:	**1,607**		**% of All:**	**30.4%**

All Units
5,294

Sources: Census, Environics Analytics, JOHNSON ECONOMICS

The number of households across the income spectrum seeking a range of both ownership and rental housing is anticipated to grow. It is projected that the homeownership rate in Cornelius will fall somewhat over the next 20 years to 70%, which would be closer to, but still significantly higher than, the Washington County and statewide ownership rates.

The main reason for this is that the number of new mobile home units available as an inexpensive ownership choice is likely to be much lower among new development than it is in the current housing mix. The households that might own a mobile home are more likely to rent if these are not available. At the same time, development trends in the Metro area, and increasingly limited land for development, point to increased development of attached types of housing such as small plexes and multi-family housing. On balance, these housing types tend to accommodate more renters than owners.

COMPARISON OF FUTURE HOUSING DEMAND TO CURRENT HOUSING INVENTORY

The profile of occupied future housing demand presented above (Figure 5.2) was compared to the current housing inventory presented in the previous section to determine the total future need for *new* housing units by type and price range (Figure 5.3).

This estimate includes a vacancy assumption. As reflected by the most recent Census data, and as is common in most communities, the vacancy rate for rental units is typically higher than that for ownership units. An average vacancy rate of 5% is assumed for the purpose of this analysis.

FIGURE 5.3: PROJECTED FUTURE NEED FOR NEW HOUSING UNITS (2040), CORNELIUS

OWNERSHIP HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	719	64	30	8	0	118	0	939	50.7%
Percentage:	76.5%	6.9%	3.2%	0.9%	0.0%	12.5%	0.0%	100%	

RENTAL HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	211	93	167	175	246	23	0	915	49.3%
Percentage:	23.1%	10.2%	18.2%	19.1%	26.9%	2.5%	0.0%	100%	

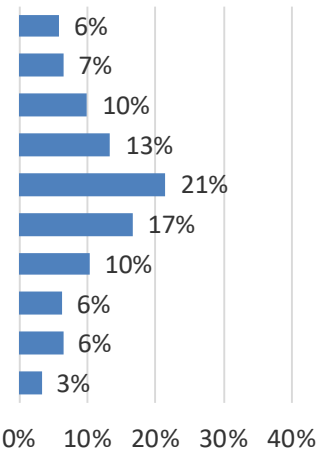
TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	

Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

- The results show a need for 1,854 new housing units by 2040.
- Of the new units needed, roughly 51% are projected to be ownership units, while 49% are projected to be rental units. This represents more renters than the estimated tenure split, but it is projected that more rental units will be needed to balance the disproportionate share of ownership units in the current inventory.
- There is some new need for ownership housing at the low-end of the pricing spectrum. But income trends suggest that the greatest demand will remain in the middle and upper-middle price ranges ($200k to $400k). This is because some of the city's current housing is found at lower value levels due to age and condition. Therefore, there may be support for some units at higher price points. The $250,000 to $350,000 price point (in current dollars) is projected to remain the greatest share of demand.
- The greatest need for rental units is found at the lowest and some higher price points. Market rents are currently clustered in the $700 to $1,600 range in current dollars. Therefore, most units are to be found in this range. There is insufficient rental housing for the lowest income households making $25,000 or less, and there may also be some support for higher rent units, which may be in new apartment complexes, townhomes or detached single-family homes for rent.

FIGURE 5.4: ESTIMATED CURRENT NEED & FUTURE NEED BY INCOME BRACKET CORNELIUS

Income Range	Current Need (no vacancy)	Future Need (no vacancy)	New Need (with vacancy)	Share of Units
Less than $15,000	187	280	109	6%
$15,000 - $24,999	209	313	121	7%
$25,000 - $34,999	297	444	183	10%
$35,000 - $49,999	482	721	248	13%
$50,000 - $74,999	761	1,139	397	21%
$75,000 - $99,999	588	881	308	17%
$100,000 - $124,999	382	572	190	10%
$125,000 - $149,999	245	367	117	6%
$150,000 - $199,999	255	382	120	6%
$200,000+	131	196	61	3%
Total:	***3,537***	***5,294***	***1,854***	



Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

Needed Unit Types

The mix of needed unit types shown in Figure 5.3 reflects both past trends and anticipated future trends. Since 2000, detached single family units (including manufactured and mobile homes) have constituted nearly all the permitted units in Cornelius. In keeping with development trends, and the buildable land available to Cornelius, single family units are expected to continue to make up a large share of new housing development over the next 20 years. However, an increasing share of new needed units is anticipated to attached housing types to accommodate renters and first-time home buyers.

- 50% of the new units are projected to be single family detached homes, while 40% is projected to be some form of attached housing, and 8% are projected to be manufactured homes.
- Single family attached units (townhomes on individual lots) are projected to meet over 8% of future need. These are defined as units on separate tax lots, attached by a wall but separately metered, the most common example being townhome units.
- Duplex through four-plex units are projected to represent over 20% of the total need. Duplex units would include a detached single-family home with an accessory dwelling unit on the same lot, or with a separate unit in the home (for instance, a rental basement unit.)
- 13% of all needed units are projected to be multi-family in structures of 5+ attached units.
- 8% of new needed units are projected to be manufactured home units, which meet the needs of some low-income households for both ownership and rental.
- Of ownership units, 77% are projected to be detached single-family homes, and 12.5% manufactured homes. Only a few units are projected to be attached forms.
- About 74% of new rental units are projected to be found in new attached buildings, with 27% projected in rental properties of 5 or more units, and 37% in buildings of two to four units, and 10% in

Needed Affordability Levels

Figure 5.5 presents the estimated need for net new housing units by major income segment, based on the projected demographics of new households to the market area. The needed affordability levels presented here are based on current 2020 dollars. Over time, incomes and housing costs will both inflate, so the general relationship projected here is expected to remain unchanged.

Figure 5.5 also discusses the housing types typically attainable by residents at these income levels.

FIGURE 5.5: PROJECTED NEED FOR NEW HOUSING AT DIFFERENT INCOME LEVELS

Household Income Segment		Income Level (Rounded)*	Afford. Rent Range	Afford. Price Range	Owner Units	Renter Units	Total	Share	Common Housing Product
Extremely Low Inc.	< 30% AMI	< $26,500	<$700	<$100k	70	186	256	14%	Govt-subsidized; Voucher
Very Low Income	30% - 50% AMI	$26.5k - $44k	$700-$1,000	$100k-$210k	108	198	306	17%	Aging/substandard rentals; Govt-subsidized; Voucher
Low Income	50% - 80% AMI	$44k - $70k	$1,000-$1,600	$210k-$300k	222	201	423	23%	Market apts; Manuf. homes; Plexes; Aging SFR
Middle Income	80% - 120% AMI	$70k - $105k	$1,600-$2,400	$300k-$430k	222	201	424	23%	Single-family detached; Townhomes; Small homes; New apts
Upper Income	> 120% AMI	> $105,000	$2,400 +	$430k +	319	128	446	24%	Single-family detached
TOTAL:					***939***	***915***	***1,854***	***100%***	

* Adjusted to 2020 dollars. The median household income level in 2020 will be will be inflated from current levels.

Sources: HUD, Census, Environics Analytics, JOHNSON ECONOMICS

- Generally, based on income levels there is a shortage of units in the lowest pricing levels for renter households.
- Figure 5.3 presents the *net NEW* housing unit need over the next 20 years. However, there is also a *current* need for more affordable units. In order for all households, current and new to pay 30% or less of their income towards housing in 2040, more affordable rental units would be required. This indicates that some of the current supply, while it shows up as existing available housing, would need to become less expensive to meet the needs of current households.
- There is a finding of some new need at the lowest end of the rental spectrum ($700 and less).
- The projection of future ownership units finds that the supply at the lowest end of the spectrum is currently sufficient due to the prevalence of older and manufactured homes in the community. (This reflects the estimated *value* of the total housing stock, and not necessarily the average pricing for housing currently for sale.) The community can support some housing at higher price points, but most demand remains in the middle-income range.
- Figure 5.6 presents estimates of need at key low-income affordability levels in 2020 and in 2040. There is existing and on-going need at these levels, based on income levels specified by Oregon Housing and Community Services for Washington County. An estimated 53% of households qualify as at least "low income" or lower on the income scale, while 14% of household qualify as "extremely low income". Typically, only rent-subsidized properties can accommodate these households at "affordable" housing cost levels. (The threshold income levels presented here are generated for the entire county based on the significantly higher countywide average household income. Therefore, these income thresholds are likely somewhat high for Cornelius.)

FIGURE 5.6: PROJECTED NEED FOR HOUSING AFFORDABLE AT LOW INCOME LEVELS, CORNELIUS

Affordablilty Level	Income Level*		Current Need (2020)		Future Need (2040)		NEW Need (20-Year)	
			# of HH	% of All	# of HH	% of All	# of HH	% of All
Extremely Low Inc.	30% AMI	$26,370	437	12%	693	13%	256	14%
Very Low Income	50% AMI	$43,950	981	28%	1,542	29%	562	30%
Low Income	80% AMI	$70,320	1,793	51%	2,778	52%	985	53%

Sources: OHCS, Environics Analytics, JOHNSON ECONOMICS

* Income levels are based on OHCS guidelines for a family of four.

Agricultural Worker Housing

There are currently 20 units of housing dedicated to this population in Cornelius, which is well less than 1% of local housing. Based on the assumption that this type of housing will maintain its current representation in the local housing stock, this indicates a need for 10 – 15 additional units for agricultural workers over the planning period. This population may also be served by other available affordable units.

VI. RECONCILIATION OF FUTURE NEED (2040) & LAND SUPPLY

This section summarizes the results of the Buildable Lands Inventory (BLI). The BLI is presented in detail in an accompanying memo to this report. This analysis relies on the most conservative estimate of capacity from the multiple scenarios considered in the BLI memo.

The following table (Figure 6.1) presents the estimated new unit capacity of the buildable lands identified in the City of Cornelius and within the UGB. The table breaks down the City's zoning into broad categories:

- Low density (<8 units/gross acre)
- Medium density (8 – 18 units/gross acre)
- High density (18+ units/gross acre)

Residential zones, as well as mixed-use zones that can accommodate some residential uses, were included in the inventory.

FIGURE 6.1: ESTIMATED BUILDABLE LANDS CAPACITY BY ACREAGE AND NO. OF UNITS (2020)

ZONING		Unconstrainted Acres				Unit Capacity	
		Vacant	Infill	Redev.	Total	Units	Share
RESIDENTIAL ZONE	**Category**						
Single-Family Res. (R-7)	Low-Density Res.	18.9	78.2		97.1	560	21%
Laurel Woods Single-Family (A-2)*	Low-Density Res.	62.3			62.3	660	25%
Manuf. Home Park (MHP)	Medium-Density Res.	1.2			1.2	11	0%
Multi-Family Res. (A-2)*	Medium-Density Res.	*61.7*		*31.2*	*92.9*	794	30%
Central Mixed-Use (CMU)	Medium-Density Res.	1.6		1.3	2.9	30	1%
Core Residential (CR)	Medium-Density Res.	0.5	11.1		11.5	71	3%
Gateway Mixed Use (GMU)	High-Density Res.	9.3		26.4	35.7	542	20%
	TOTALS:	*155.6*	*89.2*	*58.8*	*303.5*	*2,668*	100%
ZONE CATEGORIES	**Typical Housing Type**						
Low-Density Res.	Single-family detached; Duplex	81.2	78.2	0.0	159.4	1,220	46%
Medium-Density Res.	SF attached; Mobile home; 2-4 plexes	65.1	11.1	32.4	108.5	906	34%
High-Density Res.	Multi-family apartments	9.3	0.0	26.4	35.7	542	20%
	TOTALS:	*155.6*	*89.2*	*58.8*	*304*	*2,668*	100%

Source: Angelo Planning Group

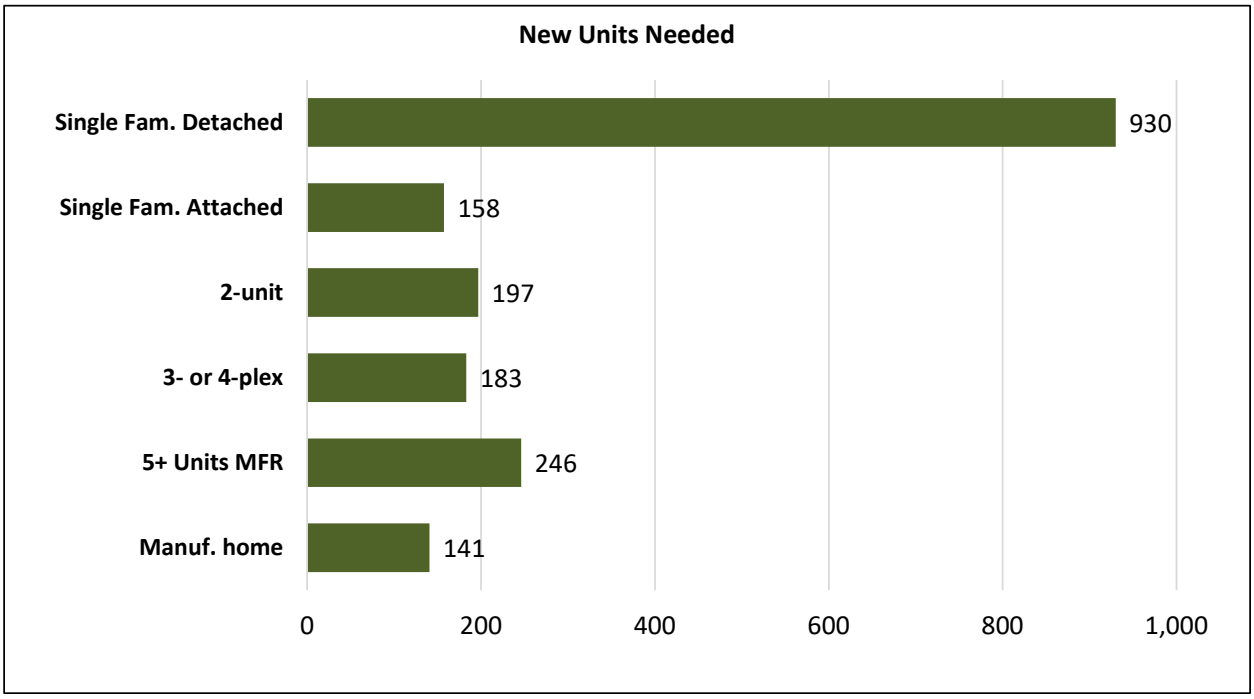
* As of the time of this report, a portion of the A-2 zone has been planned for single-family development in the Laurel Woods plan area. The single-family home portion of Laurel Woods is shown in the Low Density category in this table, while the remainder is included in the Medium Density category.

- There is a total estimated remaining capacity of 2,668 units of different types within the study area.
- Most of the remaining buildable acreage is in the medium-density A-2 residential zone. At a total capacity of 1,454 housing units (LDR and MDR) this is roughly 55% of the total unit capacity.
- Though there are many fewer buildable high-density acres, they can still accommodate nearly 550 new units due to the higher density of development. This is 20% of the total unit capacity.
- There are nearly 100 acres available in low-density zones, plus over 60 acres of the A-2 zone already allocated for single-family home development. In total, the capacity of these zones represents another 46% of the total unit capacity.

The following table summarizes the forecasted future unit need for Cornelius. These are the summarized results from Section V of this report, presented here for reference.

FIGURE 6.2: SUMMARY OF FORECASTED FUTURE UNIT NEED (2040)

TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	



Sources: PSU Population Research Center, Census, Johnson Economics

Comparison of Housing Need and Capacity

There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).

- The results find sufficient capacity for all housing types in the three housing categories: low-density housing; medium -density housing; and higher-density housing. The estimated "surplus" land capacity in each of these categories is fairly similar, ranging from 248 to 296 of each, with acreage surpluses ranging from 19 to 32 acres (see Figure 6.3).

- Under recently adopted state rules (HB2001, 2019), Cornelius as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit "cottage cluster" developments. At the same time, there is capacity in the MDR zones to accommodate demand for most of these attached types as well.

- These findings assume that under newly adopted state rules, 2% of available buildable parcels in the LDR zone will be used for the various types of attached units (single-family attached townhomes, duplex – fourplex). This amounts to a total of 42 attached units, plus 930 detached units in the LDR zone.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	159.4	1,220	7.7	972	248	32
Med-Density	SF attached; Manufact. home; 2-4 plexes	108.5	906	8.4	636	270	32
High-Density	Multi-family apartments	35.7	542	15.2	246	296	19
	TOTALS:	*303.5*	*2,668*	*8.8*	1,854	814	84

Sources: Angelo Planning Group, Johnson Economics

MEMORANDUM

Cornelius Buildable Lands Inventory –Methodology and Results

City of Cornelius Housing Needs Analysis

DATE	January 7, 2020
TO	Ryan Wells and Tim Franz, City of Cornelius
FROM	Matt Hastie, Clinton "CJ" Doxsee, and Courtney Simms, APG
CC	

INTRODUCTION

The purpose of this memorandum is to summarize the methodology of a Geographic Information Systems (GIS)-based Buildable Land Inventory (BLI) for the City of Cornelius Housing Needs Analysis (HNA). The results will help determine whether the City has a sufficient supply of land to meet long-term (20 year) housing needs.[1] The memo also will inform the strategies and approaches that may be effective and appropriate for increasing the developability of residential land, which can lead to greater overall housing supply.

The memorandum summarizes the methodology and key findings of the analysis, then presents the initial results in a series of tables and maps. This memorandum focuses solely on the supply and capacity of buildable residential land within the Metro Urban Growth Boundary (UGB). The methodology was informed by Metro's BLI methodology from the 2018 Metro Buildable Lands Inventory, which was used to estimate available residential and employment land within the entire Portland Metropolitan Region (Metro) region.

The projected need for land to support future housing and the comparison of projected need and supply will be described in a separate Housing Needs Analysis report.

Regulatory Basis

Oregon Administrative Rules (OAR) provide guidance for the standards and methods to be used in preparing an inventory of buildable land. The methods and definitions used here are consistent with OAR 660-008 and OAR 660-024. Metro does not apply additional regulations or requirements but has developed its own methodology for identifying buildable lands within the Metro region. That methodology and resulting data has been used as a starting point for this analysis to ensure

[1] The project is being conducted with funding provided by the Oregon Department of Land Conservation and Development.

consistency with regional procedures and to make efficient use of project resources. As noted in the following sections, the regional BLI data has been supplemented with local data, where available.

METHODOLOGY

The methodology generally follows the rules and assumptions identified in the methodology of Metro's 2018 BLI. The steps used to generate the BLI include the following:

Step 1: Calculate deductions for environmental resources

Step 2: Identify residential land (land zoned for residential or mixed use)

Step 3: Identify vacant tax lots (and complement developed tax lots) by zoning class

Step 4: Remove tax lots from the BLI that don't have the potential to provide residential or employment growth capacity (e.g., parks, schools or other public facilities, or land committed to future non-residential purposes)

Step 5: Calculate deductions for "future streets"

Step 6: Calculate BLI estimates (BLI includes capacity estimates for vacant land and properties with the potential for redevelopment)

The buildable lands inventory uses methods and definitions that are consistent with OAR 660-008 and OAR 660-024.

Step 1 – Calculate Deductions for Environmental Resources

Environmental resources typically provide beneficial environmental functions or aesthetic enhancements that are necessary to preserve. The preservation of these resources often provides a constraint on the developability of an area. To reflect this, areas that are identified as environmental resources are removed from the buildable inventory as a constraint.

Most areas that are considered environmental resources fall into multiple categories. Examples of these include areas that are in a floodway or floodplain, wetland, or include steep slopes. Often, this constrained land overlaps. Using an environmental hierarchy to classify the environmental features avoids double counting the capacity deduction for the BLI. Moreover, the City includes two environmental overlays, the Natural Resource Overlay (NRO) and Floodplain District (FP), which align closely with the Metro Titles 3 and 13 designations, as refined through the Tualatin Basin regional approach developed by Cornelius and other partnering organizations in the basin, and FEMA floodplain designations. Within the NRO district, density transfers are allowed where natural resources constrain development. BLI reductions will reflect the higher assumed protections when environmental features are overlapping.

Environmental Constraints categories used are the following:

- Floodways – FEMA's latest flood hazard data and updated with the City of Cornelius's Floodplain District.
- Flood Plain District (FP) – the City's FP district regulates and restricts development in special flood hazard areas within the City.
- Slopes 25% or Steeper – Steep slopes were calculated using a digital elevation model to identify areas with slopes 25% or greater, which is consistent with OAR 660-008.
- Natural Resource Overlay (NRO) – The City's NRO overlay regulates and restricts development in areas with natural resources as identified in the City's natural resource inventory and map.
- Environmental Constraints – Title 3 and 13 data were provided by Metro RLIS. Significant Natural Resource Overlay (SNRO) data is provided by Metro RLIS and updated with the City of Cornelius's Natural Resource overlay.
- Rights of Way – Utility ROW was provided by Metro RLIS, while transportation ROW was obtained using City GIS data.

These lands are combined and then overlaid with City tax lots to estimate the amount of land in each parcel where development is limited by these environmental constraints. These constrained areas are deducted from the gross area of the parcel to estimate the area of the parcel that is unconstrained and potentially buildable.

The land impacted by these constraints is removed from the inventory of developable land as follows.

<u>Single-family residential</u>

1. Floodways: 100% removed
2. Floodplain and Floodplain District: 100% removed
3. Slopes > 25% and Title 3 treated the same way: 100% removed
    a. If tax lot ≥ 50% constrained, follow the "maximum capacity rule" (defined below) to add back units[2]
    b. If tax lot is <50% constrained, assume 90% of unconstrained area is in BLI (i.e., apply 10% discount to vacant buildable acres)
4. Natural Resource Overlay (NRO):
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
5. Title 13: 50% of Title 13 constrained acres removed from BLI (consistent with Title 13 model Ordinance)
6. Assume at least one unit per tax lot, even if fully constrained

<u>Multi-family residential</u>

1. Floodways: 100% removed

[2] This add back represents Metro's approach for estimating/calculating the density transfer to mitigate the loss of potential development productivity for dwelling units.

2. Floodplain and Floodplain District: 50% removed
3. Slopes > 25%: 100% removed
4. Title 3: remove 50% of the constrained land with the other 50% considered buildable
5. Natural Resource Overlay:
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
6. Title 13: 15% of Title 13 constrained acres removed from BLI (consistent with Title 13 Model Ordinance)
7. Assume at least one unit per tax lot, even if fully constrained

Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, and only acres outside of existing right-of-way (ROW) are counted in the table. As shown on the table, most of the environmental constraints are inventoried under Metro's Title 13 (191 acres). The next largest constraint in Cornelius is the City's Natural Resource Overlay (NRO) consisting of approximately 83 acres.[3] The third largest constraint in the City are floodplains, consisting of approximately 68 acres across the City.

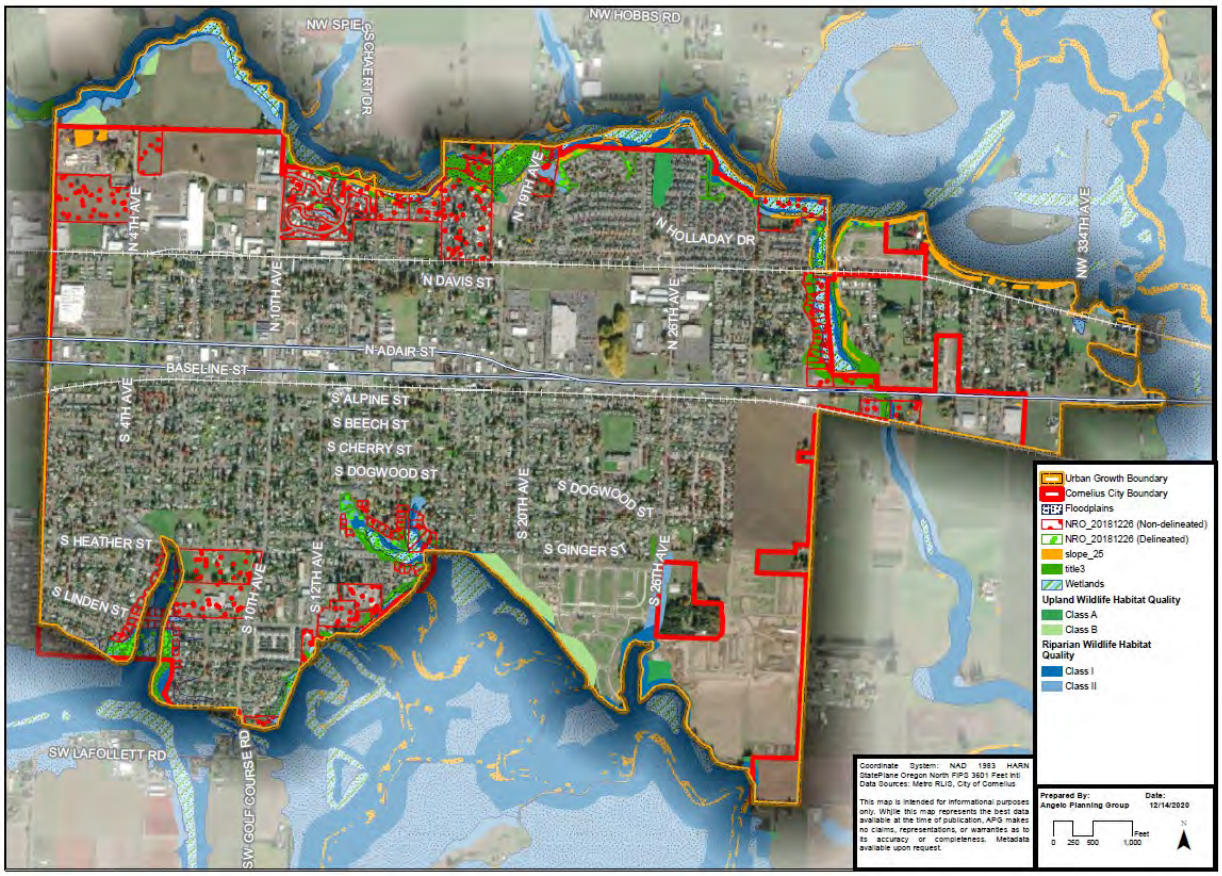
Table 1: Environmental Constraints

Constraint	Total
Constraints Total:	432.8
Floodway	7.6
Slopes >25%	16.0
Floodplain	68.7
Title 3	33.0
Wetland	33.1
Natural Resource Overlay:	83.1
Delineated	33.5
Not delineated	49.6
Title 13	191.3

Both Metro's Title 13 and the City's NRO seek to preserve natural areas and share several overlapping areas. Similar overlapping conditions exist for several other constraints such as floodplains, floodways, and wetlands or Metro's Title 3 and slopes greater than 25%. After accounting for overlapping natural resources, the total acreage of land with environmental constraints located in residential areas is approximately 175 acres. The overlaid constraints are deducted from the amount of buildable land as described in more detail below. Figure 1 illustrates the locations of each environmental constraint.

[3] The City's NRO consists of a combination of delineated and non-delineated areas. Delineated areas apply to tax lots which have completed a delineation study to identify the exact location(s) of on-site natural resources. Non-delineated NRO areas consist of areas for which environmental resources are known to occur, but the exact location(s) have not been identified.

Figure 1: Environmental Constraints Map



Step 2 – Identify Residential Land

For the purposes of this analysis, residential land is identified as the following:

- Land with a comprehensive plan designation of "Residential," including low-density residential and mid-density residential. Zoning for residential tax lots within Cornelius' City limits generally match comprehensive plan designation, with some small exceptions for lots with "Open Space" designations that have residential zoning. These are examined on a case-by-case basis.
- Land with a comprehensive plan designation of "Mixed Use." While many uses are possible within this area, expanding housing opportunities is a primary development objective of the Commercial Mixed Use (CMU) district. "Development within the CMU District shall have a significant commercial element, along with medium to high density residential uses." (CMC 153.063(C)(1))
- Other land (open space, commercial, industrial, etc.) is excluded as it does not require residential uses. Although the City's development code allows for residential use in some of these zones, there is no guarantee that it will be used for residential development.

Table 2 summarizes the distribution of low-density, medium density, and mixed-use areas by identified constraints. There is a total of 1,035 acres of residential land within located in the City. Of that, almost half of the residential land is designated for single-family residential uses. Most of the remainder of the residential land is designated for multi-family residential. Less than a tenth of the land is designated for mixed-use residential areas.

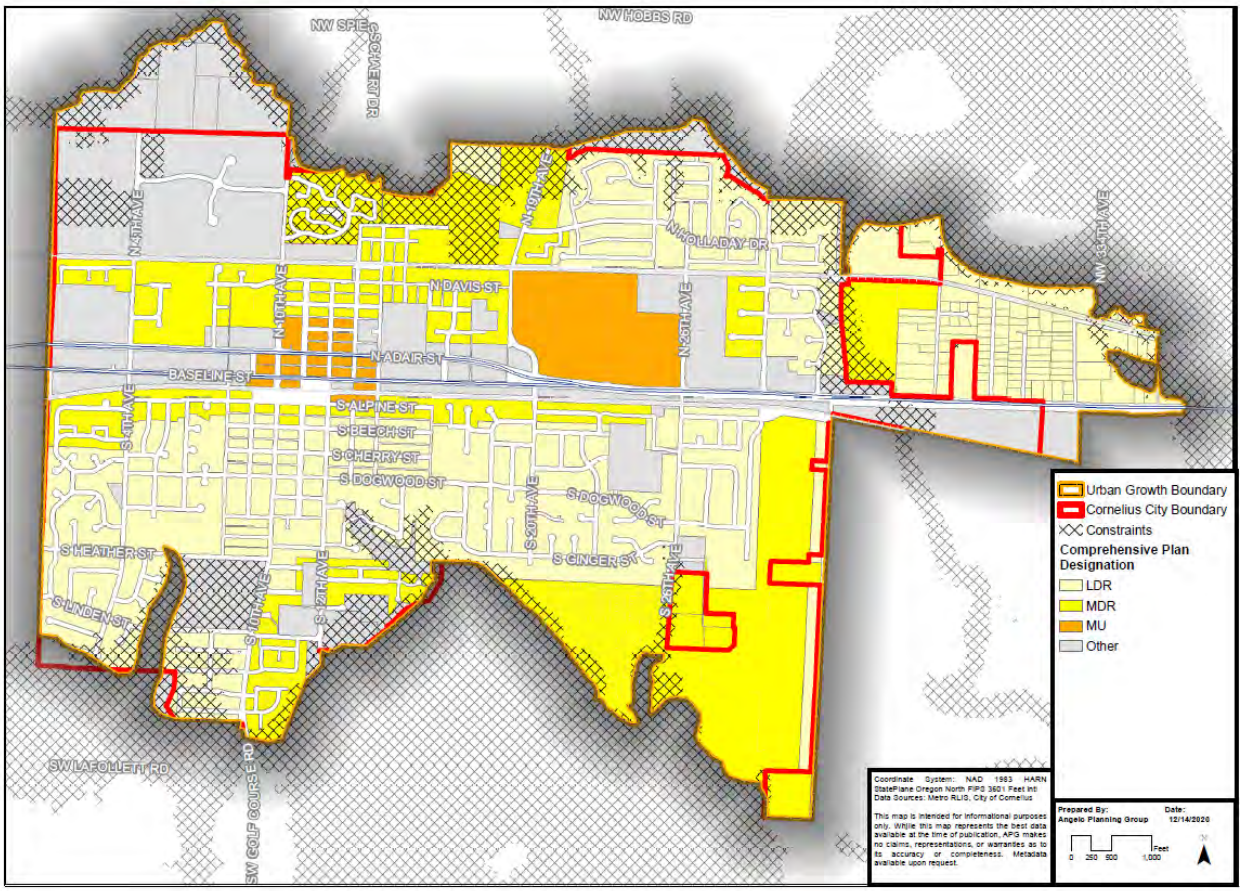
Environmental constraints reduce the amount of buildable residential land by just over 170 acres. The constraints are fairly evenly distributed between low-density and medium-density residential areas, though medium-density residential areas have slightly more constraints (approximately 94 acres) than low-density residential areas (approximately 76 acres). None of the mixed-use areas have constraints on them.

Table 2: Gross Acreage in Residential Land Inventory

Constraints (Acres)	Constrained		Unconstrained		Total	
Total	170.5	100%	865.0	100%	1,035.5	100%
Low-Density Residential	76.4	45%	444.7	51%	521.1	50%
Medium-Density Residential	94.2	55%	346.8	40%	441.0	43%
Mixed-Use	0.0	0%	73.5	9%	73.5	7%

Figure 2 illustrates all residential areas with constraints overlaid. As shown, areas with constraints are generally found near the City boundary. Most of the constraints within the City's boundary can be found along the northern and southern limits of the City. There are no constraints centrally located within the City.

Figure 2: Cornelius Location Map



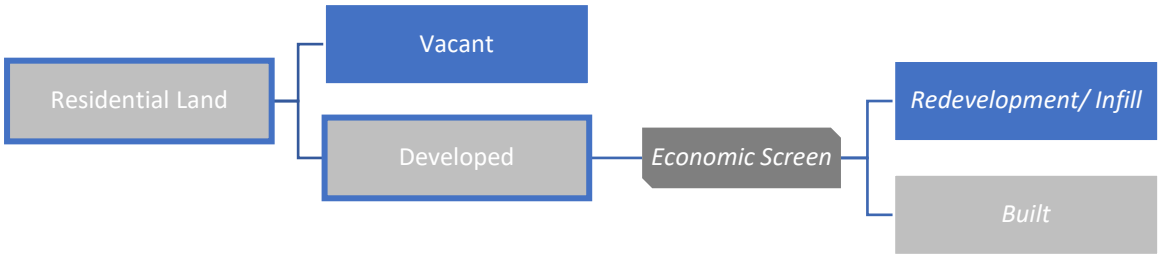
Step 3 – Identify Vacant Tax Lots (and complement developed tax lots)

This step classifies each tax lot into a set of mutually exclusive categories based on development status; this means classification into "vacant" and "developed" land.[4]

The region's buildable land inventory is sorted into *vacant* and *developed* capacity. Vacant tax lots are areas that are generally undeveloped and provide relatively easy opportunities for new residential development. Developed tax lots are areas that currently have some form of residential development, some of which have the potential to allow for new residential development through redevelopment or infill development. Developed tax lots are subjected to economic screens (described in Step 6) to determine potential redevelopment/infill capacity. If a certain level of capacity is reached, the redevelopment potential is considered as part of the buildable land inventory.

Figure 3 illustrates the structure of categories for organizing the BLI.

Figure 3: Residential Land Buildable Land Structure



Vacant land is defined and identified as follows:

- Any tax lot that is fully vacant, based on Metro aerial photo.
- Tax lot with less than 2,000 sq. ft. developed AND developed portion is under 10% of the entire tax lot area.
- Tax lots that are 95% or more "vacant" from the GIS vacant land inventory.[5]

Developed land is defined as follows:

- Land developed at densities consistent with zoning and with improvements that make it unlikely to redevelop. Tax lots that are partially vacant are considered developed at this step and are screened for their redevelopment/infill potential in Step 6.

[4] The BLI methodology does not identify areas with redevelopment potential until step 6.

[5] Metro's RLIS database, updated in January of 2020.

Step 4 – Tax Lot Exclusions.

This step removes tax lots from the BLI that do not have the potential to provide residential growth capacity. Examples of these types of exclusions include schools, parks, and churches, which are typically found in areas with residential zoning, but will not likely provide potential for additional residential capacity because they are used for or committed to non-residential purposes.

The following types of tax lots will be removed from the inventory based on Washington County Assessor PCA code designations, owner names, assessed values, and other data sources:

- Tax exempt with property codes for city, state, federal and Native American designations
- Schools
- Churches and social organizations
- Private "streets"
- Rail properties
- Tax lots under 1,000 sq. ft. (0.023 gross acres)
- Parks, open spaces and, where possible, private residential common areas

Table 3 provides a summary of the amount of land in residential areas that is excluded from the residential buildable inventory. Approximately 79 acres of land (105 tax lots) were identified as one of the uses listed for exclusion from the residential buildable inventory. Any residential development potential from lots categorized as exempt are excluded from the buildable inventory.

Table 3: Excluded Land

Jurisdiction/Status	Number of Tax Lots	Unconstrained Acres
Total:	3,400	854.8
Developed	2,901	642.4
Vacant	394	143.7
Excluded	105	78.9

Step 5 – Calculate Deductions for "Future Streets"

A portion of the vacant land supply is set aside for future right-of-way as follows:

- Tax lots under 3/8 acre assume 0% set aside for future streets.
- Tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets.
- Tax lots greater than an acre assume an 18.5% set aside for future streets.

Table 4 summarizes the right-of-way set-asides by development status. The set-asides are removed from the unconstrained acreage for each tax lot. The set-asides result in a reduction of approximately 19 acres from the buildable inventory.

Table 4: Land Deductions[6]

	Unconstrained Acres	Net Acres (ROW Removed)
Total:	786.0	766.5
Developed	642.4	642.4
Vacant	143.7	124.2

Step 6 – Estimate Potentially Buildable Lands and Housing Unit Capacity (Includes Capacity Estimates for Vacant and Redevelopment Land)

Once the net unconstrained land (buildable land with no environmental constraints) has been calculated, then the estimated number of units for vacant and developed land can be calculated.

Step 6 involves multiple calculations and economic screening to estimate the potential buildable land capacity. The calculations and screening are completed in the following order.

- Assign Parcels to Zones
- Estimate Capacity within Vacant Land
- Conduct Screening on Developed Land
    - Estimate Infill Capacity
    - Estimate Redevelopment Capacity

Assign Parcels to Zones

Only land which allows for and assumes residential development within the Cornelius Municipal Code is considered part of the Residential BLI. As such, areas are assigned a zoning district, which includes minimum and maximum densities. Land is classified by zone type (residential, mixed use, etc.) to estimate the amount of land that is potentially developable. To do this, each parcel is assigned a zone.

[6] Net acres with ROW removed does not use the weighted unconstrained acreage. Calculations for other capacity are based on the weighted unconstrained acreage.

Table 5 provides a summary of City zoning that is applied to developed and vacant land in the inventory.

Table 5: Developed and Vacant Land by Zone

Zoning	Unconstrained Acres*	Number of Tax Lots
Total:	766.5	3,295
Developed:	642.4	2,901
A2	124.0	616
CMU	9.7	51
CR	30.1	132
GMU	44.0	9
MHP	33.3	31
R7	401.3	2,062
Vacant:	124.2	394
A2	96.3	282
CMU	1.5	5
CR	0.5	3
GMU	7.6	1
MHP	0.9	3
R7	17.4	100

*Vacant land includes removal of ROW. Constrained and exempt land removed from developed and vacant areas.

Estimate Capacity within Vacant Land

For vacant lots with single family or multifamily zoning, the net developable acreage for each tax lot is simply multiplied by the minimum and maximum density allowed within that zone. For vacant lots with mixed use zoning, the potential number of units is based on minimum square footage of units, maximum number of stories, and maximum or minimum density standards, should they exist. For properties that have received land use approval for development but not yet been developed, capacity reflects the amount of development approved.

Conduct Economic Screening to Estimate Infill and Redevelopment Capacity

Infill. Infill development represents development within single-family zoning where a lot may be sufficiently large to allow homeowners to divide their lot and build an additional housing unit on the previously undeveloped portion. According to the Metro BLI, the following conditions must be met for a single-family zoned tax lot to potentially allow for infill development:

- If the tax lot is zoned single family residential and classified developed, it was assumed that one single family unit presently exists on the tax lot regardless of what's indicated on the assessor's land use code. The one exception to this rule is for tax lots in single-family zoned areas that have current land use for an apartment (according to Metro's multifamily

residential database). These parcels were not considered in calculating infill potential for single family infill supply (as any infill of such land use with this type of zoning would yield a single-family dwelling unit with the associated loss of the multi-family units, which would be unlikely). Lots greater than 2.5 times the minimum zoned lot size are included in the infill supply, except:

- In addition to meeting the size threshold, the assessor's real market building value must be below $300,000 to be counted in the infill supply (since lots with higher value homes would be excluded from the infill supply).
- Tax lots that exceed the minimum zoned lot size by a factor of five are passed through into the infill supply regardless of building value.

As such, each lot that is categorized as part of the infill supply is assumed to have the capacity for additional units. Note, however, the infill economic screen does not account for current built conditions or site access arrangement on a lot-by-lot basis. It's possible that such conditions would preclude or make additional housing particularly costly and/or challenging to develop in some cases. The net capacity for additional dwelling units on eligible infill tax lots is generated using the calculations summarized below. The net additional infill units are calculated as the lower of the following two computations. Tax lots can end up with zero additional infill units.

- Additional DU infill= (Calculated area of TL – min lot size) / min lot size (rounded down to a whole number); can equal 0.
- Additional DU infill = (net unconstrained sq. ft. / 2,000 sq. ft.), rounded down to a whole number; can equal 0.

Accessory Dwelling Units (ADU). ADU capacity is reported in probabilistic terms by geographic location within Metro's UGB. Each single-family tax lot is assigned a small probability of having an ADU built there. The probability ranges from 9% in central Portland locations to 0% for suburban areas near the UGB. Cornelius is assumed to have 0% capacity for the purpose of this BLI.

Redevelopment. If the tax lot is zoned for multi-family residential development or mixed-use residential development and is classified as developed, then the redevelopment capacity would have to meet a "units requirement" in addition to the economic requirements described previously. This inventory uses Metro's "strike price" methodology to determine if the requirements are met.

Units requirement. The multi-family or mixed-use residential redevelopment must add at least 50% more units over the number of units which already exist, or produce at least three units total to be counted towards redevelopment potential. The rationale is that developers would not tear down and redevelop an apartment or condo units unless they could yield a significant gain in rents and dwelling units. Elements of this methodology include:

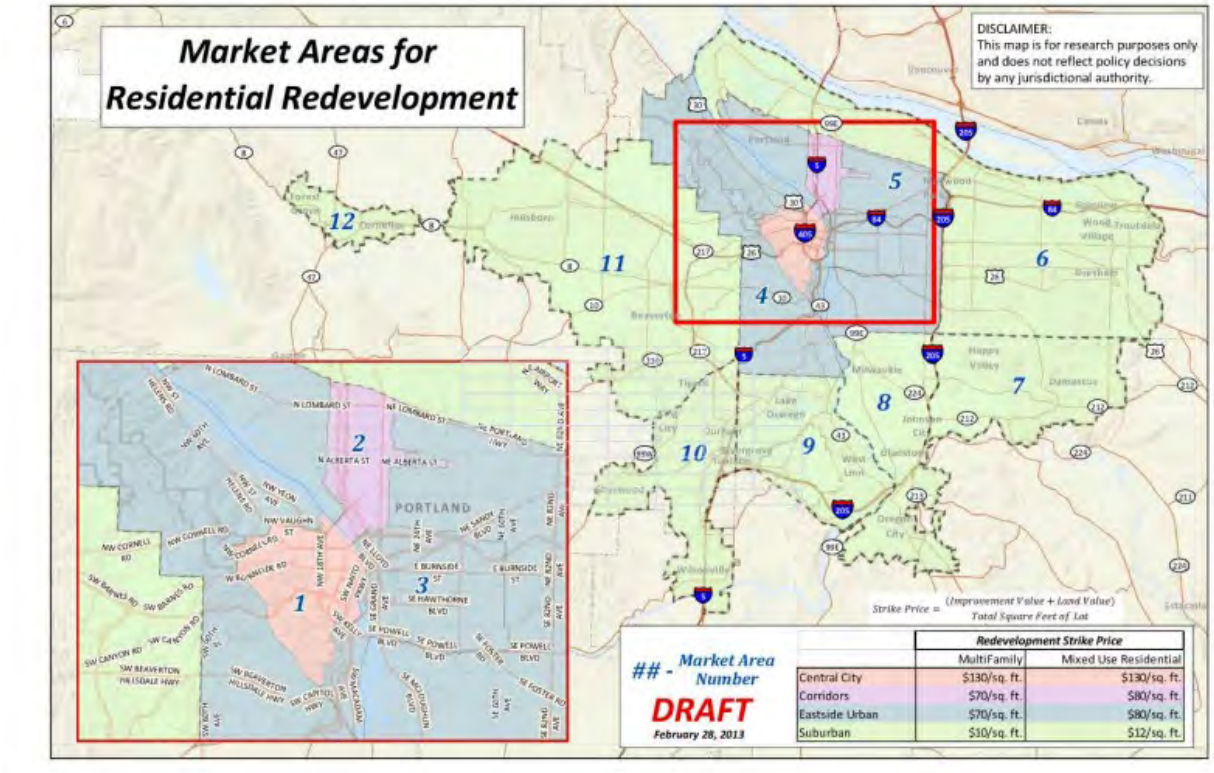
- Redevelopment of a multi-family structure must add at least 50% more units; if it doesn't, the tax lot is not counted.

- If the structure is a commercial (or industrial) building or single-family dwelling unit (in a multi-family or mixed-use zone), the redevelopment must yield at least three or more dwelling units
- Redevelopment must pass through an economic filter first before evaluation of additional dwelling units through redevelopment (see below for economic filter thresholds)

Note, for several parcels, development approvals for specific numbers of units exist. These approvals have been used to assign these lots a development capacity that matches the number of units already approved.

Strike Price Requirement. The "strike price" is used to indicate the price at which point it becomes cost effective for a developer to consider a site for redevelopment. Metro's strike prices are based on current market conditions but are pushed to a modest degree to acknowledge that demand will increase over time. Strike prices also vary by market subarea. As shown in Figure 4, the study area is located entirely within the "Suburban" market subarea category. The strike prices are $10 per square foot for multi-family development and $12 per square foot for mixed-use development.

Figure 4: Market Areas for Residential Development (Metro BLI, 2018)



RESULTS

The results of the BLI are presented in Tables 6 through 8 and illustrated in Figure 5.

Table 6: BLI Summary

Development Status	Tax Lots	Total Acres	Constrained Acres	Unconstrained Acres[7]
Total	3,590	1,343.7	198.9	1,144.8
Not Buildable	3,158	1,010.1	167.6	842.5
Built Out	2,924	842.2	115.3	726.9
Exempt	144	170.7	53.1	117.6
Potentially Buildable	522	333.7	31.4	302.3
Infill[8]	108	95.5	7.5	88.0
Redevelopment	19	66.9	8.1	58.8
Vacant	395	171.3	15.7	155.6

As summarized in Table 7, Cornelius has an estimated 302 acres of unconstrained residential land with some form of additional capacity. Half of the additional capacity is available through vacant land (approximately 155 acres). Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. While that area is approved for development, it will continue to represent additional capacity until homes are constructed there. Infill development comprises of just under 90 acres of unconstrained residential land. Most of the additional infill capacity is located outside City limits to the northeast, but within the UGB. The remainder of buildable land (approximately 59 acres) is categorized as redevelopment .

Just over half of the buildable land is zoned for Multi-Family Residential (approximately 155 acres). Buildable areas with Single-family Residential zoning comprise almost one-third (approximately 97 acres) of the buildable land. The Gateway Mixed-Use zone comprises over ten percent of buildable land (approximately 36 acres). With one exception, the supply of buildable land in all other zones is less than three acres each. The one exception is the Core Residential zone with approximately 11 acres of buildable land.

[7] The measurement of "Unconstrained Acres" is lower than "Gross-Constrained" because an additional deduction is made for developed parcels that have infill capacity to account for an existing structure. It is assumed that the existing structure remains and other land on the parcel is developed.

[8] The amount of potentially buildable acres that meet the definition for infill development does not account for individual sites that may encounter existing built conditions or access restrictions that could potentially preclude or require costly improvements to allow additional housing. As such, infill capacity may be overestimated to a small degree.

Table 7: Unconstrained Acres by Zone, Residential Zones

Zone	Projected Density	Unconstrained Acres				
		Vacant	Infill	Redev.	Total	Share
Total		155.6	89.2	58.8	303.5	100%
Single-Family Residential (R-7)	4-5/acre	18.9	78.2		97.1	32%
Manufactured Home Park (MHP)	max 10/acre	1.2			1.2	<1%
Multi-family Residential (A-2)	8-14/acre	124.0		31.2	155.2	51%
Central Mixed-Use (CMU)		1.6		1.3	2.9	1%
Core Residential (CR)	min 8/acre	0.5	11.1		11.5	4%
Gateway Mixed Use (GMU)		9.3		26.4	35.7	12%

Table 8 provides a summary of the additional housing unit capacity for each zone. The housing unit capacity is determined by the projected density for each zone. Overall, there is an estimated capacity for over 2,668 additional dwelling units. Similar to the amount of unconstrained acreage, vacant areas account for most of the capacity with over 1,300 units. Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. Redevelopment represents the second most capacity with potential for over 840 estimated units. Infill development accounts for slightly under 500 units of the estimated capacity.

For vacant land, the distribution of zoning is heavily concentrated in the Multi-Family Residential zone (approximately 1,041 units). However, most of this capacity is located in southeast Cornelius and a larger share of the proposed housing units in this area are proposed to be single-family detached homes. Vacant Single-family Residential and Gateway Mixed-Use zones account for over 100 units each. Vacant land in all other zones account for approximately 32 units. Most of the remaining vacant unit development potential is anticipated to be in the Central Mixed-Use zone.

The capacity for additional dwelling units in the infill category is heavily concentrated in the Single-Family Residential (487 units). The available supply of Core Residential zones accounts for just over 65 units.

The redevelopable supply of land accounts for just under 850 additional dwelling units in the supply. Of that, most the units are anticipated to be available between the Gateway Mixed-Use zone (approximately 420 units) and the Multi-family Residential zone (approximately 413 units). The remaining potential supply of additional units is anticipated to be in the Central Mixed-Use zone with approximately 14 additional units.

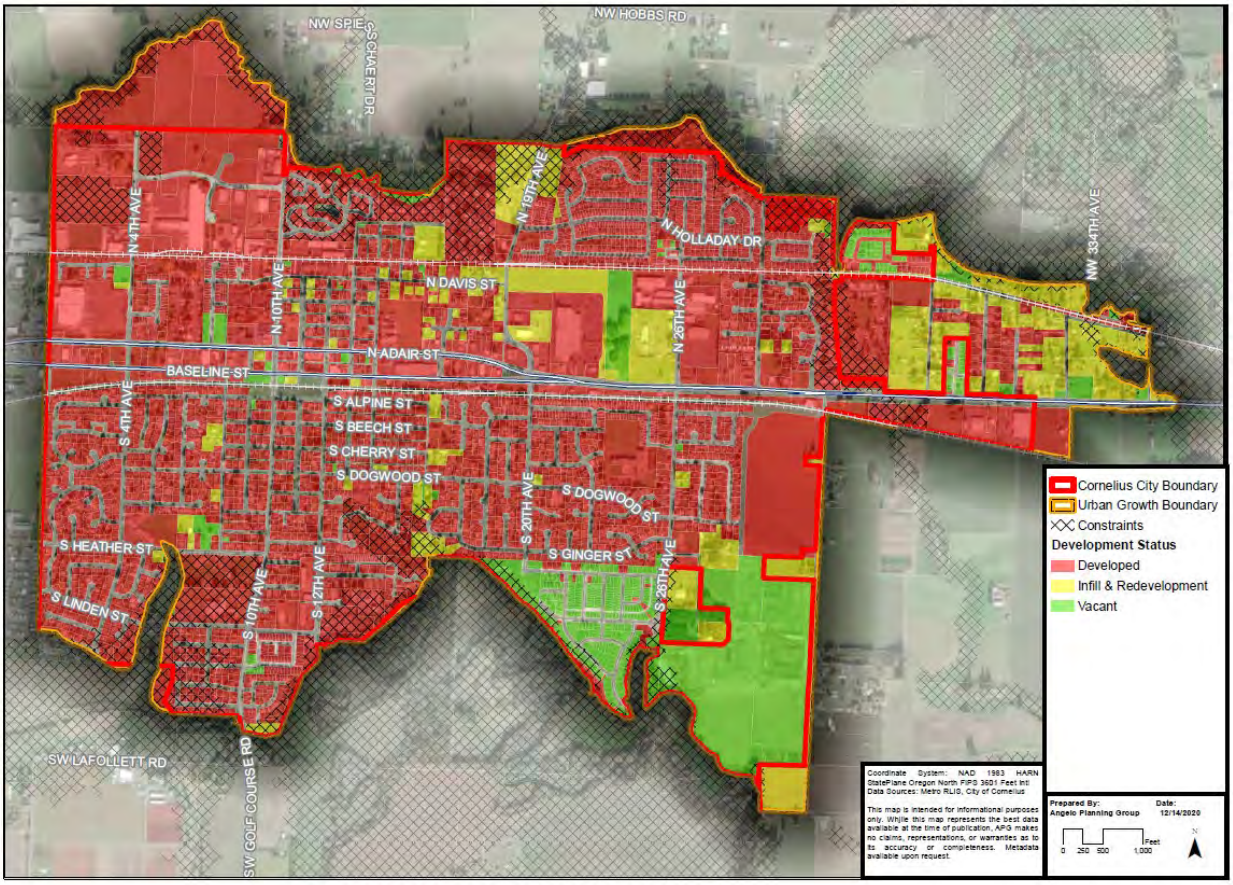
Table 8: Housing Unit Capacity by Zone, Residential Zones

Jurisdiction and Zone	Projected Density	Capacity				
		Vacant	Infill	Redev.	Total	Share
Total		1,334	487	847	2,668	100%
Single-Family Residential (R-7)	4-5/acre	139	421		560	21%
Manufactured Home Park (MHP)	max 10/acre	11			11	<1%
Multi-family Residential (A-2)*	8-14/acre	1,041		413	1,454	54%
Central Mixed-Use (CMU)		16		14	30	1%
Core Residential (CR)	min 8/acre	5	66		71	3%
Gateway Mixed Use (GMU)		122		420	542	20%

* Note: Approximately 660 of the units in the A-2 zone are proposed to be single-family detached units to be developed as part of the Laurel Woods development. This will have the effect of reducing the relative share of multi-family and attached unit capacity and increasing the share of single-family detached capacity.

Figure 5 illustrates the location of vacant and infill/redevelopment areas within the City of Cornelius.

Figure 5: Housing Unit Capacity Map



MEMORANDUM

Cornelius Buildable Lands Inventory –Methodology and Results

City of Cornelius Housing Needs Analysis

DATE	January 7, 2020
TO	Ryan Wells and Tim Franz, City of Cornelius
FROM	Matt Hastie, Clinton "CJ" Doxsee, and Courtney Simms, APG
CC	

INTRODUCTION

The purpose of this memorandum is to summarize the methodology of a Geographic Information Systems (GIS)-based Buildable Land Inventory (BLI) for the City of Cornelius Housing Needs Analysis (HNA). The results will help determine whether the City has a sufficient supply of land to meet long-term (20 year) housing needs.[1] The memo also will inform the strategies and approaches that may be effective and appropriate for increasing the developability of residential land, which can lead to greater overall housing supply.

The memorandum summarizes the methodology and key findings of the analysis, then presents the initial results in a series of tables and maps. This memorandum focuses solely on the supply and capacity of buildable residential land within the Metro Urban Growth Boundary (UGB). The methodology was informed by Metro's BLI methodology from the 2018 Metro Buildable Lands Inventory, which was used to estimate available residential and employment land within the entire Portland Metropolitan Region (Metro) region.

The projected need for land to support future housing and the comparison of projected need and supply will be described in a separate Housing Needs Analysis report.

Regulatory Basis

Oregon Administrative Rules (OAR) provide guidance for the standards and methods to be used in preparing an inventory of buildable land. The methods and definitions used here are consistent with OAR 660-008 and OAR 660-024. Metro does not apply additional regulations or requirements but has developed its own methodology for identifying buildable lands within the Metro region. That methodology and resulting data has been used as a starting point for this analysis to ensure

[1] The project is being conducted with funding provided by the Oregon Department of Land Conservation and Development.

consistency with regional procedures and to make efficient use of project resources. As noted in the following sections, the regional BLI data has been supplemented with local data, where available.

METHODOLOGY

The methodology generally follows the rules and assumptions identified in the methodology of Metro's 2018 BLI. The steps used to generate the BLI include the following:

Step 1: Calculate deductions for environmental resources

Step 2: Identify residential land (land zoned for residential or mixed use)

Step 3: Identify vacant tax lots (and complement developed tax lots) by zoning class

Step 4: Remove tax lots from the BLI that don't have the potential to provide residential or employment growth capacity (e.g., parks, schools or other public facilities, or land committed to future non-residential purposes)

Step 5: Calculate deductions for "future streets"

Step 6: Calculate BLI estimates (BLI includes capacity estimates for vacant land and properties with the potential for redevelopment)

The buildable lands inventory uses methods and definitions that are consistent with OAR 660-008 and OAR 660-024.

Step 1 – Calculate Deductions for Environmental Resources

Environmental resources typically provide beneficial environmental functions or aesthetic enhancements that are necessary to preserve. The preservation of these resources often provides a constraint on the developability of an area. To reflect this, areas that are identified as environmental resources are removed from the buildable inventory as a constraint.

Most areas that are considered environmental resources fall into multiple categories. Examples of these include areas that are in a floodway or floodplain, wetland, or include steep slopes. Often, this constrained land overlaps. Using an environmental hierarchy to classify the environmental features avoids double counting the capacity deduction for the BLI. Moreover, the City includes two environmental overlays, the Natural Resource Overlay (NRO) and Floodplain District (FP), which align closely with the Metro Titles 3 and 13 designations, as refined through the Tualatin Basin regional approach developed by Cornelius and other partnering organizations in the basin, and FEMA floodplain designations. Within the NRO district, density transfers are allowed where natural resources constrain development. BLI reductions will reflect the higher assumed protections when environmental features are overlapping.

Environmental Constraints categories used are the following:

- Floodways – FEMA's latest flood hazard data and updated with the City of Cornelius's Floodplain District.
- Flood Plain District (FP) – the City's FP district regulates and restricts development in special flood hazard areas within the City.
- Slopes 25% or Steeper – Steep slopes were calculated using a digital elevation model to identify areas with slopes 25% or greater, which is consistent with OAR 660-008.
- Natural Resource Overlay (NRO) – The City's NRO overlay regulates and restricts development in areas with natural resources as identified in the City's natural resource inventory and map.
- Environmental Constraints – Title 3 and 13 data were provided by Metro RLIS. Significant Natural Resource Overlay (SNRO) data is provided by Metro RLIS and updated with the City of Cornelius's Natural Resource overlay.
- Rights of Way – Utility ROW was provided by Metro RLIS, while transportation ROW was obtained using City GIS data.

These lands are combined and then overlaid with City tax lots to estimate the amount of land in each parcel where development is limited by these environmental constraints. These constrained areas are deducted from the gross area of the parcel to estimate the area of the parcel that is unconstrained and potentially buildable.

The land impacted by these constraints is removed from the inventory of developable land as follows.

<u>Single-family residential</u>

1. Floodways: 100% removed
2. Floodplain and Floodplain District: 100% removed
3. Slopes > 25% and Title 3 treated the same way: 100% removed
    a. If tax lot ≥ 50% constrained, follow the "maximum capacity rule" (defined below) to add back units[2]
    b. If tax lot is <50% constrained, assume 90% of unconstrained area is in BLI (i.e., apply 10% discount to vacant buildable acres)
4. Natural Resource Overlay (NRO):
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
5. Title 13: 50% of Title 13 constrained acres removed from BLI (consistent with Title 13 model Ordinance)
6. Assume at least one unit per tax lot, even if fully constrained

<u>Multi-family residential</u>

1. Floodways: 100% removed

[2] This add back represents Metro's approach for estimating/calculating the density transfer to mitigate the loss of potential development productivity for dwelling units.

2. Floodplain and Floodplain District: 50% removed
3. Slopes > 25%: 100% removed
4. Title 3: remove 50% of the constrained land with the other 50% considered buildable
5. Natural Resource Overlay:
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
6. Title 13: 15% of Title 13 constrained acres removed from BLI (consistent with Title 13 Model Ordinance)
7. Assume at least one unit per tax lot, even if fully constrained

Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, and only acres outside of existing right-of-way (ROW) are counted in the table. As shown on the table, most of the environmental constraints are inventoried under Metro's Title 13 (191 acres). The next largest constraint in Cornelius is the City's Natural Resource Overlay (NRO) consisting of approximately 83 acres.[3] The third largest constraint in the City are floodplains, consisting of approximately 68 acres across the City.

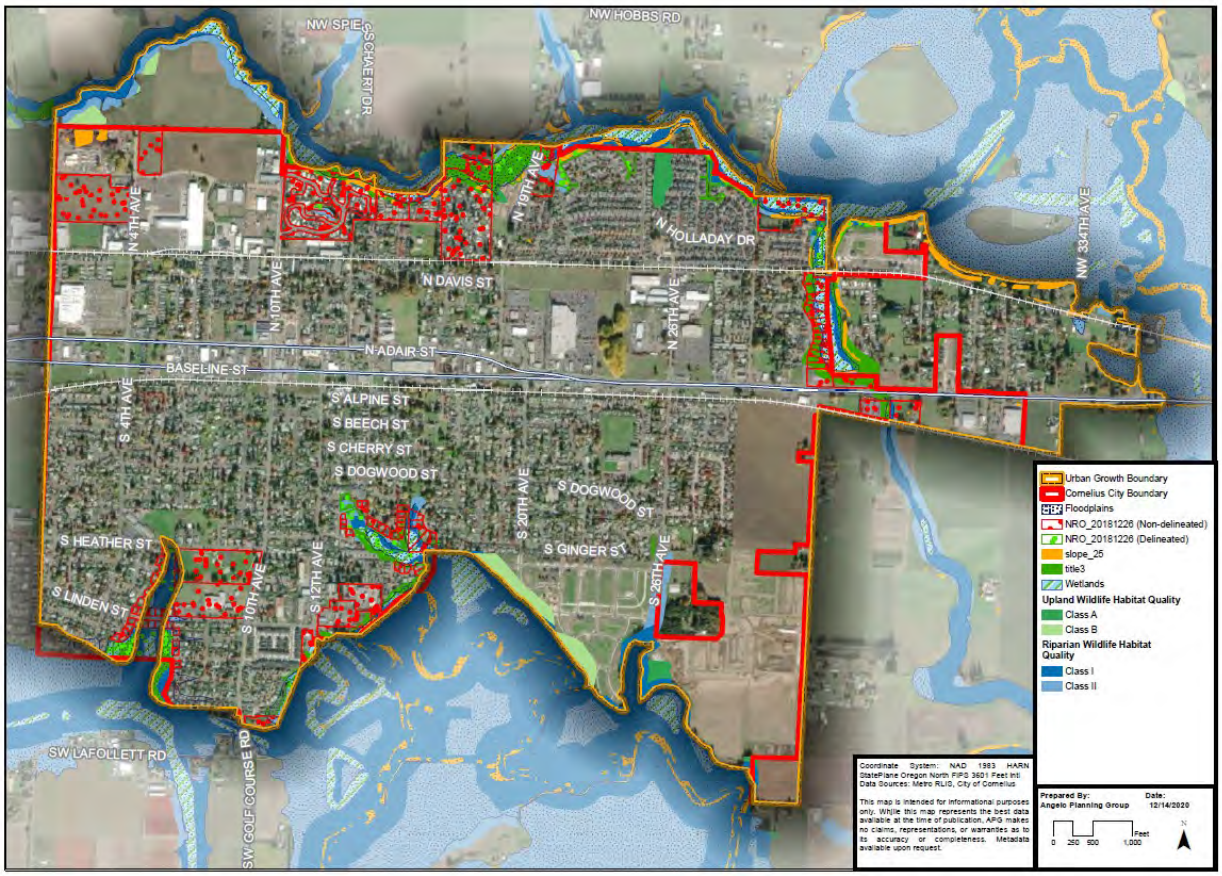
Table 1: Environmental Constraints

Constraint	Total
Constraints Total:	432.8
Floodway	7.6
Slopes >25%	16.0
Floodplain	68.7
Title 3	33.0
Wetland	33.1
Natural Resource Overlay:	83.1
Delineated	33.5
Not delineated	49.6
Title 13	191.3

Both Metro's Title 13 and the City's NRO seek to preserve natural areas and share several overlapping areas. Similar overlapping conditions exist for several other constraints such as floodplains, floodways, and wetlands or Metro's Title 3 and slopes greater than 25%. After accounting for overlapping natural resources, the total acreage of land with environmental constraints located in residential areas is approximately 175 acres. The overlaid constraints are deducted from the amount of buildable land as described in more detail below. Figure 1 illustrates the locations of each environmental constraint.

[3] The City's NRO consists of a combination of delineated and non-delineated areas. Delineated areas apply to tax lots which have completed a delineation study to identify the exact location(s) of on-site natural resources. Non-delineated NRO areas consist of areas for which environmental resources are known to occur, but the exact location(s) have not been identified.

Figure 1: Environmental Constraints Map



Step 2 – Identify Residential Land

For the purposes of this analysis, residential land is identified as the following:

- Land with a comprehensive plan designation of "Residential," including low-density residential and mid-density residential. Zoning for residential tax lots within Cornelius' City limits generally match comprehensive plan designation, with some small exceptions for lots with "Open Space" designations that have residential zoning. These are examined on a case-by-case basis.
- Land with a comprehensive plan designation of "Mixed Use." While many uses are possible within this area, expanding housing opportunities is a primary development objective of the Commercial Mixed Use (CMU) district. "Development within the CMU District shall have a significant commercial element, along with medium to high density residential uses." (CMC 153.063(C)(1))
- Other land (open space, commercial, industrial, etc.) is excluded as it does not require residential uses. Although the City's development code allows for residential use in some of these zones, there is no guarantee that it will be used for residential development.

Table 2 summarizes the distribution of low-density, medium density, and mixed-use areas by identified constraints. There is a total of 1,035 acres of residential land within located in the City. Of that, almost half of the residential land is designated for single-family residential uses. Most of the remainder of the residential land is designated for multi-family residential. Less than a tenth of the land is designated for mixed-use residential areas.

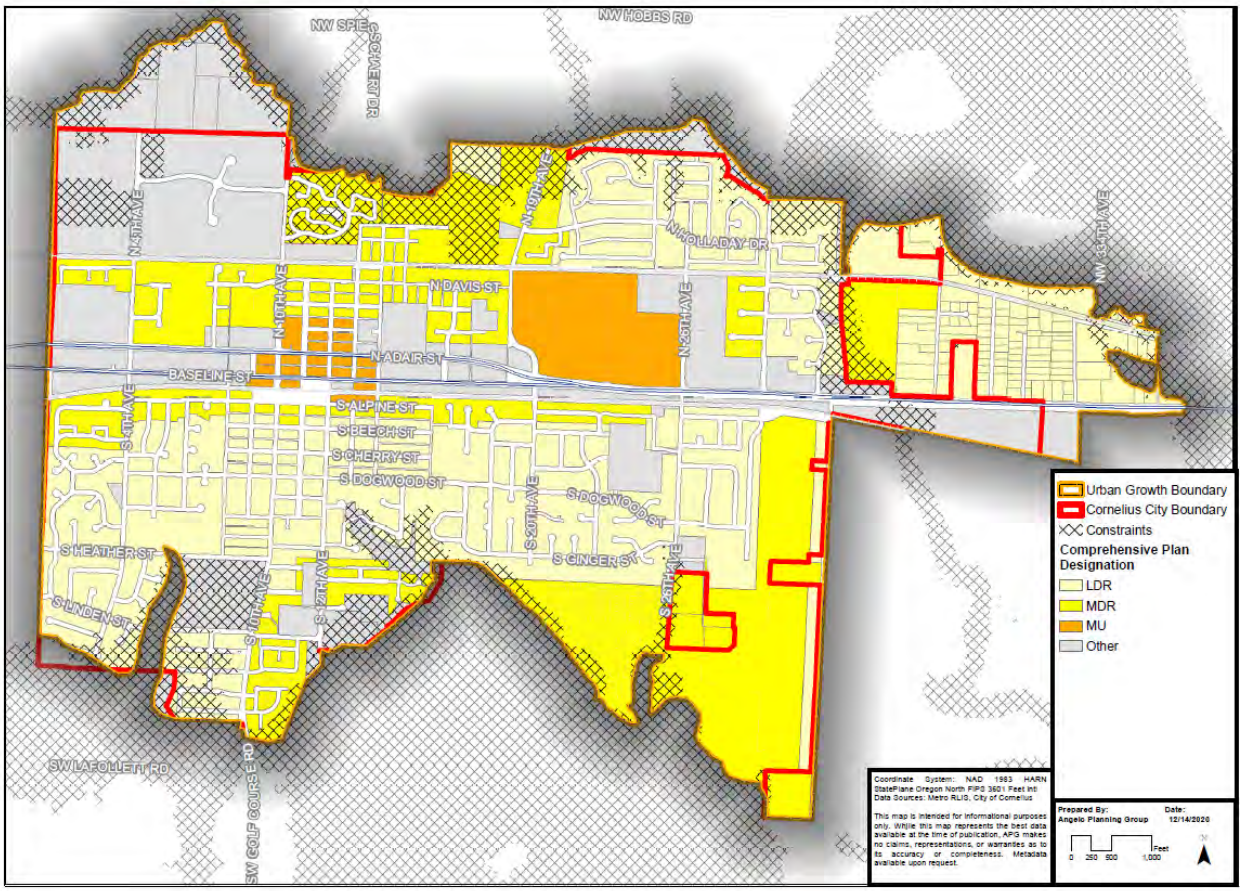
Environmental constraints reduce the amount of buildable residential land by just over 170 acres. The constraints are fairly evenly distributed between low-density and medium-density residential areas, though medium-density residential areas have slightly more constraints (approximately 94 acres) than low-density residential areas (approximately 76 acres). None of the mixed-use areas have constraints on them.

Table 2: Gross Acreage in Residential Land Inventory

Constraints (Acres)	Constrained		Unconstrained		Total	
Total	170.5	100%	865.0	100%	1,035.5	100%
Low-Density Residential	76.4	45%	444.7	51%	521.1	50%
Medium-Density Residential	94.2	55%	346.8	40%	441.0	43%
Mixed-Use	0.0	0%	73.5	9%	73.5	7%

Figure 2 illustrates all residential areas with constraints overlaid. As shown, areas with constraints are generally found near the City boundary. Most of the constraints within the City's boundary can be found along the northern and southern limits of the City. There are no constraints centrally located within the City.

Figure 2: Cornelius Location Map



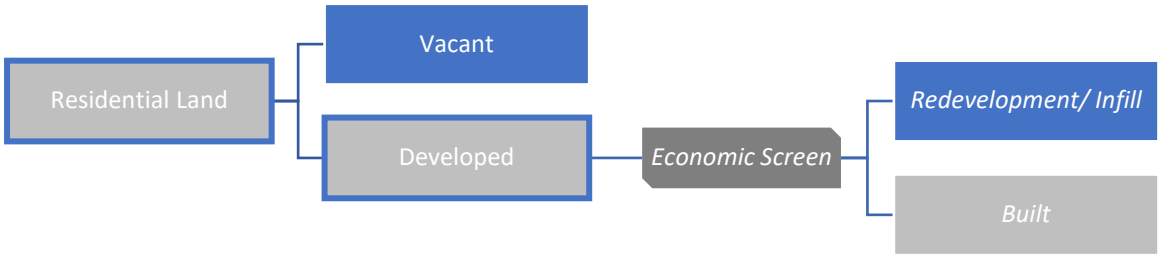
Step 3 – Identify Vacant Tax Lots (and complement developed tax lots)

This step classifies each tax lot into a set of mutually exclusive categories based on development status; this means classification into "vacant" and "developed" land.[4]

The region's buildable land inventory is sorted into *vacant* and *developed* capacity. Vacant tax lots are areas that are generally undeveloped and provide relatively easy opportunities for new residential development. Developed tax lots are areas that currently have some form of residential development, some of which have the potential to allow for new residential development through redevelopment or infill development. Developed tax lots are subjected to economic screens (described in Step 6) to determine potential redevelopment/infill capacity. If a certain level of capacity is reached, the redevelopment potential is considered as part of the buildable land inventory.

Figure 3 illustrates the structure of categories for organizing the BLI.

Figure 3: Residential Land Buildable Land Structure



Vacant land is defined and identified as follows:

- Any tax lot that is fully vacant, based on Metro aerial photo.
- Tax lot with less than 2,000 sq. ft. developed AND developed portion is under 10% of the entire tax lot area.
- Tax lots that are 95% or more "vacant" from the GIS vacant land inventory.[5]

Developed land is defined as follows:

- Land developed at densities consistent with zoning and with improvements that make it unlikely to redevelop. Tax lots that are partially vacant are considered developed at this step and are screened for their redevelopment/infill potential in Step 6.

[4] The BLI methodology does not identify areas with redevelopment potential until step 6.

[5] Metro's RLIS database, updated in January of 2020.

Step 4 – Tax Lot Exclusions.

This step removes tax lots from the BLI that do not have the potential to provide residential growth capacity. Examples of these types of exclusions include schools, parks, and churches, which are typically found in areas with residential zoning, but will not likely provide potential for additional residential capacity because they are used for or committed to non-residential purposes.

The following types of tax lots will be removed from the inventory based on Washington County Assessor PCA code designations, owner names, assessed values, and other data sources:

- Tax exempt with property codes for city, state, federal and Native American designations
- Schools
- Churches and social organizations
- Private "streets"
- Rail properties
- Tax lots under 1,000 sq. ft. (0.023 gross acres)
- Parks, open spaces and, where possible, private residential common areas

Table 3 provides a summary of the amount of land in residential areas that is excluded from the residential buildable inventory. Approximately 79 acres of land (105 tax lots) were identified as one of the uses listed for exclusion from the residential buildable inventory. Any residential development potential from lots categorized as exempt are excluded from the buildable inventory.

Table 3: Excluded Land

Jurisdiction/Status	Number of Tax Lots	Unconstrained Acres
Total:	3,400	854.8
Developed	2,901	642.4
Vacant	394	143.7
Excluded	105	78.9

Step 5 – Calculate Deductions for "Future Streets"

A portion of the vacant land supply is set aside for future right-of-way as follows:

- Tax lots under 3/8 acre assume 0% set aside for future streets.
- Tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets.
- Tax lots greater than an acre assume an 18.5% set aside for future streets.

Table 4 summarizes the right-of-way set-asides by development status. The set-asides are removed from the unconstrained acreage for each tax lot. The set-asides result in a reduction of approximately 19 acres from the buildable inventory.

Table 4: Land Deductions[6]

	Unconstrained Acres	Net Acres (ROW Removed)
Total:	786.0	766.5
Developed	642.4	642.4
Vacant	143.7	124.2

Step 6 – Estimate Potentially Buildable Lands and Housing Unit Capacity (Includes Capacity Estimates for Vacant and Redevelopment Land)

Once the net unconstrained land (buildable land with no environmental constraints) has been calculated, then the estimated number of units for vacant and developed land can be calculated.

Step 6 involves multiple calculations and economic screening to estimate the potential buildable land capacity. The calculations and screening are completed in the following order.

- Assign Parcels to Zones
- Estimate Capacity within Vacant Land
- Conduct Screening on Developed Land
    - Estimate Infill Capacity
    - Estimate Redevelopment Capacity

Assign Parcels to Zones

Only land which allows for and assumes residential development within the Cornelius Municipal Code is considered part of the Residential BLI. As such, areas are assigned a zoning district, which includes minimum and maximum densities. Land is classified by zone type (residential, mixed use, etc.) to estimate the amount of land that is potentially developable. To do this, each parcel is assigned a zone.

[6] Net acres with ROW removed does not use the weighted unconstrained acreage. Calculations for other capacity are based on the weighted unconstrained acreage.

Table 5 provides a summary of City zoning that is applied to developed and vacant land in the inventory.

Table 5: Developed and Vacant Land by Zone

Zoning	Unconstrained Acres*	Number of Tax Lots
Total:	766.5	3,295
Developed:	642.4	2,901
A2	124.0	616
CMU	9.7	51
CR	30.1	132
GMU	44.0	9
MHP	33.3	31
R7	401.3	2,062
Vacant:	124.2	394
A2	96.3	282
CMU	1.5	5
CR	0.5	3
GMU	7.6	1
MHP	0.9	3
R7	17.4	100

*Vacant land includes removal of ROW. Constrained and exempt land removed from developed and vacant areas.

Estimate Capacity within Vacant Land

For vacant lots with single family or multifamily zoning, the net developable acreage for each tax lot is simply multiplied by the minimum and maximum density allowed within that zone. For vacant lots with mixed use zoning, the potential number of units is based on minimum square footage of units, maximum number of stories, and maximum or minimum density standards, should they exist. For properties that have received land use approval for development but not yet been developed, capacity reflects the amount of development approved.

Conduct Economic Screening to Estimate Infill and Redevelopment Capacity

Infill. Infill development represents development within single-family zoning where a lot may be sufficiently large to allow homeowners to divide their lot and build an additional housing unit on the previously undeveloped portion. According to the Metro BLI, the following conditions must be met for a single-family zoned tax lot to potentially allow for infill development:

- If the tax lot is zoned single family residential and classified developed, it was assumed that one single family unit presently exists on the tax lot regardless of what's indicated on the assessor's land use code. The one exception to this rule is for tax lots in single-family zoned areas that have current land use for an apartment (according to Metro's multifamily

residential database). These parcels were not considered in calculating infill potential for single family infill supply (as any infill of such land use with this type of zoning would yield a single-family dwelling unit with the associated loss of the multi-family units, which would be unlikely). Lots greater than 2.5 times the minimum zoned lot size are included in the infill supply, except:

- In addition to meeting the size threshold, the assessor's real market building value must be below $300,000 to be counted in the infill supply (since lots with higher value homes would be excluded from the infill supply).
- Tax lots that exceed the minimum zoned lot size by a factor of five are passed through into the infill supply regardless of building value.

As such, each lot that is categorized as part of the infill supply is assumed to have the capacity for additional units. Note, however, the infill economic screen does not account for current built conditions or site access arrangement on a lot-by-lot basis. It's possible that such conditions would preclude or make additional housing particularly costly and/or challenging to develop in some cases. The net capacity for additional dwelling units on eligible infill tax lots is generated using the calculations summarized below. The net additional infill units are calculated as the lower of the following two computations. Tax lots can end up with zero additional infill units.

- Additional DU infill= (Calculated area of TL – min lot size) / min lot size (rounded down to a whole number); can equal 0.
- Additional DU infill = (net unconstrained sq. ft. / 2,000 sq. ft.), rounded down to a whole number; can equal 0.

Accessory Dwelling Units (ADU). ADU capacity is reported in probabilistic terms by geographic location within Metro's UGB. Each single-family tax lot is assigned a small probability of having an ADU built there. The probability ranges from 9% in central Portland locations to 0% for suburban areas near the UGB. Cornelius is assumed to have 0% capacity for the purpose of this BLI.

Redevelopment. If the tax lot is zoned for multi-family residential development or mixed-use residential development and is classified as developed, then the redevelopment capacity would have to meet a "units requirement" in addition to the economic requirements described previously. This inventory uses Metro's "strike price" methodology to determine if the requirements are met.

Units requirement. The multi-family or mixed-use residential redevelopment must add at least 50% more units over the number of units which already exist, or produce at least three units total to be counted towards redevelopment potential. The rationale is that developers would not tear down and redevelop an apartment or condo units unless they could yield a significant gain in rents and dwelling units. Elements of this methodology include:

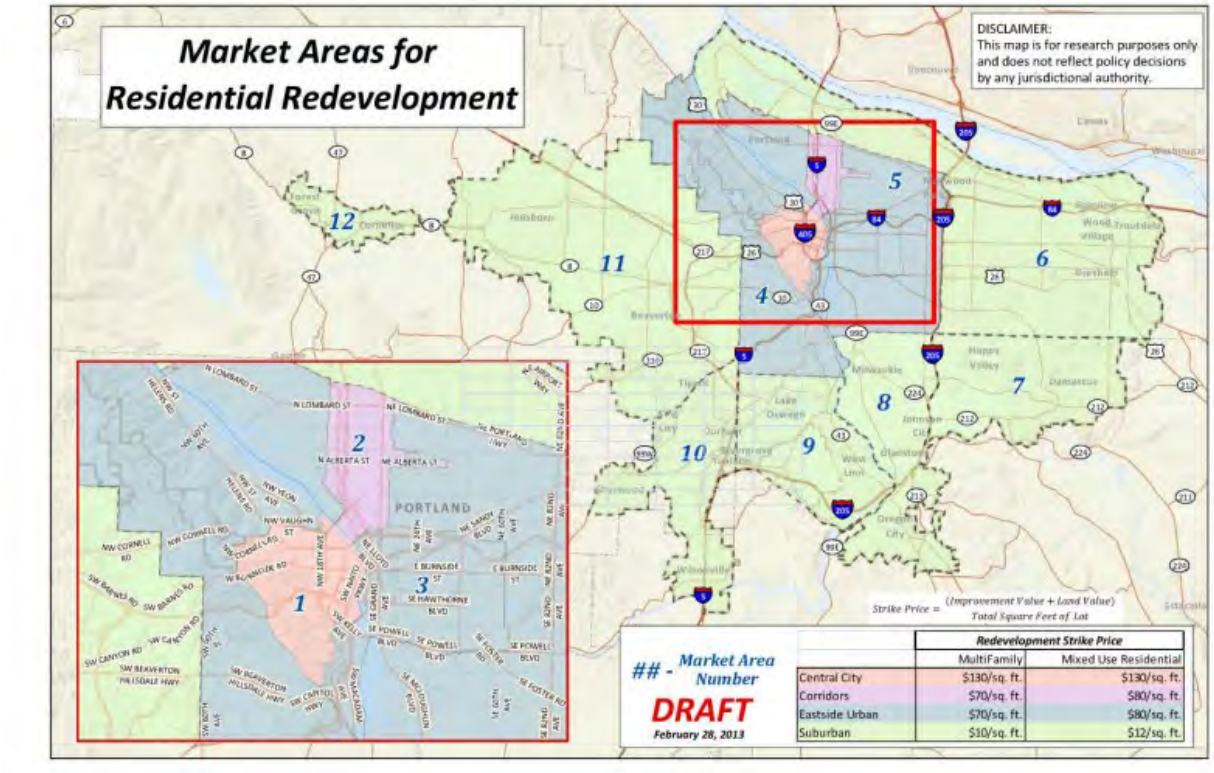
- Redevelopment of a multi-family structure must add at least 50% more units; if it doesn't, the tax lot is not counted.

- If the structure is a commercial (or industrial) building or single-family dwelling unit (in a multi-family or mixed-use zone), the redevelopment must yield at least three or more dwelling units
- Redevelopment must pass through an economic filter first before evaluation of additional dwelling units through redevelopment (see below for economic filter thresholds)

Note, for several parcels, development approvals for specific numbers of units exist. These approvals have been used to assign these lots a development capacity that matches the number of units already approved.

Strike Price Requirement. The "strike price" is used to indicate the price at which point it becomes cost effective for a developer to consider a site for redevelopment. Metro's strike prices are based on current market conditions but are pushed to a modest degree to acknowledge that demand will increase over time. Strike prices also vary by market subarea. As shown in Figure 4, the study area is located entirely within the "Suburban" market subarea category. The strike prices are $10 per square foot for multi-family development and $12 per square foot for mixed-use development.

Figure 4: Market Areas for Residential Development (Metro BLI, 2018)



RESULTS

The results of the BLI are presented in Tables 6 through 8 and illustrated in Figure 5.

Table 6: BLI Summary

Development Status	Tax Lots	Total Acres	Constrained Acres	Unconstrained Acres[7]
Total	3,590	1,343.7	198.9	1,144.8
Not Buildable	3,158	1,010.1	167.6	842.5
Built Out	2,924	842.2	115.3	726.9
Exempt	144	170.7	53.1	117.6
Potentially Buildable	522	333.7	31.4	302.3
Infill[8]	108	95.5	7.5	88.0
Redevelopment	19	66.9	8.1	58.8
Vacant	395	171.3	15.7	155.6

As summarized in Table 7, Cornelius has an estimated 302 acres of unconstrained residential land with some form of additional capacity. Half of the additional capacity is available through vacant land (approximately 155 acres). Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. While that area is approved for development, it will continue to represent additional capacity until homes are constructed there. Infill development comprises of just under 90 acres of unconstrained residential land. Most of the additional infill capacity is located outside City limits to the northeast, but within the UGB. The remainder of buildable land (approximately 59 acres) is categorized as redevelopment .

Just over half of the buildable land is zoned for Multi-Family Residential (approximately 155 acres). Buildable areas with Single-family Residential zoning comprise almost one-third (approximately 97 acres) of the buildable land. The Gateway Mixed-Use zone comprises over ten percent of buildable land (approximately 36 acres). With one exception, the supply of buildable land in all other zones is less than three acres each. The one exception is the Core Residential zone with approximately 11 acres of buildable land.

[7] The measurement of "Unconstrained Acres" is lower than "Gross-Constrained" because an additional deduction is made for developed parcels that have infill capacity to account for an existing structure. It is assumed that the existing structure remains and other land on the parcel is developed.

[8] The amount of potentially buildable acres that meet the definition for infill development does not account for individual sites that may encounter existing built conditions or access restrictions that could potentially preclude or require costly improvements to allow additional housing. As such, infill capacity may be overestimated to a small degree.

Table 7: Unconstrained Acres by Zone, Residential Zones

Zone	Projected Density	Unconstrained Acres				
		Vacant	Infill	Redev.	Total	Share
Total		155.6	89.2	58.8	303.5	100%
Single-Family Residential (R-7)	4-5/acre	18.9	78.2		97.1	32%
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For vacant land, the distribution of zoning is heavily concentrated in the Multi-Family Residential zone (approximately 1,041 units). However, most of this capacity is located in southeast Cornelius and a larger share of the proposed housing units in this area are proposed to be single-family detached homes. Vacant Single-family Residential and Gateway Mixed-Use zones account for over 100 units each. Vacant land in all other zones account for approximately 32 units. Most of the remaining vacant unit development potential is anticipated to be in the Central Mixed-Use zone.

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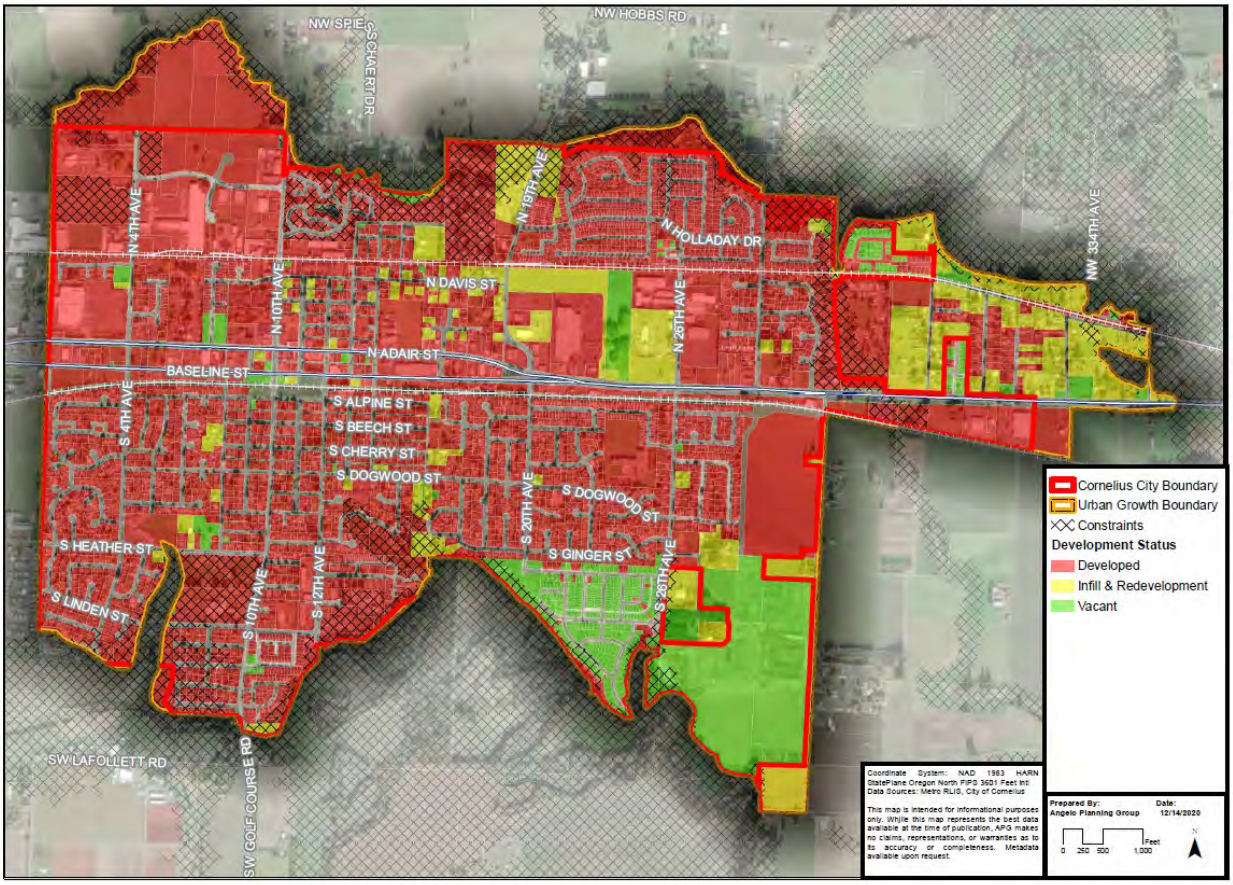
Single-Family Residential (R-7)	4-5/acre	139	421		560	21%
Manufactured Home Park (MHP)	max 10/acre	11			11	<1%
Multi-family Residential (A-2)*	8-14/acre	1,041		413	1,454	54%
Central Mixed-Use (CMU)		16		14	30	1%
Core Residential (CR)	min 8/acre	5	66		71	3%
Gateway Mixed Use (GMU)		122		420	542	20%

* Note: Approximately 660 of the units in the A-2 zone are proposed to be single-family detached units to be developed as part of the Laurel Woods development. This will have the effect of reducing the relative share of multi-family and attached unit capacity and increasing the share of single-family detached capacity.

Figure 5 illustrates the location of vacant and infill/redevelopment areas within the City of Cornelius.

Figure 5: Housing Unit Capacity Map



MEMORANDUM

Housing Strategies Report
Cornelius Housing Needs Analysis

DATE January 22, 2021

TO Ryan Wells and Tim Franz, City of Cornelius

FROM Kate Rogers and Matt Hastie, Angelo Planning Group

CC Brendan Buckley, Johnson Economics

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I. OVERVIEW

Like other cities in Oregon, the City of Cornelius is responsible for helping to ensure that its residents have access to a variety of housing types that meet the housing needs of households and residents of all incomes, ages, and specific needs. Towards that end, Angelo Planning Group (APG) and Johnson Economics conducted a Housing Needs Analysis (HNA) to better understand Cornelius's housing needs. The study includes two other reports: a Housing and Residential Land Needs Assessment (HRLNA) and a Residential Buildable Lands Inventory (BLI). Findings from these reports can be used to inform future amendments to the City's Comprehensive Plan and Development Code, as well as other strategies to support housing needs, consistent with Statewide Planning Goal 10 (Housing). Goal 10 states that the City must:

> "*encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density*."

The purpose of this Housing Strategies Report is to recommend policies and strategies for addressing the housing needs identified in the Cornelius HNA. In addition to ensuring consistency with state and federal requirements, these recommendations are intended to support partnerships among housing providers and stakeholders in Cornelius and to promote opportunities for the development of housing affordable to people with a full range of incomes and housing needs.

Section II of this report identifies initial recommendations for new or updated Comprehensive Plan housing policies. [NOTE: Final recommendations for updated Comprehensive Plan policies are provided in the Housing Measures Report, to which this report is an attachment.] Section III of this report includes an evaluation of the current Development Code in its ability to meet the City's housing goals. Section IV identifies a list of potential strategies that the City could undertake to address current and future housing needs. Finally, Section V includes analysis in support of the City's compliance with the Metropolitan Housing Rule (Oregon Administrative Rule 660-007).

II. COMPREHENSIVE PLAN HOUSING POLICIES

The Housing chapter of Cornelius's Comprehensive Plan was last updated in 2019 although revisions adopted at that time were minor. APG reviewed the Plan to assess whether it includes the following types of supportive policies:

- **Supports Statewide Planning Goal 10**. Comprehensive Plans typically do and should include a general policy that mirrors Statewide Planning Goal 10 (Housing), stating that the jurisdiction's overall goal is to "*encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density*."

- **Emphasizes affordable housing needs**. Given that meeting the needs of low- and moderate-income households often requires public intervention or subsidy, it is important to include policies emphasizing the needs of these households.
- **Supports partnerships**. Most Comprehensive Plan housing elements include policies aimed at supporting other public agencies, non-profits and market rate developers who focus on meeting the needs of low- and moderate-income households and community members with special housing needs.
- **Encourages a variety of housing types**. In addition to a broad goal or policy about meeting a full range of housing needs, Plans often include policies noting the need for a variety of housing types, including single-family attached housing, duplexes, triplexes, multi-family housing and townhomes, as well as less traditional forms of housing such as cottage cluster housing and accessory dwelling units. Addressing this policy issue also is consistent with recently adopted state legislation (House Bill 2001).
- **Affirms Fair Housing goals**. Local governments are required to ensure that their housing policies and standards do not discriminate against or have adverse effects on the ability of "protected classes" to obtain housing, consistent with the federal Fair Housing Act.
- **Supports mixed use development**. Some Plans explicitly support the development of mixed-use projects, which typically include upper story housing located above retail or other commercial uses.
- **Supports accessory dwelling units**. Comprehensive Plans may include policies specifically referencing support for this form of housing. Recent Oregon legislation requires all cities above a certain size to allow for this form of housing outright in all areas that are zoned for detached single family dwellings.
- **Supports flexible zoning**. Some Plans include policies which emphasize the need for zoning to be flexible enough to meet a variety of housing needs and keep costs for such housing down, particularly for housing affordable to low- and moderate-income households.
- **Addresses land supply goals**. Many Plans include policies which reference the need to ensure that adequate land is zoned to meet identified housing needs, and to periodically update the jurisdiction's inventory of such lands.
- **Supports maintenance and rehabilitation of existing housing**. Many Plans emphasize maintenance of existing housing stock as a method to prevent unsafe conditions and to keep affordable housing available within the community.
- **Supports development of manufactured homes**. Oregon law requires that all zones that allow for "stick built" single-family detached homes also allow for manufactured homes on individual lots. Each jurisdiction must also allow for manufactured home parks in at least one residential zone.
- **Regulates short-term rentals**. Many communities, particularly those with high levels of tourism, regulate short-term rental housing to reduce its impact on the supply and affordability of long-term rental housing. However, to date this has not arisen as an issue in Cornelius.

Table 1 summarizes APG's evaluation of the extent to which Cornelius's Comprehensive Plan includes the types of supportive policies listed above. The Housing chapter of the Comprehensive Plan includes a Goal, Policies, and Implementation strategies—each of these is included in the evaluation below.

Table 1. Comprehensive Plan Policy Evaluation

Policy Topic	*Existing Language*	*Assessment and Example Language*
Supports Statewide Planning Goal 10	*(**Goal**) To provide for the housing needs of prospective as well as present Cornelius citizens.*	Adequately addressed.
Emphasizes affordable housing needs	*(**Policy 2**) Promote and encourage housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race.* *(**Implementation 3**) The City will work with the Washington County Housing Authority and appropriate federal and state agencies in identifying and providing for housing at various rent and price ranges to ensure low- and moderate-income needs are appropriately addressed.*	Consider adding a policy that specifically mentions the need for housing that is affordable to low- and moderate-income households or edit Policy 2. For example: • *Support the creation of housing that is affordable to low- and moderate-income households through partnerships, land use policies, and programmatic efforts. (or)* • *Promote and encourage housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race, including for low- and moderate-income households.*
Supports partnerships	*(**Implementation 3**)* – see above *(**Implementation 4**) The City will work with METRO in implementing its Housing Goals and Objectives.*	The *Implementation* section mentions partnerships with Washington County Housing Authority and federal and state agencies; however, the City could consider supporting partnerships in the policies themselves. For example: • *Continue to maintain and expand partnerships with non-profit housing developers and other affordable housing providers and agencies that preserve or provide new low to moderate income-housing units, create opportunities for first-time homeownership, and help vulnerable homeowners maintain and stay in their homes.* • *Work with other jurisdictions as well as regional and state agencies to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.*

Policy Topic	*Existing Language*	*Assessment and Example Language*
Encourages a variety of housing types	*(**Policy 1**) Ensure that adequate land is available for both single and multi-family housing.* *(**Policy 2**)* – see above	The policies could do more to encourage a variety of housing types, beyond just single- and multi-family housing. Example policy language to consider: • *Provide a variety of choices regarding type, location, density, and cost of housing units corresponding to the needs, means, and preferences of current and future households.* • *Provide the opportunity for a wider range of rental and ownership housing choices in Cornelius, including additional middle housing types in low- and medium-density zones (see p. 20-21 for definitions).*
Supports mixed use development	N/A	Example policy language to consider: • *Encourage residential uses mixed with other compatible uses in the same building or on the same site within the City's mixed-use zones.*
Affirms Fair Housing Goals	N/A	Example policy language to consider: • *Employ strategies that support the Fair Housing Act and affirmatively further fair housing.*
Supports ADUs	N/A	Example policy language to consider: • *Allow and support the development of Accessory Dwelling Units in all residential zones as required by State law.*
Addresses Land Supply Goals	*(**Policy 1**)* – see above	Example policy/implementation language to consider: • *Encourage efficient use of residential land within the Urban Growth Boundary* • *The City shall regularly monitor its supply of buildable land and shall provide a sufficient amount of residential land to accommodate residential growth.* • *Ensure that the city has an adequate housing supply with enough land to support the community's growth.* • *The City shall prepare, regularly monitor, and periodically update an inventory of buildable residential land.*

Policy Topic	*Existing Language*	*Assessment and Example Language*
Supports Development of Manufactured Homes	N/A	Example policy language to consider: • *Support the maintenance and development of manufactured homes as an affordable housing choice in appropriate locations.*
Supports maintenance and rehabilitation of existing housing	N/A	Example policy language to consider: • *Encourage maintenance and rehabilitation of the existing housing stock and support local or regional programs.*
Regulates Short Term Rentals	N/A	No change recommended.

III. DEVELOPMENT CODE EVALUATION

In addition to reviewing Comprehensive Plan policies, APG reviewed Title 18: Zoning of the Cornelius Municipal Code (CMC) and summarized information about the following types of standards: housing types allowed, densities/minimum lot sizes, ADU requirements, cottage cluster housing, off-street parking, building heights, and minimum setbacks. Table 2 summarizes APG's general evaluation of the Development Code in its ability to meet the City's housing goals. The assessment also including observations and initial recommendations related to compliance with Oregon House Bill 2001 and associated Administrative Rules related to middle housing. Additional information and strategies related to that topic also are found in Section IV of this report.

Cornelius has the following residential and mixed-use zoning districts:

- R-7 – Single-Family Residential Zone
- R-10 – Single-Family Residential Zone
- MHP – Manufactured Home Park Zone
- A-2 – Multi-Family Residential Zone
- CR – Core Residential Zone
- CMU – Central Mixed Use Zone
- GMU – Gateway Mixed Use Zone

The City's Highway Commercial (C-2) zone also allows residential development and may represent an opportunity for future housing development, particularly multi-family housing as part of future mixed-use developments. However, as this is not a principally residential zoning district, residential development standards in this zone are not described in detail in the following table.

Table 2. Development Code Evaluation

<table>
<tr><th>Code Provision</th><th>Existing Code</th><th>Assessment</th></tr>
<tr>
<td>Housing Types Allowed</td>
<td>
<table>
<tr><th colspan="3">Residential Zones</th></tr>
<tr><th></th><th>Permitted Outright</th><th>Conditional Use</th></tr>
<tr><td>R-7</td><td>Single-family detached dwelling
Manufactured housing
ADU</td><td>Duplex
Common wall single-family dwelling
PUD</td></tr>
<tr><td>R-10</td><td>Single-family detached dwelling
Manufactured housing
ADU</td><td>Duplex
PUD</td></tr>
<tr><td>MHP</td><td>Manufactured housing</td><td>N/A</td></tr>
<tr><td>A-2</td><td>Common wall single-family dwellings
ADU
Duplex
Single-family attached dwellings (i.e., townhomes)
Multi-family dwellings
Boarding house</td><td>Single-family detached dwelling
Manufactured housing
PUD</td></tr>
<tr><td>CR</td><td>Single-family detached dwelling
Manufactured housing
Common wall single-family dwellings
ADU
Duplex
Single-family attached dwellings
Multi-family dwellings
Boarding house</td><td>PUD</td></tr>
</table>
</td>
<td>

HB 2001 will require Cornelius to permit middle housing types—duplexes, triplexes, fourplexes, townhomes, and cottage clusters—in residential zones that allow single-family detached housing. Cornelius's Code will need to be updated by June 2022, or else the state's model code for middle housing (currently under development) will automatically apply. The City may establish specific site or building design standards for middle housing types as long as those standards do not cause "unreasonable cost or delay."
The A-2 and CR zones already allow most of these housing types—they allow duplexes and townhomes, and by permitting multi-family dwellings, also allow triplexes and quadplexes.
Cottage clusters are not currently defined or permitted in any residential zones.
The R-7 and R-10 zones do not permit any middle housing types outright and will have to be amended to do so.
The City could also consider permitting middle housing types in its mixed-use zones (CMU and GMU).

</td>
</tr>
</table>

Code Provision	Existing Code			Assessment
	Mixed-Use Zones			
	CMU	Residential dwellings above ground floor (regulated affordable housing units allowed at ground floor)	PUD	
	GMU	Multi-family dwellings Single-family attached dwellings	PUD	

Densities / Minimum Lot Sizes Allowed

The City regulates density in residential zones through a combination of minimum and maximum units per acre and minimum lot size requirements.

	Maximum Density (dwelling units per net acre – du/na)	**Minimum Density**	**Minimum Lot Size**
R-7	5 du/na	4 du/na	SFD: 6,000 sf DUP and CWSF: 4,500 sf/unit
R-10	None listed (Effective max density based on min lot size: ~3.3 du/na)	3 du/na	10,000 sf
MHP	10 du per gross acre (~13 du/na)	--	4 acres per manufactured home park
A-2	14 du/na	SFD, SFA, CWSF: 8 du/na MF: 11 du/na	SFD, DUP, CWSF: 3,100 sf/unit SFA: 3,000 sf/unit MF: 2,330 sf/unit
CR	None (Effective max density for multi-family and single-family attached: ~16.3 du/na)	SFD: 8 du/na All others: 11 du/na	SFD and DUP: 3,100 sf CWSF, SFA, MF: 2,000 sf/unit
CMU	None	None	None
GMU	None	None	None

- **Single-family detached**: no recommended changes.
- **Duplex**: Per the Administrative Rules for HB 2001 (OAR 660-046), minimum lot size for duplexes cannot be greater than for SFD. As a result, minimum lot sizes for duplexes will need to be reduced.
- **Other middle housing types**: As part of compliance with HB 2001, the City will need to develop reasonable lot size or density requirements for triplexes, fourplexes, and cottage cluster housing in zones where they will be allowed in the future. These will need to be consistent with minimum compliance standards currently being considered by the Land Conservation and Development Commission unless the City wants to take an optional "Performance Metric Approach" to these code provisions.
- **Multi-family**: Consider increasing the maximum density and/or reducing the minimum lot area per unit in the A-2 and CR zones.

Code Provision	Existing Code	Assessment
	SFD: Single-Family Detached SFA: Single-Family Attached CWSF: Common Wall Single-Family DUP: Duplex MF: Multi-Family	
ADU Requirements	Permitted ADUs must be: • Attached to or within the primary dwelling, • In an existing accessory building, such as a detached garage, OR • Created by adding a new accessory building. The City recently updated its ADU standards to comply with SB 1051 and HB 2001. The City removed its owner occupancy and off-street parking requirements and increased its floor area allowance. In the R-7, A-2, and C-R zones, ADUs are now limited to a maximum floor area of 800 sf or 60% of the primary dwelling, whichever is less. In the CR zone, two ADUs are permitted per dwelling (including single-family attached dwellings and manufactured homes). *NOTE: The City did not include the R-10 zone in its recent ADU code updates because the R-10 designation is likely to be removed (see Housing Strategy 2).*	• The ADU standards currently comply with state law, but the City could consider additional ways to facilitate ADU development, as described in Housing Strategy 5.
Cottage Cluster Housing	Cottage clusters are not currently identified as a specific housing type. Cottages on individual lots could potentially be developed through the PUD process.	• Cottage cluster housing is one of the middle housing types that cities will need to allow in areas zoned for single-family use. As such, Cornelius will need to adopt standards for cottage cluster housing by June 2022.
Off-street Parking Requirements	• Single-Family: 1 space per unit • Duplex: 1 space per unit • Multi-Family: o Dwellings < 500 sf: 1 space per unit o 1-bedroom: 1.25 spaces per unit o 2-bedroom: 1.5 spaces per unit o 3+ bedroom: 1.75 spaces per unit	• As part of HB 2001 compliance, the City will need to update parking standards applicable to triplexes and quadplexes pursuant to the OAR standards. Minimum off-street parking requirements cannot exceed one space per unit, regardless of the number of bedrooms; allowable parking standards are further limited on smaller lots.
Building Heights	• **R-7, R-10, MHP, A-2, CR:** 35' • **CMU:** 40' or 3 stories, whichever is less • **GMU:** 45' or 3 stories, whichever is less	No recommended changes.

Code Provision	*Existing Code*	*Assessment*
Minimum Setbacks		No recommended changes.

	Front / Street Side	Rear	Interior Side
R-7	10’	10’	5’
R-10	25’	25’	10’
MHP	10’	10’	7.5’
A-2	10’	10’	Single-family: 5’ Multi-family: 5’ per story
CR	10’	10’	5’
CMU	0’	0’	0’
GMU	0’	0’	0’

IV. HOUSING STRATEGIES

With initial input from City staff and the HAC, APG has identified a variety of potential strategies applied in other communities that the City of Cornelius could consider to address current and future housing needs identified in the HNA. These strategies have been organized into the following four categories: (1) Policy and Land Supply Strategies; (2) Development Code Strategies; (3) Incentives; and (4) Funding Sources and Uses.

Table 3 provides a summary of potential housing strategies and indicates each strategy's initial priority, as determined by City staff.

Table 3. Summary of Potential Housing Strategies

Strategy	Initial Priority
LAND SUPPLY STRATEGIES	
1. UGB Amendments and Planning Amend the city's UGB if the supply of land within the UGB cannot accommodate the amount needed for future development. Prior to pursuing an expansion, the City must consider measures to improve the efficiency of future land use within the existing boundary.	Planning: High Amendments: Low
2. Rezone Land Re-designate land from other residential designations and/or from commercial, industrial, or institutional designations to meet specific housing needs, assuming there is an adequate supply of land available to meet non-residential needs. Also remove the R-10 zoning designation.	Rezone: Low Remove R-10: High
POLICY AND DEVELOPMENT CODE STRATEGIES	
3. Increase Allowed Density in Existing Zones Increase the allowed density or reduce the minimum allowed size of lots in one or more zones to allow for more compact development and/or a wider range of housing types in specific areas.	High / Low (depending on zone)
4. Facilitate "Missing Middle" Housing Types in All Residential Zones Allow duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing in a broader range of zones.	High
5. Promote Accessory Dwelling Units (ADUs) Update ADU standards to remove barriers; encourage development though reduced fees, exemptions from selected planning requirements, use of pre-approved site or building plans, or other measures.	High
6. Zoning Incentives for Affordable and Workforce Housing Create incentives for developers to provide a community benefit (such as affordable housing), in exchange for the ability to build a project that would not otherwise be allowed by the development code.	Medium

Strategy	Initial Priority
7. Streamline Off-Street Parking Requirements Reduce the number of required off-street parking spaces for certain types of housing, allow for credit for on-street spaces, and/or encourage shared parking in mixed use developments.	Low
INCENTIVES	
8. System Development Charge Exemptions or Deferrals Deferral of SDCs for affordable housing. Can be applied to regulated affordable housing and/or specific housing types (such as ADUs).	Medium
9. Tax Abatements Tax abatements are reductions in property taxes for housing and may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable or other desired housing types (such as mixed-use).	Medium
10. Land Use Permit Fee Reductions Reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), in order to reduce the upfront cost of development.	Medium
11. Expedited Development Review Strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff.	Low
FUNDING SOURCES AND PROGRAMS	
12. Tax Increment Financing (TIF) TIF is a funding mechanism in which future tax revenues in targeted development or redevelopment areas are diverted to finance infrastructure improvements and/or development—potentially including affordable and/or market-rate housing.	High
13. Land Acquisition and Banking Land acquisition is a tool to secure sites for affordable housing. Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be used for affordable housing.	High
14. Construction Excise Tax (CET) A one-time tax on new construction of between 1% and 3% to help pay for affordable housing strategies identified here. State law requires it to be spent on specific types of programs and activities.	Low
15. Public-Private Partnerships (PPPs) and Community Land Trusts Arrangements between public and private entities to create more and/or affordable housing. PPPs can promote a variety of affordable housing programs or projects and include partnerships from multiple entities (public, private, and non-profit), including Community Land Trusts.	Medium
16. Financial Assistance Programs A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.	Low

Land Supply Strategies

The following strategies are intended to address Cornelius's existing land capacity and its ability to accommodate needed housing.

1. UGB Amendments and Planning

Initial Priority: Planning – High; Amendments – Low

This strategy involves amending the Cornelius Urban Growth Boundary (UGB) if the supply of land within the UGB cannot accommodate the amount needed for future development. Metro manages this process in coordination with local jurisdictions in the Portland Metro region.

The findings of the HNA do not indicate the need for a UGB expansion to accommodate the projected housing needs in Cornelius. There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. There also is an adequate supply of land to meet the projected mix of different types of housing units, including single-family detached and attached units, duplexes, triplexes, quadplexes, and multi-family units, given the allowed housing types and densities in each zone and the mix of units proposed in previously approved developments.

Urban and Rural Reserve Planning

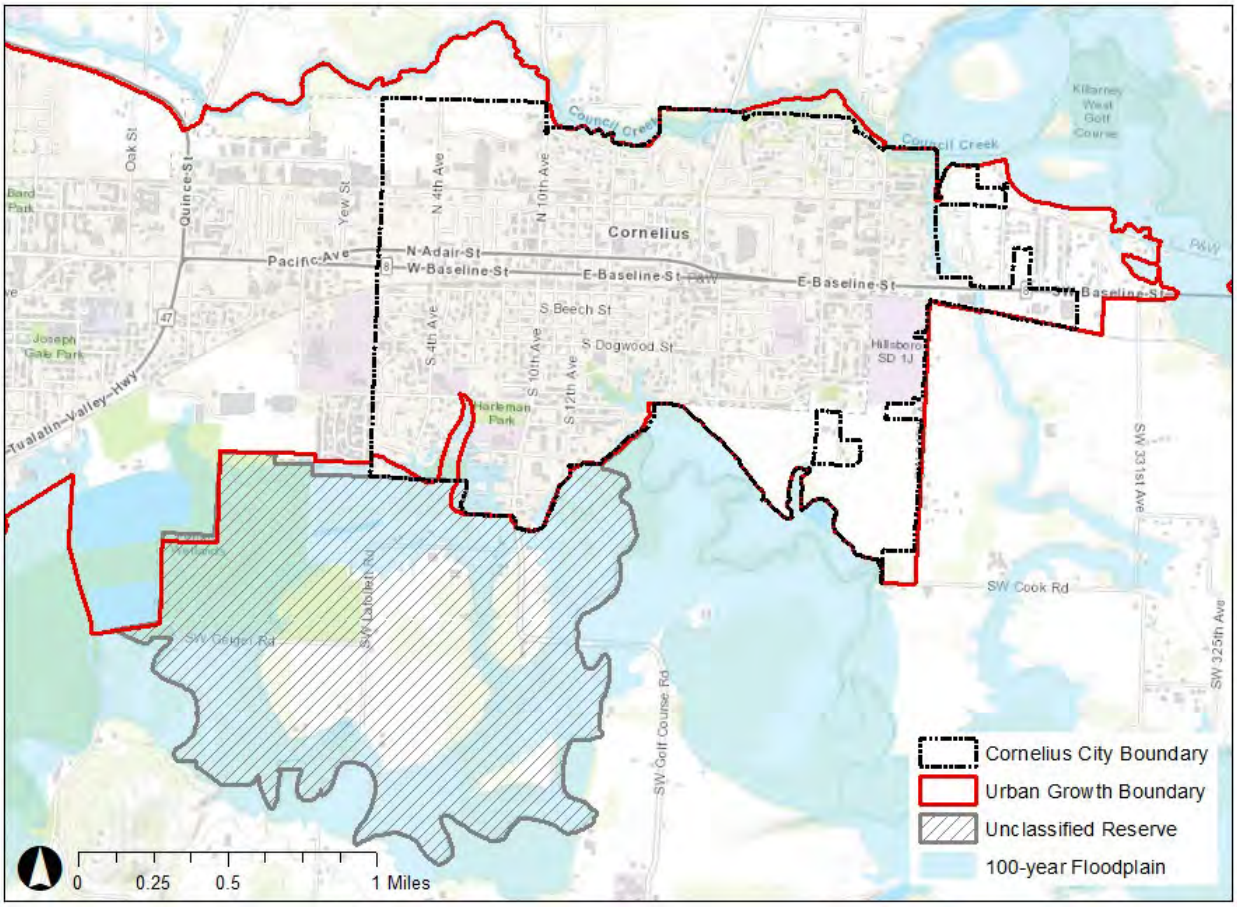
The findings of the HNA indicate a surplus of land zoned for all types of housing development. This surplus land could accommodate 248 low-density units, 270 medium-density units (single-family attached, manufactured homes, and 2-4 plexes) and 296 high-density units (multi-family apartments) over and above the projected future need.

While the HNA does not indicate the need for an expansion of the UGB at this time, the City may need to explore that option in the future as development consumes the current supply of land, particularly if the pace of development continues on its recent trajectory. In anticipation of those future activities, the City will need to ensure that it has identified appropriate future expansion areas. Towards that end, the area to the southwest of the existing City boundary may be a candidate for a swap with other areas adjacent to Cornelius currently designated as Rural Reserve, with an intent to upgrade to Urban Reserve in the future (see Figure 1).[1] The area to the southeast of the city boundary would be expected to be more suitable for development and have more opportunities for efficient and cost-effective development in comparison to the area to the southwest. That area to the southwest, which is not classified as a Rural Reserve and therefore could be considered for a future UGB expansion, is subject to significant natural resource-related constraints (e.g., 66% of the total area is classified as riparian areas and wetlands and much of the area is within the 100-year floodplain). Any UGB planning or adjustments would need to be

[1] Urban reserves are lands suitable for accommodating urban development over the 50 years after their designation. Rural reserves are lands that are high value working farms and forests or have important natural features like rivers, wetlands, buttes and floodplains. These areas will be protected from urbanization for 50 years after their designation. (Source: https://www.oregonmetro.gov/urban-and-rural-reserves)

undertaken in coordination with Metro as part of its process for periodically identifying and refining Urban Reserves and potential future UGB expansion areas.

Figure 1. UGB Map



UGB Expansion

As noted above, the findings of our study do not indicate the need for a UGB expansion to accommodate projected housing needs in Cornelius between 2020 and 2040. The comparison of land need and demand overall shows a surplus of land supply in comparison to projected land need over the next 20 years, both overall and for specific housing types. To the extent that the City identifies the need for a UGB expansion in the future, in partnership with Metro, the City would first need to complete the following steps:

- Further analyze and update its findings of where there is an insufficient supply of buildable land inside the UGB.
- Consider and adopt efficiency measures to ensure that land inside the UGB is being used efficiently. Many of the code update recommendations identified below are efficiency measures.

- Work with Metro to identify potential expansion areas within Cornelius' portion of the UGB, including through re-classification or establishment of additional urban reserve areas and prioritization of potential expansion areas adjacent to Cornelius.

2. Rezone Land

Initial Priority: Rezone - Low; Remove R-10 - High

As noted above, the HNA indicates a modest surplus of land in each general land use designation (low, medium, and high density zones). As a result, rezoning land to address any imbalance among different zoning districts is not warranted at this time.

To the extent rezoning is warranted and considered in the future, the City will need to identify the most appropriate locations for a potential rezoning. In doing so, the City should use the following criteria or factors:

- **Proximity to existing high-density areas**. Extending an existing area of high-density land would reduce impacts on the transition between lower- and higher-density areas and could increase the level or potential for support from surrounding property owners.
- **Proximity to services**. Ideally, higher-density areas should be close to supporting commercial and other services (schools, parks, etc.) to help ensure that residents can easily access these services and daily needs by walking, biking, or driving.
- **Size and ownership**. The City should prioritize relatively large sites (3-10 acres) for rezoning. Larger sites will be more attractive for development and provide more flexibility for site design.

In addition, any rezoning of land would also need to be accompanied by amendments to Cornelius's Comprehensive Plan map (which applies two residential land use designations: Low Density Residential and Medium Density Residential).

Remove R-10 Zone

The R-10 Single-Family Residential Zone is on the books in the CMC but has never been applied. The minimum lot size in R-10 is 10,000 sf. This low-density designation does not reflect the expected development patterns in Cornelius into the future. Therefore, we recommend that the R-10 zone be removed, and that any future areas planned for low-density residential use be zoned as R-7. City staff has indicated that removal of the R-10 is likely to move forward.

Policy and Development Code Strategies

The following set of strategies include possible amendments to Title 18 of the Cornelius Municipal Code, which the City could consider or further evaluate to help meet Cornelius's housing needs and goals. In addition to the specific strategies identified here, the City will need to ensure that it applies clear and objective standards for the development of all needed housing. That should be a component or consideration in considering any future development code amendments.

3. Increase Allowed Density in Existing Zones

Initial Priority: High for high density zones; Low for low density zones

The HNA found that the City of Cornelius has a sufficient overall supply of residential land to accommodate future housing needs, assuming land is built at or near the planned density levels, based on existing zoning. Increasing allowed density in existing zones is not strictly necessary to meet projected housing needs within the existing UGB; however, the City's allowed densities in its medium- and high-density zones are relatively low for a city in the Portland Metro area and may limit financial feasibility of this form of housing.

There are two key benefits to allowing higher densities to be considered in selected locations:

- **Housing affordability**. Smaller lot sizes and higher densities allow for some of the major costs of development—such as acquiring land and building infrastructure—to be divided among more units. This decreases the per-unit cost of development and can enable lower sale prices or rental rates.
- **Efficiency of land use and infrastructure provision**. Higher densities also help to ensure that residential land is used efficiently. If growth rates accelerate more quickly than projected, then it will be more important for the City to efficiently use land within the existing UGB. It is also more efficient for the City to provide roads, sewer, and water systems (on a per-unit basis) to higher density development.

Additionally, because there is a projected deficit of land zoned for single-family detached housing (despite the overall surplus of residential land), it is important that the City use land zoned for single-family detached housing efficiently to meet the projected need.

The City regulates density in residential zones through a combination of minimum and maximum units per acre and minimum lot size requirements. In addition to considering increased density allowances, the City should address potential inconsistencies between allowable lot sizes and densities in residential zones. One opportunity to address these inconsistencies is to remove the per-unit minimum lot area standards for multi-family housing, and instead regulate density by units per acre only. This approach also has the benefit of promoting more efficient use of land for larger multi-family projects.

Potential amendments to maximum density and minimum lot size standards are presented in Table 4. These amendments are intended to allow for higher density development while considering the existing character and stated purpose of the zone. In addition, minimum lot sizes for middle housing

will need to be amended and/or added to comply with HB 2001 administrative rules. (See Strategy 4 for additional discussion of middle housing standards.) Minimum lot width, lot depth, or setback standards may also need to be modified to ensure they are consistent with any changes to minimum lot size standards (and also for compliance with HB 2001).

In updating density requirements, the City should be mindful of the potential impacts of displacement and gentrification (e.g., existing lower cost housing being replaced by denser but potentially more expensive newer housing). A number of other strategies described in this report can help reduce or mitigate impacts of displacement.

Table 4. Potential Minimum Lot Size/Density Amendments

Zone	**Existing Min. Lot Size** (square feet) **/ Max. Density Standard** (units per net acre)	**Proposed Standard**	***Commentary***
R-7 – Single-Family Residential	SFD: 6,000 sf DUP, CWSF: 4,500 sf/du	SFD, CWSF: no change DUP, TRI: 6,000 sf/lot QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du	*Middle Housing: The City will need to develop minimum lot sizes for middle housing types consistent with the OAR. Proposed standards reflect minimum OAR compliance. Per OAR, maximum density cannot apply to middle housing (except townhouses/SFA). This will need to be reflected in the code.*
	5 du/na	No change	
R-10 – Single-Family Residential	SFD: 10,000 sf	SFD: No change DUP, TRI, QUAD, CC: 10,000 sf/lot SFA: 1,500 sf/du	*As noted under Strategy 2, we recommend removing R-10 from the code. However, we are including it here in case that recommendation is not implemented.* *SFA: For minimum OAR compliance, average minimum lot size for townhouses cannot exceed 1,500 sf. However, cities can limit density for a townhouse project to four times the allowed density for SFD. If the City limits density in this way, the townhouse lots themselves would be allowed to be as small as 1,500 sf (on average), but no more than 4 townhouse lots could be created from a 10,000-sf parent parcel. Any remainder could be placed in a shared open space tract.* *Other types: Same comments as for R-7.*
	No max. density	SFA: limit density to 4 units per 10,000 sf (or the equivalent)	
MHP – Manufactured Home Park	4 acres per manufactured home park	No change	*N/A*
	10 units per gross acre		
A-2 – Multi-Family Residential	SFD, DUP, CWSF: 3,100 sf/du SFA: 3,000 sf/du	SFD, CWSF: no change DUP: 3,100 sf/lot TRI: 5,000 sf/lot	*Middle Housing: Because SFD is not permitted in the A-2 zone, the City is not required to permit middle housing or to*

Zone	**Existing Min. Lot Size** (square feet) **/ Max. Density Standard** (units per net acre)	**Proposed Standard**	***Commentary***
	MF: 2,330 sf/du	QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du MF: no minimum per unit	*meet minimum OAR standards. However, all middle housing types are already permitted. For the sake of consistency, we recommend applying the same min. lot sizes for middle housing that will be required in the CR zone.* *MF: Recommend increasing maximum density and removing per-unit lot area standards. This allows more efficient development for larger multi-family projects.*
	14 du/na	18 – 20 du/na	
CR – Core Residential	SFD, DUP: 3,100 sf CWSF, SFA, MF: 2,000 sf/du	SFD, DUP, CWSF: no change TRI: 5,000 sf/lot QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du MF: no minimum per unit	*Middle Housing: Proposed standards reflect minimum OAR compliance.* *MF: Same comments as for A-2.*
	(Effective max density for MF and SFA: ~16.3 du/na)	24 du/na	
SFD: Single-Family Detached SFA: Single-Family Attached CWSF: Common Wall Single-Family DUP: Duplex		TRI: Triplex QUAD: Quadplex CC: Cottage Cluster MF: Multi-Family	

Cornelius could look to other small cities within the Portland metro area for examples of density standards that might be appropriate. Standards for medium- and high-density zones in the Cities of Forest Grove, Gladstone, Milwaukie, Sherwood, and Troutdale are presented in Table 5.

Table 5. Density Examples from Other Small Cities in Metro Area

City	Zone	Min. Lot Size	**Max. Density** (units per net acre)
Forest Grove[1]	Residential RML	None	12
	Residential RMH	None	20.28
Gladstone	Multi-family residential MR	MF: 3,000 sf + 1,000 sf/du	Based on min. lot area – Effective density up to ~30+ du/na for larger projects
Milwaukie	Residential Zone R-3	5,000 sf	14.5

City	Zone	Min. Lot Size	Max. Density (units per net acre)
	Residential Zone R-2.5	5,000 sf	17.4
	Residential Zone R-2	5,000 sf	17.4
	Residential Zone R-1, R-1-B	5,000 sf	32
Sherwood	Medium Density Residential (MDRL)	5,000 sf	8
	Medium Density Residential High (MDRH)	SFD: 5,000 sf MF: 8,000 sf + 3,200 sf/du over 2 units	11
	High Density Residential (HDR)	SFD: 5,000 sf MF: 8,000 sf + 1,500 sf/du over 2 units	24
Troutdale	R-4 Attached Residential	SFD: 4,000 sf SFA: 3,500 sf per unit	Based on min. lot area
	A-2 Apartment Residential	Based on number of units: 2-3: 9,000 sf/du 4-14: 9,000 sf + 2,500 sf/du over 3 15-37: 41,000 sf + 2,000 sf/du over 15 38-94: 87,000 sf + 1,500 sf/du over 38 95-155: 172,500 sf + 1,000 sf/du over 95 >155: 1,500 sf/du	Based on min. lot area – Effective density ranges from ~12 – 22 du/na

[Note 1: Forest Grove's listed density standards are "target density," which are permitted outright in each zone.]

4. Facilitate "Missing Middle" Housing Types in All Residential Zones

Initial Priority: High

According to the HNA, middle housing types are expected to account for nearly 30% of the projected housing need in Cornelius over the next 20 years. As defined in the HNA, this includes attached single-family homes (i.e., townhouses or rowhouses), and lots with two to four units. In addition, pursuant to Oregon House Bill 2001 (2019) (HB 2001), Cornelius will be required to permit middle housing types (defined as duplexes, triplexes, fourplexes, townhouses, and cottage clusters) in areas zoned for residential use that allow single-family detached housing. Duplexes, specifically, must be allowed on every residentially zoned lot that allows single-family detached housing. For the other housing types, the City has a bit more flexibility to regulate middle housing within residential zones—although the Oregon Administrative Rules (OAR) set fairly strict limits on that flexibility. The City can adopt siting and design standards for middle housing, but any standards must not discourage middle housing through unreasonable cost or delay. Cornelius's code will need to be updated by June 30, 2022, or else the state's Model Code for Middle Housing will automatically apply.

Middle Housing Characteristics

Duplexes, triplexes, fourplexes, townhomes and cottage clusters are considered "middle housing" because they fall between multi-family development and single-family detached housing in terms of density and scale. Middle housing can be more difficult to develop because development code standards may not address these housing types' unique characteristics or because the standards are unnecessarily restrictive. If regulated appropriately, these housing types can fit in well in neighborhoods with mostly detached single-family houses.

Duplex

Another common characteristic of these housing types is that they are often smaller individual dwelling units. Given the demographic trends summarized in this study, and the ongoing challenge of providing enough housing options for people with moderate incomes, smaller sized, modest housing units will continue to be an important need in the City of Cornelius. However, the larger average household size in Cornelius also limits the value of smaller residential units for some families.

Triplex and Quadplex

Due to the costs of land, infrastructure, and construction, it can be difficult for builders to produce new single-family detached housing that is affordable to households at moderate or lower income levels. These middle housing types can be more feasible to provide for these income levels because they require less land per unit and can be more efficiently served with infrastructure.

Townhouses

Opportunities to Support Middle Housing

In addition to meeting state requirements, there are opportunities for the City of Cornelius to support development of a variety of housing types by reducing unnecessary barriers, providing more flexibility, and tailoring standards to fit a variety of housing types. This would result in an expanded array of housing choices across the city for a broader range of people and households. The City already allows many of these types of housing in certain zones, either outright or through discretionary review (see Table 6).

Cottage Cluster

NOTE: Because single-family detached housing is not permitted in the A-2 zone, the City is not required to allow middle housing in this zone or meet minimum standards for OAR compliance. However, as indicated in Table 6, most middle housing types are already permitted in A-2. Therefore, we recommend applying the same use allowances in A-2 as will be applied in the other residential zones as well as consistent development standards.

Table 6. Zones Where Middle Housing Types are Currently Allowed

Zone	R-7	R-10	A-2	CR
Duplex	CU	CU	✓	✓
Common Wall Single-Family	CU	x	✓	✓
Townhouse (single-family attached)	x	x	✓	✓
Triplex and Fourplex (multi-family)	x	x	✓	✓
Cottage Cluster	x	x	x	x

✓ = permitted; x = not permitted; CU = Conditional Use

Summary of Requirements and Options

Following is a summary of Cornelius's obligations and options for compliance with HB 2001 and associated OARs as well as options to further facilitate middle housing in the city:

Duplexes. The OARs give cities limited ability to regulate siting and design standards for duplexes. Cities must apply the same, or less restrictive, standards as those that apply to SFDs. Also, duplexes cannot count toward maximum density in a zone. Where the City does have options is in its ability to encourage duplexes by applying more flexible / less restrictive standards than it applies to SFDs. For example, the City could allow duplexes to be taller or have a higher lot coverage. The City also has the option of allowing two detached units on a lot, in addition to attached units. The City also may not require more than one (1) off-street parking space per dwelling unit for a duplex.

Townhouses. Single-family attached housing is currently permitted the A-2 and CR zones and will also need to be allowed in the R-7 and R-10 zones. The City's current minimum lot size standards (except perhaps in the CR zone) make attached housing impractical; they will need to be amended to be consistent with minimum OAR compliance (as recommended under Strategy 3). Under minimum compliance rules, cities are allowed to limit townhouse density to four times the density allowed for SFD or 25 units per acre, whichever is less. Development standards (setbacks, height, lot coverage, etc.) generally apply to all development within residential zones, and therefore comply with the OAR; however, a closer review for compliance will be needed. The minimum off-street parking requirement of one (1) space per unit complies with the OAR.

Establish standards specific to triplexes and fourplexes. The CMC currently defines multi-family housing as a building containing three or more units; therefore, triplexes and fourplexes are both lumped into the multi-family category. However, three- and four-unit buildings are very different in scale and design than higher-density apartment complexes. A triplex or fourplex with side-by-side units can look identical to a row of three or four townhouses. The only difference is that the land underneath the units is not divided into individual lots. As such, the City should consider defining triplexes and fourplexes as a separate housing type (but make sure they continue to be permitted where multi-family housing is permitted). Minimum lot sizes reflecting minimum OAR compliance are recommended under Strategy 3. The City will need to ensure any other development or design standards are consistent with OAR standards. Parking standards will also need to be updated for triplexes and quadplexes so as not to require more than one (1) space per unit. (The OAR further limits parking requirements on smaller lots.)

Establish standards specific to cottage clusters. Cottage clusters are groups of small, detached homes, usually oriented around a common green or courtyard. They are typically on the same lot but can also be on individual lots with shared open space and parking tracts. Cottage clusters are not currently defined or permitted by the CMC—they are not consistent with the definition of multi-family, nor would they meet minimum lot standards for SFD housing. The City will need to define cottage clusters consistent with HB 2001, which applies a maximum building footprint of 900 sf per unit. The City should also develop a specific set of siting and design standards addressing cottage clusters' unique design considerations—including shared courtyards, parking areas, and community buildings. The state's Model Code provides a useful set of design standards that the City could adopt wholesale or modify for Cornelius' needs.

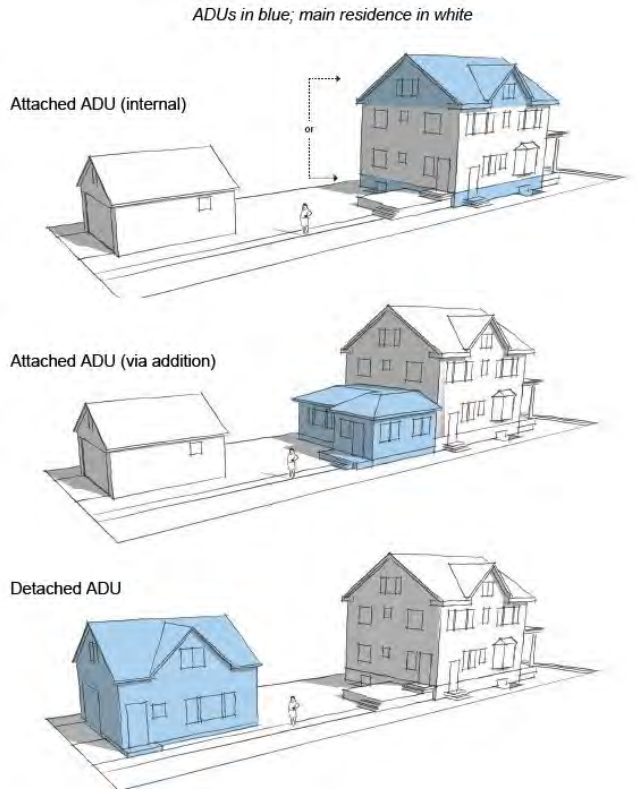
NOTE: The City can choose to not only allow, but encourage, middle housing by applying more flexible / less restrictive standards than what is required for minimum compliance. However, if the City chooses to apply any siting or design standards to middle housing that are more restrictive than (1) the OAR minimum standards, (2) the Middle Housing Model Code, or (3) the City's standards applicable to SFD, it will need to justify those standards by demonstrating that they do not cause unreasonable cost or delay.

5. Promote Accessory Dwelling Units (ADUs)

Initial Priority: High

An Accessory Dwelling Unit (ADU) is a secondary dwelling unit on the same lot as a single-family house that is typically smaller than the primary dwelling. ADUs can come in three forms: a detached structure, an attached addition, or a conversion of internal living space in the primary dwelling (Figure 2). As ADUs are often invisible from the street or may be perceived as a part of the primary dwelling, they offer a method of increasing density with minimal visual impact on the character of the neighborhood. Online survey results indicated relatively strong support for this type of housing in existing neighborhoods in Cornelius.

Figure 2. Types of ADUs



Source: City of St. Paul, MN

ADUs are a viable housing option with several benefits:

- Building and renting an ADU can raise income for a homeowner and help offset the homeowner's mortgage and housing costs.
- ADUs can add to the local supply of rental units and can provide a relatively affordable rental option for a person or household that prefers living in a detached unit rather than an apartment or other attached housing.
- ADUs offer flexibility for homeowners to either rent the unit or to host a family member. The proximity to the main house can be particularly beneficial for hosting an elderly family member that may need care and assistance.

Oregon state statute requires cities with a population of over 2,500 to allow ADUs outright on any lot where single-family housing is allowed.[2] In addition, the statute requires that cities limit the regulations that apply to ADUs to "reasonable siting and design standards." HB 2001 recently clarified that reasonable siting and design standards do not include owner occupancy requirements or requirements for additional off-street parking for ADUs. DLCD provided a guidance document to

[2] See ORS 197.312(5).

help cities help cities implement the ADU requirements.[3] The guidance document includes a model code as well as recommendations for removing barriers to ADU development.

The City recently updated its ADU standards to address state requirements. Below are recommendations for additional amendments to Cornelius's ADU standards that could further reduce Code barriers, as well as other potential strategies that the City could consider to better support development of ADUs.

Code Recommendations

Increase maximum size allowance for internal ADU conversions. In all zones, ADUs are limited to 800 sf or 60% of the size of the primary unit, whichever is greater. This is generally consistent with DLCD's guidance for ADUs. The DLCD guidelines also suggest allowing additional floor area for ADUs created by converting a level of the primary dwelling (e.g., the basement)—so that the ADU could occupy the entire level.

Allow exceptions to rear yard setbacks. ADUs must currently meet all base zone setback requirements; all residential zones require 10-foot rear yards. In most cases, ADUs will be constructed behind the primary dwelling. If the ADU must also comply with the rear yard setback requirement, that may require the ADU to be placed closer to the primary dwelling than would otherwise be desirable and may result in small, unusable yard areas. It is recommended to allow ADUs to be built up to 5 feet from the rear lot line. If there are concerns about the scale of an ADU next to an adjacent lot, a lower height limit or additional privacy standards can be applied to ADUs that are within a certain distance of the rear lot line.

Consider exceptions to lot coverage standards. Maximum lot coverage requirements have the potential to preclude ADUs from being built on smaller lots. The City could consider exempting ADUs (or a portion of their floor area) from counting toward lot coverage limits. To address storm water concerns, the City could consider limits to impermeable surfaces rather than simply coverage by structures (as suggested by the DLCD guidance).

Consider allowing two ADUs in more zones than just CR. The CR zone currently allows up to two ADUs for each single-family dwelling. The City could consider allowing two ADUs in other zones, if one of the ADUs is internal or an attached addition. In these cases, the internal ADU would not be visible from the street or adjacent properties. Also, the property would function similarly to a triplex and Cornelius will already need to allow triplexes in its residential zones, pursuant to HB 2001.

Other ADU Strategies

In addition to more supportive development code regulations, Cornelius could also consider other strategies to facilitate ADU development.

[3] https://www.oregon.gov/lcd/Publications/ADU_Guidance_updatedSept2019.pdf

SDC Reductions or Deferrals. The City could consider reducing or deferring system development charges for ADUs to make them more financially viable. S*ee Strategy 8.*

Pre-approved Site or Building Plans. Pre-approved building and site plans have been reviewed in advance for conformance with zoning and building codes, and can reduce housing development costs by reducing design and permit process times and fees.

Cities in Oregon, Washington, and elsewhere in the U.S. have used this approach to streamline the development review process, providing an incentive for certain types of housing development. Some of the plan programs also seek to promote improved residential design that fits a neighborhood context. This often works best for simpler types of development and could work well for ADU plans. Below are examples of this approach in other cities.

- **Santa Cruz, CA:** The City's ADU Development Program provides assistance for homeowners who were considering building an ADU. In the past, the program provided resources including an ADU manual and a plan set book with seven conceptual prototype designs that were available through partnerships with local architects. Although the prototypes are no longer to code and cannot be used for construction, they still offer good examples of different ADU ideas and configurations.[4]
- **Portland, OR:** In 2007, the City of Portland developed a set of housing prototype plans geared toward infill development on small sites in low- and medium-density multi-dwelling zones. Rather than a focus on streamlining the process and reducing costs, Portland's Infill Design Project objective was to improve design outcomes for smaller-scale infill development in existing neighborhoods. The housing prototypes covered development forms including cottage cluster, cottage court, rowhouses, townhouses, house-plexes, and courtyard flats.[5] Earlier in 2004, Portland also developed a catalogue of designs for "skinny houses" to suit very narrow lots through a similar competition called the Living Smart Project. The project also involved zoning code amendments to ensure that the prototype homes would meet all the code requirements, making them "permit-ready."[6]
- **Roanoke, VA:** Roanoke's Residential Plans Library is a database of professionally designed residential building plans available for purchase that complement the character of Roanoke's neighborhoods. The plans are all pre-approved for compliance with the Neighborhood Design District and building code. As such, the plans come with reduced permitting fees, since plan review requirements already have been addressed.[7] While

[4] ADU Publications, City of Santa Cruz, CA. https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/programs/accessory-dwelling-unit-development-program/ordering-information

[5] Infill Design Toolkit, City of Portland. https://www.portland.gov/sites/default/files/2020-01/toolkit1208-optimized_bkmrks.pdf

[6] Portland Catalogue of Narrow House Designs, City of Portland. https://www.oregon.gov/lcd/UP/Documents/LivingSmart-Catalogue.pdf

[7] Residential Plans Library, City of Roanoke, VA. https://www.roanokeva.gov/1297/Residential-Plans-Library

Roanoke's plans library only includes designs for single-family detached homes and duplexes, the model could potentially be applied to ADUs (or other housing types) as well.

6. Zoning Incentives for Affordable and Workforce Housing.

Initial Priority: Medium

The HNA identifies both existing and future needs for housing affordable to low-income households (defined as households earning 80% or less of area median income). In particular, the HNA identifies a shortage of rental units at the lowest pricing levels that would be affordable to the lowest-income households.[8]

As noted above, some development regulations can present obstacles or add costs to housing developments. These obstacles are particularly challenging for developments built by housing authorities, non-profit developers, or even for-profit developers that are attempting to build units affordable to people with lower or moderate incomes.[9] In order to support developments that include units affordable to moderate- or low-income households, the City can offer concessions on zoning and development code standards. The concessions should be offered in exchange for the development dedicating a minimum proportion of the units to be regulated as affordable to people with lower or moderate income. The CMC already provides certain concessions for affordable housing; for example, it allows affordable units to be located on the ground floor of buildings in the CMU and CC zones, where residential units are otherwise only permitted on upper floors or behind nonresidential uses.

Incentives typically used in other jurisdictions include relief from certain development standards such as parking, setbacks, or density. Examples include the following:

- **Parking reductions.** In general, research shows that households with lower incomes tend to have lower car ownerships and driving rates, particularly when residents have ready access to shopping and other opportunities and services. A number of jurisdictions in Oregon provide reductions in off-street parking requirements for developments that are affordable to households with low or moderate incomes. Typically, developments must commit to providing affordable units over a significant length of time (20-60 years).
- **Height or density bonuses.** Some cities allow higher density or greater height in exchange for a commitment to provide housing units that are affordable to households with low or moderate incomes. Height bonuses are typically in terms of number of stories (e.g., one story in an area with an existing height limit of 30 or 45 feet). Density bonuses are typically stated in terms of a percentage of units (e.g., 10-20% is a common threshold). The amount

[8] Spending 30% or less on housing costs is a common measure of "affordability" used by HUD and others.

[9] Housing affordable to moderate-income, working households that do not typically qualify for subsidized housing is often referred to as "workforce housing."

of the bonus can be tied to the affordability levels provided and/or to the number of affordable units. Additionally, setback and bulk standards may be allowed to vary to accommodate the added density or to reduce development costs.

- **Allow flexibility in how affordable units are provided.** In some cases, it may be advantageous to construct the affordable units on a different site than the primary development that is receiving the concession. It may also make sense for the development to purchase existing market-rate units and convert them to affordable units. Allowing flexibility in how the units are provided can also widen the appeal of the program.

We recommend that the City consult with local non-profit housing developers or other affordable housing providers to determine which zoning incentives would be most beneficial.

7. Streamline Off-Street Parking Requirements.

Initial Priority: Low

Providing off-street parking adds to the cost of a development and reduces the area of a site that can be developed with dwelling units. Some jurisdictions have revised their parking standards to reduce the barriers that off-street parking standards pose to housing development. Strategies include reducing the number of required off-street parking spaces for certain types of housing, allowing for credit for on-street spaces, and/or encouraging shared parking in mixed use developments.

The CMC currently requires a minimum of 1 space per dwelling unit for most housing types including single-family detached and attached houses, duplexes, and manufactured homes. For multi-family dwellings, the minimum requirements vary by size of units, ranging from 1 space for units with under 500 sf up to 1.75 spaces for 3-bedroom units.

As noted under Strategy 4, some changes to CMC requirements are needed for consistency with state middle housing requirements. In addition, some reductions may make sense based on typical vehicle ownership patterns associated with certain types of housing or households. Parking reductions for affordable or workforce housing are discussed under Strategy 6. Finally, the City should consider whether it is equitable to require only one space per single-family dwelling, regardless of size or number of bedrooms while requiring more than one space per unit for larger multi-family units.

While additional reductions to minimum parking requirements may be a low-priority strategy in the near-term, the City could consider undertaking a parking study to determine whether reductions may be warranted at some point. For example, the City could assess actual parking demand for existing residential development, such as multi-family dwellings. This would determine whether builders are meeting or exceeding parking minimums, and to what extent parking stalls are actually being utilized. It also would help determine how reductions in off-street parking requirements could impact the on-street parking supply and capacity. An oversupply of parking could indicate that reductions to minimum parking standards for multi-family dwellings may be warranted.

Incentives

The following incentive strategies are intended to make development of housing—particularly affordable housing—more financially viable by reducing fees or other costs.

8. System Development Charge Exemptions or Deferrals

Initial Priority: Medium

System development charges (SDCs) are one-time charges assessed on new development to pay for the costs of expanding public facilities. Cornelius assesses SDCs for water, sewer, surface water management, and parks. Fees for water, sewer, and surface water are shared with the City of Hillsboro and Clean Water Services, respectively. Washington County assesses a Transportation Development Tax which serves as a county-wide SDC, with a portion of proceeds funding projects in Cornelius.

The City could consider a number of approaches to reducing, deferring, or modifying the fees assessed by and paid to Cornelius in the future, including tying the fees to the size or type of housing developed. SDC deferral may be the most reasonable option in the shorter-term, given potential impacts of reductions or modifications on city revenues and costs. SDC exemptions or deferrals can have a sizable impact on development costs and feasibility, therefore can have real impact in terms of housing production. HB 2001 requires local governments to consider ways to increase the affordability of middle housing types through ordinances and policies, including waiving or deferring SDCs.

SDC Deferrals

SDC deferrals typically allow a development to delay payment of the fees for a specified period of time (e.g., 6, 9 or 12 months) or until the certificate of occupancy is issued, rather than at the time the building permit is issued. SDC deferral can be combined with SDC financing so that payments begin after one year and continue for a certain number of years (e.g., 10 years). The City could offer a lower interest rate (e.g., 0.25% above the Prime rate) and/or allow the lien to be in second position for affordable housing or other types of housing developments.

A financing program can be more beneficial to the property owner because fees are paid gradually, rather than in a lump sum soon after the completion of the project. However, a financing program also brings additional administrative requirements and costs to the City to track and collect payments over time.

SDC Reductions or Deferrals for ADUs

As noted above for Strategy 5, Promote Accessory Dwelling Units, SDCs can have a significant impact on the cost of ADU development. The City's SDCs for a single-family home amount to $31,010 and for an ADU with separate utility service, $27,785 (see Table 7).

Table 7. Cornelius SDCs for Single-Family Home and ADU[10]

	Single-Family Home	ADU
Hillsboro Water Connection SDC	$6,287	$6,287*
Cornelius Water Connection SDC	$3,884	$3,884*
Cornelius 5/8" Water Meter Fee	$500	$500*
CWS Sewer Connection SDC	$5,800	$5,800*
Cornelius Sewer Connection SDC	$232	$232*
Surface Water Management - Quantity	$1,067	$1,067
Parks SDC	$4,471	$4,471
Washington County Transportation Development Tax	$9,269	$5,544
Total	**$31,010**	**$27,785 ($11,082*)**

* These charges can be avoided if the ADU connects to the existing utility services of the main residence. If the service connection results in exceedance of regulatory thresholds (e.g., fixture counts for sewer SDCs), this may result in a SDC charge. New service connections for the ADU will result in full SDC fees as noted in Table 7.

The Home Builders Association of Metropolitan Portland produces an annual comparison of SDC levels in cities across the region.[11] Based on assumptions of a typical single-family development, the HBA estimates that Cornelius's SDCs are comparable to Hillsboro, but roughly 13% higher than in Forest Grove. Cornelius SDCs are somewhat lower than other Washington County communities, including Beaverton, North Plains, Tigard, and Sherwood.

Several cities around Oregon have implemented programs providing SDC exemptions for the construction of ADUs, including Portland, Tigard, Springfield, Redmond, Salem, Hubbard, and Mt. Angel. While a full exemption may not be feasible for the Cornelius, deferring SDCs (as discussed above) or reducing them may help alleviate some of the cost burden that SDCs impose upon ADUs.

SDC Methodology

As a long-term strategy the City may also consider scaling SDCs based on the type or size of housing. In 2017, the City of Newport adopted new methodology to scale SDCs to different types and sizes of housing. The new methodology was adopted as part of a larger package of four policies and strategies intended to respond to the increased need for workforce and affordable housing in the community. The methodology sets a higher price per square foot for smaller homes; however, when that is calculated against the more modest size of those homes, the result is a lower fee for smaller homes, rather than the City's previous one-size-fits-all approach.

[10] https://www.ci.cornelius.or.us/sites/default/files/fileattachments/community_development_amp_planning/page/491/sfd_development_fees_72020.pdf

[11] https://www.hbapdx.org/uploads/1/1/6/8/116808533/2020_sdc_chart_-_multi-family.pdf

9. Tax Abatements

Initial Priority: Medium

Tax abatements are reductions in property taxes for housing. Tax abatements offer a financial incentive to developers that can improve the long-term economic performance of a property and improve its viability. Abatements may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable housing. Property tax exemptions or freezes can also be applied to housing in distressed areas, or for rehabilitated housing. Abatements can be a substantial incentive to developers, but the City will forego taxes on the property, generally for ten years, or in some cases for the life of the development. Other taxing jurisdictions are not included unless they agree to participate.

The state currently authorizes tax abatements for various types of housing and affordable housing through several programs outlined in the Oregon Revised Statutes (ORS). These include:

- Nonprofit Corporation Low-Income Housing (ORS 307.540 to 307.548)
- Low-Income Rental Housing (ORS 307.515 – 307.537)
- Vertical Housing (ORS 307.841 to 307.867)
- Transit-Oriented Multi-Unit Development (ORS 307.600 – 307.637)
- Homebuyer Opportunity Limited Tax Exemption (ORS 307.651 to 307.687)
- Residential Rehabilitation Tax Freeze (ORS 308.450 to 308.481)

The City already has made significant progress in implementing this strategy and the need for additional actions may be relatively limited as a result beyond continuing to implement the City's current program. The City of Cornelius adopted a modified version of the Nonprofit Corporation Low-Income Housing Tax Exemption in 2015, which enables the City to exempt affordable housing developed by non-profit agencies from City taxes (CMC Chapter 3.35). The exemption is currently limited to projects that house residents aged 55 and over; however, the City is now in the process of removing this limitation from the code, with amendments scheduled for adoption on January 4, 2021. Another limitation on this exemption is also likely to be removed: Because the City of Cornelius makes up less than 51% of the taxing district, per state law only City taxes can be exempted unless the developer receives approval from Washington County and the school district to exempt their portions of property taxes as well. However, the City has solicited and is likely to receive approval from the school districts for the tax exemption, which would meet the 51% threshold that would allow a full property tax exemption for qualifying housing projects.

Other Examples:

- The City of Beaverton has an Affordable Housing Tax Exemption Program designed to promote construction of affordable rental housing for low-income households (focusing on 60 percent area median income and below). The program allows an exemption of up to 100 percent of property taxes.

- The City of Tigard administers a tax abatement program within the City's designated "Vertical Housing Development Zones" (VHDZ), which is intended to incentivize multi-story mixed-use development and affordable housing in targeted areas. This program allows a partial property tax exemption of 20% per floor (and up to 80% total) for mixed-use developments within the designated VHDZ, and provides an additional exemption if the project includes low-income housing.
- The City of Newberg has a Multiple Unit Housing Property Tax Exemption (MUPTE) that aims to encourage private development of multi-unit housing in transit-oriented areas by providing a ten-year property tax exemption on the residential portion of improvements. Newberg also has a property tax exemption of properties owned by low-income persons or held for the purposes of developing low-income housing.

Cornelius could consider similar tax abatements that target the types of housing that are most desired and the geographic areas in which housing is most needed. The HNA indicates that multi-family housing with five or more units represents 13.3% of the total future housing units needed. The greatest need for rental units is found at the lowest price points (as well as some in higher price ranges). There is insufficient rental housing for the lowest income households making $25,000 or less. Therefore, additional tax abatements that target low-income rental housing and/or multi-family housing may be beneficial to Cornelius.

10. Land Use Permit Fee Reductions

Initial Priority: Medium

The Cornelius Community Development department collects permit fees for planning and engineering services (and contracts with the City of Forest Grove for building services). By reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), the City could reduce the upfront cost of development. This could be administered as a complete fee waiver or a reduced fee based on a set metric (e.g. reduced fee is 50% of original permit fee). Permit fees generally represent a lower share of overall cost to the developer than SDCs, sometimes by a factor of five or more, and therefore fee reductions will tend to have a proportionately lower impact than SDC reductions. The City's schedule of estimated fees and charges for an example single family home estimates that permit fees make up roughly 10% of the total combined cost of development and permit fees.

11. Expedited Development Review

Initial Priority: Low

Expedited development review includes a variety of strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff. This strategy allows regulated affordable housing projects to get more quickly from design to building permit, reducing carrying / financing costs, and delivering affordable units sooner.

Streamlining the review and permitting process is usually administratively feasible, though the greatest obstacle is often staff resources to expedite some projects when staff is already busy and/or limited in size. The value of certitude (a clear process with explicit requirements and a predictable timeline) is likely an even greater enticement to developers than the saving of fees. Further, review timelines for the City of Cornelius are already very short in comparison to many other jurisdictions and compared to minimum state requirements. Because there is limited ability to further streamline review processes and timelines, this is a low-priority strategy.

Funding Sources and Uses

The following funding sources could create revenues and opportunities for Cornelius to increase its supply of needed housing, particularly affordable housing. HB 2001 will require the City to consider ways to increase the affordability of middle housing by considering funding sources such a construction tax (Strategy 14—low priority), and incentives such as property tax abatements (Strategy 9—medium priority) and deferring system development charges (Strategy 8—medium priority).

12. Tax Increment Financing

Initial Priority: High

Tax Increment Financing (TIF) is the mechanism through which Urban Renewal Areas (URAs) or TIF districts grow revenue. At the time of adoption, the tax revenues flowing to each taxing jurisdiction from the TIF district is frozen at its current level. Any growth in tax revenues in future years, due to annual tax increase plus new development, is the "tax increment" that goes to the district itself to fund projects in the area. Small cities (50,000 people or less) are allowed to have up to 25% of their land area and assessed value in TIF districts.

TIF is a good tool to use in areas where new development or redevelopment is anticipated. The growth of TIF revenue depends on this development actually occurring; if a TIF district remains stagnant, then tax revenues will not grow to fund the planned projects. Therefore, it is advisable that the Urban Renewal agency waits for some sign of growth in the TIF district, before undertaking the expense of projects dependent on TIF.

While many different types of projects are eligible for TIF funds, for the most part, TIF funds go to physical improvements in the area itself. These projects can include participating in public/private partnerships with developers or can be used to complete off-site public improvements that benefit and encourage new development in the area, or to acquire key sites. TIF funds can also be used to pay for development fees.

In terms of housing, TIF funding can be used to provide incentives to achieve housing types that may not be otherwise market feasible to develop. Examples include mixed use, transit-oriented, or affordable housing in areas where it may not otherwise occur. If the Urban Renewal Agency prioritizes these projects, TIF funds might be used to contribute to public-private partnerships in which a developer builds this type of housing in return from incentives from the agency. Often the

agency controls one or more key parcels in the district and may offer them to developers at reduced cost. Another approach is to waive SDCs to the developer, and have the agency compensate the other jurisdictions from TIF funding.

The City of John Day has recently created an innovative TIF district to help provide incentives for both new housing and renovated housing. The incentives are designed to rebate some of the newly created assessed value directly to the property owner, to make the project more attractive. The URA was created in such a way to include much of the city's vacant developable land for housing, to encourage build-out and ensure that the value of new development is captured by the TIF.

The City of Cornelius recently adopted an Urban Renewal Plan in 2019, which includes potential opportunities for mixed use and residential development. The primary incentives supporting low income and/or mixed-use housing in the adopted Urban Renewal Plan include property acquisition (Strategy 13) and development assistance/cost sharing. Therefore, there may be opportunities to allocate future TIF funds to support other strategies outlined elsewhere in this report.

13. Land Acquisition and Banking

Initial Priority: High

Land acquisition is a tool to secure sites for prioritized housing types such as affordable housing or mixed-use housing. Public agencies can identify locations where prices are going up and acquire land before the market becomes too competitive, with the intention to use the land for affordable housing. The ability to identify promising sites within these locations and act quickly and efficiently in acquiring them can tip the scales to make an affordable housing development financially feasible. Planning ahead ensures that there will be housing opportunities in neighborhoods where the rest of the properties may appreciate quickly. Access to a ready funding source such as TIF funding is important to take advantage of these opportunities.

Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be developed for affordable housing. Land banks are often quasi-governmental entities created by municipalities to effectively manage and repurpose an inventory of underused, abandoned, or foreclosed property. Public agencies or larger nonprofits may be better equipped than small community development corporations to do both land acquisition and banking.

Key challenges for **land acquisition** include reliably identifying future areas where land value will climb before prices go up, developing the resources necessary to purchase the land, creating mechanisms for easy land transfer and removing the liability associated with holding land. **Land banking** requires significant up-front investment to acquire land, which typically requires grants, and funding partnerships—with non-profits, public entities, and private financing—to reach necessary funding levels. In addition, while this technique can help address the long-term need for affordable housing, it will not address the current need in the short-term.

A full land banking or acquisition program may not be practical for a jurisdiction the size of Cornelius. However, a potentially feasible way to implement this strategy in Cornelius would be to assess the potential for any existing City-owned properties to be used for affordable or workforce housing development and then seek non-profit or other affordable housing developers to lead the actual development efforts. In exchange for donating or selling City-owned land at a nominal price, the City would require a commitment to long-term affordability of any housing units developed. This strategy would be implemented in conjunction with the City's Urban Renewal Program (Strategy 12).

14. Construction Excise Tax

Initial Priority: Low

A construction excise tax (CET) is a tax on construction projects. In 2016, the Oregon Legislature passed Senate Bill 1533 authorizing Oregon cities and counties to establish a CET for affordable housing. According to state statutes, the tax may be imposed on improvements to real property that result in a new structure or additional square footage in an existing structure. Cities and counties may levy a CET on residential construction for up to 1% of the permit value; or on commercial and industrial construction, with no cap on the rate of the CET.

The allowed uses for CET funding are defined by the state statutes. For a residential CET, uses include funding incentives (e.g. fee and SDC waivers, tax abatements, etc.) and affordable housing programs. A portion must also flow to the Oregon Housing and Community Services (OHCS) for homeowner programs. For a commercial or industrial CET, a portion of funds must be used for allowed developer incentives and the rest is unrestricted.

To date, at least eight jurisdictions (Portland, Corvallis, Cannon Beach, Hood River County, Hood River City, Newport, Eugene, and Tigard) have passed local CETs for affordable housing, and many others are considering adopting the tool. Jurisdictions can exempt certain types of development from the CET, such as public facilities and improvements, as well as development under a specified value.

The City of Cornelius has already adopted a CET of 0.75% for all construction in the city and dedicates those revenues for specific purposes—including public safety and administration. As such, an additional CET is likely not feasible in the near term; therefore, this is a low-priority strategy and could be considered in the longer term. Long-term implementation should be based on a future assessment of the relative success and benefits of the existing CET in meeting its goals and the potential support for increasing the CET amount to provide revenues to support affordable housing development.

15. Public-Private Partnerships (PPPs) and Community Land Trusts

Initial Priority: Medium

Public-private partnerships (PPPS) are arrangements between public and private entities, which can be implemented to create more housing and/or affordable housing. PPPs can promote a variety

of affordable housing programs or projects and include partnerships from multiple from multiple entities (public, private, and non-profit). These efforts typically involve utilization of a variety of other housing measures or strategies, including those described in this report.

Supporting a **Community Land Trust (CLT)** is one example of a PPP to support housing. With the CLT model, a community organization owns land and provides long-term ground leases to low-income households to purchase the homes on the land, agreeing to purchase prices, resale prices, equity capture, and other terms. This model allows low-income households to become homeowners and capture some equity as the home appreciates, but ensures that the home remains affordable for future homebuyers. CLTs may also lease land to affordable housing developers for the development of rental housing or may develop and manage rental housing themselves. Land trusts are typically run as non-profits, with support from the public sector and philanthropy, and could be linked to a land bank. Land trusts can be focused on homeownership or rental units.

At this time, the City of Cornelius has limited capacity to implement these types of programs directly. However, the City would be receptive to partnering under the right circumstances should they be approached by an established organization. The City could also consider supporting existing CLTs through incentives such as tax abatements. Implementation of this opportunistic approach is identified as a medium priority.

16. Financial Assistance Programs

Initial Priority: Low

A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.

A range of financial assistance programs can be used to maintain housing affordability, help keep residents in their homes, or assist in the acquisition of land for housing. Possible tools include rent assistance, loans for new homeowners, assistance to low-income homeowners for repairs and upgrades, and land acquisition. Partner agencies like the Washington County Department of Housing Services, and non-profit housing organizations such as Bienestar and Community Partners for Affordable Housing make these types of programs available across the region.

The City of Cornelius has limited capacity to implement these types of programs but supports their implementation by other organizations in Cornelius. Therefore, this identified as a low-priority strategy. However, the City can support efforts by other organizations to implement this strategy, including housing rehabilitation loans provided by Washington County, including rehabilitation of housing for people with disabilities.

V. CONSISTENCY WITH METRO AREA REQUIREMENTS

Cities within the Portland Metropolitan region must comply with two requirements related to the capacity of buildable land. Both requirements are found in Oregon Administrative Rule (OAR) 660-007. The two rules state that:

> *Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances. (OAR 660-007-0030 (1))*
>
> *The Cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood must provide for an overall density of six or more dwelling units per net buildable acre. These are relatively small cities with some growth potential (i.e. with a regionally coordinated population projection of less than 8,000 persons for the active planning area). (OAR 660-007-0035 (1))*

The City of Cornelius is in compliance with both of these requirements as described below.

50/50 Housing Split

The Multi-Family Residential (A-2) zone alone accounts for 51% of the unconstrained capacity for the city. The A-2 zone permits duplex and multi-family dwelling types. Multi-family dwellings are allowed as permitted uses in the CMU (1%), CR (4%), and GMU (12%) zones. Duplex dwellings are allowed as permitted uses in the CR (4%) zone. The R-7 (32%) zone currently permits duplexes as a conditional use. As a result, well over 50% of the city's residential capacity currently is within zones that allow and are intended for multi-family and other attached forms of housing. In addition, within the next 18 months, the City of Cornelius will be required to allow for middle housing (duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing) in the majority of the city's residential areas. This will further increase the proportion of the city's residential land supply where multi-family and other attached forms of housing are allowed.

Density Requirement

The overall average density of buildable land across all residential and mixed use zones in Cornelius is approximately 9 units per acre. This is based on a total capacity of 2,668 units across 282 unconstrained weighted acres of buildable lands that account for street dedications. The following table describes these calculations in more detail. The table shows capacity in terms of dwelling units and density in terms of dwelling units per net acre.

Zoning Designation	*Vacant capacity*	*Infill capacity*	*Redev. capacity*	*Total capacity*
R7				
Capacity	139	421		560
Density	8	5	0	6

Zoning Designation	*Vacant capacity*	*Infill capacity*	*Redev. capacity*	*Total capacity*
MHP				
Capacity	11			11
Density	10	0	0	10
A2				
Capacity	1,041		413	1,454
Density	10	0	13	11
CMU				
Capacity	16		14	30
Density	11	0	11	11
CR				
Capacity	5	66		71
Density	11	6	0	6
GMU				
Capacity	122		420	542
Density	16	0	16	16
Total Average Capacity	**1,334**	**487**	**847**	**2,668**
Overall Average Density	**10**	**5**	**14**	**9**

ORDINANCE NO. 2021-03

Exhibit B

Cornelius
Oregon's Family Town

CITY OF CORNELIUS
COMMUNITY DEVELOPMENT DEPARTMENT

CORNELIUS HOUSING NEEDS ANALYSIS

Comprehensive Plan Amendment

Land Use File No. CPA-01-21

City Council Hearing Date: April 5, 2021

Staff Report Date: March 24, 2021

Request: A Type III Comprehensive Plan Text Amendment (CPA-01-21) for amendments to Chapter IV (Housing) of the City Comprehensive Plan and adoption of the 2021 Cornelius Housing Needs Analysis.

Applicant: Cornelius Community Development Department

Process: The Comprehensive Plan Amendment (CPA-01-21) application was initiated by the Cornelius Community Development Department. Before taking final action on a proposed amendment to the Comprehensive Plan, the Planning Commission shall hold a public hearing. After the public hearing before the Planning Commission, the City Council shall hold a public hearing to consider the written report and recommendation of the Planning Commission relative to the proposed amendment to the Comprehensive Plan. Notice of the time, place and purpose of the public hearing shall be given in accordance with the requirements of CMC 18.15.030.

APPEAL RIGHTS

The Commission will make a recommendation to Council concerning the request. Council will make a decision. Any appeal of a decision by Council shall be made to the State Land Use Board of Appeals (LUBA) per ORS 197.830. In order for an issue to be considered for appeal to LUBA, it must be raised before the close of the record of the Public Hearing. Such issues must be raised with sufficient specificity so as to afford the hearing body and the parties an adequate opportunity to respond to each issue. If there is no continuance granted at the hearing, any participant in the hearing may request that the record remain open for at least seven days after the hearing.

APPLICABLE CRITERIA

Comprehensive Plan Amendment:

- Statewide Planning Goals
- Metro Urban Growth Management Functional Plan
- Chapter 18.130 (Comprehensive Plan Amendment)

BASIC FACTS AND BACKGROUND INFORMATION

1. In 2009 Johnson Reid Economics prepared, and the City of Cornelius adopted, an Economic Opportunities Analysis and Long-Term Urban Land Needs Assessment.

2. Recognizing the need to update the data and policies in the relevant chapter of the Comprehensive Plan and prepare a new Housing Needs Analysis, the City of Cornelius applied for and received a Technical Assistance Grant from the Oregon Department of Land Conservation and Development.

3. The City released a competitive Request for Qualifications in January 2020 and selected a team led by Angelo Planning Group from among the applicants.

4. In order to ensure legitimate public involvement in the HNA development process, particularly during the unusual circumstances of a global COVID-19 pandemic, the City released an online survey from June 19 to July 1, 2020 to gain input from community members about their biggest housing-related priorities and concerns, and about the types of housing they think are most needed in Cornelius.

5. The City also convened a Housing Advisory Committee (HAC), comprised of nonprofit and market-rate housing developers, members of the Cornelius Planning Commission and City Council, affordable housing advocates and service providers, city staff, and other stakeholders, to review draft results, work products, and recommendations at various stages of the HNA process.

6. Text amendments to the Comprehensive Plan, Chapter IV (Housing) (Exhibit "A") will provide additional support for housing variety, including specific support for certain beneficial housing types, such as middle housing, accessory dwelling units, mixed-use, manufactured homes, and housing that is affordable to low- and moderate-income households. The policies also support maintenance and rehabilitation of existing housing stock, which promotes neighborhood quality and retention of affordable inventory.

7. Notice of the proposed amendments were sent to the Oregon Department of Land Conservation and Development on February 12, 2021 as shown within Exhibit "C".

8. Notice of the proposed public hearings was published in the Forest Grove News Times on February 24, 2021 as shown within Exhibit "D".

9. On March 23, 2021, following a public hearing, the Cornelius Planning Commission voted unanimously to recommend approval of the Comprehensive Plan Amendment and adoption of the 2021 Cornelius Housing Needs Analysis.

COMPREHENSIVE PLAN AMENDMENT REVIEW CRITERIA

Section 18.130.010(D)(1), Approval Criteria:

1. *The proposed plan and amendments shall conform to the requirements of the Oregon Statewide Planning Goals, and applicable administrative rules of the State Land Conservation and Development Commission.*

Findings: The proposal is to amend Chapter IV (Housing) of the Cornelius Comprehensive Plan and adopt the 2021 Cornelius Housing Needs Analysis (HNA). The proposed new Housing Chapter relies on work recently completed as part of the updated HNA project. The applicable Statewide Planning Goals are Goals 1 (Citizen Involvement), 5 (Natural and Historic Resources), 7 (Natural Hazards), and 10 (Housing). While many other planning goals have a tangential relationship to housing planning, they are not directly relevant to the technical analyses conducted as part of the Housing Needs Analysis or the proposed updated policies and information included in the Comprehensive Plan Housing chapter.

Goal 1 – Citizen Involvement

Goal 1 requires the City to employ an appropriately-scaled involvement program to ensure the opportunity for meaningful public involvement throughout the land use planning process. The City and consultant convened four Housing Advisory Committee (HAC) meetings between June 2020 and February 2021 to review draft results, work products, and recommendations at various stages of the HNA process. The HAC was comprised of nonprofit and market-rate housing developers, members of the Cornelius Planning Commission and City Council, affordable housing advocates and service providers, and city staff.

The City also administered an online survey to gain input from community members about their biggest housing-related priorities and concerns, and about the types of housing they think are most needed in Cornelius. The survey was available online in English and Spanish from June 19 through July 1, 2020. Notice of the survey was publicized in the Cornelius Gazette, on the City website, on social media, and via email newsletter. There were 70 total responses to the English survey and 15 responses to the Spanish survey. The results of the survey primarily informed the housing policies and strategies that were considered for addressing the housing needs identified in the HNA.

This application (CPA-01-21) would replace the Housing Chapter of the Comprehensive Plan. The City prepared and published a public notice in the Forest Grove News-Times on February 24, 2021, announcing public hearings to be held before the Planning Commission and the City Council concerning the proposed Amendment, as shown within Exhibit “D”.

The Planning Commission hearing for the Comprehensive Plan Amendment review is scheduled for 7:00 PM on Tuesday, March 23, 2021. Due to the Governor’s social distancing order, the meeting is scheduled to be heard via GoToMeeting, an online meeting platform. Sign-on information is available on the City website as well as the Planning Commission meeting agenda.

The City Council hearing is scheduled for April 5, 2021 via Zoom (pending Planning Commission recommendation). Notice of the proposed amendment was published on the Oregon Department of Land Conservation and Development's Plan Amendments (PAPA) website on February 12, 2021. Notice of the public hearings was published in the Forest Grove News-Times on February 24, 2021. The notices afforded citizens and interest groups the opportunity to submit comments, provide testimony, ask questions, receive answers, or challenge the proposed adoption and amendment. After a decision is rendered, a ten (10) day appeal period follows, which allows the opportunity to request a review of the decision at the Land Use Board of Appeals. Through the application of mandated and adopted noticing and public participation requirements, the requirements of Goal 1 have been met.

Goal 5 – Natural, Scenic and Historic Resources

Goal 5 requires the City to inventory, protect and conserve natural, scenic and historic resources within the City. The Buildable Land Inventory (BLI) conducted as part of the HNA addresses areas that the City has identified as natural resources through its Goal 5 inventory, regional inventories of natural resources, and associated development code requirements intended to protect, conserve or minimize impacts to these resources. The BLI identifies these areas as "constrained" consistent with City development code standards and policies and assumes reduced or limited capacity for future housing in these areas. Through this analysis process and continued implementation of the City's policies and standards associated with natural resource protection, the requirements of Goal 5 have been met.

Goal 7 - Natural Hazards

Goal 7 requires the City to protect people and property from natural hazards. Similar to Goal 5 resources, the BLI conducted as part of the HNA addresses areas that the City, Metro region and state have identified as natural hazards through available hazards data and associated development code requirements intended to avoid impacts associated with those hazards. In Cornelius, hazards are primarily related to floodplain areas, with some smaller areas related to steep slopes. The BLI identifies these areas as "constrained" consistent with City development code standards and policies and assumes reduced or limited capacity for future housing in these areas. Through this analysis process and continued implementation of the City's policies and standards associated with natural hazards protection, the requirements of Goal 7 have been met.

Goal 10 – Housing

Goal 10 requires the City to maintain and plan for an adequate supply of land to accommodate at least 20 years of future growth, providing flexibility in housing location, type, and density to ensure the availability and prices of housing units are commensurate with the needs and financial capabilities of Oregon households. Comprehensive plans are required to include an analysis of local housing needs by type and affordability, an assessment of housing development potential, and an inventory of residential land; contain policies for residential development and supportive services based on that analysis that increase the likelihood that needed housing types will be developed; and provide for an adequate supply of a variety of housing types consistent with identified policies and meeting minimum density and housing mix requirements (established by OAR 660, Division 007).

The Housing Needs Analysis (HNA), which shall be adopted by reference in the Comprehensive Plan Amendment and included as an exhibit to the adopting ordinance, provides information about the factors that could affect housing development, including demographics, affordability trends, workforce housing availability, market health, and regulatory structure. The HNA includes the

City's buildable lands inventory (BLI) for housing within the UGB. The BLI is required by Goal 10 to ensure that current use designations provide an adequate short- and long-term land supply for housing development for meeting existing needs and those of projected growth. It analyzes existing development patterns and intensity, land and development values, existing land use designations and zoning, and building constraints to determine where there is vacant land and/or land that is likely to be redeveloped, and compares the existing supply of land to emerging trends and indicators for future estimates of demand.

Housing Needs Analysis and Buildable Lands Inventory

Cornelius's HNA, which includes the City's BLI, provides the factual basis informing the update to the Housing Chapter of the Comprehensive Plan. The HNA found that the City's UGB contains an adequate supply of land to meet projected future needs. More specifically, the findings include:

- There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).
- The results find sufficient capacity for all housing types in the three housing categories: low-density housing; medium-density housing; and higher-density housing. The estimated "surplus" land capacity in each of these categories is fairly similar, ranging from 248 to 296 units of each, with acreage surpluses ranging from 19 to 32 acres (see Figure 6.3).
- Under recently adopted state rules (HB 2001 (2019)), Cornelius as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit "cottage cluster" developments. At the same time, there is capacity in the MDR zones to accommodate demand for most of these attached types as well.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

Sources: Angelo Planning Group, Johnson Economics

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	159.4	1,220	7.7	972	248	32
Med-Density	SF attached; Manufact. home; 2-4 plexes	108.5	906	8.4	636	270	32
High-Density	Multi-family apartments	35.7	542	15.2	246	296	19
	TOTALS:	*303.5*	*2,668*	*8.8*	1,854	814	84

Land Zoned to Allow a Full Range of Housing Types

Residential and mixed-use zones in Cornelius allow for a full range of housing types. The following table summarizes the types of housing allowed in each of these zones. As noted above, a large percentage of the City's overall residential capacity is within the City's A-2, CR, CMU and GMU zones which allow for the widest range of housing types. This information demonstrates

that the City has zoning which allows for a wide range of housing types, including a mix of single-family detached housing, as well as townhomes, apartments, and "plexes."

Residential Zones	
	Permitted Outright
R-7	Single-family detached dwelling Manufactured housing Accessory Dwelling Unit (ADU)
R-10	Single-family detached dwelling Manufactured housing ADU
MHP	Manufactured housing
A-2	Common wall single-family dwellings ADU Duplex Single-family attached dwellings (i.e., townhomes) Multi-family dwellings Boarding house
CR	Single-family detached dwelling Manufactured housing Common wall single-family dwellings ADU Duplex Single-family attached dwellings Multi-family dwellings Boarding house
CMU	Residential dwellings above ground floor (regulated affordable housing units allowed at ground floor)
GMU	Multi-family dwellings Single-family attached dwellings

Policies in Support of Goal 10

As part of the HNA process, project consultants reviewed the City's existing Comprehensive Plan policies for consistency with a variety of local, regional and statewide housing objectives. In many ways, the City's existing policies already provide a strong policy basis and framework in this regard. However, a number of policy amendments were recommended to further strengthen the City's housing policies and ensure they are consistent with state and regional housing objectives and requirements. Specific recommendations included the following.

Strengthen existing policy language to:

- Expand the need for a full range of housing types addressed.
- Reduce emphasis on providing for higher-end housing options.

Adopt new policies aimed at the following objectives:

- Support the Fair Housing Act and affirmatively further fair housing.

- Support the development of Accessory Dwelling Units (ADUs).
- Encourage residential uses mixed with other compatible uses in the same building or on the same site within the City's mixed-use zones.
- Support the maintenance and development of manufactured homes as an affordable housing choice in appropriate locations.
- Continue to maintain and expand partnerships with non-profit housing developers and other affordable housing providers and agencies.
- Encourage maintenance and rehabilitation of the existing housing stock.
- Work with other jurisdictions as well as regional and state agencies to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.
- Encourage an adequate supply and efficient use of residential land within the Urban Growth Boundary.

These recommendations are reflected in the proposed amendments to Chapter IV of the Cornelius Comprehensive Plan, and they will ensure that the City's policies are consistent with Statewide Goal 10 and related requirements.

Consistency with Metro Planning Rule

Cities within the Portland Metropolitan region must comply with two requirements related to the capacity of buildable land. Both requirements are found in Oregon Administrative Rule (OAR) 660-007. The two rules state that:

- *Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances. (OAR 660-007-0030 (1))*

- *The Cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood must provide for an overall density of six or more dwelling units per net buildable acre. These are relatively small cities with some growth potential (i.e. with a regionally coordinated population projection of less than 8,000 persons for the active planning area). (OAR 660-007-0035 (1))*

The City of Cornelius is in compliance with both of these requirements. The Multi-Family Residential (A-2) zone alone accounts for 51% of the unconstrained capacity for the city. The A-2 zone permits duplex and multi-family dwelling types. Multi-family dwellings are also allowed as permitted uses in the CMU (1%), CR (4%), and GMU (12%) zones. Duplex dwellings are allowed as permitted uses in the CR (4%) zone. The R-7 (32%) zone currently permits duplexes as a conditional use. As a result, well over 50% of the city's residential capacity currently is within zones that allow and are intended for multi-family and other attached forms of housing. In addition, future changes to allow for middle housing types in compliance with HB 2001 (2019) will further increase the proportion of the city's residential land supply where multi-family and other attached forms of housing are allowed.

The overall average density of buildable land across all residential and mixed use zones in Cornelius is approximately 9 units per acre. This is based on a total capacity of 2,668 units across 282 unconstrained weighted acres of buildable lands that account for street dedications.

Consistency with House Bill 2001 And Oregon Administrative Rule (OAR) 660-046
As a City within the Portland Metropolitan region, the City of Cornelius will need to comply with House Bill 2001 and the implementing OAR provisions for large and Metro cities. The City must update its Development Code to comply with these requirements by June 30, 2022. The Housing Strategies Report summarizes a number of types of changes the City can pursue as part of that process. However, the City is not required or ready to make those changes as part of this Comprehensive Plan Update process.

The requirements of Goal 10 and associated Administrative Rules have been met.

Conclusions: Based upon the findings stated above, staff finds this criterion is met.

2. *The proposed amendments shall comply with all other applicable laws, rules and regulations of the state, city, and other governmental agencies having jurisdiction over land use regulation within the City.*

Findings: The City of Cornelius is located within Washington County and is within the Portland Metropolitan area which is governed by Metro. As such, all Comprehensive Plan Amendments are required to meet the applicable laws, rules and regulations of the State, City, County, and Metro. This application will amend Chapter IV (Housing) of the Comprehensive Plan. The primary plan that guides this Comprehensive Plan Amendment is the Metro Urban Growth Management Functional Plan (UGMFP).

Metro Urban Growth Management Functional Plan
The Metro UGMFP provides tools to meet regional goals and objectives adopted by Metro Council, including the 2040 Growth Concept and the Regional Framework Plan. Under the Metro Charter, the City of Cornelius' Comprehensive Plan and implementing ordinances are required to comply and be consistent with the UGMFP. The UGMFP consists of 11 code titles with policies and compliance procedures for the following topics:

- Title 1: Housing Capacity
- Title 3: Water Quality and Flood Management *(not applicable)*
- Title 4: Industrial and Other Employment Areas *(not applicable)*
- Title 6: Centers, Corridors, Station Communities and Main Streets *(not applicable)*
- Title 7: Housing Choice
- Title 8: Compliance Procedures
- Title 10: Definitions *(not applicable)*
- Title 11: Planning for New Urban Areas *(not applicable)*
- Title 12: Protection of Residential Neighborhoods *(not applicable)*
- Title 13: Nature in Neighborhoods *(not applicable)*
- Title 14: Urban Growth Boundary *(not applicable)*

Metro requires "substantial compliance" with requirements in the UGMFP. Per the definition in Title 10, "substantial compliance" means that the City's Comprehensive Plan conforms with the purposes of the performance standards in the functional plan "on the whole." Any failure to meet individual performance standard requirements is considered technical or minor in nature.

The findings below address applicable Titles of the UGMFP. Based on the findings described below, the proposed Comprehensive Plan Amendment substantially complies with all applicable titles of the UGMFP.

Title 1: Housing Capacity

Findings: Title 1 of the UGMFP is intended to promote efficient land use within the Metro urban growth boundary (UGB) by increasing the capacity to accommodate housing. Title 1 requires the City to adopt minimum residential development density standards by March 2011. If the City did not adopt a minimum density by March 2011, the City must adopt a minimum density that is at least 80 percent of the maximum density. Title 1 also provides measures to decrease development capacity in selected areas by transferring the capacity to other areas of the community. This may be approved as long as the community's overall capacity is not reduced.

Cornelius has established minimum densities in its Zoning Code (Title 18: Zoning of the Cornelius Municipal Code (CMC)) for each residential base zone. These minimum and maximum densities comply with Title 1 for all zones where residential dwelling units are authorized. The Comprehensive Plan Amendment is for the policy text of the Comprehensive Plan and does not reduce densities or make any changes to land use designations or zoning. The policies in the proposed Comprehensive Plan continue to promote a diversity of housing types and efficient residential development. The Plan includes policies that recommend expanding the range of housing types and densities in the city. The findings for Statewide Planning Goal 10 include information from the Housing Needs Analysis evaluating housing capacity and demonstrate how the Comprehensive Plan Amendment supports compact development, especially in the city's mixed use and high-density residential zones. Further, Metro's 2017 Compliance Report (the most recent report available) concludes that Cornelius is in compliance for the City's Title 7 responsibilities.

Based on the findings above, the proposed Comprehensive Plan amendments are consistent with Title 1.

Title 7: Housing Choice

Findings: Title 7 is designed to ensure the production of affordable housing within the UGB. Under Title 7, the City is required to include in its Comprehensive Plan and implementing ordinances strategies to ensure the production of a diverse range of housing types, maintain the existing supply of affordable housing, increase opportunities for new affordable housing dispersed throughout the City, and increase opportunities for households of all income levels to live in affordable housing (3.07.730).

The City's HNA (Exhibit "B") demonstrates that Cornelius currently has a range of housing types, including single-family detached and attached homes, duplexes, 3- and 4-plexes, multi-family, and manufactured homes, and has sufficient capacity to provide for needed housing during the next 20 years. The Comprehensive Plan Amendment includes policies that support a diverse range of housing types available to households of all incomes. It also includes policies that support:

- The Fair Housing Act and affirmatively furthering fair housing.
- Maintenance and development of manufactured homes as an affordable housing choice.
- Partnerships with non-profit housing developers and other affordable housing providers and agencies.
- Maintenance and rehabilitation of the existing housing stock.
- Collaboration with other jurisdictions and the state to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.

As part of the Housing Strategies Report, a component of the HNA, the City also evaluated potential amendments to its zoning ordinance to reduce barriers to and encourage development of smaller, potentially more affordable housing types such as accessory dwelling units and "middle" housing types, as well as potential zoning incentives for affordable and workforce housing. The Housing Strategies Report also considers other incentives and funding strategies that would support affordable housing development in Cornelius. Further, Metro's 2017 Compliance Report concludes that Cornelius is in compliance for the City's Title 7 responsibilities.

Based on the findings above, the Comprehensive Plan Amendment is consistent with Title 7.

Title 8: Compliance Procedures

Findings: Title 8 establishes a process for ensuring compliance with requirements of the UGMFP. An amendment to the City comprehensive plan or land use regulations is deemed to comply with the UGMFP only if the City provided notice to Metro as required by section 3.07.820(a). The City of Cornelius provided Metro with a copy of the draft Comprehensive Plan Amendment via Oregon Department of Land Conservation and Development's Plan Amendments (PAPA) website on February 12, 2021, which is more than 35 days prior to the first evidentiary hearing, scheduled for March 23, 2021.

Based on the findings above, the Comprehensive Plan Amendment is consistent with Title 8.

Conclusions: Based upon the findings stated above, staff finds this criterion is met.

3. *The proposed amendment shall address the criteria identified in the Chapter 1 of the City Comprehensive Plan.*

Chapter 1 (pages 11-12) of the City Comprehensive Plan lists the criteria to be used for approval of an amendment. It states that an amendment need not satisfy all of the criteria, but it must reasonably address some of the criteria. The criteria for a Comprehensive Plan Amendment are:

a. The fact that an applicant owns land for which the change is being sought is not in itself sufficient justification for the change or amendment.

Findings and Conclusions: This action is being proposed by the City of Cornelius and not any specific property owner. This criterion is not appliable.

b. The proposed change or amendment must meet a public need. Such need must be documented by appropriate facts and evidence and should extend from the statewide planning goals, Metro 2040, or the City Comprehensive Plan.

Findings: As illustrated in the above sections, the proposed Comprehensive Plan Amendment to Chapter IV are intended to help Cornelius meet its current and future housing needs, which are documented by evidence in the Housing Needs Analysis (Exhibit "B"). The findings above indicate how the proposed amendments are consistent with applicable Statewide Planning Goals and Metro 2040 Growth Concept (as implemented by the Metro UGMFP). The proposed amendment provides an update to the Housing policies of the City's current Comprehensive Plan and serves to expand and enhance the City's current housing policies.

Conclusions: Based upon the findings above, staff concludes this criterion is met.

c. The amendment is necessary to conform with current state law or regional policy, which requires local compliance.

Findings: The Comprehensive Plan Amendment will achieve consistency with applicable Statewide Planning Goals, including Goal 10 and associated Administrative Rules, as well as the Metro UGMFP. The City has addressed applicable Statewide Planning Goals, OARs, and Metro Titles within this staff report.

Conclusions: Based upon the findings above, staff concludes this criterion is met.

d. The amendment is necessary to implement the adopted vision for the community, or to respond to unanticipated local circumstances.

Findings: In the 1998-99 Periodic Review process, the City adopted specific vision statements for each chapter of the Comprehensive Plan. The Vision Statement for Chapter IV (Housing) states, *"Citizens take pride in the quality and variety of residential neighborhoods."* This vision statement is not being altered by the proposed amendments. The amended housing policies are intended to help the City of Cornelius further its vision for quality and variety in residential neighborhoods. The amendments do this by providing additional support for housing variety, including specific support for certain beneficial housing types, such as middle housing, accessory dwelling units, mixed-use, manufactured homes, and housing that is affordable to low- and moderate-income households. The policies also support maintenance and rehabilitation of existing housing stock, which promotes neighborhood quality and retention of affordable inventory.

Conclusions: Based upon the findings above, staff concludes this criterion is met.

e. The proposed change or amendment must be in conformance with the amended goals and policies of the Comprehensive Plan, as well as being consistent with state and regional policies.

Findings: The City's stated housing goal is, "*To provide for the housing needs of prospective as well as present Cornelius citizens.*" This goal is not being altered by the proposed amendments to Comprehensive Plan housing policies. The findings for Statewide Planning Goal 10 indicate how the proposed amendments help the City meet the housing needs of current and future residents. The findings above also indicate how the Comprehensive Plan amendment is consistent with other state policies and the Metro UGMFP.

Conclusions: Based upon the findings above, staff concludes this criterion is met.

f. The amendment must meet the standards and requirements of the zone in which it is located, or proposed to be located.

Findings and Conclusions: The proposal is an amendment to the text of the Comprehensive Plan, not to the Zoning Code or to a specific property. This criterion is not applicable.

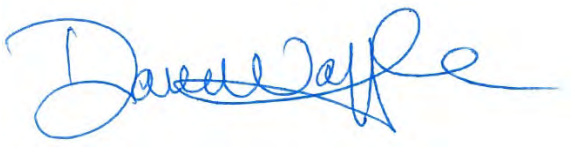
RECOMMENDATION

The request is for Comprehensive Plan Text Amendment to Chapter IV (Housing) of the City Comprehensive Plan and adoption of the 2021 Cornelius Housing Needs Analysis (HNA). The

proposed new Housing Chapter relies on work recently completed as part of the updated HNA project. The proposal is consistent with the City's Comprehensive Plan, all applicable standards from the Metro Urban Growth Management Functional Plan, and the Oregon Statewide Planning Goals.

Based upon the facts, findings and conclusions in the Staff Report, the Cornelius Planning Commission recommends approval and adoption of CPA-01-21 to the Cornelius City Council.

DATE OF STAFF REPORT AND RECOMMENDATION: March 24, 2021



Dave Waffle, Planning Commission Chair

Ryan A. Wells, AICP, Community Development Director

Exhibits:
- "A" Proposed amendments to Chapter IV (Housing) of the City Comprehensive Plan
- "B" Draft Cornelius Housing Needs Analysis, including Buildable Lands Inventory, Housing and Residential Land Needs Assessment, and Housing Strategies Report
- "C" Notice to the Oregon Department of Land Conservation and Development
- "D" Notice to the Forest Grove News-Times

EXHIBIT "A"

CHAPTER IV

HOUSING

Vision: *Citizens take pride in the quality and variety of residential neighborhoods and housing choices in Cornelius.*

Goal: *To provide for the housing needs of prospective as well as present Cornelius citizens.*

Having affordable, quality housing in safe neighborhoods with access to community services is essential for all Oregonians. Like other cities in Oregon, the City of Cornelius is responsible for helping to ensure that its residents have access to a variety of housing types that meet the housing needs of households and residents of all incomes, ages and specific needs. Towards that end, the City has undertaken and will continue to implement and update a variety of activities to meet current and future housing needs:

- Conduct and periodically update an analysis of current and future housing conditions and needs. The City most recently conducted this analysis in 2020. The results are summarized in this element of the Comprehensive Plan and described in more detail in a supporting Housing and Residential Land Need Assessment Report.
- Conduct and periodically update an inventory of buildable residential land to ensure that the City has an adequate supply of land zoned for residential use to meet projected future needs. The City most recently conducted this analysis in 2020. The results are summarized in this element of the Comprehensive Plan and described in more detail in a supporting Buildable Lands Inventory Report.
- Adopt a set of housing-related Comprehensive Plan policies to address future housing needs.
- Regularly update and apply regulations in the City's Zoning and Subdivision Ordinances to meet housing needs identified in the Comprehensive Plan and supporting documents.
- Implement additional strategies to address housing needs in partnership with state and county agencies and other housing organizations. Potential strategies are described in more detail in a Housing Strategies Report prepared as part of the Housing Needs Analysis in 2020-2021.

The remainder of this chapter summarizes these topics in more detail.

Demographic Trends

Following is a brief summary of demographic conditions and trends in Cornelius, along with accompanying tables and charts, as described in the *Housing Needs Analysis* prepared for the City in 2020. Additional information about demographic and housing conditions and trends can be found in that document, which is a supporting document of the Comprehensive Plan.

- Cornelius is a City of roughly 12,300 people (City) located mostly in Washington County near the western edge of the Portland metropolitan area.

- Based on the UGB population, Cornelius is the 42nd largest city in the state by population, similar in size to other the regional cities of St. Helens and Gladstone. Cornelius is roughly half the population of neighboring Forest Grove, and a tenth the population of Hillsboro to the east.
- Cornelius has experienced strong growth, growing an estimated 27% since 2000. In contrast, Washington County as a whole saw higher growth of 38%, while the state population grew by 23%. (US Census and PSU Population Research Center)
- Cornelius was home to an estimated 3,540 households in 2020, an increase of 660 households since 2000. The percentage of families has fallen slightly from 78% of all households in 2000 to 76% in 2020. The city has a larger share of family households than Washington County (66%) and the state (63%). Average household size is estimated to have fallen during this period but remains high compared to the county.
- Cornelius's estimated average household size is 3.42 persons. This is significantly higher than the Washington County average of 2.62 and greater than the statewide average of 2.47.

FIGURE 2.1: CORNELIUS DEMOGRAPHIC PROFILE

POPULATION, HOUSEHOLDS, FAMILIES, AND YEAR-ROUND HOUSING UNITS					
	2000 (Census)	**2010 (Census)**	**Growth 00-10**	**2020 (PSU)**	**Growth 10-20**
Population[1]	9,652	11,869	23%	12,265	3%
Households[2]	2,880	3,277	14%	3,537	8%
Families[3]	2,245	2,501	11%	2,685	7%
Housing Units[4]	3,003	3,467	15%	3,718	7%
Group Quarters Population[5]	116	162	40%	167	3%
Household Size (non-group)	*3.31*	*3.51*	6%	*3.42*	-3%
Avg. Family Size	*3.64*	*3.88*	7%	*3.84*	-1%
PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000 (Census)	**2010 (Census)**	**Growth 00-10**	**2020 (Proj.)**	**Growth 10-20**
Per Capita ($)	na	$16,739	na	$22,110	32%
Median HH ($)	na	$47,768	na	$62,786	31%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

1 From PSU Population Research Center, growth rate 2000-2019 extended to 2020

2 2020 Households = (2020 population - Group Quarters Population)/2020 HH Size

3 Ratio of 2020 Families to total HH is based on 2018 ACS 5-year Estimates

4 2020 housing units are the '10 Census total plus new units permitted from '10 through '20 (source: Census, City)

5 Ratio of 2020 Group Quarters Population to Total Population is kept constant from 2010.

Housing Conditions and Trends

- **Housing Tenure.** Cornelius has a much greater share of homeowner households than renter households. The 2018 American Community Survey estimates that 79% of occupied units were owner occupied, and only 21% renter occupied. The ownership rate has risen since 2000 (72%). During this period the statewide rate fell from 64% to 61%. Nationally, the homeownership rate has fallen towards the historical average of 65%, after having climbed to 69% from the late 1990s to 2004.

- **Housing Stock.** Cornelius had an estimated 3,718 housing units in 2020, with a vacancy rate of 4.9% (includes ownership and rental units). See Figure 4.1. The housing stock has increased by roughly 715 units since 2000, or growth of 24%. Detached single-family homes represent an estimated 72% of housing units. Units in larger apartment complexes of 5 or more units represent only 4% of units, and other types of attached homes represent 13% of units. (Attached single family generally includes townhomes, some condos, and 2 to 4-plexes which are separately metered.) Manufactured homes represent 10% of the inventory.

  As Figure 4.3 shows, a large share of owner-occupied units (82%) are detached homes or manufactured homes (13%). Renter-occupied units are much more distributed among a range of structure types. About 39% of rented units are estimated to be detached homes or manufactured homes, while the remainder are some form of attached unit. Nearly 20% of rental units are in larger apartment complexes.

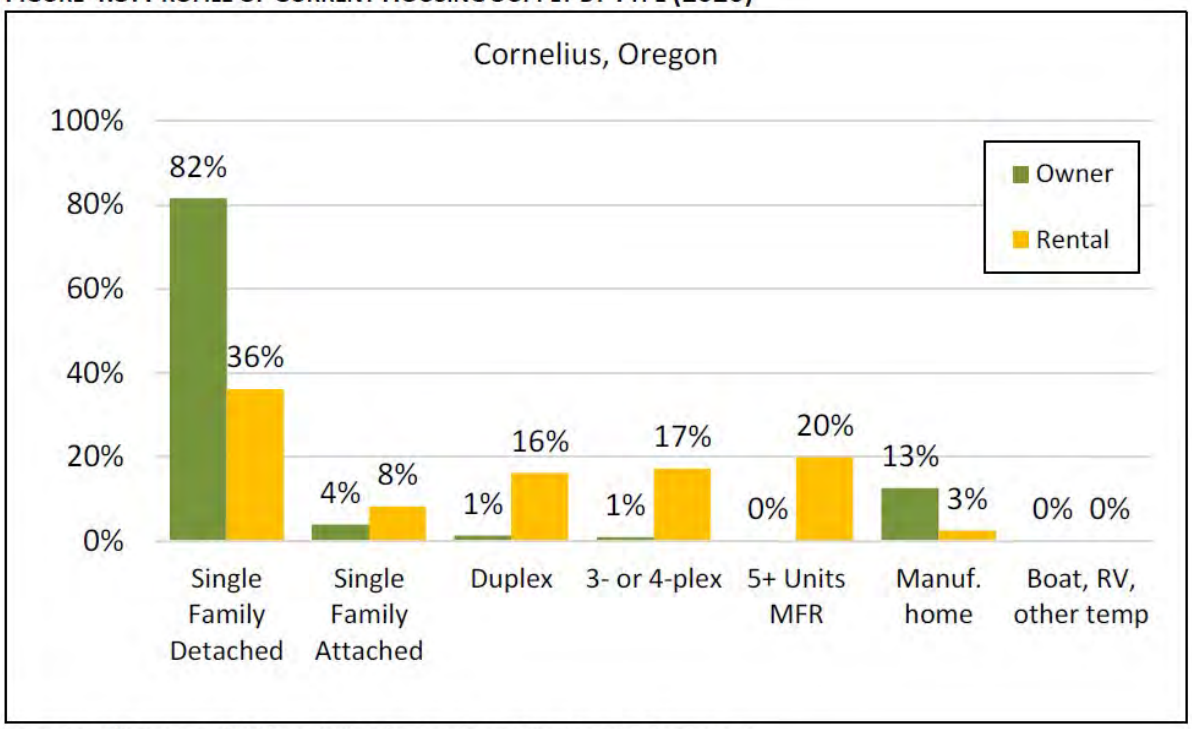
FIGURE 4.1: CURRENT HOUSING PROFILE (2020)

CURRENT HOUSING CONDITIONS (2020)			SOURCE
Total 2020 Population:	12,265		PSU Pop. Research Center
- Estimated group housing population:	167	(1.4% of Total)	US Census
Estimated Non-Group 2020 Population:	**12,098**	(Total - Group)	
Avg. HH Size:	3.42		US Census
Estimated Non-Group 2020 Households:	**3,537**	(Pop/HH Size)	
Total Housing Units:	**3,718**	(Occupied + Vacant)	Census 2010 + permits
Occupied Housing Units:	3,537	(= # of HH)	
Vacant Housing Units:	181	(Total HH - Occupied)	
Current Vacancy Rate:	4.9%	(Vacant units/ Total units)	

Sources: Johnson Economics, City of Cornelius, PSU Population Research Center, U.S. Census

*This table reflects population, household and housing unit projections shown in Figure 2.1

FIGURE 4.3: PROFILE OF CURRENT HOUSING SUPPLY BY TYPE (2020)



Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

Current and Projected Housing Needs

Following is a brief summary of current and projected housing needs in Cornelius, along with accompanying tables and charts, as described in the Housing Needs Analysis prepared for the City in 2020. Additional information related to current and projected housing needs can be found in that document, which is a supporting document of the Comprehensive Plan.

- **Current Housing Needs:**
  - A comparison of estimated current housing demand with the existing supply identifies the existing discrepancies between needs and the housing which is currently available. The estimated number of units outnumbers the number of households by roughly 180 units, indicating an average vacancy rate of 5%.
  - In general, the 2020 analysis indicates that there is support for more ownership housing at both lower and higher price ranges. This is because most housing in Cornelius is clustered at the low-middle to middle property values, while analysis of household incomes and ability to pay indicates that some households could afford housing at higher price points.
  - The analysis finds that the current market rates for most rental units are in the $700 to $1,600/month range. Therefore, this is where most of the rental unit supply is clustered. However, the greatest unmet need is found at the lowest end of the income scale, where many current renters pay more than 30% of their income in housing costs. There is an indication that some renter households could support more units at higher rental levels. Rentals at more expensive levels generally represent single family homes for rent.

- **Projected Housing Needs:**
  The projected future (20-year) housing profile in the study area is based on the current housing profile (2020), multiplied by an assumed projected future household growth rate. The projected future growth is the forecasted 2040 population for the City of Cornelius included in the most recent Metro Urban Growth analysis and Regional Transportation Plan analysis (1.8%).

  This profile of future housing demand was compared to the current housing inventory to determine the total future need for new housing units by type and price range (see Figure 5.3).

  - The results show a need for 1,854 new housing units by 2040.
  - Of the new units needed, roughly 51% are projected to be ownership units, while 49% are projected to be rental units. This represents more renters than the estimated tenure split, but it is projected that more rental units will be needed to address future needs for a greater proportion of rental units, given demographic and housing market trends, including age and income characteristics of future residents.
  - There is some new need for ownership housing at the low-end of the pricing spectrum. But income trends suggest that the greatest demand will remain in the middle and upper-middle price ranges ($200k to $400k). This is because some of the city's current housing is found at lower value levels due to age and condition. Therefore, there may be support for some units at higher price points. The $250,000 to $350,000 price point (in current dollars) is projected to remain the greatest share of demand.
  - The greatest need for rental units is found at the lowest and some higher price points. Market rents are currently clustered in the $700 to $1,600 range in current dollars. Therefore, most units are to be found in this range. There is insufficient rental housing for the lowest income households making $25,000 or less, and there may also be some support for higher rent units, which may be in new apartment complexes, townhomes or detached single-family homes for rent.

FIGURE 5.3: PROJECTED FUTURE NEED FOR NEW HOUSING UNITS (2040), CORNELIUS

OWNERSHIP HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	719	64	30	8	0	118	0	939	50.7%
Percentage:	76.5%	6.9%	3.2%	0.9%	0.0%	12.5%	0.0%	100%	

RENTAL HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	211	93	167	175	246	23	0	915	49.3%
Percentage:	23.1%	10.2%	18.2%	19.1%	26.9%	2.5%	0.0%	100%	

TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	

Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

Comparison of Projected Need and Buildable Land Supply

There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).

- The results find sufficient capacity for all housing types in the three housing categories: low-density housing; medium -density housing; and higher-density housing. The estimated "surplus" land capacity in each of these categories is fairly similar, ranging from 248 to 296 of each, with acreage surpluses ranging from 19 to 32 acres (see Figure 6.3).
- Under recently adopted state rules (HB2001, 2019), Cornelius as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit "cottage cluster" developments. At the same time, there is capacity in the MDR zones to accommodate demand for most of these attached types as well.
- These findings assume that under newly adopted state rules, 2% of available buildable parcels in the LDR zone will be used for the various types of attached units (single-family attached townhomes, duplex – fourplex). This amounts to a total of 42 attached units, plus 930 detached units in the LDR zone.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	159.4	1,220	7.7	972	248	32
Med-Density	SF attached; Manufact. home; 2-4 plexes	108.5	906	8.4	636	270	32
High-Density	Multi-family apartments	35.7	542	15.2	246	296	19
	TOTALS:	*303.5*	*2,668*	*8.8*	1,854	814	84

Sources: Angelo Planning Group, Johnson Economics

More detail on these findings is included in the "Housing and Residential Land Needs Assessment Report" and the Buildable Lands Inventory (BLI) maps prepared for the city.

Strategies to Accommodate Future Housing Needs

The City can consider a variety of other strategies in the future to provide opportunities for a wide range of housing choices, efficient land use, and development of housing affordable to people with low and moderate incomes. Potential strategies are summarized in the following table and described in more detail in the "*Housing Strategies Report"* prepared by the City as part of its Housing Needs Analysis project in 2020-2021. The ability to implement specific strategies will largely depend on staffing and financial resources available to the City at any given time.

Strategy	Initial Priority
LAND SUPPLY STRATEGIES	
1. UGB Amendments and Planning Amend the city's UGB if the supply of land within the UGB cannot accommodate the amount needed for future development. Prior to pursuing an expansion, the City must consider measures to improve the efficiency of future land use within the existing boundary.	Planning: High Amendments: Low
2. Rezone Land Re-designate land from other residential designations and/or from commercial, industrial, or institutional designations if needed to meet specific housing needs, assuming there is an adequate supply of land available to meet non-residential needs. Also remove the R-10 zoning designation.	Rezone: Low Remove R-10: High

Strategy	Initial Priority
POLICY AND DEVELOPMENT CODE STRATEGIES	
3. Increase Allowed Density in Existing Zones Increase the allowed density or reduce the minimum allowed size of lots in one or more zones to allow for more compact development and/or a wider range of housing types in specific areas.	High / Low (depending on zone)
4. Facilitate "Missing Middle" Housing Types in All Residential Zones Allow duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing in a broader range of zones.	High
5. Promote Accessory Dwelling Units (ADUs) Update ADU standards to remove barriers; encourage development though reduced fees, exemptions from selected planning requirements, use of pre-approved site or building plans, or other measures. Balance with strategies to ensure that homeowners have adequate capacity to manage and afford ADUs.	High
6. Zoning Incentives for Affordable and Workforce Housing Create incentives for developers to provide a community benefit (such as affordable housing), in exchange for the ability to build a project that would not otherwise be allowed by the development code.	Medium
7. Streamline Off-Street Parking Requirements Reduce the number of required off-street parking spaces for certain types of housing, allow for credit for on-street spaces, and/or encourage shared parking in mixed use developments.	Low
INCENTIVES	
8. System Development Charge Exemptions or Deferrals Deferral of SDCs for affordable housing. Can be applied to regulated affordable housing and/or specific housing types (such as ADUs).	Medium
9. Tax Abatements Tax abatements are reductions in property taxes for housing and may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable or other desired housing types (such as mixed-use).	Medium
10. Land Use Permit Fee Reductions Reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), in order to reduce the upfront cost of development.	Medium
11. Expedited Development Review Strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff.	Low
FUNDING SOURCES AND PROGRAMS	
12. Tax Increment Financing (TIF)	High

Strategy	Initial Priority
TIF is a funding mechanism in which future tax revenues in targeted development or redevelopment areas are diverted to finance infrastructure improvements and/or development—potentially including affordable and/or market-rate housing.	
13. Land Acquisition and Banking Land acquisition is a tool to secure sites for affordable housing. Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be used for affordable housing.	High
14. Construction Excise Tax (CET) A one-time tax on new construction of between 1% and 3% to help pay for affordable housing strategies identified here. State law requires it to be spent on specific types of programs and activities.	Low
15. Public-Private Partnerships (PPPs) and Community Land Trusts Arrangements between public and private entities to create more and/or affordable housing. PPPs can promote a variety of affordable housing programs or projects and include partnerships from multiple entities (public, private, and non-profit), including Community Land Trusts.	Medium
16. Financial Assistance Programs A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.	Low

POLICIES

1. Ensure that adequate land is available to meet the housing needs of current and future Cornelius residents.
2. Promote and encourage a variety of housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race.
3. Employ strategies that support the Fair Housing Act and affirmatively further fair housing.
4. Provide the opportunity for a wider range of rental and ownership housing choices in Cornelius, including additional middle housing types, such as duplexes, triplexes, quadplexes, townhouses, and cottage clusters, in low- and medium-density zones.
5. Allow and support the development of Accessory Dwelling Units in all residential zones as required by State law.
6. Encourage residential uses mixed with other compatible uses in the same building or on the same site within the City's mixed-use zones.
7. Support the maintenance and development of manufactured homes as an affordable housing choice in appropriate locations.
8. Promote and encourage open spaces and buffers in new subdivisions and other housing developments.
9. Develop minimum density standards that comply with regional mandates.

10. Continue to maintain and expand partnerships with non-profit housing developers and other affordable housing providers and agencies that preserve or provide new low- to moderate-income housing units, create opportunities for first-time homeownership, and help vulnerable homeowners maintain and stay in their homes.
11. Encourage maintenance and rehabilitation of the existing housing stock, including through support for local or regional programs and partner organizations.
12. Work with other jurisdictions as well as regional and state agencies to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.
13. Encourage development of residential land within the Urban Growth Boundary at densities and for housing types consistent with those identified in the City's *Housing Needs Analysis*.
14. Ensure that the city has an adequate housing supply with enough land to support the community's growth.

IMPLEMENTATION ACTIONS

1. All subdivision requests within the Urban Growth Boundary shall be reviewed administratively to ensure policy enforcement. The Planning Commission will determine the suitability of developments outside the City limits but within the urban growth boundary through master planning. The subdivision process shall be divided into two steps. Preliminary plats and final plats shall be reviewed administratively. If a subdivision request involves a discretionary decision it shall be reviewed at a public hearing before the Planning Commission.
2. The City shall seek to accommodate the full scope of the population and employment allocations assigned to Cornelius by METRO and Washington County.
3. The City will work with the Washington County Housing Authority, non-profit housing developers, other affordable housing providers, and appropriate federal and state agencies in identifying and providing for housing at various rent and price ranges to ensure low- and moderate-income needs are appropriately addressed.
4. The City will work with METRO in implementing its Housing Goals and Objectives.
5. The City will prepare, regularly monitor, and periodically update an inventory of buildable residential land and prepare and update Housing Production Strategies to provide a sufficient amount of residential land to accommodate residential growth, consistent with state requirements.

EXHIBIT "B"

CITY OF CORNELIUS, OR

HOUSING AND RESIDENTIAL LAND NEEDS ASSESSMENT
(OREGON STATEWIDE PLANNING GOAL 10)

20-YEAR HOUSING NEED
2020 - 2040

January 2021

JOHNSON ECONOMICS

Acknowledgments

Johnson Economics prepared this report for the City of Cornelius. Johnson Economics and the City of Cornelius thank the many people who helped to develop this document.

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This report was prepared in accordance with the requirements of OAR 660 Division 8: Interpretation of Goal 10 Housing. This project is funded by the State of Oregon through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

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TABLE OF CONTENTS

I. INTRODUCTION

This analysis outlines a forecast of housing need within the City of Cornelius. Housing need and resulting land need are forecast to 2040 consistent with 20-year need assessment requirements of Oregon Revised Statutes.[1] This report presents a housing need analysis (presented in number and types of housing units) and a residential land need analysis, based on those projections.

The primary data sources used in generating this forecast were:

- Portland State University Population Research Center
- Metro
- U.S. Census
- Environics Analytics Inc.[2]
- Oregon Employment Department
- City of Cornelius
- Washington County
- Other sources are identified as appropriate.

This analysis relies heavily on Census data from both the Decennial Census, and the American Community Survey (ACS). Generally, data from the ACS has a larger statistical margin of error than the 10-year Census. This analysis relies whenever possible on the most recent ACS 5-year estimates. The 5-year estimates have the lowest margin of error in comparison to the ACS 3-year and 1-year estimates. All Census data feature some margin of error but remain the best source of data available on many demographic and housing subjects.

II. CITY OF CORNELIUS DEMOGRAPHIC PROFILE

SUMMARY

The following table (Figure 2.1) presents a profile of City of Cornelius demographics from the 2000 and 2010 Census. It also reflects the estimated population of this area as of 2019 from PSU estimates, forecasted forward to 2020 using the growth rate since 2010.

- Cornelius is a City of roughly 12,300 people (City) located mostly in Washington County near the western edge of the Portland metropolitan area.
- Based on the UGB population, Cornelius is the 42nd largest city in the state by population, similar in size to other the regional cities of St. Helens and Gladstone. Cornelius is roughly half the population of neighboring Forest Grove, and a tenth the population of Hillsboro to the east.
- Cornelius has experienced strong growth, growing an estimated 27% since 2000. In contrast, Washington County as a whole saw higher growth of 38%, while the state population grew by 23%. (US Census and PSU Population Research Center)
- Cornelius was home to an estimated 3,540 households in 2020, an increase of 660 households since 2000. The percentage of families has fallen slightly from 78% of all households in 2000 to 76% in 2020. The city has a larger share of family households than Washington County (66%) and the state (63%). Average household size is estimated to have fallen during this period but remains high compared to the county.

[1] ORS 197.628; OAR 660-025

[2] Environics Analytics Inc. is a third-party company providing data on demographics and market segmentation. It licenses data from the Nielson Company which conducts direct market research including surveying of households across the nation. Nielson combines proprietary data with data from the U.S. Census, Postal Service, and other federal sources, as well as local-level sources such as Equifax, Vallassis and the National Association of Realtors. Projections of future growth by demographic segments are based on the continuation of long-term and emergent demographic trends identified through the above sources.

- Cornelius's estimated average household size is 3.42 persons. This is significantly higher than the Washington County average of 2.62 and greater than the statewide average of 2.47.

FIGURE 2.1: CORNELIUS DEMOGRAPHIC PROFILE

POPULATION, HOUSEHOLDS, FAMILIES, AND YEAR-ROUND HOUSING UNITS					
	2000 (Census)	2010 (Census)	Growth 00-10	2020 (PSU)	Growth 10-20
Population[1]	9,652	11,869	23%	12,265	3%
Households[2]	2,880	3,277	14%	3,537	8%
Families[3]	2,245	2,501	11%	2,685	7%
Housing Units[4]	3,003	3,467	15%	3,718	7%
Group Quarters Population[5]	116	162	40%	167	3%
Household Size (non-group)	*3.31*	*3.51*	6%	*3.42*	-3%
Avg. Family Size	*3.64*	*3.88*	7%	*3.84*	-1%
PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000 (Census)	2010 (Census)	Growth 00-10	2020 (Proj.)	Growth 10-20
Per Capita ($)	na	$16,739	na	$22,110	32%
Median HH ($)	na	$47,768	na	$62,786	31%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

1 From PSU Population Research Center, growth rate 2000-2019 extended to 2020

2 2020 Households = (2020 population - Group Quarters Population)/2020 HH Size

3 Ratio of 2020 Families to total HH is based on 2018 ACS 5-year Estimates

4 2020 housing units are the '10 Census total plus new units permitted from '10 through '20 (source: Census, City)

5 Ratio of 2020 Group Quarters Population to Total Population is kept constant from 2010.

A. POPULATION GROWTH

Since 2000, Cornelius has grown by roughly 2,600 people within the UGB, or 27% in 20 years. This was less than the countywide rate of growth. In comparison, the population of Forest Grove grew by an estimated 42% during this period.

B. HOUSEHOLD GROWTH & SIZE

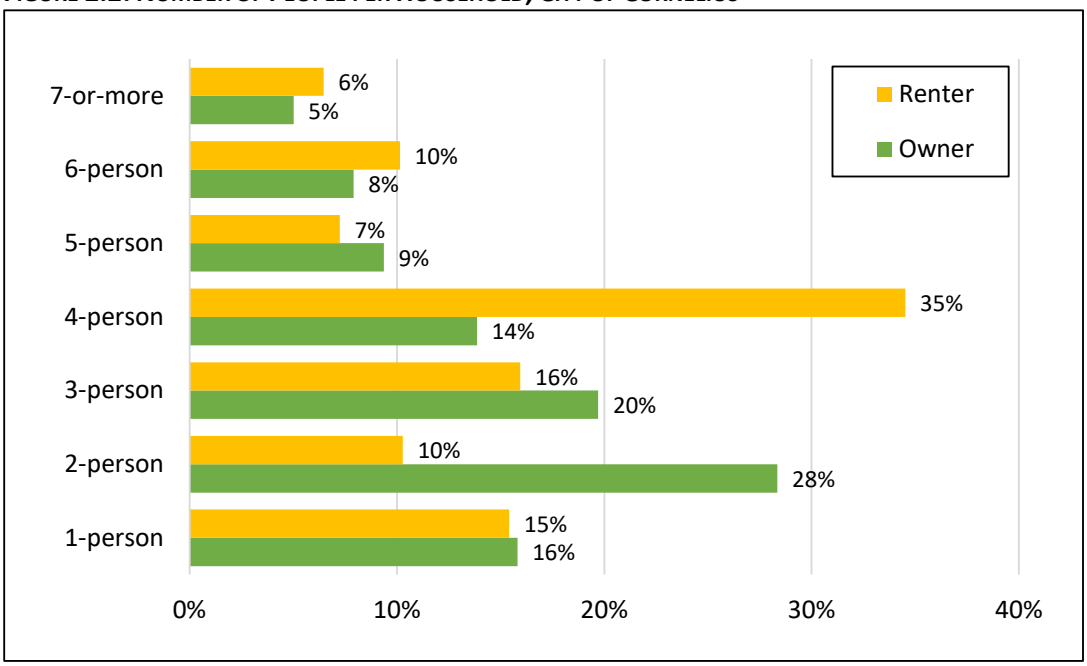
As of 2020, the city has an estimated 3,540 households. Since 2000, Cornelius has added an estimated 660 households. This is an average of roughly 32 households annually during this period. The growth since 2000 has roughly kept pace with the growth in new housing units, which have been permitted at the rate of roughly 35 units per year.

There has been a general trend in Oregon and nationwide towards declining household size as birth rates have fallen, more people have chosen to live alone, and the Baby Boomers have become empty nesters. While this trend of diminishing household size is expected to continue nationwide, there are limits to how far the average can fall.

Cornelius's average household size of 3.4 people, with 76% family households, is still much higher than Washington County (2.62; 66%).

Figure 2.2 shows the share of households by the number of people for renter and owner households in 2018 (latest data available), according to the Census. Renter households are more likely to have four persons, or larger family sizes. Owner households are more likely to have two persons or three persons. Household size correlates to housing needs.

FIGURE 2.2: NUMBER OF PEOPLE PER HOUSEHOLD, CITY OF CORNELIUS



SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: B25009 (2018 ACS 5-yr Estimates)

C. FAMILY HOUSEHOLDS

As of the 2010 Census, 76% of Cornelius households were family households, slightly lower than 2000 (78%). But the total number of family households in Cornelius is estimated to have grown by roughly 440 since 2000. The Census defines family households as two or more persons, related by marriage, birth or adoption and living together. In 2020, family households in Cornelius had an average size of 3.8 people.

D. GROUP QUARTERS POPULATION

The City of Cornelius has an estimated group quarters population of 1.4% of the total population, or 167 persons. Group quarters include such shared housing situations as nursing homes, prisons, dorms, group residences, military housing, or shelters. For the purposes of this analysis, these residents are removed from the estimated population total, before determining the amount of other types of housing that are needed for non-group households. (The share of group quarters population is assumed to remain steady over the 20-year forecast period.)

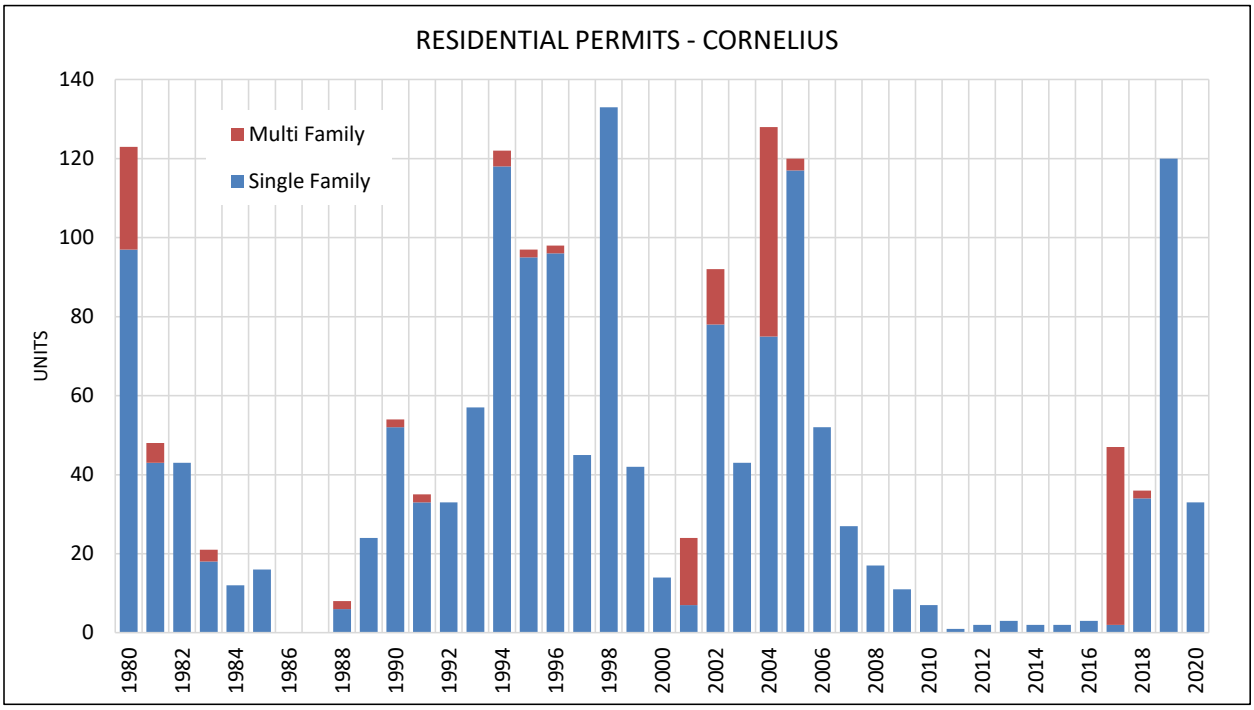
E. HOUSING UNITS

Data from the City of Cornelius and the US Census indicate that the city added roughly 715 new housing units since 2000, representing 24% growth in the housing stock. This number of new units is slightly higher than the growth in new households estimated during the same period (660), indicating that housing growth has kept pace with growing need.

As of 2020, the city had an estimated housing stock of roughly 3,718 units for its 3,537 estimated households. This translates to an estimated average vacancy rate of 4.9%.

Residential Permits: The city of Cornelius has accounted for just over 1% of the total county residential permits since 2000. An average of 35 units have been permitted annually since 2000, with 17% being multi-family units.

FIGURE 2.3: HISTORIC AND PROJECTED RESIDENTIAL PERMITS, CITY OF CORNELIUS

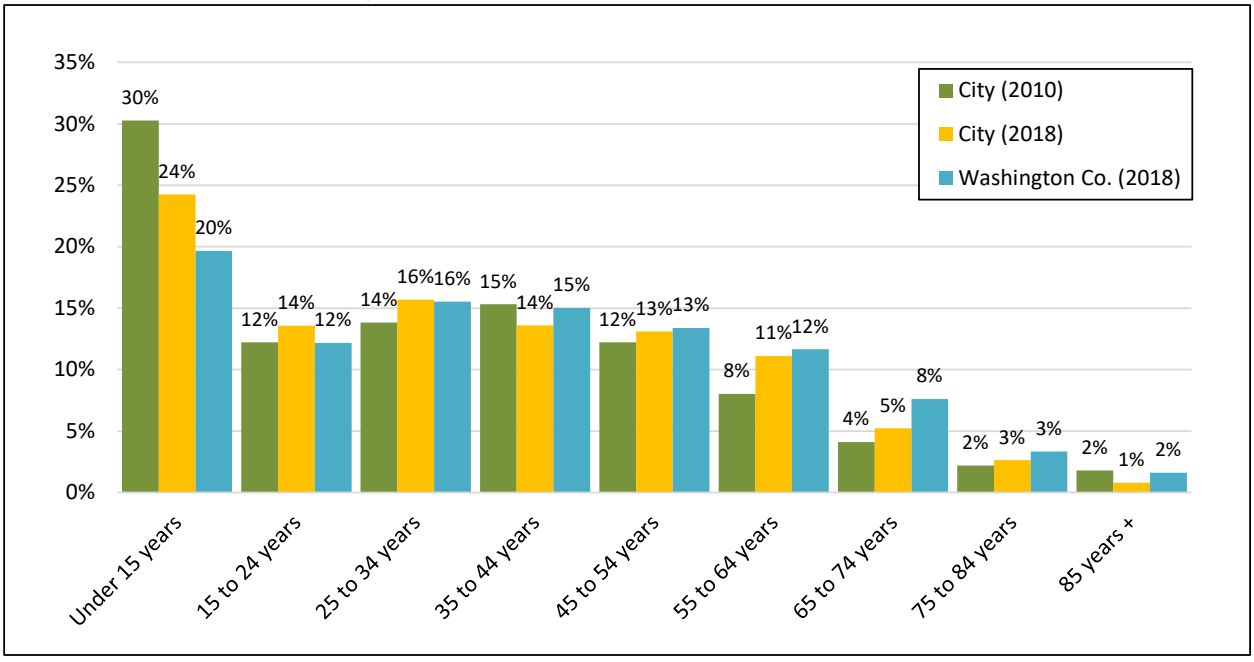


SOURCE: HUD

F. AGE TRENDS

The following figure shows the share of the population falling in different age cohorts between the 2000 Census and the most recent 5-year American Community Survey estimates. As the chart shows, there is a general trend for middle age and young cohorts to fall as share of total population, while older cohorts have grown in share. This is in keeping with the national trend caused by the aging of the Baby Boom generation. Overall, Cornelius has a younger population than the county, with a greater share of children.

FIGURE 2.4: AGE COHORT TRENDS, 2000 - 2018

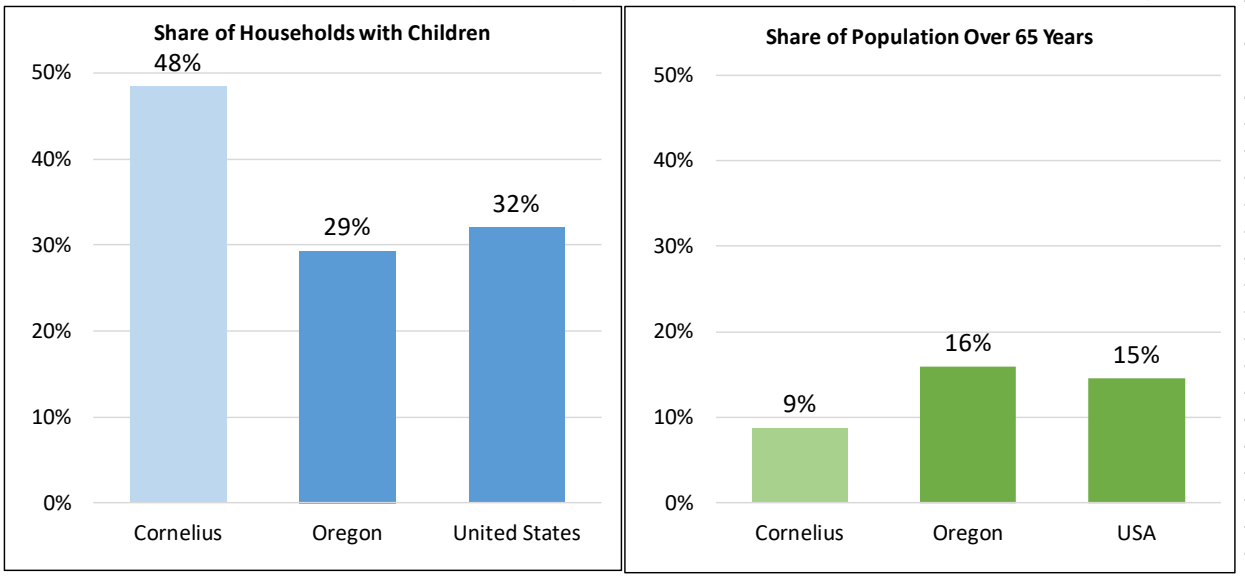


SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: QT-P1 (2000); S0101 (2018 ACS 5-yr Estimates)

- The cohorts which grew the most in share during this period were those aged 55 to 74 years. Still, an estimated 91% of the population is under 65 years of age.
- In the 2018 ACS, the local median age was an estimated 32 years, compared to 38 years in Oregon.

Figure 2.5 presents the share of households with children, and the share of population over 65 years for comparison. Compared to state and national averages, Cornelius has a higher share of households with children. At 9%, the share of population over 65 is much lower than the state and national figures.

FIGURE 2.5: SHARE OF HOUSEHOLDS WITH CHILDREN/ POPULATION OVER 65 YEARS (CORNELIUS)



SOURCE: US Census, JOHNSON ECONOMICS LLC
Census Tables: B11005; S0101 (2018 ACS 5-yr Estimates)

G. INCOME TRENDS

The following figure presents data on Cornelius's income trends. (2000 Census data on income is not available for Cornelius.)

FIGURE 2.6: INCOME TRENDS, 2000 – 2020

PER CAPITA AND MEDIAN HOUSEHOLD INCOME					
	2000 (Census)	2010 (Census)	Growth 00-10	2020 (Proj.)	Growth 10-20
Per Capita ($)	na	$16,739	na	$22,110	32%
Median HH ($)	na	$47,768	na	$62,786	31%

SOURCE: Census, PSU Population Research Center, and Johnson Economics

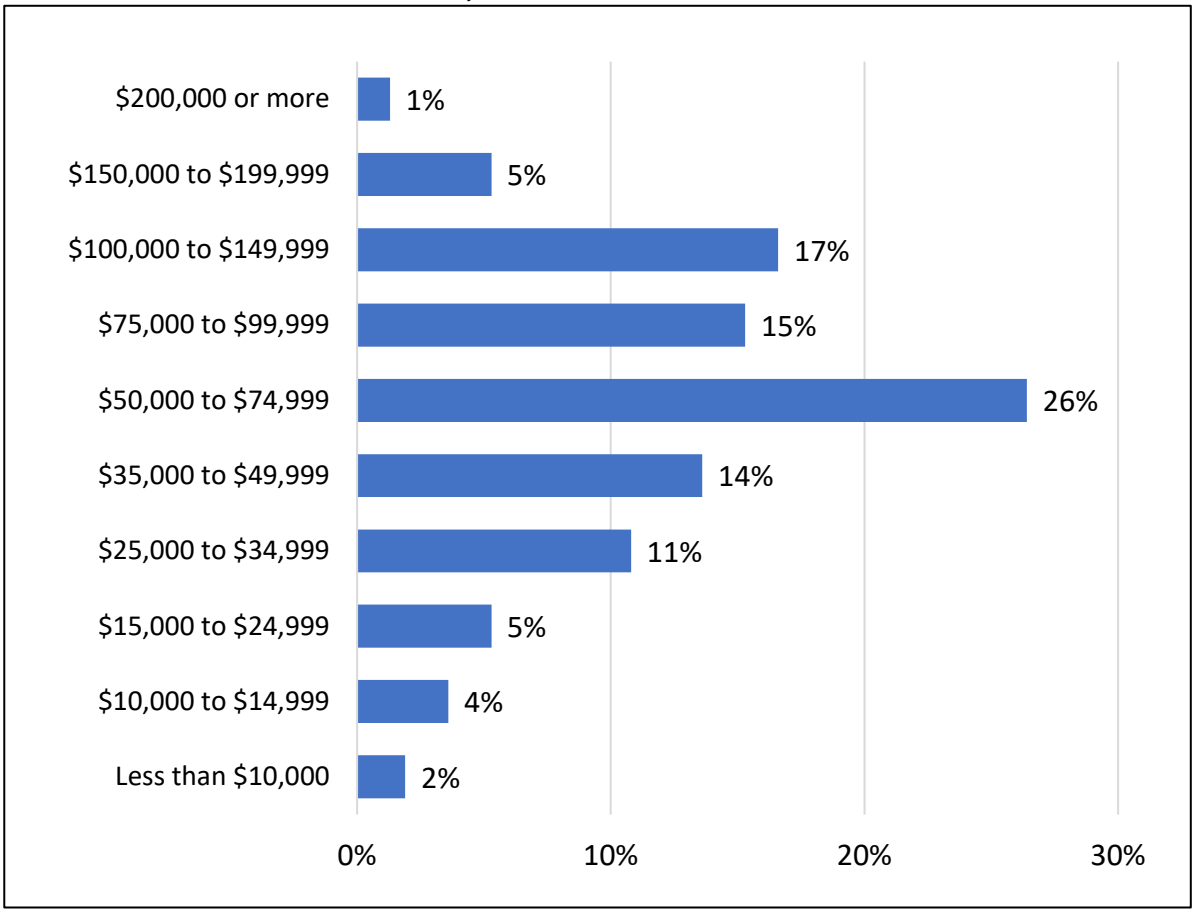
Census Tables: DP-1 (2000, 2010); DP-3 (2000); S1901; S19301

- Cornelius's estimated median household income was $63,000 in 2020. This is 24% lower than the Washington County median of $83,000, but still well above the statewide median of $56,000.
- Cornelius's per capita income is roughly $22,000.
- Median income has grown an estimated 32% between 2010 and 2019, in real dollars. Inflation was an estimated 18% over this period, so the local median income has well exceeded inflation. This is not the case in many regions and nationally, where income growth has not kept pace with inflation.

Figure 2.7 presents the estimated distribution of households by income as of 2018. The largest income cohorts are those households earning between $50k and $75k, followed by households earning between $75,000 and $149,000. Fifty-five percent of households earn between $35,000 and $100,000.

- 35% of households earn less than $50k per year, while 65% of households earn $50k or more.
- 11% of households earn less than $25k per year.

FIGURE 2.7: HOUSEHOLD INCOME COHORTS, 2018



SOURCE: US Census, Census Tables: S1901 (2018 ACS 5-yr Est.)

H. POVERTY STATISTICS

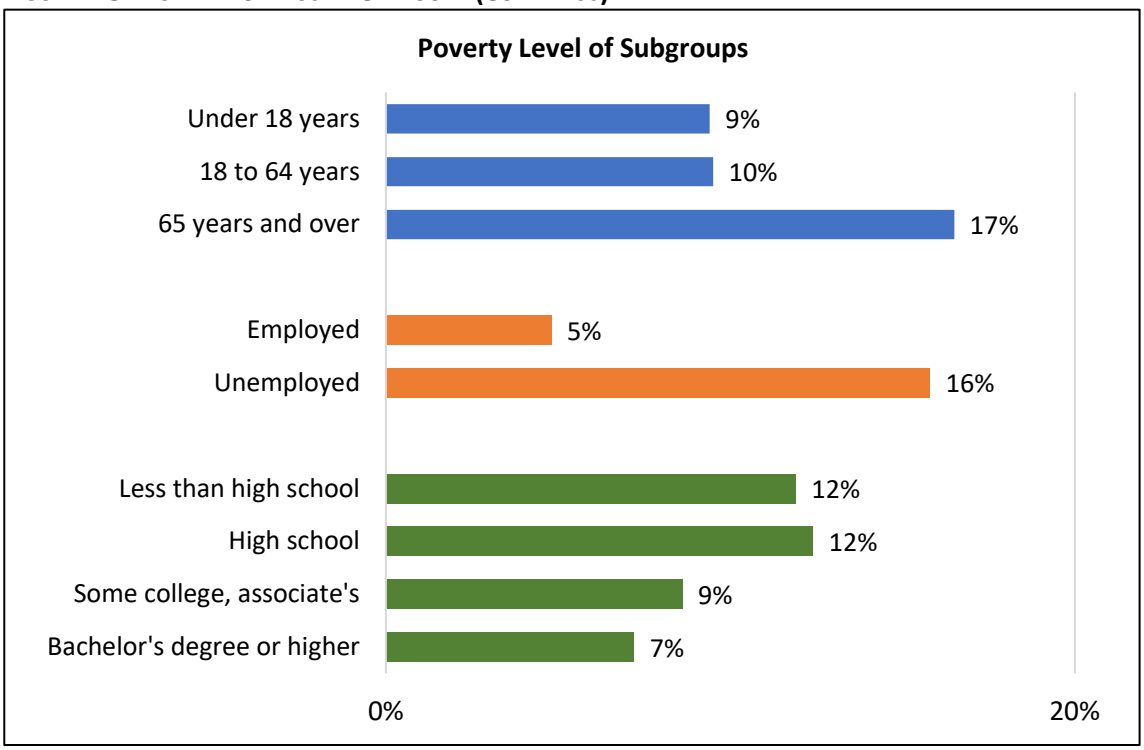
According to the US Census, the official poverty rate in Cornelius is an estimated 10% over the most recent period reported (2018 5-year estimates).[3] This is roughly 1,250 individuals in Cornelius. In comparison, the official poverty rate in Washington County is 9%, and at the state level is 17%. In the 2014-18 period:

- The Cornelius poverty rate is highest among those over 65 years of age at 17%. The rate is 10% among those between 18 and 64 years of age. The estimated rate is lowest for children at 9%.
- For those without a high school diploma, and with only a high school diploma, the poverty rate is 12%.
- Among those who are employed the poverty rate is 5%, while it is 16% for those who are unemployed.

Information on affordable housing is presented in Section II F of this report.

[3] Census Tables: S1701 (2018 ACS 5-yr Estimates)

FIGURE 2.8: POVERTY STATUS BY CATEGORY (CORNELIUS)



SOURCE: US Census
Census Tables: S1701 (2018 ACS 5-yr Est.)

I. EMPLOYMENT LOCATION TRENDS

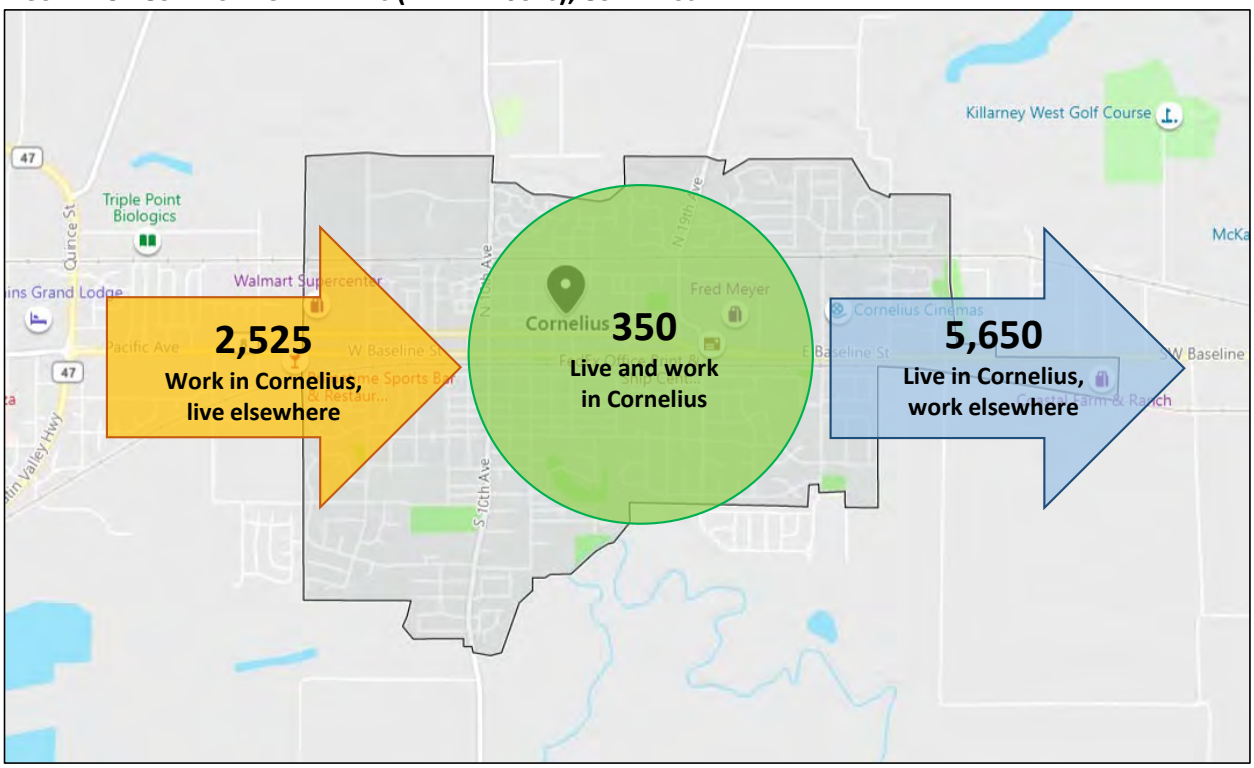
This section provides an overview of employment and industry trends in Cornelius that are related to housing.

Commuting Patterns: The following figure shows the inflow and outflow of commuters to Cornelius according to the Census Employment Dynamics Database. These figures reflect "covered employment" as of 2017, the most recent year available. (Covered employment refers to those jobs where the employee is covered by federal unemployment insurance.) This category does not include many contract employees and self-employed and therefore is not a complete picture of local employment. The figure discussed here is best understood as indicators of the general pattern of commuting and not exact figures.

As of 2017, the most recent year available, the Census estimated there were roughly 2,870 covered employment jobs located in Cornelius. Of these, an estimated 350 or 12%, are held by local residents, while over 2,500 employees commute into the city from elsewhere. This pattern is fairly common among most communities. The most common homes of local workers commuting into the city are Hillsboro and Forest Grove.

Of the estimated 5,985 employed Cornelius residents, 94% of them commute elsewhere to employment. The most common destinations for Cornelius commuters are Hillsboro, Portland and Beaverton. Smaller shares work elsewhere in the Portland metro or in the mid-Willamette Valley.

FIGURE 2.9: COMMUTING PATTERNS (PRIMARY JOBS), CORNELIUS



Source: US Census Longitudinal Employer-Household Dynamics

Jobs/Household Ratio: Cornelius features a fairly-low jobs-to-households ratio. There are an estimated 2,875 jobs in the city of Cornelius (including covered and non-covered), and an estimated 3,537 households in Cornelius. This represents 0.8 jobs per household. There is no standard jobs-to-households ratio that is right for all communities, but it can provide a guide to the balance between employment uses and residential uses in the city.

There is an average of 1.7 jobs held for each Cornelius households, a majority of which are located outside the city.

III. CURRENT HOUSING CONDITIONS

This section presents a profile of the current housing stock and market indicators in Cornelius. This profile forms the foundation to which current and future housing needs will be compared.

A. HOUSING TENURE

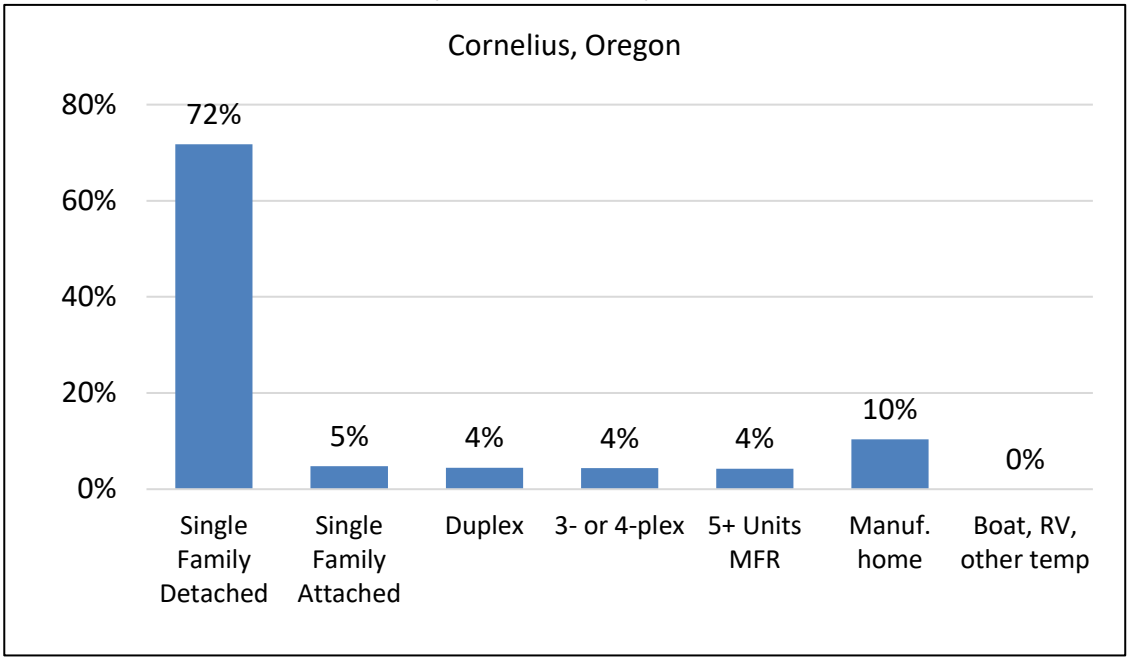
Cornelius has a much greater share of homeowner households than renter households. The 2018 American Community Survey estimates that 79% of occupied units were owner occupied, and only 21% renter occupied. The ownership rate has risen since 2000 (72%). During this period the statewide rate fell from 64% to 61%. Nationally, the homeownership rate has fallen towards the historical average of 65%, after having climbed to 69% from the late 1990's to 2004.

The estimated ownership rate is much lower across Washington County (62%) and statewide (61%).

B. HOUSING STOCK

As shown in Figure 2.1, Cornelius had an estimated 3,718 housing units in 2020, with a vacancy rate of 4.9% (includes ownership and rental units). The housing stock has increased by roughly 715 units since 2000, or growth of 24%.

FIGURE 3.1: ESTIMATED SHARE OF UNITS, BY PROPERTY TYPE, 2018



SOURCE: US Census, City of Cornelius

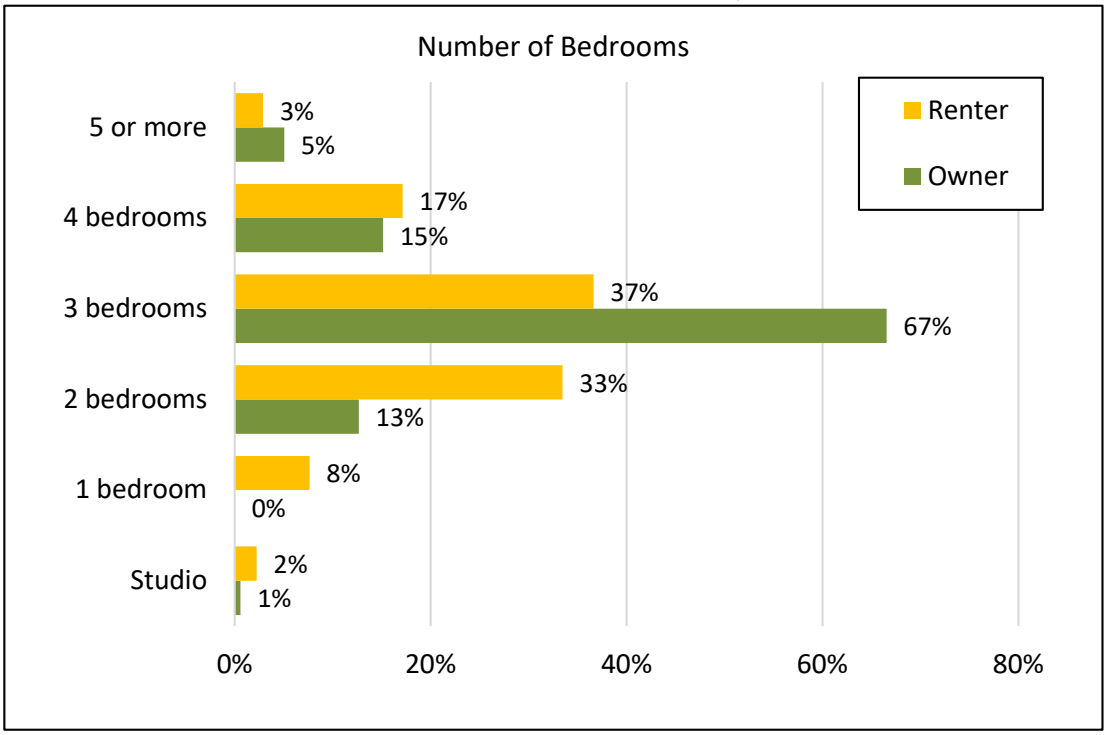
Figure 3.1 shows the estimated number of units by type in 2020 based on US Census. Detached single-family homes represent an estimated 72% of housing units.

Units in larger apartment complexes of 5 or more units represent only 4% of units, and other types of attached homes represent 13% of units. (Attached single family generally includes townhomes, some condos, and 2 to 4-plexes which are separately metered.) Manufactured homes represent 10% of the inventory.

C. NUMBER OF BEDROOMS

Figure 3.2 shows the share of units for owners and renters by the number of bedrooms they have. In general, owner-occupied units are much more likely to have three or more bedrooms, while renter-occupied units are much more likely to have three or fewer bedrooms.

FIGURE 3.2: NUMBER OF BEDROOMS FOR OWNER AND RENTER UNITS, 2018



SOURCE: US Census
Census Tables: B25042 (2018 ACS 5-year Estimates)

D. UNIT TYPES BY TENURE

As Figure 3.3 and 3.4 show, a large share of owner-occupied units (82%) are detached homes, which is related to why owner-occupied units tend to have more bedrooms, as do manufactured homes (13%). Renter-occupied units are much more distributed among a range of structure types. About 39% of rented units are estimated to be detached homes or manufactured homes, while the remainder are some form of attached unit. Nearly 20% of rental units are in larger apartment complexes.

FIGURE 3.3: CURRENT INVENTORY BY UNIT TYPE, FOR OWNERSHIP AND RENTAL HOUSING

OWNERSHIP HOUSING

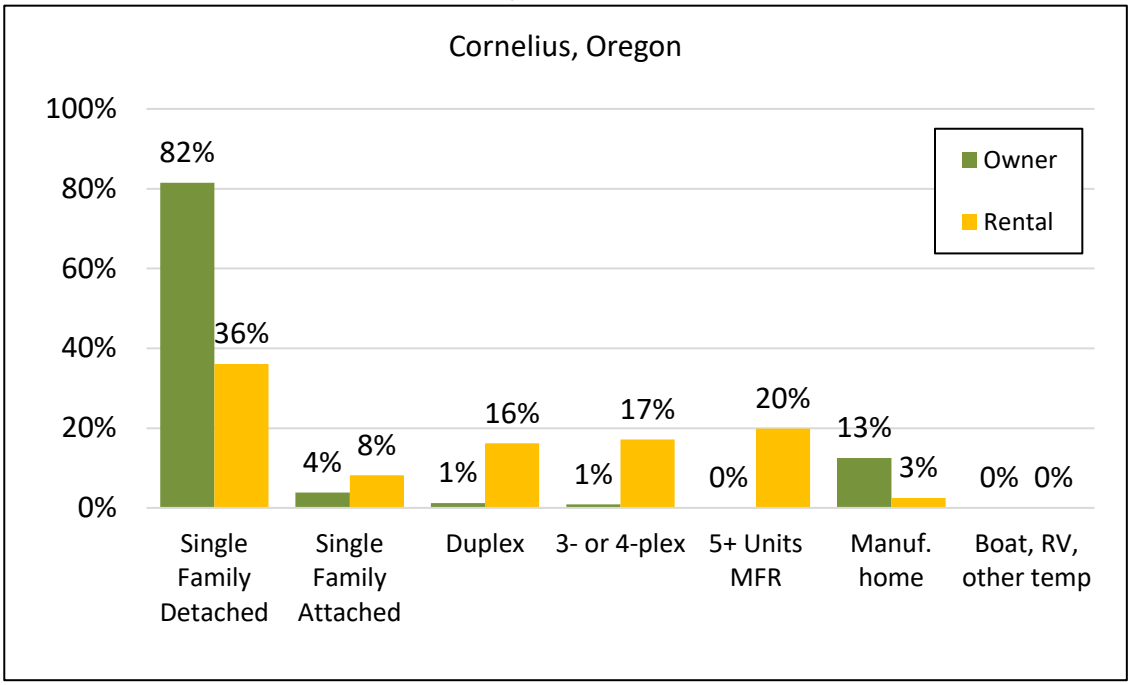
OWNERSHIP HOUSING								
Price Range	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	2,377	113	36	25	0	366	0	2,917
Percentage:	81.5%	3.9%	1.2%	0.9%	0.0%	12.5%	0.0%	100%

RENTAL HOUSING

RENTAL HOUSING								
Price Range	Single Family Detached	Single Family Attached	Duplex	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units
Totals:	289	65	130	137	159	20	0	801
Percentage:	36.1%	8.2%	16.2%	17.1%	19.9%	2.5%	0.0%	100%

Sources: US Census, JOHNSON ECONOMICS, CITY OF CORNELIUS

FIGURE 3.4: CURRENT INVENTORY BY UNIT TYPE, BY SHARE

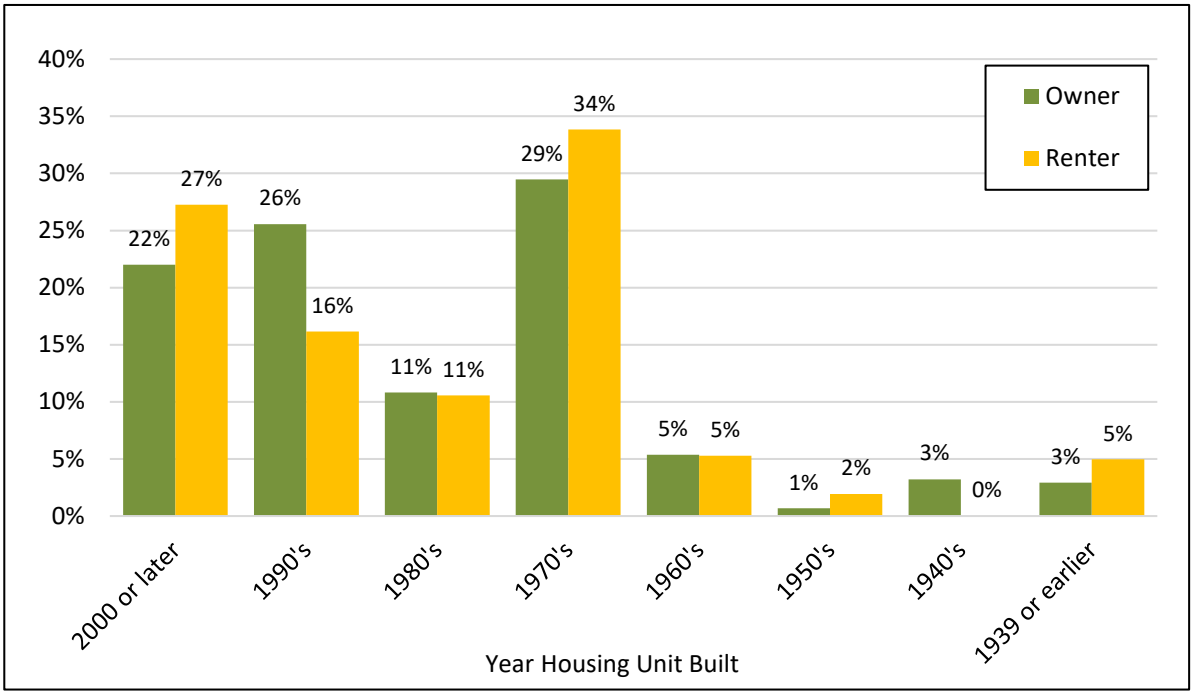


Sources: US Census, JOHNSON ECONOMICS, CITY OF CORNELIUS

E. AGE AND CONDITION OF HOUSING STOCK

Cornelius's housing stock reflects the pattern of development over time. Almost three-fourths, or 74%, of the housing stock is pre-2000 with the remainder being post-2000. The single largest share of housing stock was built in the 1970's. Only 12% of the housing stock dates from the 1960's or earlier, which is low compared to many Oregon communities.

FIGURE 3.5: AGE OF UNITS FOR OWNERS AND RENTERS



SOURCE: US Census
Census Tables: B25036 (2018 ACS 5-year Estimates)

- Unfortunately, good quantitative data on housing condition is generally unavailable without an intensive on-site survey of all local housing that is beyond the scope of this analysis. Census categories related to housing condition are ill-suited for this analysis, dealing with such issues as units without indoor plumbing, which was more common in the mid-20th Century, but is an increasingly rare situation. Age of units serves as the closest reliable proxy for condition with available data.
- For ownership units, older homes may be in poor condition, but are also more likely to have undergone some repair and renovation over the years. Rental units are more likely to degrade steadily with age and wear-and-tear, and less likely to receive sufficient reinvestment to keep them in top condition, though this is not universally true.

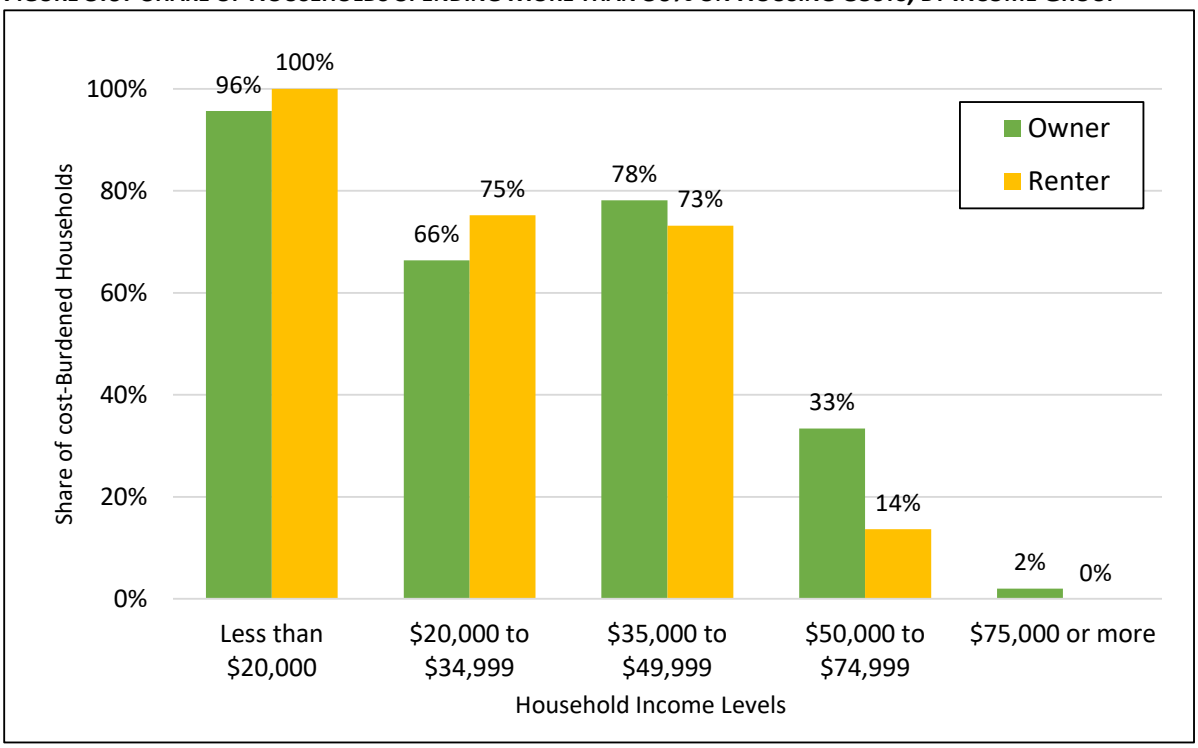
F. HOUSING COSTS VS. LOCAL INCOMES

Figure 3.6 shows the share of owner and renter households who are paying more than 30% of their household income towards housing costs, by income segment. (Spending 30% or less on housing costs is a common measure of "affordability" used by HUD and others, and in the analysis presented in this report.)

As one would expect, households with lower incomes tend to spend more than 30% of their income on housing, while incrementally fewer of those in higher income groups spend more than 30% of their incomes on housing costs. Of those earning less than $20,000, an estimated 96% of owner households spend more than 30% of income on housing costs and 100% of renters.

In total, the US Census estimates that over 36% of Cornelius households pay more than 30% of income towards housing costs (2018 American Community Survey, B25106)

FIGURE 3.6: SHARE OF HOUSEHOLDS SPENDING MORE THAN 30% ON HOUSING COSTS, BY INCOME GROUP



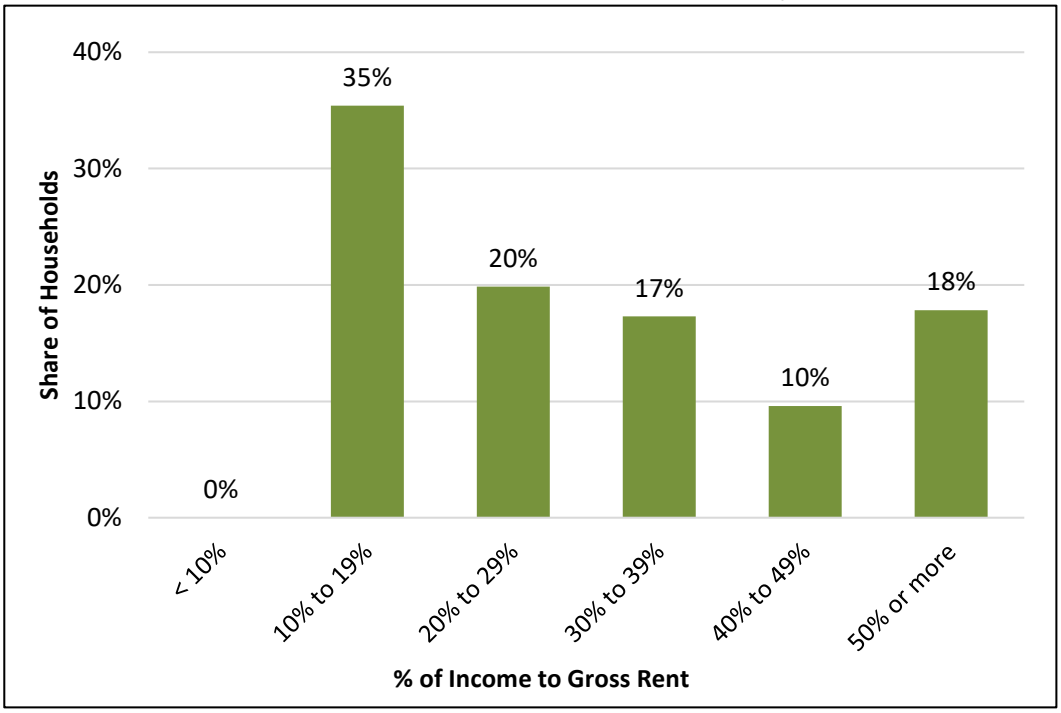
Sources: US Census, JOHNSON ECONOMICS
Census Table: B25106 (2018 ACS 5-yr Estimates)

Housing is generally one of a household's largest living costs, if not the largest. The ability to find affordable housing options, and even build wealth through ownership, is one of the biggest contributors to helping lower income households save and build wealth. Even if renting, affordable housing costs, allow for more household income to be put to other needs, including saving.

The following figures shows the percentage of household income spent towards gross rent[4] for local renter households only. This more fine-grained data shows that not only are 45% of renters spending more than 30% of their income on gross rent, but an estimated 18% of renters are spending 50% or more of their income on housing and are considered severely rent-burdened.

Renters are disproportionately lower income relative to homeowners. Housing cost burdens are felt more broadly for these households, and as the analysis presented in a later section shows there is a need for more affordable rental units in Cornelius, as in most communities.

FIGURE 3.7: PERCENTAGE OF HOUSEHOLD INCOME SPENT ON GROSS RENT, CORNELIUS RENTER HOUSEHOLDS



Sources: US Census, JOHNSON ECONOMICS
Census Table: B25070 (2018 ACS 5-yr Estimates)

G. PUBLICLY ASSISTED HOUSING

Cornelius has an estimated 79 rent-subsidized housing units, found in 12 properties, according to Oregon Housing and Community Development (OHCS). These properties are funded through HUD programs, tax credits and other programs which guarantee subsidized rents for qualified households. This includes the recently completed Cornelius Place, which features 45 affordable senior housing units.

The estimated 79 subsidized housing units in Cornelius represents 2% of total local households, and 8% of local renter households. The high number of renters paying over 30% of their income towards housing costs indicates that there is an ongoing need for rental units at the lowest price points.

Agricultural Worker Housing: Cornelius is home to one property that provides 20 units dedicated to agricultural workers (included in the above total). This population may also be served by other available affordable units.

Homelessness: The most recent (2019) Point-in-Time count of homeless individuals in Washington County[5] found 503 homeless individuals on the streets, in shelters, or other temporary and/or precarious housing; this includes 81 children. Of these, 298 were sheltered, and 232 were unsheltered.

[4] The Census defines Gross Rent as "the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else)." Housing costs for homeowners include mortgage, property taxes, insurance, utilities and condo or HOA dues.

[5] Figures are for the entire County

H. STUDENT HOUSEHOLDS

The neighboring city of Forest Grove is home to Pacific University, a private liberal arts college with nearly 2,000 undergraduate and graduate students. As with many universities, most upperclassmen tend to live off campus in a variety of housing options in the Forest Grove and Cornelius areas. The university does not track the exact numbers of Pacific students living in Cornelius. The 2018 ACS estimates that there are 655 enrolled college students in the community. 76% of these are estimated to be enrolled in public colleges, including community college, and public distance learning. 23% are enrolled in private college, including Pacific University. College students who live on their own are more likely to have low incomes and be renters. These are captured in the estimates of current housing needs in the next section.

IV. CURRENT HOUSING NEEDS (CITY OF CORNELIUS)

The profile of current housing conditions in the study area is based on Census 2010, which the Portland State University Population Research Center (PRC) uses to develop yearly estimates through 2019. The 2019 estimate is forecasted to 2020 using the estimated growth rate realized since 2010.

FIGURE 4.1: CURRENT HOUSING PROFILE (2020)

CURRENT HOUSING CONDITIONS (2020)			SOURCE
Total 2020 Population:	12,265		PSU Pop. Research Center
- Estimated group housing population:	167	(1.4% of Total)	US Census
Estimated Non-Group 2020 Population:	**12,098**	(Total - Group)	
Avg. HH Size:	3.42		US Census
Estimated Non-Group 2020 Households:	**3,537**	(Pop/HH Size)	
Total Housing Units:	**3,718**	(Occupied + Vacant)	Census 2010 + permits
Occupied Housing Units:	3,537	(= # of HH)	
Vacant Housing Units:	181	(Total HH - Occupied)	
Current Vacancy Rate:	4.9%	(Vacant units/ Total units)	

Sources: Johnson Economics, City of Cornelius, PSU Population Research Center, U.S. Census

*This table reflects population, household and housing unit projections shown in Figure 2.1

We estimate a current population of roughly 12,265 residents, living in 3,537 households (excluding group living situations). Average household size is 3.4 persons.

There are an estimated 3,715 housing units in the city, indicating an estimated vacancy rate of 4.9%. This includes units vacant for any reason, not just those which are currently for sale or rent.

ESTIMATE OF CURRENT HOUSING DEMAND

Following the establishment of the current housing profile, the current housing demand was determined based upon the age and income characteristics of current households.

The analysis considered the propensity of households in specific age and income levels to either rent or own their home (tenure), in order to derive the current demand for ownership and rental housing units and the appropriate housing cost level of each. This is done by combining data on tenure by age and tenure by income from the Census American Community Survey (tables: B25007 and B25118, 2018 ACS 5-yr Estimates).

The analysis takes into account the average amount that owners and renters tend to spend on housing costs. For instance, lower income households tend to spend more of their total income on housing, while upper income households spend less on a percentage basis. In this case, it was assumed that households in lower income bands would *prefer* housing costs at no more than 30% of gross income (a common measure of affordability). Higher income households pay a decreasing share down to 20% for the highest income households.

While the Census estimates that most low-income households pay more than 30% of their income for housing, this is an estimate of current *preferred* demand. It assumes that low-income households prefer (or demand) units affordable to them at no more than 30% of income, rather than more expensive units.

Figure 4.2 presents a snapshot of current housing demand (i.e. preferences) equal to the number of households in the study area (3,537). The breakdown of tenure (owners vs. renters) reflects data from the 2018 ACS.

FIGURE 4.2: ESTIMATE OF CURRENT HOUSING DEMAND (2020)

Ownership				
Price Range	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0k - $80k	97	Less than $15,000	3.7%	3.7%
$80k - $130k	114	$15,000 - $24,999	4.4%	8.1%
$130k - $180k	115	$25,000 - $34,999	4.4%	12.5%
$180k - $230k	391	$35,000 - $49,999	15.0%	27.6%
$230k - $340k	591	$50,000 - $74,999	22.7%	50.3%
$340k - $430k	420	$75,000 - $99,999	16.2%	66.4%
$430k - $510k	310	$100,000 - $124,999	11.9%	78.3%
$510k - $590k	215	$125,000 - $149,999	8.3%	86.6%
$590k - $750k	230	$150,000 - $199,999	8.8%	95.5%
$750k +	118	$200,000+	4.5%	100.0%
Totals:	**2,602**		**% of All:**	**73.6%**

Rental				
Rent Level	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0 - $400	90	Less than $15,000	9.6%	9.6%
$400 - $700	95	$15,000 - $24,999	10.2%	19.7%
$700 - $900	182	$25,000 - $34,999	19.5%	39.2%
$900 - $1100	91	$35,000 - $49,999	9.8%	49.0%
$1100 - $1600	170	$50,000 - $74,999	18.2%	67.1%
$1600 - $2000	168	$75,000 - $99,999	18.0%	85.1%
$2000 - $2400	72	$100,000 - $124,999	7.7%	92.8%
$2400 - $2800	30	$125,000 - $149,999	3.2%	96.0%
$2800 - $3500	25	$150,000 - $199,999	2.7%	98.7%
$3500 +	13	$200,000+	1.3%	100.0%
Totals:	**935**		**% of All:**	**26.4%**

All Households
3,537

Sources: PSU Population Research Center, Environics Analytics., Census, JOHNSON ECONOMICS
Census Tables: B25007, B25106, B25118 (2018 ACS 5-yr Estimates)
Environics Analytics: Estimates of income by age of householder

The estimated home price and rent ranges are irregular because they are mapped to the affordability levels of the Census income level categories. For instance, an affordable home for those in the lowest income category (less than $15,000) would have to cost $80,000 or less. Affordable rent for someone in this category would be $400 or less.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5% (significantly more than the current rate, but in line with historic norms), with 15% down payment. These assumptions are designed to represent prudent lending and borrowing levels for ownership households. The 30-year mortgage commonly serves as the standard. In the 2000's, down payment requirements fell significantly, but standards have tightened somewhat since the 2008/9 credit crisis. While 20% is often cited as the standard for most buyers, it is common for homebuyers, particularly first-time buyers, to pay significantly less than this using available programs.

Interest rates are subject to disruption from national and global economic forces, and therefore impossible to forecast beyond the short term. The 5% used here is roughly the average 30-year rate over the last 20 years. The general trend has been falling interest rates since the early 1980's, but coming out of the recent recession, many economists believe that rates cannot fall farther and must begin to climb as the Federal Reserve raises its rate over the coming years.

During the 2020 Covid-19 emergency, the Federal Reserve has again cut their benchmark funds rate to near zero, which has reduced mortgage rates moderately, but not dramatically. The economic uncertainty has the effect of making lenders more cautious, and this can balance the effect of a lower federal rate.

CURRENT HOUSING INVENTORY

The profile of current housing demand (Figure 4.2) represents the preference and affordability levels of households. In reality, the current housing supply (Figures 4.3 and 4.4 below) differs from this profile, meaning that some households may find themselves in housing units which are not optimal, either not meeting the household's own/rent preference, or being unaffordable (requiring more than 30% of gross income).

A profile of current housing supply in Cornelius was estimated based on permit data from the City of Cornelius and Census data from the most recently available 2018 ACS, which provides a profile of housing types (single family, attached, manufactured home, etc.), tenure, housing values, and rent levels. The 5-year estimates from the ACS were used because 3-year and 1-year estimates are not yet available for Cornelius geography.

- An estimated 78% of housing units are ownership units, while an estimated 22% of housing units are rental units. This is different than the estimated demand profile shown in Figure 4.2, which estimated a somewhat higher demand for rental units. This is likely due to the high number of mobile homes in the community. These households would normally tend to rent in many communities, but are able to own homes in Cornelius, due to the higher stock of affordable options. The inventory includes vacant units.

- 82% of ownership units are detached homes, and 13% are manufactured homes. Thirty-nine percent of rental units are either single family homes or manufactured homes, while 20% are in structures of 5 units or more.

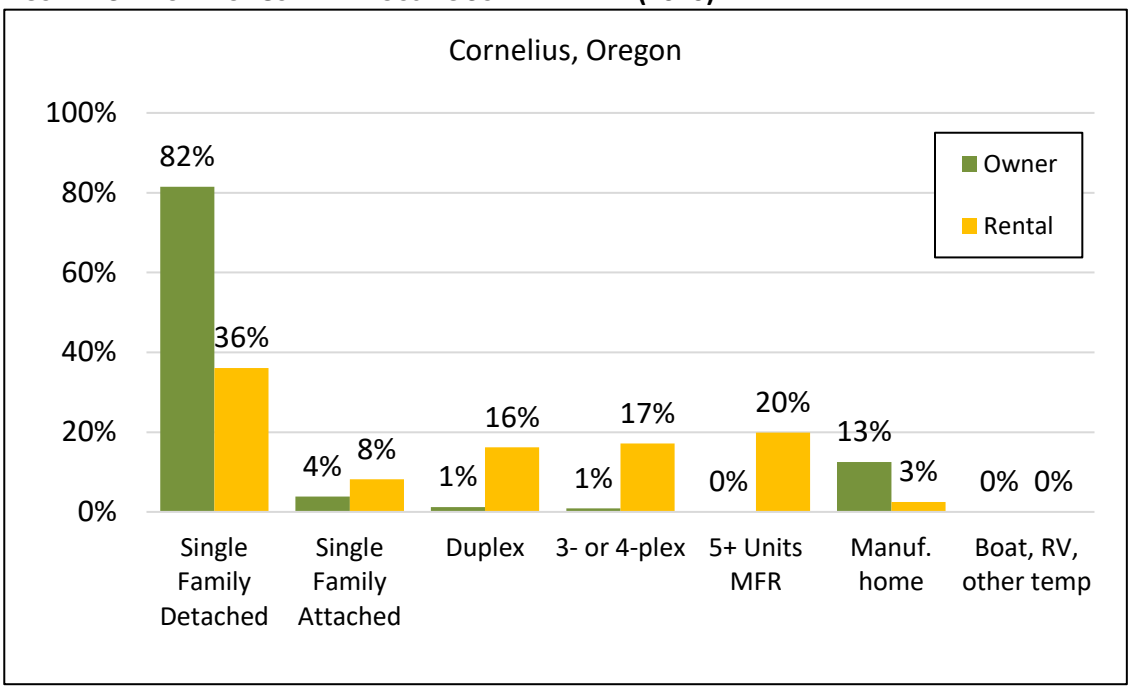
- Of total housing units, an estimated 72% are detached homes, and 10% are manufactured homes. Eighteen percent are some sort of attached unit type. There are also a small share of households living in RV units.

- The affordability of different unit types is an approximation based on Census data on the distribution of housing units by value (ownership) or gross rent (rentals).

- Most subsidized affordable housing units found in the city are represented by the inventory at the lowest end of the rental spectrum.

- Ownership housing found at the lower end of the value spectrum generally reflect mobile homes, older, smaller homes, or homes in poor condition on small or irregular lots. **It is important to note that these represent estimates of current *property value or current housing cost to the owner*, not the current market pricing of homes for sale in the city.** These properties may be candidates for redevelopment when next they sell but are currently estimated to have low value.

FIGURE 4.3: PROFILE OF CURRENT HOUSING SUPPLY BY TYPE (2020)



Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

FIGURE 4.4: PROFILE OF CURRENT HOUSING SUPPLY, ESTIMATED AFFORDABILITY (2020)

Income Range	Ownership Housing		Rental Housing		Share of Total Units
	Affordable Price Level	Estimated Units	Affordable Rent Level	Estimated Units	
Less than $15,000	$0k - $80k	354	$0 - $400	37	11%
$15,000 - $24,999	$80k - $130k	22	$400 - $700	12	1%
$25,000 - $34,999	$130k - $180k	322	$700 - $900	214	14%
$35,000 - $49,999	$180k - $230k	587	$900 - $1100	183	21%
$50,000 - $74,999	$230k - $340k	1,107	$1100 - $1600	209	35%
$75,000 - $99,999	$340k - $430k	363	$1600 - $2000	81	12%
$100,000 - $124,999	$430k - $510k	95	$2000 - $2400	30	3%
$125,000 - $149,999	$510k - $590k	22	$2400 - $2800	21	1%
$150,000 - $199,999	$590k - $750k	44	$2800 - $3500	15	2%
$200,000+	$750k +	2	$3500 +	0	0%
	78%	2,917	22%	801	0% 10% 20% 30% 40%

Sources: US Census, PSU Population Research Center, JOHNSON ECONOMICS
Census Tables: B25004, B25032, B25063, B25075 (2018 ACS 5-yr Estimates)

COMPARISON OF CURRENT HOUSING DEMAND WITH CURRENT SUPPLY

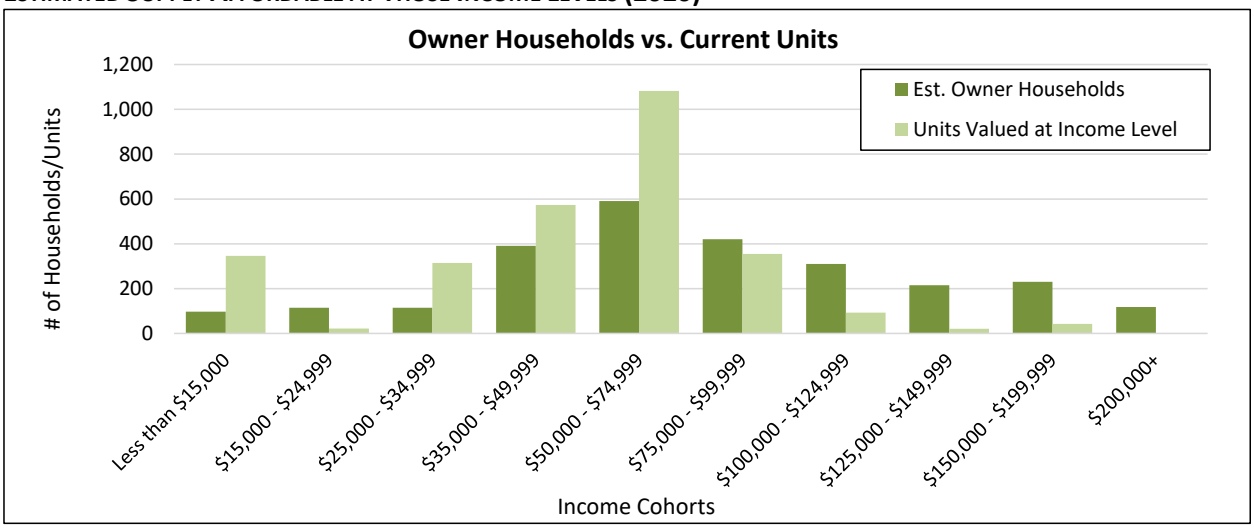
A comparison of estimated current housing *demand* with the existing *supply* identifies the existing discrepancies between needs and the housing which is currently available. The estimated number of units outnumbers the number of households by roughly 180 units, indicating an average vacancy rate of 5%.

In general, this identifies that there is currently support for more ownership housing at both lower and higher price ranges. This is because most housing in Cornelius is clustered at the low-middle to middle property values, while analysis of household incomes and ability to pay indicates that some households could afford housing at higher price points.

The analysis finds that the current market rates for most rental units are in the $700 to $1,600/month range. Therefore, this is where most of the rental unit supply is currently clustered. However, the greatest unmet need is found at the lowest end of the income scale, where many current renters pay more than 30% of their income in housing costs. There is an indication that some renter households could support more units at higher rental levels. Rentals at more expensive levels generally represent single family homes for rent.

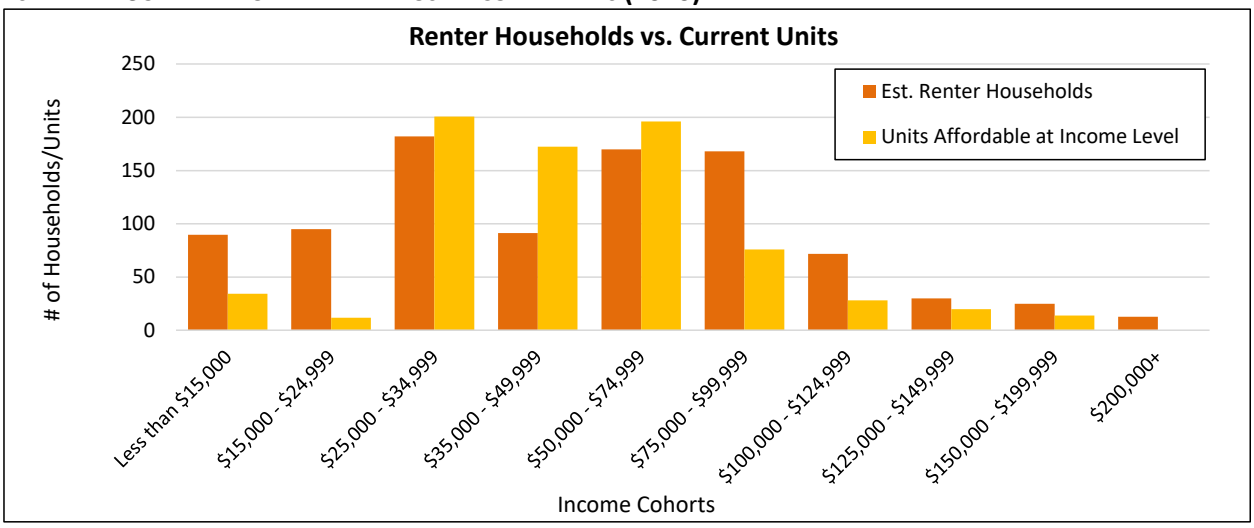
Figures 4.5 and 4.6 present this information in chart form, comparing the estimated number of households in given income ranges, and the supply of units currently valued (ownership) or priced (rentals) within those income ranges. The data is presented for owner and renter households.

FIGURE 4.5: COMPARISON OF OWNER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of Cornelius, Census, JOHNSON ECONOMICS

FIGURE 4.6: COMPARISON OF RENTER HOUSEHOLD INCOME GROUPS TO ESTIMATED SUPPLY AFFORDABLE AT THOSE INCOME LEVELS (2020)



Sources: PSU Population Research Center, City of Cornelius, Census, JOHNSON ECONOMICS

The home value and rent segments which show a "surplus" in Figures 4.5 and 4.6 illustrate where current property values and market rent levels are in Cornelius. Housing prices and rent levels will tend to congregate around those levels. These levels will be too costly for some (i.e. require more than 30% in gross income) or "too affordable" for others (i.e. they have income levels that indicate they could afford more expensive housing if it were available).

In general, these findings demonstrate that there are some lower-value housing opportunities for many owner households, and potential support for some more expensive ownership housing. There is a need for more rental units at lower rent levels (<$700/mo.), and modest support for some rental units at higher rent levels as well.

HOME SALE PRICES

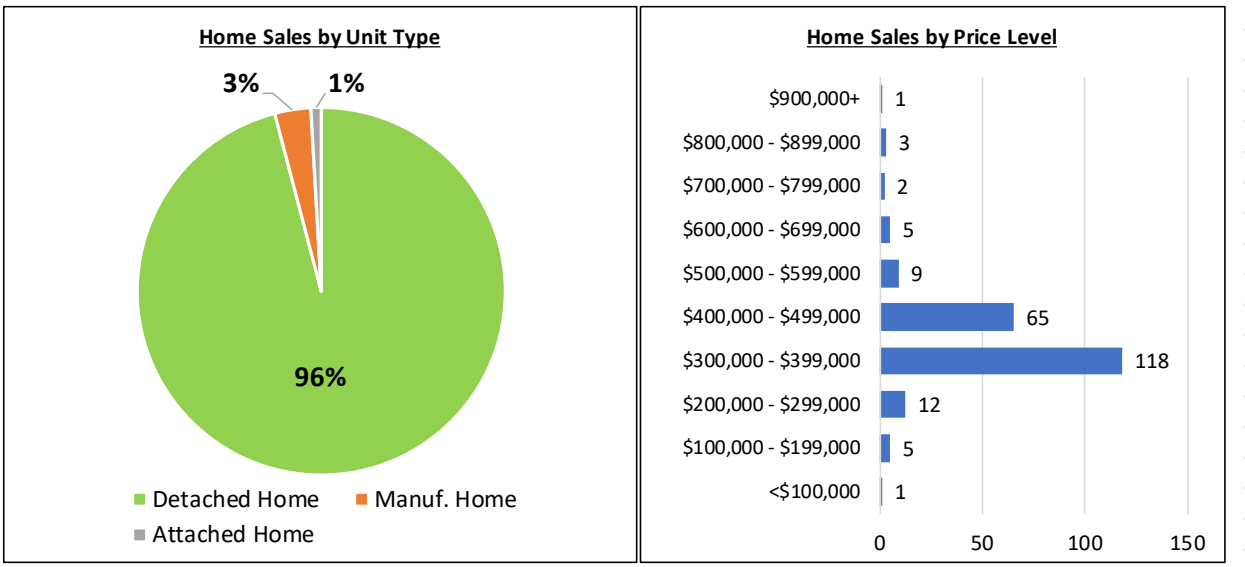
It is important to note that the figures presented in the prior section represent estimates of current *property value or current housing cost to the owner*, not the current market pricing of homes for sale in the city. For instance, a household living in a manufactured home that has been paid off over many years may have relatively low housing costs. This indicates that one owner household is living in a "lower value" unit. It does **not** indicate that units at this price point are available on the current market.

If this hypothetical household were to sell their home, it would sell at a higher price reflecting inflation and current achievable market prices. For this reason, many of the lower value or lower rent units found in the previous section will actually become higher-priced units when they are sold or become vacant.

For reference, this section presents home sales data from 2019 to indicate housing costs for new entrants into the market (Figure 4.7).

- The median sale price was $380,000.
- The average (mean) sale price was $400,000.
- The average price per square foot was $220/s.f.
- The median square footage was 1,675 s.f.

FIGURE 4.7: CORNELIUS HOME SALES (12 MONTHS)



Sources: RMLS, JOHNSON ECONOMICS

- 5.5% of sales were priced between $200,000 and $299,000.
- 53% of sales were priced between $300,000 and $399,000.
- 38.5% of sales were priced at $400,000 or more.
- 3% of sales were priced below $200,000.

Affordability: As indicated, 88% of recent sales in Cornelius took place within the $200,000 to $500,000 price range. Homes in this range should be affordable to many households earning from roughly $45,000 to $125,000 per year. An estimated 55% of local households fall within these income segments.

Roughly 28% of households earn less than $45,000 per year, meaning that the bulk of housing supply on the current for-sale market is likely too expensive for most of these households.

* * *

The findings of current need form the foundation for projected future housing need, presented in the following section.

V. FUTURE HOUSING NEEDS - 2040 (CITY OF CORNELIUS)

The projected future (20-year) housing profile (Figure 5.1) in the study area is based on the current housing profile (2020), multiplied by an assumed projected future household growth rate. The projected future growth is the forecasted 2040 population for the City of Cornelius included in the most recent Metro Urban Growth analysis and Regional Transportation Plan analysis (1.8%).

FIGURE 5.1: FUTURE HOUSING PROFILE (2040)

PROJECTED FUTURE HOUSING CONDITIONS (2020 - 2040)			SOURCE
2020 Population (Minus Group Pop.)	12,098		PSU
Projected Annual Growth Rate	1.8%	Metro UGR Forecast Program	Metro
2040 Population (Minus Group Pop.)	17,188	(Total 2040 Population - Group Housing Pop.)	
Estimated group housing population:	244	Share of total pop. (1.4%)	US Census
Total Estimated 2040 Population:	**17,432**		
Estimated Non-Group 2040 Households:	**5,294**	(2040 Non-Group Pop./Avg. Household Size)	
New Households 2020 to 2040	1,756		
Avg. Household Size:	3.25	Projected household size	US Census
Total Housing Units:	**5,572**	Occupied Units plus Vacant	
Occupied Housing Units:	5,294	(= Number of Non-Group Households)	
Vacant Housing Units:	279	(= Total Units - Occupied Units)	
Projected Market Vacancy Rate:	5.0%	(Vacant Units/ Total Units)	

Sources: PSU Population Research Center, Metro, Census, JOHNSON ECONOMICS LLC
*Projections are applied to estimates of 2020 population, household and housing units shown in Figure 2.1

The model projects growth in the number of non-group households over 20 years of nearly 1,800 households, with accompanying population growth of 5,200 new residents. (The number of households differs from the number of housing units, because the total number of housing units includes a percentage of vacancy. Projected housing unit needs are discussed below.)

PROJECTION OF FUTURE HOUSING UNIT DEMAND (2040)

The profile of future housing demand was derived using the same methodology used to produce the estimate of current housing need. This estimate includes current and future households *but does not include a vacancy assumption*. *The vacancy assumption is added in the subsequent step.* Therefore, the need identified below is the total need for actual households in occupied units (5,294).

The analysis considered the propensity of households at specific age and income levels to either rent or own their home, in order to derive the future need for ownership and rental housing units, and the affordable cost level of each. The projected need is for *all* 2040 households and therefore includes the needs of current households.

The price levels presented here use the same assumptions regarding the amount of gross income applied to housing costs, from 30% for low income households down to 20% for the highest income households.

The affordable price level for ownership housing assumes 30-year amortization, at an interest rate of 5%, with 15% down payment. Because of the impossibility of predicting variables such as interest rates 20 years into the future,

these assumptions were kept constant from the estimation of current housing demand. Income levels and price levels are presented in 2020 dollars.

Figure 5.2 presents the projected occupied future housing demand (current and new households, without vacancy) in 2040.

FIGURE 5.2: PROJECTED OCCUPIED FUTURE HOUSING DEMAND (2040)

Ownership				
Price Range	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0k - $80k	132	Less than $15,000	3.6%	3.6%
$80k - $130k	156	$15,000 - $24,999	4.2%	7.8%
$130k - $180k	149	$25,000 - $34,999	4.1%	11.8%
$180k - $230k	548	$35,000 - $49,999	14.9%	26.7%
$230k - $340k	827	$50,000 - $74,999	22.4%	49.2%
$340k - $430k	603	$75,000 - $99,999	16.3%	65.5%
$430k - $510k	447	$100,000 - $124,999	12.1%	77.6%
$510k - $590k	315	$125,000 - $149,999	8.5%	86.2%
$590k - $750k	337	$150,000 - $199,999	9.1%	95.3%
$750k +	173	$200,000+	4.7%	100.0%
Totals:	**3,687**		**% of All:**	**69.6%**

Rental				
Rent Level	**# of Households**	**Income Range**	**% of Total**	**Cumulative**
$0 - $400	148	Less than $15,000	9.2%	9.2%
$400 - $700	158	$15,000 - $24,999	9.8%	19.0%
$700 - $900	295	$25,000 - $34,999	18.3%	37.4%
$900 - $1100	173	$35,000 - $49,999	10.7%	48.1%
$1100 - $1600	311	$50,000 - $74,999	19.4%	67.5%
$1600 - $2000	278	$75,000 - $99,999	17.3%	84.8%
$2000 - $2400	124	$100,000 - $124,999	7.7%	92.5%
$2400 - $2800	52	$125,000 - $149,999	3.3%	95.8%
$2800 - $3500	45	$150,000 - $199,999	2.8%	98.6%
$3500 +	23	$200,000+	1.4%	100.0%
Totals:	**1,607**		**% of All:**	**30.4%**

All Units
5,294

Sources: Census, Environics Analytics, JOHNSON ECONOMICS

The number of households across the income spectrum seeking a range of both ownership and rental housing is anticipated to grow. It is projected that the homeownership rate in Cornelius will fall somewhat over the next 20 years to 70%, which would be closer to, but still significantly higher than, the Washington County and statewide ownership rates.

The main reason for this is that the number of new mobile home units available as an inexpensive ownership choice is likely to be much lower among new development than it is in the current housing mix. The households that might own a mobile home are more likely to rent if these are not available. At the same time, development trends in the Metro area, and increasingly limited land for development, point to increased development of attached types of housing such as small plexes and multi-family housing. On balance, these housing types tend to accommodate more renters than owners.

COMPARISON OF FUTURE HOUSING DEMAND TO CURRENT HOUSING INVENTORY

The profile of occupied future housing demand presented above (Figure 5.2) was compared to the current housing inventory presented in the previous section to determine the total future need for *new* housing units by type and price range (Figure 5.3).

This estimate includes a vacancy assumption. As reflected by the most recent Census data, and as is common in most communities, the vacancy rate for rental units is typically higher than that for ownership units. An average vacancy rate of 5% is assumed for the purpose of this analysis.

FIGURE 5.3: PROJECTED FUTURE NEED FOR NEW HOUSING UNITS (2040), CORNELIUS

OWNERSHIP HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	719	64	30	8	0	118	0	939	50.7%
Percentage:	76.5%	6.9%	3.2%	0.9%	0.0%	12.5%	0.0%	100%	

RENTAL HOUSING									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	211	93	167	175	246	23	0	915	49.3%
Percentage:	23.1%	10.2%	18.2%	19.1%	26.9%	2.5%	0.0%	100%	

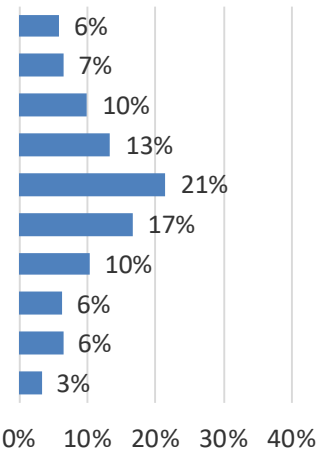
TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	

Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

- The results show a need for 1,854 new housing units by 2040.
- Of the new units needed, roughly 51% are projected to be ownership units, while 49% are projected to be rental units. This represents more renters than the estimated tenure split, but it is projected that more rental units will be needed to balance the disproportionate share of ownership units in the current inventory.
- There is some new need for ownership housing at the low-end of the pricing spectrum. But income trends suggest that the greatest demand will remain in the middle and upper-middle price ranges ($200k to $400k). This is because some of the city's current housing is found at lower value levels due to age and condition. Therefore, there may be support for some units at higher price points. The $250,000 to $350,000 price point (in current dollars) is projected to remain the greatest share of demand.
- The greatest need for rental units is found at the lowest and some higher price points. Market rents are currently clustered in the $700 to $1,600 range in current dollars. Therefore, most units are to be found in this range. There is insufficient rental housing for the lowest income households making $25,000 or less, and there may also be some support for higher rent units, which may be in new apartment complexes, townhomes or detached single-family homes for rent.

FIGURE 5.4: ESTIMATED CURRENT NEED & FUTURE NEED BY INCOME BRACKET CORNELIUS

Income Range	Current Need (no vacancy)	Future Need (no vacancy)	New Need (with vacancy)	Share of Units
Less than $15,000	187	280	109	6%
$15,000 - $24,999	209	313	121	7%
$25,000 - $34,999	297	444	183	10%
$35,000 - $49,999	482	721	248	13%
$50,000 - $74,999	761	1,139	397	21%
$75,000 - $99,999	588	881	308	17%
$100,000 - $124,999	382	572	190	10%
$125,000 - $149,999	245	367	117	6%
$150,000 - $199,999	255	382	120	6%
$200,000+	131	196	61	3%
Total:	***3,537***	***5,294***	***1,854***	



Sources: PSU, City of Cornelius, Census, Environics Analytics, JOHNSON ECONOMICS

Needed Unit Types

The mix of needed unit types shown in Figure 5.3 reflects both past trends and anticipated future trends. Since 2000, detached single family units (including manufactured and mobile homes) have constituted nearly all the permitted units in Cornelius. In keeping with development trends, and the buildable land available to Cornelius, single family units are expected to continue to make up a large share of new housing development over the next 20 years. However, an increasing share of new needed units is anticipated to attached housing types to accommodate renters and first-time home buyers.

- 50% of the new units are projected to be single family detached homes, while 40% is projected to be some form of attached housing, and 8% are projected to be manufactured homes.
- Single family attached units (townhomes on individual lots) are projected to meet over 8% of future need. These are defined as units on separate tax lots, attached by a wall but separately metered, the most common example being townhome units.
- Duplex through four-plex units are projected to represent over 20% of the total need. Duplex units would include a detached single-family home with an accessory dwelling unit on the same lot, or with a separate unit in the home (for instance, a rental basement unit.)
- 13% of all needed units are projected to be multi-family in structures of 5+ attached units.
- 8% of new needed units are projected to be manufactured home units, which meet the needs of some low-income households for both ownership and rental.
- Of ownership units, 77% are projected to be detached single-family homes, and 12.5% manufactured homes. Only a few units are projected to be attached forms.
- About 74% of new rental units are projected to be found in new attached buildings, with 27% projected in rental properties of 5 or more units, and 37% in buildings of two to four units, and 10% in

Needed Affordability Levels

Figure 5.5 presents the estimated need for net new housing units by major income segment, based on the projected demographics of new households to the market area. The needed affordability levels presented here are based on current 2020 dollars. Over time, incomes and housing costs will both inflate, so the general relationship projected here is expected to remain unchanged.

Figure 5.5 also discusses the housing types typically attainable by residents at these income levels.

FIGURE 5.5: PROJECTED NEED FOR NEW HOUSING AT DIFFERENT INCOME LEVELS

Household Income Segment		Income Level (Rounded)*	Afford. Rent Range	Afford. Price Range	Owner Units	Renter Units	Total	Share	Common Housing Product
Extremely Low Inc.	< 30% AMI	< $26,500	<$700	<$100k	70	186	256	14%	Govt-subsidized; Voucher
Very Low Income	30% - 50% AMI	$26.5k - $44k	$700-$1,000	$100k-$210k	108	198	306	17%	Aging/substandard rentals; Govt-subsidized; Voucher
Low Income	50% - 80% AMI	$44k - $70k	$1,000-$1,600	$210k-$300k	222	201	423	23%	Market apts; Manuf. homes; Plexes; Aging SFR
Middle Income	80% - 120% AMI	$70k - $105k	$1,600-$2,400	$300k-$430k	222	201	424	23%	Single-family detached; Townhomes; Small homes; New apts
Upper Income	> 120% AMI	> $105,000	$2,400 +	$430k +	319	128	446	24%	Single-family detached
TOTAL:					***939***	***915***	***1,854***	***100%***	

* Adjusted to 2020 dollars. The median household income level in 2020 will be will be inflated from current levels.

Sources: HUD, Census, Environics Analytics, JOHNSON ECONOMICS

- Generally, based on income levels there is a shortage of units in the lowest pricing levels for renter households.
- Figure 5.3 presents the *net NEW* housing unit need over the next 20 years. However, there is also a *current* need for more affordable units. In order for all households, current and new to pay 30% or less of their income towards housing in 2040, more affordable rental units would be required. This indicates that some of the current supply, while it shows up as existing available housing, would need to become less expensive to meet the needs of current households.
- There is a finding of some new need at the lowest end of the rental spectrum ($700 and less).
- The projection of future ownership units finds that the supply at the lowest end of the spectrum is currently sufficient due to the prevalence of older and manufactured homes in the community. (This reflects the estimated *value* of the total housing stock, and not necessarily the average pricing for housing currently for sale.) The community can support some housing at higher price points, but most demand remains in the middle-income range.
- Figure 5.6 presents estimates of need at key low-income affordability levels in 2020 and in 2040. There is existing and on-going need at these levels, based on income levels specified by Oregon Housing and Community Services for Washington County. An estimated 53% of households qualify as at least "low income" or lower on the income scale, while 14% of household qualify as "extremely low income". Typically, only rent-subsidized properties can accommodate these households at "affordable" housing cost levels. (The threshold income levels presented here are generated for the entire county based on the significantly higher countywide average household income. Therefore, these income thresholds are likely somewhat high for Cornelius.)

FIGURE 5.6: PROJECTED NEED FOR HOUSING AFFORDABLE AT LOW INCOME LEVELS, CORNELIUS

Affordablilty Level	Income Level*		Current Need (2020)		Future Need (2040)		NEW Need (20-Year)	
			# of HH	% of All	# of HH	% of All	# of HH	% of All
Extremely Low Inc.	30% AMI	$26,370	437	12%	693	13%	256	14%
Very Low Income	50% AMI	$43,950	981	28%	1,542	29%	562	30%
Low Income	80% AMI	$70,320	1,793	51%	2,778	52%	985	53%

Sources: OHCS, Environics Analytics, JOHNSON ECONOMICS

* Income levels are based on OHCS guidelines for a family of four.

Agricultural Worker Housing

There are currently 20 units of housing dedicated to this population in Cornelius, which is well less than 1% of local housing. Based on the assumption that this type of housing will maintain its current representation in the local housing stock, this indicates a need for 10 – 15 additional units for agricultural workers over the planning period. This population may also be served by other available affordable units.

VI. RECONCILIATION OF FUTURE NEED (2040) & LAND SUPPLY

This section summarizes the results of the Buildable Lands Inventory (BLI). The BLI is presented in detail in an accompanying memo to this report. This analysis relies on the most conservative estimate of capacity from the multiple scenarios considered in the BLI memo.

The following table (Figure 6.1) presents the estimated new unit capacity of the buildable lands identified in the City of Cornelius and within the UGB. The table breaks down the City's zoning into broad categories:

- Low density (<8 units/gross acre)
- Medium density (8 – 18 units/gross acre)
- High density (18+ units/gross acre)

Residential zones, as well as mixed-use zones that can accommodate some residential uses, were included in the inventory.

FIGURE 6.1: ESTIMATED BUILDABLE LANDS CAPACITY BY ACREAGE AND NO. OF UNITS (2020)

ZONING		Unconstrainted Acres				Unit Capacity	
		Vacant	Infill	Redev.	Total	Units	Share
RESIDENTIAL ZONE	**Category**						
Single-Family Res. (R-7)	Low-Density Res.	18.9	78.2		97.1	560	21%
Laurel Woods Single-Family (A-2)*	Low-Density Res.	62.3			62.3	660	25%
Manuf. Home Park (MHP)	Medium-Density Res.	1.2			1.2	11	0%
Multi-Family Res. (A-2)*	Medium-Density Res.	*61.7*		*31.2*	*92.9*	794	30%
Central Mixed-Use (CMU)	Medium-Density Res.	1.6		1.3	2.9	30	1%
Core Residential (CR)	Medium-Density Res.	0.5	11.1		11.5	71	3%
Gateway Mixed Use (GMU)	High-Density Res.	9.3		26.4	35.7	542	20%
	TOTALS:	*155.6*	*89.2*	*58.8*	*303.5*	*2,668*	100%
ZONE CATEGORIES	**Typical Housing Type**						
Low-Density Res.	Single-family detached; Duplex	81.2	78.2	0.0	159.4	1,220	46%
Medium-Density Res.	SF attached; Mobile home; 2-4 plexes	65.1	11.1	32.4	108.5	906	34%
High-Density Res.	Multi-family apartments	9.3	0.0	26.4	35.7	542	20%
	TOTALS:	*155.6*	*89.2*	*58.8*	*304*	*2,668*	100%

Source: Angelo Planning Group

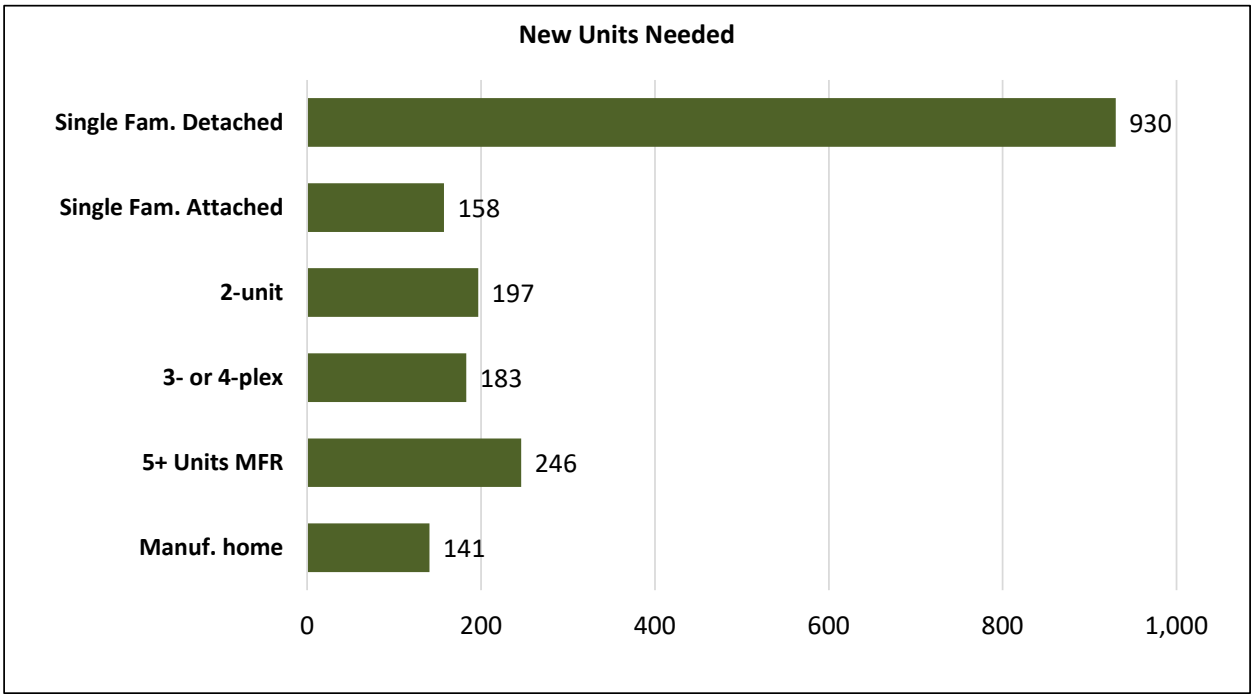
* As of the time of this report, a portion of the A-2 zone has been planned for single-family development in the Laurel Woods plan area. The single-family home portion of Laurel Woods is shown in the Low Density category in this table, while the remainder is included in the Medium Density category.

- There is a total estimated remaining capacity of 2,668 units of different types within the study area.
- Most of the remaining buildable acreage is in the medium-density A-2 residential zone. At a total capacity of 1,454 housing units (LDR and MDR) this is roughly 55% of the total unit capacity.
- Though there are many fewer buildable high-density acres, they can still accommodate nearly 550 new units due to the higher density of development. This is 20% of the total unit capacity.
- There are nearly 100 acres available in low-density zones, plus over 60 acres of the A-2 zone already allocated for single-family home development. In total, the capacity of these zones represents another 46% of the total unit capacity.

The following table summarizes the forecasted future unit need for Cornelius. These are the summarized results from Section V of this report, presented here for reference.

FIGURE 6.2: SUMMARY OF FORECASTED FUTURE UNIT NEED (2040)

TOTAL HOUSING UNITS									
			Multi-Family						
Unit Type:	Single Family Detached	Single Family Attached	2-unit	3- or 4-plex	5+ Units MFR	Manuf. home	Boat, RV, other temp	Total Units	% of Units
Totals:	930	158	197	183	246	141	0	**1,854**	**100%**
Percentage:	50.2%	8.5%	10.6%	9.9%	13.3%	7.6%	0.0%	100%	



Sources: PSU Population Research Center, Census, Johnson Economics

Comparison of Housing Need and Capacity

There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. Figure 6.3 below presents a comparison of the BLI capacity for new housing units, compared to the estimate for new unit need by 2040. It breaks down need by general zoning category (LDR, MDR, HDR).

- The results find sufficient capacity for all housing types in the three housing categories: low-density housing; medium -density housing; and higher-density housing. The estimated "surplus" land capacity in each of these categories is fairly similar, ranging from 248 to 296 of each, with acreage surpluses ranging from 19 to 32 acres (see Figure 6.3).

- Under recently adopted state rules (HB2001, 2019), Cornelius as a Metro-area city will be required in the future to allow for additional housing types in low-density residential zones. This includes attached single-family homes (townhomes), duplex-to-fourplex, and compact small-unit "cottage cluster" developments. At the same time, there is capacity in the MDR zones to accommodate demand for most of these attached types as well.

- These findings assume that under newly adopted state rules, 2% of available buildable parcels in the LDR zone will be used for the various types of attached units (single-family attached townhomes, duplex – fourplex). This amounts to a total of 42 attached units, plus 930 detached units in the LDR zone.

FIGURE 6.3: COMPARISON OF FORECASTED FUTURE LAND NEED (2040) WITH AVAILABLE CAPACITY

WITHIN CITY LIMITS		SUPPLY			DEMAND		
Zone & Plan Category	Typical Housing Type	Buildable Land Inventory (Total)			Growth Rate (1.8%)		
		Developable Acres	Unit Capacity	Avg. Density (units/ac)	New Unit Need (2040)	Surplus or (Deficit)	
						Units	Acres
Low-Density	Single-family detached; Some SF attached & plex	159.4	1,220	7.7	972	248	32
Med-Density	SF attached; Manufact. home; 2-4 plexes	108.5	906	8.4	636	270	32
High-Density	Multi-family apartments	35.7	542	15.2	246	296	19
	TOTALS:	*303.5*	*2,668*	*8.8*	1,854	814	84

Sources: Angelo Planning Group, Johnson Economics

MEMORANDUM

Cornelius Buildable Lands Inventory –Methodology and Results

City of Cornelius Housing Needs Analysis

DATE	January 7, 2020
TO	Ryan Wells and Tim Franz, City of Cornelius
FROM	Matt Hastie, Clinton "CJ" Doxsee, and Courtney Simms, APG
CC	

INTRODUCTION

The purpose of this memorandum is to summarize the methodology of a Geographic Information Systems (GIS)-based Buildable Land Inventory (BLI) for the City of Cornelius Housing Needs Analysis (HNA). The results will help determine whether the City has a sufficient supply of land to meet long-term (20 year) housing needs.[1] The memo also will inform the strategies and approaches that may be effective and appropriate for increasing the developability of residential land, which can lead to greater overall housing supply.

The memorandum summarizes the methodology and key findings of the analysis, then presents the initial results in a series of tables and maps. This memorandum focuses solely on the supply and capacity of buildable residential land within the Metro Urban Growth Boundary (UGB). The methodology was informed by Metro's BLI methodology from the 2018 Metro Buildable Lands Inventory, which was used to estimate available residential and employment land within the entire Portland Metropolitan Region (Metro) region.

The projected need for land to support future housing and the comparison of projected need and supply will be described in a separate Housing Needs Analysis report.

Regulatory Basis

Oregon Administrative Rules (OAR) provide guidance for the standards and methods to be used in preparing an inventory of buildable land. The methods and definitions used here are consistent with OAR 660-008 and OAR 660-024. Metro does not apply additional regulations or requirements but has developed its own methodology for identifying buildable lands within the Metro region. That methodology and resulting data has been used as a starting point for this analysis to ensure

[1] The project is being conducted with funding provided by the Oregon Department of Land Conservation and Development.

consistency with regional procedures and to make efficient use of project resources. As noted in the following sections, the regional BLI data has been supplemented with local data, where available.

METHODOLOGY

The methodology generally follows the rules and assumptions identified in the methodology of Metro's 2018 BLI. The steps used to generate the BLI include the following:

Step 1: Calculate deductions for environmental resources

Step 2: Identify residential land (land zoned for residential or mixed use)

Step 3: Identify vacant tax lots (and complement developed tax lots) by zoning class

Step 4: Remove tax lots from the BLI that don't have the potential to provide residential or employment growth capacity (e.g., parks, schools or other public facilities, or land committed to future non-residential purposes)

Step 5: Calculate deductions for "future streets"

Step 6: Calculate BLI estimates (BLI includes capacity estimates for vacant land and properties with the potential for redevelopment)

The buildable lands inventory uses methods and definitions that are consistent with OAR 660-008 and OAR 660-024.

Step 1 – Calculate Deductions for Environmental Resources

Environmental resources typically provide beneficial environmental functions or aesthetic enhancements that are necessary to preserve. The preservation of these resources often provides a constraint on the developability of an area. To reflect this, areas that are identified as environmental resources are removed from the buildable inventory as a constraint.

Most areas that are considered environmental resources fall into multiple categories. Examples of these include areas that are in a floodway or floodplain, wetland, or include steep slopes. Often, this constrained land overlaps. Using an environmental hierarchy to classify the environmental features avoids double counting the capacity deduction for the BLI. Moreover, the City includes two environmental overlays, the Natural Resource Overlay (NRO) and Floodplain District (FP), which align closely with the Metro Titles 3 and 13 designations, as refined through the Tualatin Basin regional approach developed by Cornelius and other partnering organizations in the basin, and FEMA floodplain designations. Within the NRO district, density transfers are allowed where natural resources constrain development. BLI reductions will reflect the higher assumed protections when environmental features are overlapping.

Environmental Constraints categories used are the following:

- Floodways – FEMA's latest flood hazard data and updated with the City of Cornelius's Floodplain District.
- Flood Plain District (FP) – the City's FP district regulates and restricts development in special flood hazard areas within the City.
- Slopes 25% or Steeper – Steep slopes were calculated using a digital elevation model to identify areas with slopes 25% or greater, which is consistent with OAR 660-008.
- Natural Resource Overlay (NRO) – The City's NRO overlay regulates and restricts development in areas with natural resources as identified in the City's natural resource inventory and map.
- Environmental Constraints – Title 3 and 13 data were provided by Metro RLIS. Significant Natural Resource Overlay (SNRO) data is provided by Metro RLIS and updated with the City of Cornelius's Natural Resource overlay.
- Rights of Way – Utility ROW was provided by Metro RLIS, while transportation ROW was obtained using City GIS data.

These lands are combined and then overlaid with City tax lots to estimate the amount of land in each parcel where development is limited by these environmental constraints. These constrained areas are deducted from the gross area of the parcel to estimate the area of the parcel that is unconstrained and potentially buildable.

The land impacted by these constraints is removed from the inventory of developable land as follows.

Single-family residential

1. Floodways: 100% removed
2. Floodplain and Floodplain District: 100% removed
3. Slopes > 25% and Title 3 treated the same way: 100% removed
    a. If tax lot ≥ 50% constrained, follow the "maximum capacity rule" (defined below) to add back units[2]
    b. If tax lot is <50% constrained, assume 90% of unconstrained area is in BLI (i.e., apply 10% discount to vacant buildable acres)
4. Natural Resource Overlay (NRO):
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
5. Title 13: 50% of Title 13 constrained acres removed from BLI (consistent with Title 13 model Ordinance)
6. Assume at least one unit per tax lot, even if fully constrained

Multi-family residential

1. Floodways: 100% removed

[2] This add back represents Metro's approach for estimating/calculating the density transfer to mitigate the loss of potential development productivity for dwelling units.

2. Floodplain and Floodplain District: 50% removed
3. Slopes > 25%: 100% removed
4. Title 3: remove 50% of the constrained land with the other 50% considered buildable
5. Natural Resource Overlay:
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
6. Title 13: 15% of Title 13 constrained acres removed from BLI (consistent with Title 13 Model Ordinance)
7. Assume at least one unit per tax lot, even if fully constrained

Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, and only acres outside of existing right-of-way (ROW) are counted in the table. As shown on the table, most of the environmental constraints are inventoried under Metro's Title 13 (191 acres). The next largest constraint in Cornelius is the City's Natural Resource Overlay (NRO) consisting of approximately 83 acres.[3] The third largest constraint in the City are floodplains, consisting of approximately 68 acres across the City.

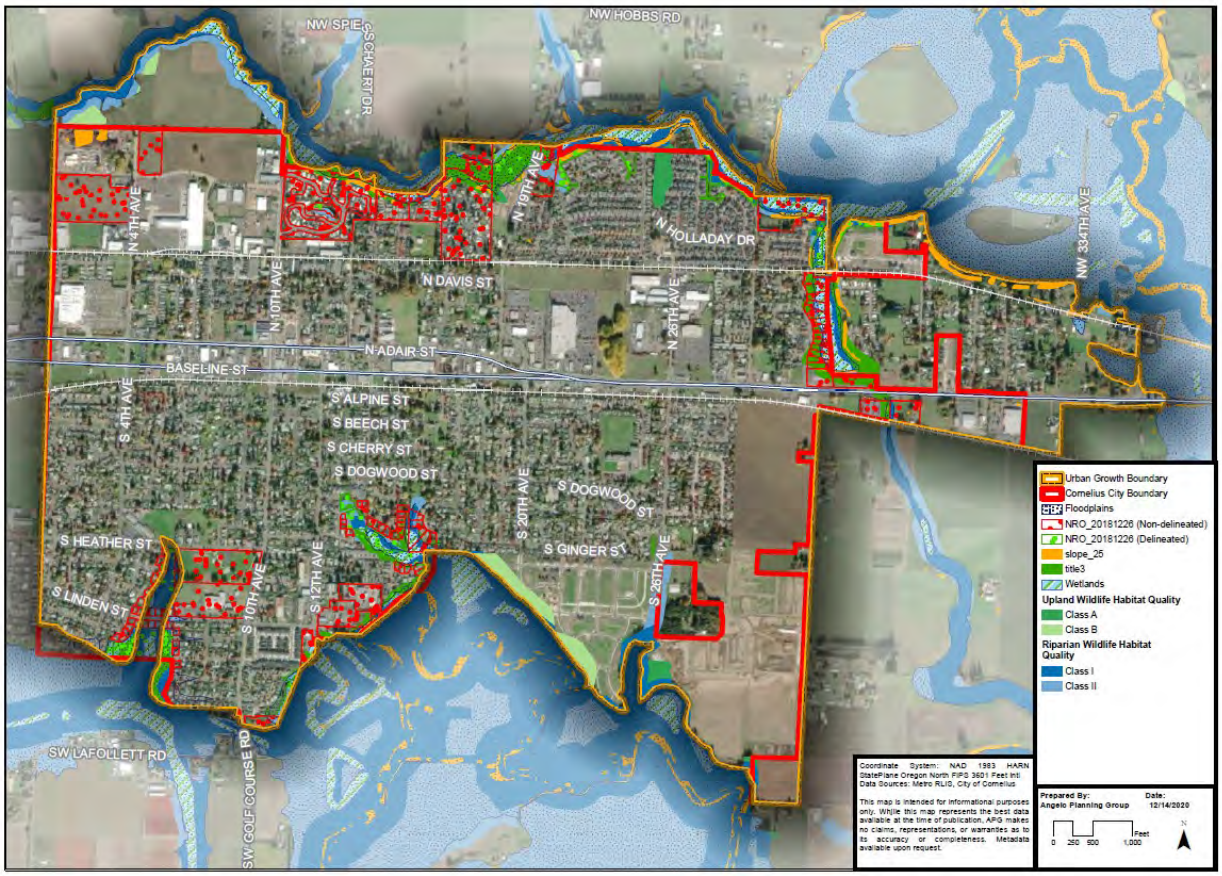
Table 1: Environmental Constraints

Constraint	Total
Constraints Total:	432.8
Floodway	7.6
Slopes >25%	16.0
Floodplain	68.7
Title 3	33.0
Wetland	33.1
Natural Resource Overlay:	83.1
Delineated	33.5
Not delineated	49.6
Title 13	191.3

Both Metro's Title 13 and the City's NRO seek to preserve natural areas and share several overlapping areas. Similar overlapping conditions exist for several other constraints such as floodplains, floodways, and wetlands or Metro's Title 3 and slopes greater than 25%. After accounting for overlapping natural resources, the total acreage of land with environmental constraints located in residential areas is approximately 175 acres. The overlaid constraints are deducted from the amount of buildable land as described in more detail below. Figure 1 illustrates the locations of each environmental constraint.

[3] The City's NRO consists of a combination of delineated and non-delineated areas. Delineated areas apply to tax lots which have completed a delineation study to identify the exact location(s) of on-site natural resources. Non-delineated NRO areas consist of areas for which environmental resources are known to occur, but the exact location(s) have not been identified.

Figure 1: Environmental Constraints Map



Step 2 – Identify Residential Land

For the purposes of this analysis, residential land is identified as the following:

- Land with a comprehensive plan designation of "Residential," including low-density residential and mid-density residential. Zoning for residential tax lots within Cornelius' City limits generally match comprehensive plan designation, with some small exceptions for lots with "Open Space" designations that have residential zoning. These are examined on a case-by-case basis.
- Land with a comprehensive plan designation of "Mixed Use." While many uses are possible within this area, expanding housing opportunities is a primary development objective of the Commercial Mixed Use (CMU) district. "Development within the CMU District shall have a significant commercial element, along with medium to high density residential uses." (CMC 153.063(C)(1))
- Other land (open space, commercial, industrial, etc.) is excluded as it does not require residential uses. Although the City's development code allows for residential use in some of these zones, there is no guarantee that it will be used for residential development.

Table 2 summarizes the distribution of low-density, medium density, and mixed-use areas by identified constraints. There is a total of 1,035 acres of residential land within located in the City. Of that, almost half of the residential land is designated for single-family residential uses. Most of the remainder of the residential land is designated for multi-family residential. Less than a tenth of the land is designated for mixed-use residential areas.

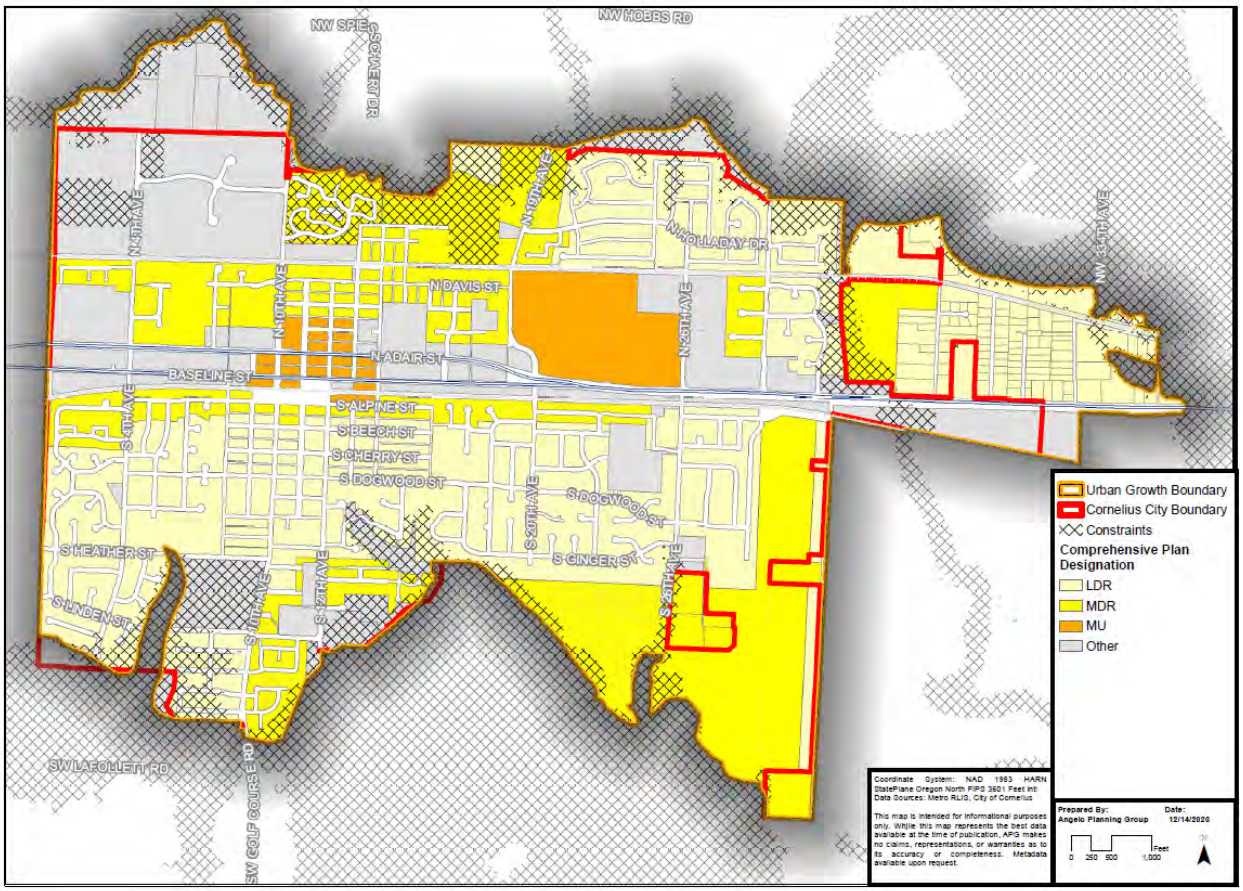
Environmental constraints reduce the amount of buildable residential land by just over 170 acres. The constraints are fairly evenly distributed between low-density and medium-density residential areas, though medium-density residential areas have slightly more constraints (approximately 94 acres) than low-density residential areas (approximately 76 acres). None of the mixed-use areas have constraints on them.

Table 2: Gross Acreage in Residential Land Inventory

Constraints (Acres)	Constrained		Unconstrained		Total	
Total	170.5	100%	865.0	100%	1,035.5	100%
Low-Density Residential	76.4	45%	444.7	51%	521.1	50%
Medium-Density Residential	94.2	55%	346.8	40%	441.0	43%
Mixed-Use	0.0	0%	73.5	9%	73.5	7%

Figure 2 illustrates all residential areas with constraints overlaid. As shown, areas with constraints are generally found near the City boundary. Most of the constraints within the City's boundary can be found along the northern and southern limits of the City. There are no constraints centrally located within the City.

Figure 2: Cornelius Location Map



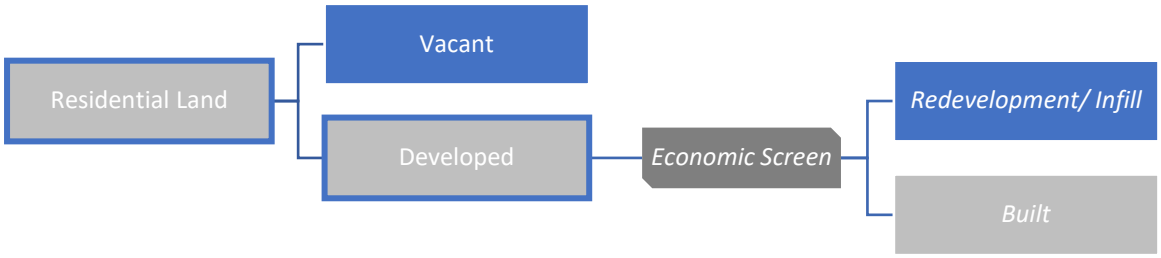
Step 3 – Identify Vacant Tax Lots (and complement developed tax lots)

This step classifies each tax lot into a set of mutually exclusive categories based on development status; this means classification into "vacant" and "developed" land.[4]

The region's buildable land inventory is sorted into *vacant* and *developed* capacity. Vacant tax lots are areas that are generally undeveloped and provide relatively easy opportunities for new residential development. Developed tax lots are areas that currently have some form of residential development, some of which have the potential to allow for new residential development through redevelopment or infill development. Developed tax lots are subjected to economic screens (described in Step 6) to determine potential redevelopment/infill capacity. If a certain level of capacity is reached, the redevelopment potential is considered as part of the buildable land inventory.

Figure 3 illustrates the structure of categories for organizing the BLI.

Figure 3: Residential Land Buildable Land Structure



Vacant land is defined and identified as follows:

- Any tax lot that is fully vacant, based on Metro aerial photo.
- Tax lot with less than 2,000 sq. ft. developed AND developed portion is under 10% of the entire tax lot area.
- Tax lots that are 95% or more "vacant" from the GIS vacant land inventory.[5]

Developed land is defined as follows:

- Land developed at densities consistent with zoning and with improvements that make it unlikely to redevelop. Tax lots that are partially vacant are considered developed at this step and are screened for their redevelopment/infill potential in Step 6.

[4] The BLI methodology does not identify areas with redevelopment potential until step 6.

[5] Metro's RLIS database, updated in January of 2020.

Step 4 – Tax Lot Exclusions.

This step removes tax lots from the BLI that do not have the potential to provide residential growth capacity. Examples of these types of exclusions include schools, parks, and churches, which are typically found in areas with residential zoning, but will not likely provide potential for additional residential capacity because they are used for or committed to non-residential purposes.

The following types of tax lots will be removed from the inventory based on Washington County Assessor PCA code designations, owner names, assessed values, and other data sources:

- Tax exempt with property codes for city, state, federal and Native American designations
- Schools
- Churches and social organizations
- Private "streets"
- Rail properties
- Tax lots under 1,000 sq. ft. (0.023 gross acres)
- Parks, open spaces and, where possible, private residential common areas

Table 3 provides a summary of the amount of land in residential areas that is excluded from the residential buildable inventory. Approximately 79 acres of land (105 tax lots) were identified as one of the uses listed for exclusion from the residential buildable inventory. Any residential development potential from lots categorized as exempt are excluded from the buildable inventory.

Table 3: Excluded Land

Jurisdiction/Status	Number of Tax Lots	Unconstrained Acres
Total:	3,400	854.8
Developed	2,901	642.4
Vacant	394	143.7
Excluded	105	78.9

Step 5 – Calculate Deductions for "Future Streets"

A portion of the vacant land supply is set aside for future right-of-way as follows:

- Tax lots under 3/8 acre assume 0% set aside for future streets.
- Tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets.
- Tax lots greater than an acre assume an 18.5% set aside for future streets.

Table 4 summarizes the right-of-way set-asides by development status. The set-asides are removed from the unconstrained acreage for each tax lot. The set-asides result in a reduction of approximately 19 acres from the buildable inventory.

Table 4: Land Deductions[6]

	Unconstrained Acres	Net Acres (ROW Removed)
Total:	786.0	766.5
Developed	642.4	642.4
Vacant	143.7	124.2

Step 6 – Estimate Potentially Buildable Lands and Housing Unit Capacity (Includes Capacity Estimates for Vacant and Redevelopment Land)

Once the net unconstrained land (buildable land with no environmental constraints) has been calculated, then the estimated number of units for vacant and developed land can be calculated.

Step 6 involves multiple calculations and economic screening to estimate the potential buildable land capacity. The calculations and screening are completed in the following order.

- Assign Parcels to Zones
- Estimate Capacity within Vacant Land
- Conduct Screening on Developed Land
    - Estimate Infill Capacity
    - Estimate Redevelopment Capacity

Assign Parcels to Zones

Only land which allows for and assumes residential development within the Cornelius Municipal Code is considered part of the Residential BLI. As such, areas are assigned a zoning district, which includes minimum and maximum densities. Land is classified by zone type (residential, mixed use, etc.) to estimate the amount of land that is potentially developable. To do this, each parcel is assigned a zone.

[6] Net acres with ROW removed does not use the weighted unconstrained acreage. Calculations for other capacity are based on the weighted unconstrained acreage.

Table 5 provides a summary of City zoning that is applied to developed and vacant land in the inventory.

Table 5: Developed and Vacant Land by Zone

Zoning	Unconstrained Acres*	Number of Tax Lots
Total:	766.5	3,295
Developed:	642.4	2,901
A2	124.0	616
CMU	9.7	51
CR	30.1	132
GMU	44.0	9
MHP	33.3	31
R7	401.3	2,062
Vacant:	124.2	394
A2	96.3	282
CMU	1.5	5
CR	0.5	3
GMU	7.6	1
MHP	0.9	3
R7	17.4	100

*Vacant land includes removal of ROW. Constrained and exempt land removed from developed and vacant areas.

Estimate Capacity within Vacant Land

For vacant lots with single family or multifamily zoning, the net developable acreage for each tax lot is simply multiplied by the minimum and maximum density allowed within that zone. For vacant lots with mixed use zoning, the potential number of units is based on minimum square footage of units, maximum number of stories, and maximum or minimum density standards, should they exist. For properties that have received land use approval for development but not yet been developed, capacity reflects the amount of development approved.

Conduct Economic Screening to Estimate Infill and Redevelopment Capacity

Infill. Infill development represents development within single-family zoning where a lot may be sufficiently large to allow homeowners to divide their lot and build an additional housing unit on the previously undeveloped portion. According to the Metro BLI, the following conditions must be met for a single-family zoned tax lot to potentially allow for infill development:

- If the tax lot is zoned single family residential and classified developed, it was assumed that one single family unit presently exists on the tax lot regardless of what's indicated on the assessor's land use code. The one exception to this rule is for tax lots in single-family zoned areas that have current land use for an apartment (according to Metro's multifamily

residential database). These parcels were not considered in calculating infill potential for single family infill supply (as any infill of such land use with this type of zoning would yield a single-family dwelling unit with the associated loss of the multi-family units, which would be unlikely). Lots greater than 2.5 times the minimum zoned lot size are included in the infill supply, except:

- In addition to meeting the size threshold, the assessor's real market building value must be below $300,000 to be counted in the infill supply (since lots with higher value homes would be excluded from the infill supply).
- Tax lots that exceed the minimum zoned lot size by a factor of five are passed through into the infill supply regardless of building value.

As such, each lot that is categorized as part of the infill supply is assumed to have the capacity for additional units. Note, however, the infill economic screen does not account for current built conditions or site access arrangement on a lot-by-lot basis. It's possible that such conditions would preclude or make additional housing particularly costly and/or challenging to develop in some cases. The net capacity for additional dwelling units on eligible infill tax lots is generated using the calculations summarized below. The net additional infill units are calculated as the lower of the following two computations. Tax lots can end up with zero additional infill units.

- Additional DU infill= (Calculated area of TL – min lot size) / min lot size (rounded down to a whole number); can equal 0.
- Additional DU infill = (net unconstrained sq. ft. / 2,000 sq. ft.), rounded down to a whole number; can equal 0.

Accessory Dwelling Units (ADU). ADU capacity is reported in probabilistic terms by geographic location within Metro's UGB. Each single-family tax lot is assigned a small probability of having an ADU built there. The probability ranges from 9% in central Portland locations to 0% for suburban areas near the UGB. Cornelius is assumed to have 0% capacity for the purpose of this BLI.

Redevelopment. If the tax lot is zoned for multi-family residential development or mixed-use residential development and is classified as developed, then the redevelopment capacity would have to meet a "units requirement" in addition to the economic requirements described previously. This inventory uses Metro's "strike price" methodology to determine if the requirements are met.

Units requirement. The multi-family or mixed-use residential redevelopment must add at least 50% more units over the number of units which already exist, or produce at least three units total to be counted towards redevelopment potential. The rationale is that developers would not tear down and redevelop an apartment or condo units unless they could yield a significant gain in rents and dwelling units. Elements of this methodology include:

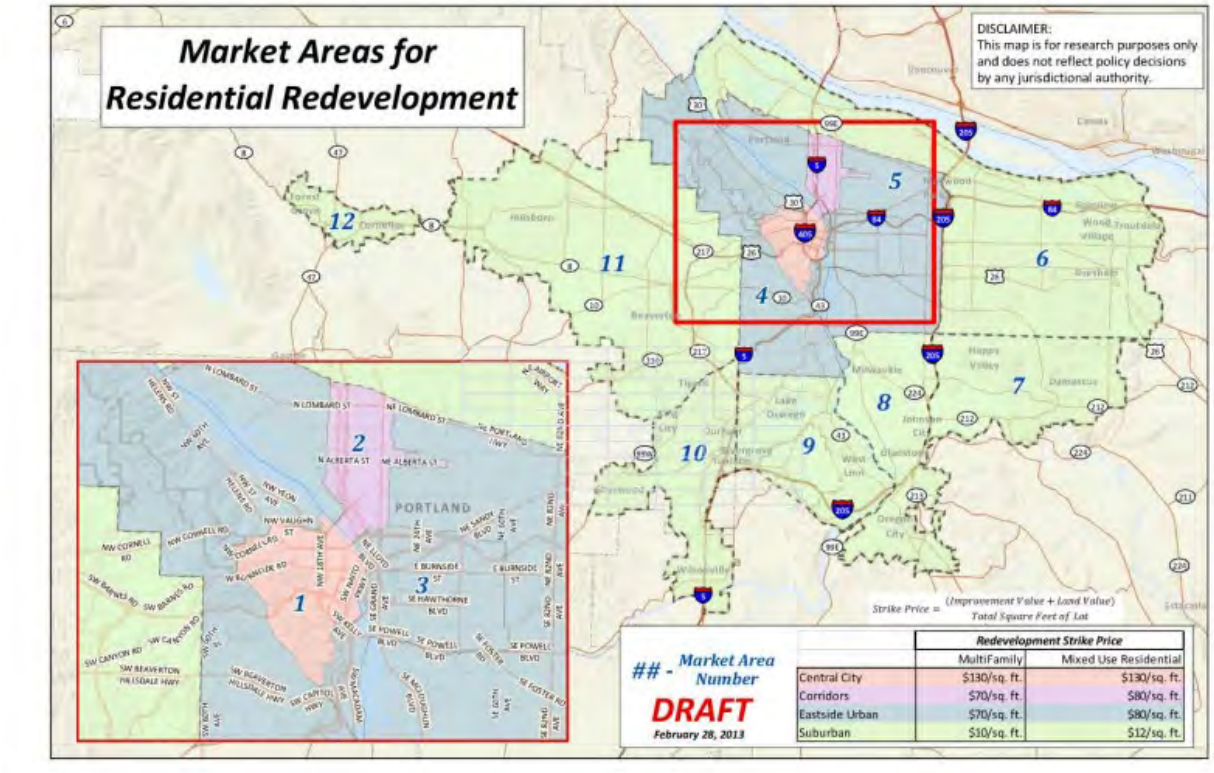
- Redevelopment of a multi-family structure must add at least 50% more units; if it doesn't, the tax lot is not counted.

- If the structure is a commercial (or industrial) building or single-family dwelling unit (in a multi-family or mixed-use zone), the redevelopment must yield at least three or more dwelling units
- Redevelopment must pass through an economic filter first before evaluation of additional dwelling units through redevelopment (see below for economic filter thresholds)

Note, for several parcels, development approvals for specific numbers of units exist. These approvals have been used to assign these lots a development capacity that matches the number of units already approved.

Strike Price Requirement. The "strike price" is used to indicate the price at which point it becomes cost effective for a developer to consider a site for redevelopment. Metro's strike prices are based on current market conditions but are pushed to a modest degree to acknowledge that demand will increase over time. Strike prices also vary by market subarea. As shown in Figure 4, the study area is located entirely within the "Suburban" market subarea category. The strike prices are $10 per square foot for multi-family development and $12 per square foot for mixed-use development.

Figure 4: Market Areas for Residential Development (Metro BLI, 2018)



RESULTS

The results of the BLI are presented in Tables 6 through 8 and illustrated in Figure 5.

Table 6: BLI Summary

Development Status	Tax Lots	Total Acres	Constrained Acres	Unconstrained Acres[7]
Total	3,590	1,343.7	198.9	1,144.8
Not Buildable	3,158	1,010.1	167.6	842.5
Built Out	2,924	842.2	115.3	726.9
Exempt	144	170.7	53.1	117.6
Potentially Buildable	522	333.7	31.4	302.3
Infill[8]	108	95.5	7.5	88.0
Redevelopment	19	66.9	8.1	58.8
Vacant	395	171.3	15.7	155.6

As summarized in Table 7, Cornelius has an estimated 302 acres of unconstrained residential land with some form of additional capacity. Half of the additional capacity is available through vacant land (approximately 155 acres). Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. While that area is approved for development, it will continue to represent additional capacity until homes are constructed there. Infill development comprises of just under 90 acres of unconstrained residential land. Most of the additional infill capacity is located outside City limits to the northeast, but within the UGB. The remainder of buildable land (approximately 59 acres) is categorized as redevelopment .

Just over half of the buildable land is zoned for Multi-Family Residential (approximately 155 acres). Buildable areas with Single-family Residential zoning comprise almost one-third (approximately 97 acres) of the buildable land. The Gateway Mixed-Use zone comprises over ten percent of buildable land (approximately 36 acres). With one exception, the supply of buildable land in all other zones is less than three acres each. The one exception is the Core Residential zone with approximately 11 acres of buildable land.

[7] The measurement of "Unconstrained Acres" is lower than "Gross-Constrained" because an additional deduction is made for developed parcels that have infill capacity to account for an existing structure. It is assumed that the existing structure remains and other land on the parcel is developed.

[8] The amount of potentially buildable acres that meet the definition for infill development does not account for individual sites that may encounter existing built conditions or access restrictions that could potentially preclude or require costly improvements to allow additional housing. As such, infill capacity may be overestimated to a small degree.

Table 7: Unconstrained Acres by Zone, Residential Zones

Zone	Projected Density	Unconstrained Acres				
		Vacant	Infill	Redev.	Total	Share
Total		155.6	89.2	58.8	303.5	100%
Single-Family Residential (R-7)	4-5/acre	18.9	78.2		97.1	32%
Manufactured Home Park (MHP)	max 10/acre	1.2			1.2	<1%
Multi-family Residential (A-2)	8-14/acre	124.0		31.2	155.2	51%
Central Mixed-Use (CMU)		1.6		1.3	2.9	1%
Core Residential (CR)	min 8/acre	0.5	11.1		11.5	4%
Gateway Mixed Use (GMU)		9.3		26.4	35.7	12%

Table 8 provides a summary of the additional housing unit capacity for each zone. The housing unit capacity is determined by the projected density for each zone. Overall, there is an estimated capacity for over 2,668 additional dwelling units. Similar to the amount of unconstrained acreage, vacant areas account for most of the capacity with over 1,300 units. Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. Redevelopment represents the second most capacity with potential for over 840 estimated units. Infill development accounts for slightly under 500 units of the estimated capacity.

For vacant land, the distribution of zoning is heavily concentrated in the Multi-Family Residential zone (approximately 1,041 units). However, most of this capacity is located in southeast Cornelius and a larger share of the proposed housing units in this area are proposed to be single-family detached homes. Vacant Single-family Residential and Gateway Mixed-Use zones account for over 100 units each. Vacant land in all other zones account for approximately 32 units. Most of the remaining vacant unit development potential is anticipated to be in the Central Mixed-Use zone.

The capacity for additional dwelling units in the infill category is heavily concentrated in the Single-Family Residential (487 units). The available supply of Core Residential zones accounts for just over 65 units.

The redevelopable supply of land accounts for just under 850 additional dwelling units in the supply. Of that, most the units are anticipated to be available between the Gateway Mixed-Use zone (approximately 420 units) and the Multi-family Residential zone (approximately 413 units). The remaining potential supply of additional units is anticipated to be in the Central Mixed-Use zone with approximately 14 additional units.

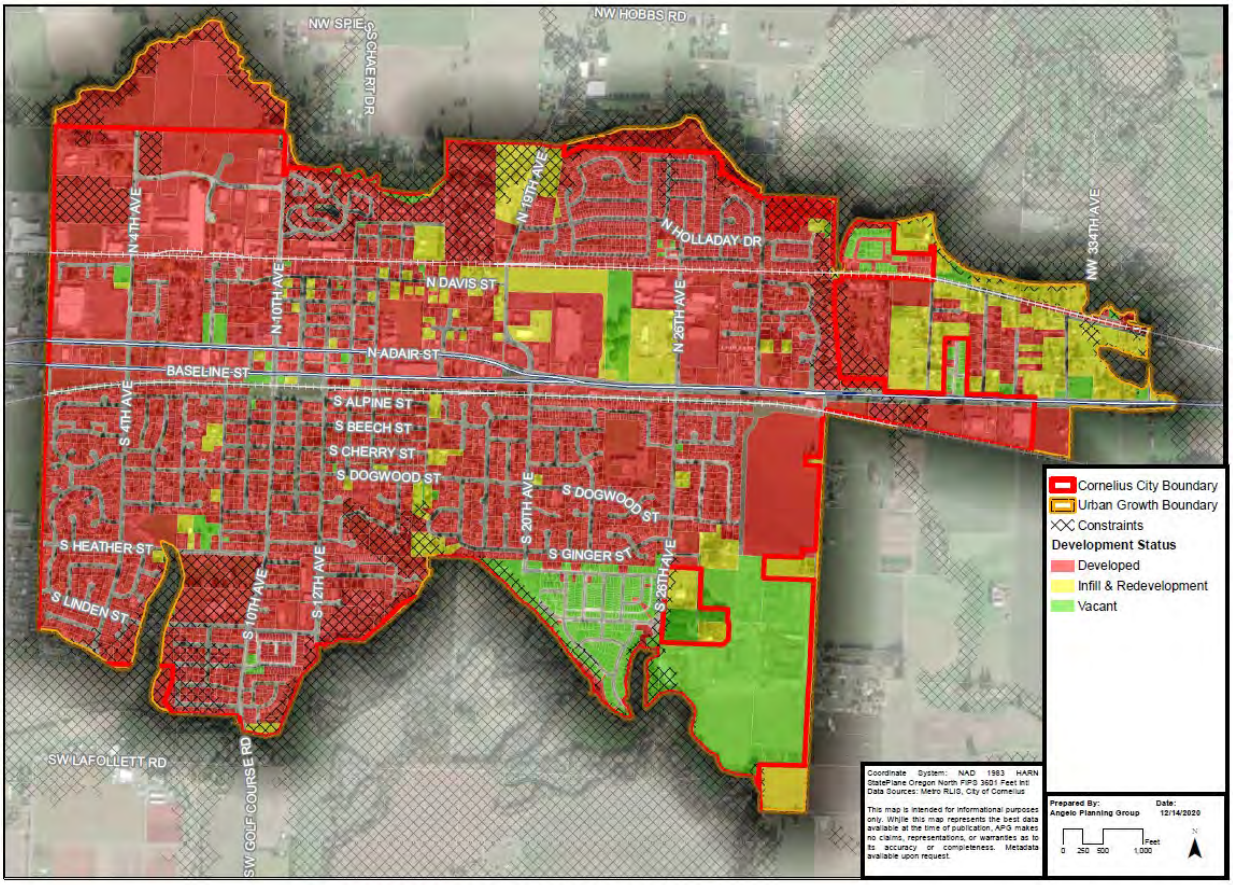
Table 8: Housing Unit Capacity by Zone, Residential Zones

Jurisdiction and Zone	Projected Density	Capacity				
		Vacant	Infill	Redev.	Total	Share
Total		1,334	487	847	2,668	100%
Single-Family Residential (R-7)	4-5/acre	139	421		560	21%
Manufactured Home Park (MHP)	max 10/acre	11			11	<1%
Multi-family Residential (A-2)*	8-14/acre	1,041		413	1,454	54%
Central Mixed-Use (CMU)		16		14	30	1%
Core Residential (CR)	min 8/acre	5	66		71	3%
Gateway Mixed Use (GMU)		122		420	542	20%

* Note: Approximately 660 of the units in the A-2 zone are proposed to be single-family detached units to be developed as part of the Laurel Woods development. This will have the effect of reducing the relative share of multi-family and attached unit capacity and increasing the share of single-family detached capacity.

Figure 5 illustrates the location of vacant and infill/redevelopment areas within the City of Cornelius.

Figure 5: Housing Unit Capacity Map



MEMORANDUM

Cornelius Buildable Lands Inventory –Methodology and Results

City of Cornelius Housing Needs Analysis

DATE	January 7, 2020
TO	Ryan Wells and Tim Franz, City of Cornelius
FROM	Matt Hastie, Clinton "CJ" Doxsee, and Courtney Simms, APG
CC	

INTRODUCTION

The purpose of this memorandum is to summarize the methodology of a Geographic Information Systems (GIS)-based Buildable Land Inventory (BLI) for the City of Cornelius Housing Needs Analysis (HNA). The results will help determine whether the City has a sufficient supply of land to meet long-term (20 year) housing needs.[1] The memo also will inform the strategies and approaches that may be effective and appropriate for increasing the developability of residential land, which can lead to greater overall housing supply.

The memorandum summarizes the methodology and key findings of the analysis, then presents the initial results in a series of tables and maps. This memorandum focuses solely on the supply and capacity of buildable residential land within the Metro Urban Growth Boundary (UGB). The methodology was informed by Metro's BLI methodology from the 2018 Metro Buildable Lands Inventory, which was used to estimate available residential and employment land within the entire Portland Metropolitan Region (Metro) region.

The projected need for land to support future housing and the comparison of projected need and supply will be described in a separate Housing Needs Analysis report.

Regulatory Basis

Oregon Administrative Rules (OAR) provide guidance for the standards and methods to be used in preparing an inventory of buildable land. The methods and definitions used here are consistent with OAR 660-008 and OAR 660-024. Metro does not apply additional regulations or requirements but has developed its own methodology for identifying buildable lands within the Metro region. That methodology and resulting data has been used as a starting point for this analysis to ensure

[1] The project is being conducted with funding provided by the Oregon Department of Land Conservation and Development.

consistency with regional procedures and to make efficient use of project resources. As noted in the following sections, the regional BLI data has been supplemented with local data, where available.

METHODOLOGY

The methodology generally follows the rules and assumptions identified in the methodology of Metro's 2018 BLI. The steps used to generate the BLI include the following:

Step 1: Calculate deductions for environmental resources

Step 2: Identify residential land (land zoned for residential or mixed use)

Step 3: Identify vacant tax lots (and complement developed tax lots) by zoning class

Step 4: Remove tax lots from the BLI that don't have the potential to provide residential or employment growth capacity (e.g., parks, schools or other public facilities, or land committed to future non-residential purposes)

Step 5: Calculate deductions for "future streets"

Step 6: Calculate BLI estimates (BLI includes capacity estimates for vacant land and properties with the potential for redevelopment)

The buildable lands inventory uses methods and definitions that are consistent with OAR 660-008 and OAR 660-024.

Step 1 – Calculate Deductions for Environmental Resources

Environmental resources typically provide beneficial environmental functions or aesthetic enhancements that are necessary to preserve. The preservation of these resources often provides a constraint on the developability of an area. To reflect this, areas that are identified as environmental resources are removed from the buildable inventory as a constraint.

Most areas that are considered environmental resources fall into multiple categories. Examples of these include areas that are in a floodway or floodplain, wetland, or include steep slopes. Often, this constrained land overlaps. Using an environmental hierarchy to classify the environmental features avoids double counting the capacity deduction for the BLI. Moreover, the City includes two environmental overlays, the Natural Resource Overlay (NRO) and Floodplain District (FP), which align closely with the Metro Titles 3 and 13 designations, as refined through the Tualatin Basin regional approach developed by Cornelius and other partnering organizations in the basin, and FEMA floodplain designations. Within the NRO district, density transfers are allowed where natural resources constrain development. BLI reductions will reflect the higher assumed protections when environmental features are overlapping.

Environmental Constraints categories used are the following:

- Floodways – FEMA's latest flood hazard data and updated with the City of Cornelius's Floodplain District.
- Flood Plain District (FP) – the City's FP district regulates and restricts development in special flood hazard areas within the City.
- Slopes 25% or Steeper – Steep slopes were calculated using a digital elevation model to identify areas with slopes 25% or greater, which is consistent with OAR 660-008.
- Natural Resource Overlay (NRO) – The City's NRO overlay regulates and restricts development in areas with natural resources as identified in the City's natural resource inventory and map.
- Environmental Constraints – Title 3 and 13 data were provided by Metro RLIS. Significant Natural Resource Overlay (SNRO) data is provided by Metro RLIS and updated with the City of Cornelius's Natural Resource overlay.
- Rights of Way – Utility ROW was provided by Metro RLIS, while transportation ROW was obtained using City GIS data.

These lands are combined and then overlaid with City tax lots to estimate the amount of land in each parcel where development is limited by these environmental constraints. These constrained areas are deducted from the gross area of the parcel to estimate the area of the parcel that is unconstrained and potentially buildable.

The land impacted by these constraints is removed from the inventory of developable land as follows.

Single-family residential

1. Floodways: 100% removed
2. Floodplain and Floodplain District: 100% removed
3. Slopes > 25% and Title 3 treated the same way: 100% removed
    a. If tax lot ≥ 50% constrained, follow the "maximum capacity rule" (defined below) to add back units[2]
    b. If tax lot is <50% constrained, assume 90% of unconstrained area is in BLI (i.e., apply 10% discount to vacant buildable acres)
4. Natural Resource Overlay (NRO):
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
5. Title 13: 50% of Title 13 constrained acres removed from BLI (consistent with Title 13 model Ordinance)
6. Assume at least one unit per tax lot, even if fully constrained

Multi-family residential

1. Floodways: 100% removed

[2] This add back represents Metro's approach for estimating/calculating the density transfer to mitigate the loss of potential development productivity for dwelling units.

2. Floodplain and Floodplain District: 50% removed
3. Slopes > 25%: 100% removed
4. Title 3: remove 50% of the constrained land with the other 50% considered buildable
5. Natural Resource Overlay:
    a. 100% of Natural Resource Overlay that have been delineated
    b. 50% of all other Natural Resource Overlay areas removed from BLI.
6. Title 13: 15% of Title 13 constrained acres removed from BLI (consistent with Title 13 Model Ordinance)
7. Assume at least one unit per tax lot, even if fully constrained

Table 1 summarizes the acreage for each constraint. Note that land can be subject to more than one constraint, and only acres outside of existing right-of-way (ROW) are counted in the table. As shown on the table, most of the environmental constraints are inventoried under Metro's Title 13 (191 acres). The next largest constraint in Cornelius is the City's Natural Resource Overlay (NRO) consisting of approximately 83 acres.[3] The third largest constraint in the City are floodplains, consisting of approximately 68 acres across the City.

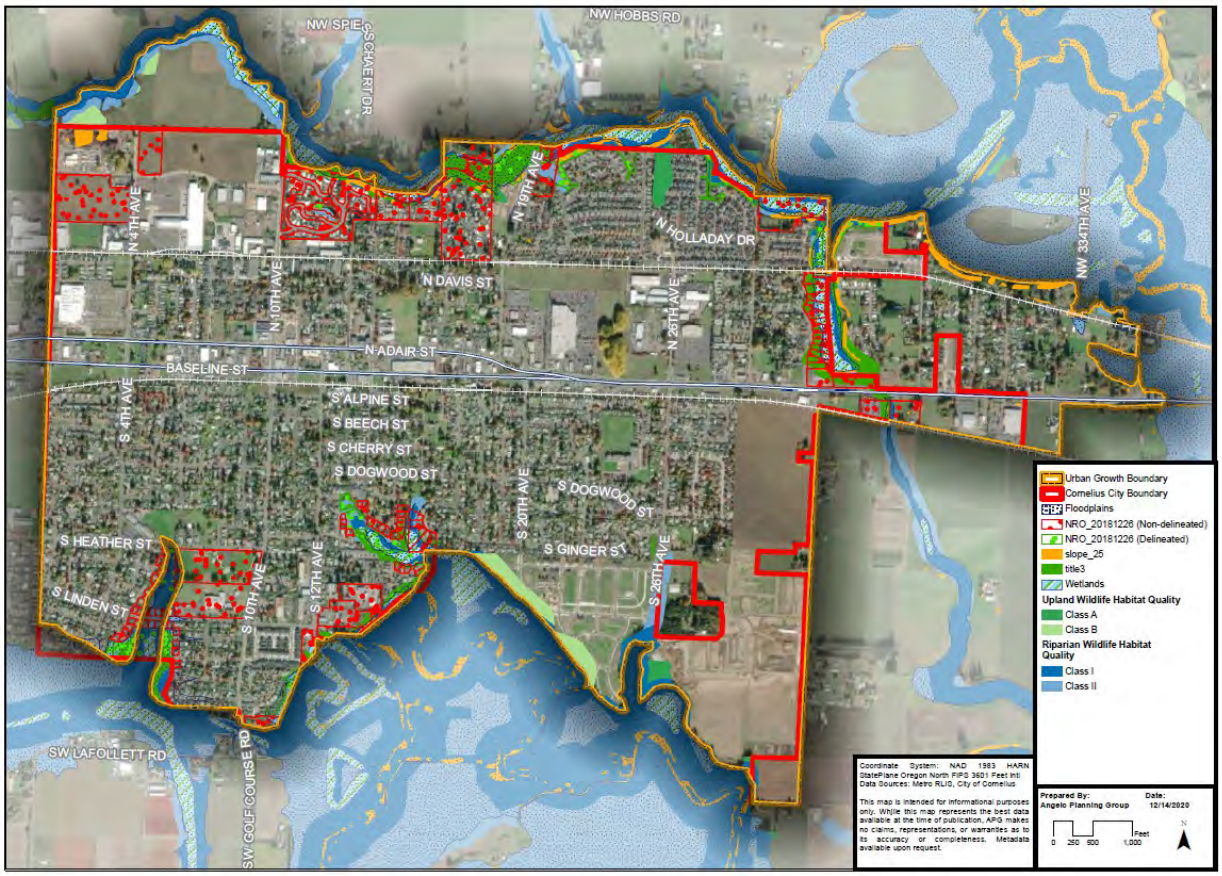
Table 1: Environmental Constraints

Constraint	Total
Constraints Total:	432.8
Floodway	7.6
Slopes >25%	16.0
Floodplain	68.7
Title 3	33.0
Wetland	33.1
Natural Resource Overlay:	83.1
Delineated	33.5
Not delineated	49.6
Title 13	191.3

Both Metro's Title 13 and the City's NRO seek to preserve natural areas and share several overlapping areas. Similar overlapping conditions exist for several other constraints such as floodplains, floodways, and wetlands or Metro's Title 3 and slopes greater than 25%. After accounting for overlapping natural resources, the total acreage of land with environmental constraints located in residential areas is approximately 175 acres. The overlaid constraints are deducted from the amount of buildable land as described in more detail below. Figure 1 illustrates the locations of each environmental constraint.

[3] The City's NRO consists of a combination of delineated and non-delineated areas. Delineated areas apply to tax lots which have completed a delineation study to identify the exact location(s) of on-site natural resources. Non-delineated NRO areas consist of areas for which environmental resources are known to occur, but the exact location(s) have not been identified.

Figure 1: Environmental Constraints Map



Step 2 – Identify Residential Land

For the purposes of this analysis, residential land is identified as the following:

- Land with a comprehensive plan designation of "Residential," including low-density residential and mid-density residential. Zoning for residential tax lots within Cornelius' City limits generally match comprehensive plan designation, with some small exceptions for lots with "Open Space" designations that have residential zoning. These are examined on a case-by-case basis.
- Land with a comprehensive plan designation of "Mixed Use." While many uses are possible within this area, expanding housing opportunities is a primary development objective of the Commercial Mixed Use (CMU) district. "Development within the CMU District shall have a significant commercial element, along with medium to high density residential uses." (CMC 153.063(C)(1))
- Other land (open space, commercial, industrial, etc.) is excluded as it does not require residential uses. Although the City's development code allows for residential use in some of these zones, there is no guarantee that it will be used for residential development.

Table 2 summarizes the distribution of low-density, medium density, and mixed-use areas by identified constraints. There is a total of 1,035 acres of residential land within located in the City. Of that, almost half of the residential land is designated for single-family residential uses. Most of the remainder of the residential land is designated for multi-family residential. Less than a tenth of the land is designated for mixed-use residential areas.

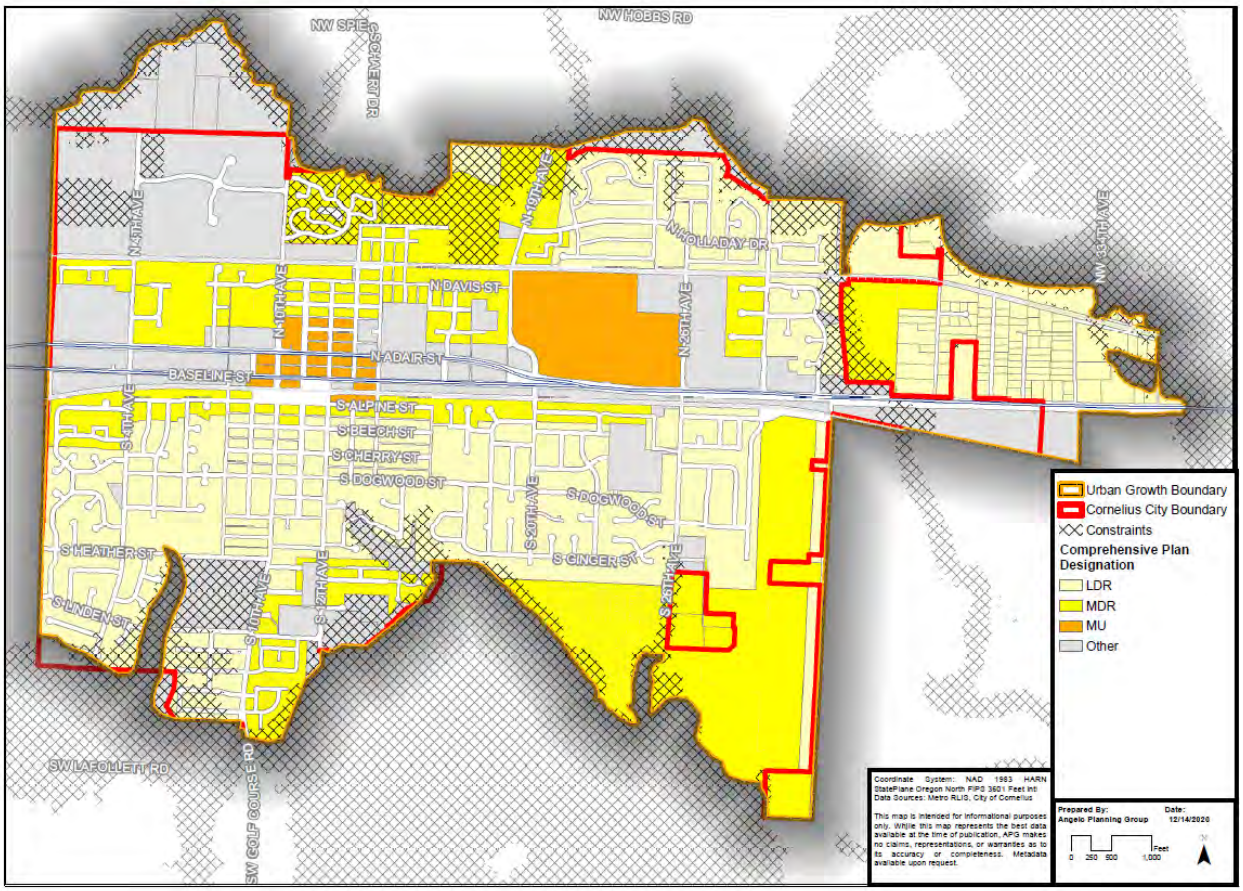
Environmental constraints reduce the amount of buildable residential land by just over 170 acres. The constraints are fairly evenly distributed between low-density and medium-density residential areas, though medium-density residential areas have slightly more constraints (approximately 94 acres) than low-density residential areas (approximately 76 acres). None of the mixed-use areas have constraints on them.

Table 2: Gross Acreage in Residential Land Inventory

Constraints (Acres)	Constrained		Unconstrained		Total	
Total	170.5	100%	865.0	100%	1,035.5	100%
Low-Density Residential	76.4	45%	444.7	51%	521.1	50%
Medium-Density Residential	94.2	55%	346.8	40%	441.0	43%
Mixed-Use	0.0	0%	73.5	9%	73.5	7%

Figure 2 illustrates all residential areas with constraints overlaid. As shown, areas with constraints are generally found near the City boundary. Most of the constraints within the City's boundary can be found along the northern and southern limits of the City. There are no constraints centrally located within the City.

Figure 2: Cornelius Location Map



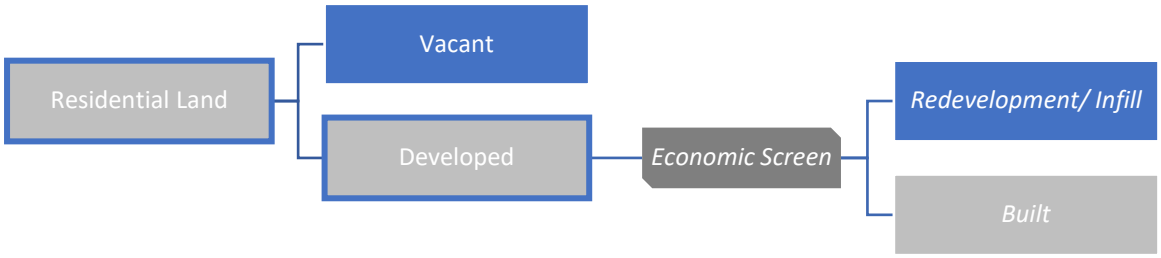
Step 3 – Identify Vacant Tax Lots (and complement developed tax lots)

This step classifies each tax lot into a set of mutually exclusive categories based on development status; this means classification into "vacant" and "developed" land.[4]

The region's buildable land inventory is sorted into *vacant* and *developed* capacity. Vacant tax lots are areas that are generally undeveloped and provide relatively easy opportunities for new residential development. Developed tax lots are areas that currently have some form of residential development, some of which have the potential to allow for new residential development through redevelopment or infill development. Developed tax lots are subjected to economic screens (described in Step 6) to determine potential redevelopment/infill capacity. If a certain level of capacity is reached, the redevelopment potential is considered as part of the buildable land inventory.

Figure 3 illustrates the structure of categories for organizing the BLI.

Figure 3: Residential Land Buildable Land Structure



Vacant land is defined and identified as follows:

- Any tax lot that is fully vacant, based on Metro aerial photo.
- Tax lot with less than 2,000 sq. ft. developed AND developed portion is under 10% of the entire tax lot area.
- Tax lots that are 95% or more "vacant" from the GIS vacant land inventory.[5]

Developed land is defined as follows:

- Land developed at densities consistent with zoning and with improvements that make it unlikely to redevelop. Tax lots that are partially vacant are considered developed at this step and are screened for their redevelopment/infill potential in Step 6.

[4] The BLI methodology does not identify areas with redevelopment potential until step 6.

[5] Metro's RLIS database, updated in January of 2020.

Step 4 – Tax Lot Exclusions.

This step removes tax lots from the BLI that do not have the potential to provide residential growth capacity. Examples of these types of exclusions include schools, parks, and churches, which are typically found in areas with residential zoning, but will not likely provide potential for additional residential capacity because they are used for or committed to non-residential purposes.

The following types of tax lots will be removed from the inventory based on Washington County Assessor PCA code designations, owner names, assessed values, and other data sources:

- Tax exempt with property codes for city, state, federal and Native American designations
- Schools
- Churches and social organizations
- Private "streets"
- Rail properties
- Tax lots under 1,000 sq. ft. (0.023 gross acres)
- Parks, open spaces and, where possible, private residential common areas

Table 3 provides a summary of the amount of land in residential areas that is excluded from the residential buildable inventory. Approximately 79 acres of land (105 tax lots) were identified as one of the uses listed for exclusion from the residential buildable inventory. Any residential development potential from lots categorized as exempt are excluded from the buildable inventory.

Table 3: Excluded Land

Jurisdiction/Status	Number of Tax Lots	Unconstrained Acres
Total:	3,400	854.8
Developed	2,901	642.4
Vacant	394	143.7
Excluded	105	78.9

Step 5 – Calculate Deductions for "Future Streets"

A portion of the vacant land supply is set aside for future right-of-way as follows:

- Tax lots under 3/8 acre assume 0% set aside for future streets.
- Tax lots between 3/8 acre and 1 acre assume a 10% set aside for future streets.
- Tax lots greater than an acre assume an 18.5% set aside for future streets.

Table 4 summarizes the right-of-way set-asides by development status. The set-asides are removed from the unconstrained acreage for each tax lot. The set-asides result in a reduction of approximately 19 acres from the buildable inventory.

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	Unconstrained Acres	Net Acres (ROW Removed)
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Vacant	143.7	124.2

Step 6 – Estimate Potentially Buildable Lands and Housing Unit Capacity (Includes Capacity Estimates for Vacant and Redevelopment Land)

Once the net unconstrained land (buildable land with no environmental constraints) has been calculated, then the estimated number of units for vacant and developed land can be calculated.

Step 6 involves multiple calculations and economic screening to estimate the potential buildable land capacity. The calculations and screening are completed in the following order.

- Assign Parcels to Zones
- Estimate Capacity within Vacant Land
- Conduct Screening on Developed Land
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    - Estimate Redevelopment Capacity

Assign Parcels to Zones

Only land which allows for and assumes residential development within the Cornelius Municipal Code is considered part of the Residential BLI. As such, areas are assigned a zoning district, which includes minimum and maximum densities. Land is classified by zone type (residential, mixed use, etc.) to estimate the amount of land that is potentially developable. To do this, each parcel is assigned a zone.

[6] Net acres with ROW removed does not use the weighted unconstrained acreage. Calculations for other capacity are based on the weighted unconstrained acreage.

Table 5 provides a summary of City zoning that is applied to developed and vacant land in the inventory.

Table 5: Developed and Vacant Land by Zone

Zoning	Unconstrained Acres*	Number of Tax Lots
Total:	766.5	3,295
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GMU	7.6	1
MHP	0.9	3
R7	17.4	100

*Vacant land includes removal of ROW. Constrained and exempt land removed from developed and vacant areas.

Estimate Capacity within Vacant Land

For vacant lots with single family or multifamily zoning, the net developable acreage for each tax lot is simply multiplied by the minimum and maximum density allowed within that zone. For vacant lots with mixed use zoning, the potential number of units is based on minimum square footage of units, maximum number of stories, and maximum or minimum density standards, should they exist. For properties that have received land use approval for development but not yet been developed, capacity reflects the amount of development approved.

Conduct Economic Screening to Estimate Infill and Redevelopment Capacity

Infill. Infill development represents development within single-family zoning where a lot may be sufficiently large to allow homeowners to divide their lot and build an additional housing unit on the previously undeveloped portion. According to the Metro BLI, the following conditions must be met for a single-family zoned tax lot to potentially allow for infill development:

- If the tax lot is zoned single family residential and classified developed, it was assumed that one single family unit presently exists on the tax lot regardless of what's indicated on the assessor's land use code. The one exception to this rule is for tax lots in single-family zoned areas that have current land use for an apartment (according to Metro's multifamily

residential database). These parcels were not considered in calculating infill potential for single family infill supply (as any infill of such land use with this type of zoning would yield a single-family dwelling unit with the associated loss of the multi-family units, which would be unlikely). Lots greater than 2.5 times the minimum zoned lot size are included in the infill supply, except:

- In addition to meeting the size threshold, the assessor's real market building value must be below $300,000 to be counted in the infill supply (since lots with higher value homes would be excluded from the infill supply).
- Tax lots that exceed the minimum zoned lot size by a factor of five are passed through into the infill supply regardless of building value.

As such, each lot that is categorized as part of the infill supply is assumed to have the capacity for additional units. Note, however, the infill economic screen does not account for current built conditions or site access arrangement on a lot-by-lot basis. It's possible that such conditions would preclude or make additional housing particularly costly and/or challenging to develop in some cases. The net capacity for additional dwelling units on eligible infill tax lots is generated using the calculations summarized below. The net additional infill units are calculated as the lower of the following two computations. Tax lots can end up with zero additional infill units.

- Additional DU infill= (Calculated area of TL – min lot size) / min lot size (rounded down to a whole number); can equal 0.
- Additional DU infill = (net unconstrained sq. ft. / 2,000 sq. ft.), rounded down to a whole number; can equal 0.

Accessory Dwelling Units (ADU). ADU capacity is reported in probabilistic terms by geographic location within Metro's UGB. Each single-family tax lot is assigned a small probability of having an ADU built there. The probability ranges from 9% in central Portland locations to 0% for suburban areas near the UGB. Cornelius is assumed to have 0% capacity for the purpose of this BLI.

Redevelopment. If the tax lot is zoned for multi-family residential development or mixed-use residential development and is classified as developed, then the redevelopment capacity would have to meet a "units requirement" in addition to the economic requirements described previously. This inventory uses Metro's "strike price" methodology to determine if the requirements are met.

Units requirement. The multi-family or mixed-use residential redevelopment must add at least 50% more units over the number of units which already exist, or produce at least three units total to be counted towards redevelopment potential. The rationale is that developers would not tear down and redevelop an apartment or condo units unless they could yield a significant gain in rents and dwelling units. Elements of this methodology include:

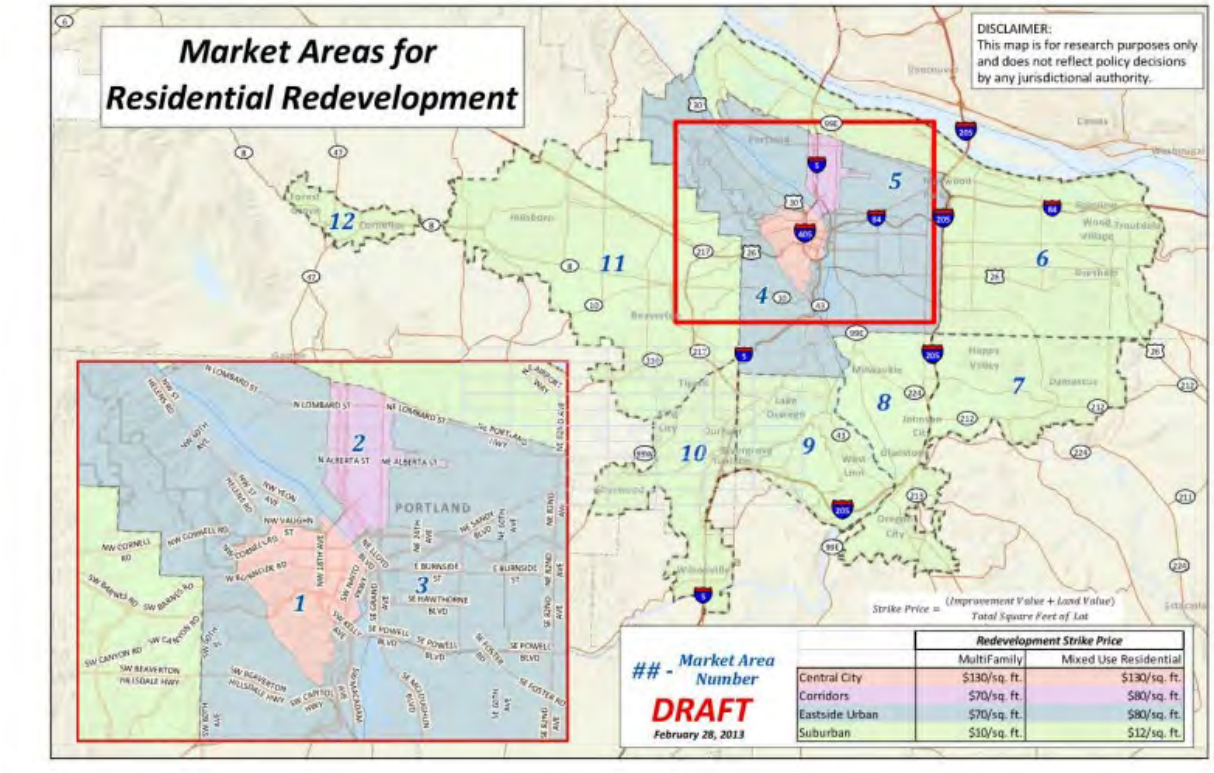
- Redevelopment of a multi-family structure must add at least 50% more units; if it doesn't, the tax lot is not counted.

- If the structure is a commercial (or industrial) building or single-family dwelling unit (in a multi-family or mixed-use zone), the redevelopment must yield at least three or more dwelling units
- Redevelopment must pass through an economic filter first before evaluation of additional dwelling units through redevelopment (see below for economic filter thresholds)

Note, for several parcels, development approvals for specific numbers of units exist. These approvals have been used to assign these lots a development capacity that matches the number of units already approved.

Strike Price Requirement. The "strike price" is used to indicate the price at which point it becomes cost effective for a developer to consider a site for redevelopment. Metro's strike prices are based on current market conditions but are pushed to a modest degree to acknowledge that demand will increase over time. Strike prices also vary by market subarea. As shown in Figure 4, the study area is located entirely within the "Suburban" market subarea category. The strike prices are $10 per square foot for multi-family development and $12 per square foot for mixed-use development.

Figure 4: Market Areas for Residential Development (Metro BLI, 2018)



RESULTS

The results of the BLI are presented in Tables 6 through 8 and illustrated in Figure 5.

Table 6: BLI Summary

Development Status	Tax Lots	Total Acres	Constrained Acres	Unconstrained Acres[7]
Total	3,590	1,343.7	198.9	1,144.8
Not Buildable	3,158	1,010.1	167.6	842.5
Built Out	2,924	842.2	115.3	726.9
Exempt	144	170.7	53.1	117.6
Potentially Buildable	522	333.7	31.4	302.3
Infill[8]	108	95.5	7.5	88.0
Redevelopment	19	66.9	8.1	58.8
Vacant	395	171.3	15.7	155.6

As summarized in Table 7, Cornelius has an estimated 302 acres of unconstrained residential land with some form of additional capacity. Half of the additional capacity is available through vacant land (approximately 155 acres). Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. While that area is approved for development, it will continue to represent additional capacity until homes are constructed there. Infill development comprises of just under 90 acres of unconstrained residential land. Most of the additional infill capacity is located outside City limits to the northeast, but within the UGB. The remainder of buildable land (approximately 59 acres) is categorized as redevelopment .

Just over half of the buildable land is zoned for Multi-Family Residential (approximately 155 acres). Buildable areas with Single-family Residential zoning comprise almost one-third (approximately 97 acres) of the buildable land. The Gateway Mixed-Use zone comprises over ten percent of buildable land (approximately 36 acres). With one exception, the supply of buildable land in all other zones is less than three acres each. The one exception is the Core Residential zone with approximately 11 acres of buildable land.

[7] The measurement of "Unconstrained Acres" is lower than "Gross-Constrained" because an additional deduction is made for developed parcels that have infill capacity to account for an existing structure. It is assumed that the existing structure remains and other land on the parcel is developed.

[8] The amount of potentially buildable acres that meet the definition for infill development does not account for individual sites that may encounter existing built conditions or access restrictions that could potentially preclude or require costly improvements to allow additional housing. As such, infill capacity may be overestimated to a small degree.

Table 7: Unconstrained Acres by Zone, Residential Zones

Zone	Projected Density	Unconstrained Acres				
		Vacant	Infill	Redev.	Total	Share
Total		155.6	89.2	58.8	303.5	100%
Single-Family Residential (R-7)	4-5/acre	18.9	78.2		97.1	32%
Manufactured Home Park (MHP)	max 10/acre	1.2			1.2	<1%
Multi-family Residential (A-2)	8-14/acre	124.0		31.2	155.2	51%
Central Mixed-Use (CMU)		1.6		1.3	2.9	1%
Core Residential (CR)	min 8/acre	0.5	11.1		11.5	4%
Gateway Mixed Use (GMU)		9.3		26.4	35.7	12%

Table 8 provides a summary of the additional housing unit capacity for each zone. The housing unit capacity is determined by the projected density for each zone. Overall, there is an estimated capacity for over 2,668 additional dwelling units. Similar to the amount of unconstrained acreage, vacant areas account for most of the capacity with over 1,300 units. Most of this land is located in southeast Cornelius and has received recent land use approval for multi-phase development. Redevelopment represents the second most capacity with potential for over 840 estimated units. Infill development accounts for slightly under 500 units of the estimated capacity.

For vacant land, the distribution of zoning is heavily concentrated in the Multi-Family Residential zone (approximately 1,041 units). However, most of this capacity is located in southeast Cornelius and a larger share of the proposed housing units in this area are proposed to be single-family detached homes. Vacant Single-family Residential and Gateway Mixed-Use zones account for over 100 units each. Vacant land in all other zones account for approximately 32 units. Most of the remaining vacant unit development potential is anticipated to be in the Central Mixed-Use zone.

The capacity for additional dwelling units in the infill category is heavily concentrated in the Single-Family Residential (487 units). The available supply of Core Residential zones accounts for just over 65 units.

The redevelopable supply of land accounts for just under 850 additional dwelling units in the supply. Of that, most the units are anticipated to be available between the Gateway Mixed-Use zone (approximately 420 units) and the Multi-family Residential zone (approximately 413 units). The remaining potential supply of additional units is anticipated to be in the Central Mixed-Use zone with approximately 14 additional units.

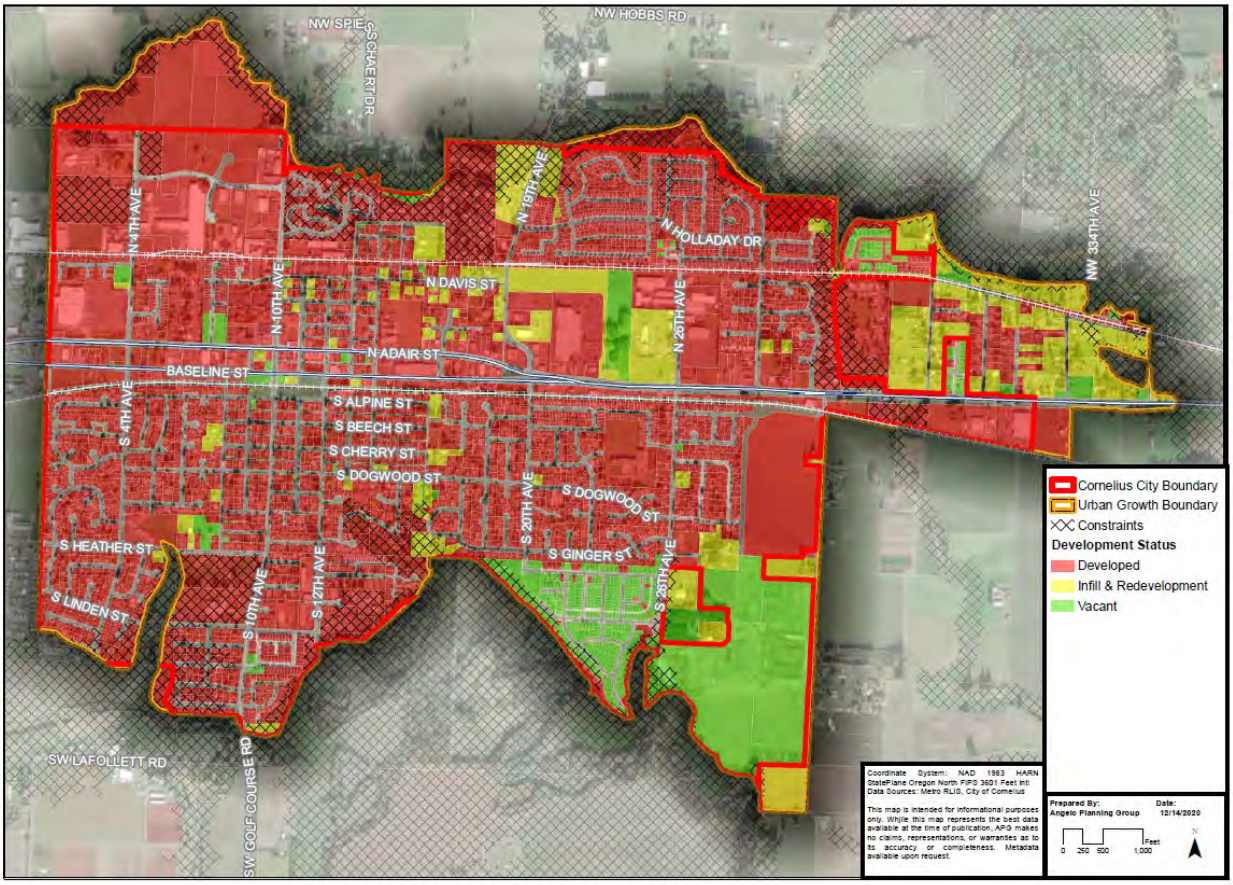
Table 8: Housing Unit Capacity by Zone, Residential Zones

Jurisdiction and Zone	Projected Density	Capacity				
		Vacant	Infill	Redev.	Total	Share
Total		1,334	487	847	2,668	100%
Single-Family Residential (R-7)	4-5/acre	139	421		560	21%
Manufactured Home Park (MHP)	max 10/acre	11			11	<1%
Multi-family Residential (A-2)*	8-14/acre	1,041		413	1,454	54%
Central Mixed-Use (CMU)		16		14	30	1%
Core Residential (CR)	min 8/acre	5	66		71	3%
Gateway Mixed Use (GMU)		122		420	542	20%

* Note: Approximately 660 of the units in the A-2 zone are proposed to be single-family detached units to be developed as part of the Laurel Woods development. This will have the effect of reducing the relative share of multi-family and attached unit capacity and increasing the share of single-family detached capacity.

Figure 5 illustrates the location of vacant and infill/redevelopment areas within the City of Cornelius.

Figure 5: Housing Unit Capacity Map



MEMORANDUM

Housing Strategies Report
Cornelius Housing Needs Analysis

DATE January 22, 2021

TO Ryan Wells and Tim Franz, City of Cornelius

FROM Kate Rogers and Matt Hastie, Angelo Planning Group

CC Brendan Buckley, Johnson Economics

Table of Contents

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I. OVERVIEW

Like other cities in Oregon, the City of Cornelius is responsible for helping to ensure that its residents have access to a variety of housing types that meet the housing needs of households and residents of all incomes, ages, and specific needs. Towards that end, Angelo Planning Group (APG) and Johnson Economics conducted a Housing Needs Analysis (HNA) to better understand Cornelius's housing needs. The study includes two other reports: a Housing and Residential Land Needs Assessment (HRLNA) and a Residential Buildable Lands Inventory (BLI). Findings from these reports can be used to inform future amendments to the City's Comprehensive Plan and Development Code, as well as other strategies to support housing needs, consistent with Statewide Planning Goal 10 (Housing). Goal 10 states that the City must:

> "*encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density*."

The purpose of this Housing Strategies Report is to recommend policies and strategies for addressing the housing needs identified in the Cornelius HNA. In addition to ensuring consistency with state and federal requirements, these recommendations are intended to support partnerships among housing providers and stakeholders in Cornelius and to promote opportunities for the development of housing affordable to people with a full range of incomes and housing needs.

Section II of this report identifies initial recommendations for new or updated Comprehensive Plan housing policies. [NOTE: Final recommendations for updated Comprehensive Plan policies are provided in the Housing Measures Report, to which this report is an attachment.] Section III of this report includes an evaluation of the current Development Code in its ability to meet the City's housing goals. Section IV identifies a list of potential strategies that the City could undertake to address current and future housing needs. Finally, Section V includes analysis in support of the City's compliance with the Metropolitan Housing Rule (Oregon Administrative Rule 660-007).

II. COMPREHENSIVE PLAN HOUSING POLICIES

The Housing chapter of Cornelius's Comprehensive Plan was last updated in 2019 although revisions adopted at that time were minor. APG reviewed the Plan to assess whether it includes the following types of supportive policies:

- **Supports Statewide Planning Goal 10**. Comprehensive Plans typically do and should include a general policy that mirrors Statewide Planning Goal 10 (Housing), stating that the jurisdiction's overall goal is to "*encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density*."

- **Emphasizes affordable housing needs**. Given that meeting the needs of low- and moderate-income households often requires public intervention or subsidy, it is important to include policies emphasizing the needs of these households.
- **Supports partnerships**. Most Comprehensive Plan housing elements include policies aimed at supporting other public agencies, non-profits and market rate developers who focus on meeting the needs of low- and moderate-income households and community members with special housing needs.
- **Encourages a variety of housing types**. In addition to a broad goal or policy about meeting a full range of housing needs, Plans often include policies noting the need for a variety of housing types, including single-family attached housing, duplexes, triplexes, multi-family housing and townhomes, as well as less traditional forms of housing such as cottage cluster housing and accessory dwelling units. Addressing this policy issue also is consistent with recently adopted state legislation (House Bill 2001).
- **Affirms Fair Housing goals**. Local governments are required to ensure that their housing policies and standards do not discriminate against or have adverse effects on the ability of "protected classes" to obtain housing, consistent with the federal Fair Housing Act.
- **Supports mixed use development**. Some Plans explicitly support the development of mixed-use projects, which typically include upper story housing located above retail or other commercial uses.
- **Supports accessory dwelling units**. Comprehensive Plans may include policies specifically referencing support for this form of housing. Recent Oregon legislation requires all cities above a certain size to allow for this form of housing outright in all areas that are zoned for detached single family dwellings.
- **Supports flexible zoning**. Some Plans include policies which emphasize the need for zoning to be flexible enough to meet a variety of housing needs and keep costs for such housing down, particularly for housing affordable to low- and moderate-income households.
- **Addresses land supply goals**. Many Plans include policies which reference the need to ensure that adequate land is zoned to meet identified housing needs, and to periodically update the jurisdiction's inventory of such lands.
- **Supports maintenance and rehabilitation of existing housing**. Many Plans emphasize maintenance of existing housing stock as a method to prevent unsafe conditions and to keep affordable housing available within the community.
- **Supports development of manufactured homes**. Oregon law requires that all zones that allow for "stick built" single-family detached homes also allow for manufactured homes on individual lots. Each jurisdiction must also allow for manufactured home parks in at least one residential zone.
- **Regulates short-term rentals**. Many communities, particularly those with high levels of tourism, regulate short-term rental housing to reduce its impact on the supply and affordability of long-term rental housing. However, to date this has not arisen as an issue in Cornelius.

Table 1 summarizes APG's evaluation of the extent to which Cornelius's Comprehensive Plan includes the types of supportive policies listed above. The Housing chapter of the Comprehensive Plan includes a Goal, Policies, and Implementation strategies—each of these is included in the evaluation below.

Table 1. Comprehensive Plan Policy Evaluation

Policy Topic	*Existing Language*	*Assessment and Example Language*
Supports Statewide Planning Goal 10	*(**Goal**) To provide for the housing needs of prospective as well as present Cornelius citizens.*	Adequately addressed.
Emphasizes affordable housing needs	*(**Policy 2**) Promote and encourage housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race.* *(**Implementation 3**) The City will work with the Washington County Housing Authority and appropriate federal and state agencies in identifying and providing for housing at various rent and price ranges to ensure low- and moderate-income needs are appropriately addressed.*	Consider adding a policy that specifically mentions the need for housing that is affordable to low- and moderate-income households or edit Policy 2. For example: • *Support the creation of housing that is affordable to low- and moderate-income households through partnerships, land use policies, and programmatic efforts. (or)* • *Promote and encourage housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race, including for low- and moderate-income households.*
Supports partnerships	*(**Implementation 3**)* – see above *(**Implementation 4**) The City will work with METRO in implementing its Housing Goals and Objectives.*	The *Implementation* section mentions partnerships with Washington County Housing Authority and federal and state agencies; however, the City could consider supporting partnerships in the policies themselves. For example: • *Continue to maintain and expand partnerships with non-profit housing developers and other affordable housing providers and agencies that preserve or provide new low to moderate income-housing units, create opportunities for first-time homeownership, and help vulnerable homeowners maintain and stay in their homes.* • *Work with other jurisdictions as well as regional and state agencies to identify the region's housing needs and pursue a shared approach to improve housing affordability across all household income ranges.*

Policy Topic	*Existing Language*	*Assessment and Example Language*
Encourages a variety of housing types	*(**Policy 1**) Ensure that adequate land is available for both single and multi-family housing.* *(**Policy 2**)* – see above	The policies could do more to encourage a variety of housing types, beyond just single- and multi-family housing. Example policy language to consider: • *Provide a variety of choices regarding type, location, density, and cost of housing units corresponding to the needs, means, and preferences of current and future households.* • *Provide the opportunity for a wider range of rental and ownership housing choices in Cornelius, including additional middle housing types in low- and medium-density zones (see p. 20-21 for definitions).*
Supports mixed use development	N/A	Example policy language to consider: • *Encourage residential uses mixed with other compatible uses in the same building or on the same site within the City's mixed-use zones.*
Affirms Fair Housing Goals	N/A	Example policy language to consider: • *Employ strategies that support the Fair Housing Act and affirmatively further fair housing.*
Supports ADUs	N/A	Example policy language to consider: • *Allow and support the development of Accessory Dwelling Units in all residential zones as required by State law.*
Addresses Land Supply Goals	*(**Policy 1**)* – see above	Example policy/implementation language to consider: • *Encourage efficient use of residential land within the Urban Growth Boundary* • *The City shall regularly monitor its supply of buildable land and shall provide a sufficient amount of residential land to accommodate residential growth.* • *Ensure that the city has an adequate housing supply with enough land to support the community's growth.* • *The City shall prepare, regularly monitor, and periodically update an inventory of buildable residential land.*

Policy Topic	*Existing Language*	*Assessment and Example Language*
Supports Development of Manufactured Homes	N/A	Example policy language to consider: • *Support the maintenance and development of manufactured homes as an affordable housing choice in appropriate locations.*
Supports maintenance and rehabilitation of existing housing	N/A	Example policy language to consider: • *Encourage maintenance and rehabilitation of the existing housing stock and support local or regional programs.*
Regulates Short Term Rentals	N/A	No change recommended.

III. DEVELOPMENT CODE EVALUATION

In addition to reviewing Comprehensive Plan policies, APG reviewed Title 18: Zoning of the Cornelius Municipal Code (CMC) and summarized information about the following types of standards: housing types allowed, densities/minimum lot sizes, ADU requirements, cottage cluster housing, off-street parking, building heights, and minimum setbacks. Table 2 summarizes APG's general evaluation of the Development Code in its ability to meet the City's housing goals. The assessment also including observations and initial recommendations related to compliance with Oregon House Bill 2001 and associated Administrative Rules related to middle housing. Additional information and strategies related to that topic also are found in Section IV of this report.

Cornelius has the following residential and mixed-use zoning districts:

- R-7 – Single-Family Residential Zone
- R-10 – Single-Family Residential Zone
- MHP – Manufactured Home Park Zone
- A-2 – Multi-Family Residential Zone
- CR – Core Residential Zone
- CMU – Central Mixed Use Zone
- GMU – Gateway Mixed Use Zone

The City's Highway Commercial (C-2) zone also allows residential development and may represent an opportunity for future housing development, particularly multi-family housing as part of future mixed-use developments. However, as this is not a principally residential zoning district, residential development standards in this zone are not described in detail in the following table.

Table 2. Development Code Evaluation

<table>
<tr><th>Code Provision</th><th>Existing Code</th><th>Assessment</th></tr>
<tr>
<td>Housing Types Allowed</td>
<td>
<table>
<tr><th colspan="3">Residential Zones</th></tr>
<tr><th></th><th>Permitted Outright</th><th>Conditional Use</th></tr>
<tr><td>R-7</td><td>Single-family detached dwelling
Manufactured housing
ADU</td><td>Duplex
Common wall single-family dwelling
PUD</td></tr>
<tr><td>R-10</td><td>Single-family detached dwelling
Manufactured housing
ADU</td><td>Duplex
PUD</td></tr>
<tr><td>MHP</td><td>Manufactured housing</td><td>N/A</td></tr>
<tr><td>A-2</td><td>Common wall single-family dwellings
ADU
Duplex
Single-family attached dwellings (i.e., townhomes)
Multi-family dwellings
Boarding house</td><td>Single-family detached dwelling
Manufactured housing
PUD</td></tr>
<tr><td>CR</td><td>Single-family detached dwelling
Manufactured housing
Common wall single-family dwellings
ADU
Duplex
Single-family attached dwellings
Multi-family dwellings
Boarding house</td><td>PUD</td></tr>
</table>
</td>
<td>

HB 2001 will require Cornelius to permit middle housing types—duplexes, triplexes, fourplexes, townhomes, and cottage clusters—in residential zones that allow single-family detached housing. Cornelius's Code will need to be updated by June 2022, or else the state's model code for middle housing (currently under development) will automatically apply. The City may establish specific site or building design standards for middle housing types as long as those standards do not cause "unreasonable cost or delay."
The A-2 and CR zones already allow most of these housing types—they allow duplexes and townhomes, and by permitting multi-family dwellings, also allow triplexes and quadplexes.
Cottage clusters are not currently defined or permitted in any residential zones.
The R-7 and R-10 zones do not permit any middle housing types outright and will have to be amended to do so.
The City could also consider permitting middle housing types in its mixed-use zones (CMU and GMU).

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</tr>
</table>

Code Provision	Existing Code			Assessment
	Mixed-Use Zones			
	CMU	Residential dwellings above ground floor (regulated affordable housing units allowed at ground floor)	PUD	
	GMU	Multi-family dwellings Single-family attached dwellings	PUD	

Densities / Minimum Lot Sizes Allowed

The City regulates density in residential zones through a combination of minimum and maximum units per acre and minimum lot size requirements.

	Maximum Density (dwelling units per net acre – du/na)	**Minimum Density**	**Minimum Lot Size**
R-7	5 du/na	4 du/na	SFD: 6,000 sf DUP and CWSF: 4,500 sf/unit
R-10	None listed (Effective max density based on min lot size: ~3.3 du/na)	3 du/na	10,000 sf
MHP	10 du per gross acre (~13 du/na)	--	4 acres per manufactured home park
A-2	14 du/na	SFD, SFA, CWSF: 8 du/na MF: 11 du/na	SFD, DUP, CWSF: 3,100 sf/unit SFA: 3,000 sf/unit MF: 2,330 sf/unit
CR	None (Effective max density for multi-family and single-family attached: ~16.3 du/na)	SFD: 8 du/na All others: 11 du/na	SFD and DUP: 3,100 sf CWSF, SFA, MF: 2,000 sf/unit
CMU	None	None	None
GMU	None	None	None

- **Single-family detached**: no recommended changes.
- **Duplex**: Per the Administrative Rules for HB 2001 (OAR 660-046), minimum lot size for duplexes cannot be greater than for SFD. As a result, minimum lot sizes for duplexes will need to be reduced.
- **Other middle housing types**: As part of compliance with HB 2001, the City will need to develop reasonable lot size or density requirements for triplexes, fourplexes, and cottage cluster housing in zones where they will be allowed in the future. These will need to be consistent with minimum compliance standards currently being considered by the Land Conservation and Development Commission unless the City wants to take an optional "Performance Metric Approach" to these code provisions.
- **Multi-family**: Consider increasing the maximum density and/or reducing the minimum lot area per unit in the A-2 and CR zones.

Code Provision	Existing Code	Assessment
	SFD: Single-Family Detached SFA: Single-Family Attached CWSF: Common Wall Single-Family DUP: Duplex MF: Multi-Family	
ADU Requirements	Permitted ADUs must be: • Attached to or within the primary dwelling, • In an existing accessory building, such as a detached garage, OR • Created by adding a new accessory building. The City recently updated its ADU standards to comply with SB 1051 and HB 2001. The City removed its owner occupancy and off-street parking requirements and increased its floor area allowance. In the R-7, A-2, and C-R zones, ADUs are now limited to a maximum floor area of 800 sf or 60% of the primary dwelling, whichever is less. In the CR zone, two ADUs are permitted per dwelling (including single-family attached dwellings and manufactured homes). *NOTE: The City did not include the R-10 zone in its recent ADU code updates because the R-10 designation is likely to be removed (see Housing Strategy 2).*	• The ADU standards currently comply with state law, but the City could consider additional ways to facilitate ADU development, as described in Housing Strategy 5.
Cottage Cluster Housing	Cottage clusters are not currently identified as a specific housing type. Cottages on individual lots could potentially be developed through the PUD process.	• Cottage cluster housing is one of the middle housing types that cities will need to allow in areas zoned for single-family use. As such, Cornelius will need to adopt standards for cottage cluster housing by June 2022.
Off-street Parking Requirements	• Single-Family: 1 space per unit • Duplex: 1 space per unit • Multi-Family: o Dwellings < 500 sf: 1 space per unit o 1-bedroom: 1.25 spaces per unit o 2-bedroom: 1.5 spaces per unit o 3+ bedroom: 1.75 spaces per unit	• As part of HB 2001 compliance, the City will need to update parking standards applicable to triplexes and quadplexes pursuant to the OAR standards. Minimum off-street parking requirements cannot exceed one space per unit, regardless of the number of bedrooms; allowable parking standards are further limited on smaller lots.
Building Heights	• **R-7, R-10, MHP, A-2, CR:** 35' • **CMU:** 40' or 3 stories, whichever is less • **GMU:** 45' or 3 stories, whichever is less	No recommended changes.

Code Provision	*Existing Code*	*Assessment*
Minimum Setbacks		No recommended changes.

	Front / Street Side	Rear	Interior Side
R-7	10’	10’	5’
R-10	25’	25’	10’
MHP	10’	10’	7.5’
A-2	10’	10’	Single-family: 5’ Multi-family: 5’ per story
CR	10’	10’	5’
CMU	0’	0’	0’
GMU	0’	0’	0’

IV. HOUSING STRATEGIES

With initial input from City staff and the HAC, APG has identified a variety of potential strategies applied in other communities that the City of Cornelius could consider to address current and future housing needs identified in the HNA. These strategies have been organized into the following four categories: (1) Policy and Land Supply Strategies; (2) Development Code Strategies; (3) Incentives; and (4) Funding Sources and Uses.

Table 3 provides a summary of potential housing strategies and indicates each strategy's initial priority, as determined by City staff.

Table 3. Summary of Potential Housing Strategies

Strategy	Initial Priority
LAND SUPPLY STRATEGIES	
1. UGB Amendments and Planning Amend the city's UGB if the supply of land within the UGB cannot accommodate the amount needed for future development. Prior to pursuing an expansion, the City must consider measures to improve the efficiency of future land use within the existing boundary.	Planning: High Amendments: Low
2. Rezone Land Re-designate land from other residential designations and/or from commercial, industrial, or institutional designations to meet specific housing needs, assuming there is an adequate supply of land available to meet non-residential needs. Also remove the R-10 zoning designation.	Rezone: Low Remove R-10: High
POLICY AND DEVELOPMENT CODE STRATEGIES	
3. Increase Allowed Density in Existing Zones Increase the allowed density or reduce the minimum allowed size of lots in one or more zones to allow for more compact development and/or a wider range of housing types in specific areas.	High / Low (depending on zone)
4. Facilitate "Missing Middle" Housing Types in All Residential Zones Allow duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing in a broader range of zones.	High
5. Promote Accessory Dwelling Units (ADUs) Update ADU standards to remove barriers; encourage development though reduced fees, exemptions from selected planning requirements, use of pre-approved site or building plans, or other measures.	High
6. Zoning Incentives for Affordable and Workforce Housing Create incentives for developers to provide a community benefit (such as affordable housing), in exchange for the ability to build a project that would not otherwise be allowed by the development code.	Medium

Strategy	Initial Priority
7. Streamline Off-Street Parking Requirements Reduce the number of required off-street parking spaces for certain types of housing, allow for credit for on-street spaces, and/or encourage shared parking in mixed use developments.	Low
INCENTIVES	
8. System Development Charge Exemptions or Deferrals Deferral of SDCs for affordable housing. Can be applied to regulated affordable housing and/or specific housing types (such as ADUs).	Medium
9. Tax Abatements Tax abatements are reductions in property taxes for housing and may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable or other desired housing types (such as mixed-use).	Medium
10. Land Use Permit Fee Reductions Reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), in order to reduce the upfront cost of development.	Medium
11. Expedited Development Review Strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff.	Low
FUNDING SOURCES AND PROGRAMS	
12. Tax Increment Financing (TIF) TIF is a funding mechanism in which future tax revenues in targeted development or redevelopment areas are diverted to finance infrastructure improvements and/or development—potentially including affordable and/or market-rate housing.	High
13. Land Acquisition and Banking Land acquisition is a tool to secure sites for affordable housing. Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be used for affordable housing.	High
14. Construction Excise Tax (CET) A one-time tax on new construction of between 1% and 3% to help pay for affordable housing strategies identified here. State law requires it to be spent on specific types of programs and activities.	Low
15. Public-Private Partnerships (PPPs) and Community Land Trusts Arrangements between public and private entities to create more and/or affordable housing. PPPs can promote a variety of affordable housing programs or projects and include partnerships from multiple entities (public, private, and non-profit), including Community Land Trusts.	Medium
16. Financial Assistance Programs A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.	Low

Land Supply Strategies

The following strategies are intended to address Cornelius's existing land capacity and its ability to accommodate needed housing.

1. UGB Amendments and Planning

Initial Priority: Planning – High; Amendments – Low

This strategy involves amending the Cornelius Urban Growth Boundary (UGB) if the supply of land within the UGB cannot accommodate the amount needed for future development. Metro manages this process in coordination with local jurisdictions in the Portland Metro region.

The findings of the HNA do not indicate the need for a UGB expansion to accommodate the projected housing needs in Cornelius. There is a total forecasted need for roughly 1,850 units over the next 20 years based on the forecasted growth rate. This is below the estimated total capacity of 2,668 units. There also is an adequate supply of land to meet the projected mix of different types of housing units, including single-family detached and attached units, duplexes, triplexes, quadplexes, and multi-family units, given the allowed housing types and densities in each zone and the mix of units proposed in previously approved developments.

Urban and Rural Reserve Planning

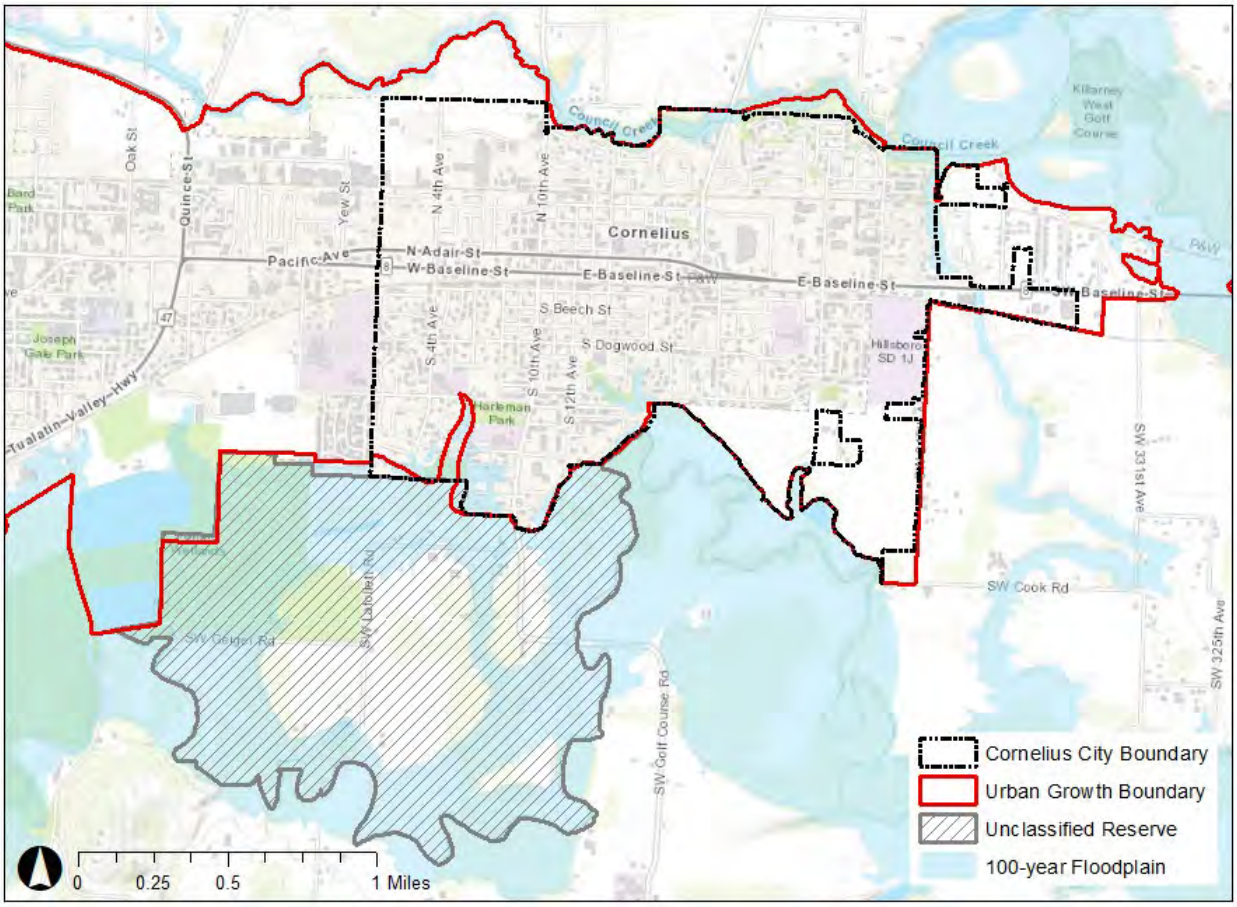
The findings of the HNA indicate a surplus of land zoned for all types of housing development. This surplus land could accommodate 248 low-density units, 270 medium-density units (single-family attached, manufactured homes, and 2-4 plexes) and 296 high-density units (multi-family apartments) over and above the projected future need.

While the HNA does not indicate the need for an expansion of the UGB at this time, the City may need to explore that option in the future as development consumes the current supply of land, particularly if the pace of development continues on its recent trajectory. In anticipation of those future activities, the City will need to ensure that it has identified appropriate future expansion areas. Towards that end, the area to the southwest of the existing City boundary may be a candidate for a swap with other areas adjacent to Cornelius currently designated as Rural Reserve, with an intent to upgrade to Urban Reserve in the future (see Figure 1).[1] The area to the southeast of the city boundary would be expected to be more suitable for development and have more opportunities for efficient and cost-effective development in comparison to the area to the southwest. That area to the southwest, which is not classified as a Rural Reserve and therefore could be considered for a future UGB expansion, is subject to significant natural resource-related constraints (e.g., 66% of the total area is classified as riparian areas and wetlands and much of the area is within the 100-year floodplain). Any UGB planning or adjustments would need to be

[1] Urban reserves are lands suitable for accommodating urban development over the 50 years after their designation. Rural reserves are lands that are high value working farms and forests or have important natural features like rivers, wetlands, buttes and floodplains. These areas will be protected from urbanization for 50 years after their designation. (Source: https://www.oregonmetro.gov/urban-and-rural-reserves)

undertaken in coordination with Metro as part of its process for periodically identifying and refining Urban Reserves and potential future UGB expansion areas.

Figure 1. UGB Map



UGB Expansion

As noted above, the findings of our study do not indicate the need for a UGB expansion to accommodate projected housing needs in Cornelius between 2020 and 2040. The comparison of land need and demand overall shows a surplus of land supply in comparison to projected land need over the next 20 years, both overall and for specific housing types. To the extent that the City identifies the need for a UGB expansion in the future, in partnership with Metro, the City would first need to complete the following steps:

- Further analyze and update its findings of where there is an insufficient supply of buildable land inside the UGB.
- Consider and adopt efficiency measures to ensure that land inside the UGB is being used efficiently. Many of the code update recommendations identified below are efficiency measures.

- Work with Metro to identify potential expansion areas within Cornelius' portion of the UGB, including through re-classification or establishment of additional urban reserve areas and prioritization of potential expansion areas adjacent to Cornelius.

2. Rezone Land

Initial Priority: Rezone - Low; Remove R-10 - High

As noted above, the HNA indicates a modest surplus of land in each general land use designation (low, medium, and high density zones). As a result, rezoning land to address any imbalance among different zoning districts is not warranted at this time.

To the extent rezoning is warranted and considered in the future, the City will need to identify the most appropriate locations for a potential rezoning. In doing so, the City should use the following criteria or factors:

- **Proximity to existing high-density areas**. Extending an existing area of high-density land would reduce impacts on the transition between lower- and higher-density areas and could increase the level or potential for support from surrounding property owners.
- **Proximity to services**. Ideally, higher-density areas should be close to supporting commercial and other services (schools, parks, etc.) to help ensure that residents can easily access these services and daily needs by walking, biking, or driving.
- **Size and ownership**. The City should prioritize relatively large sites (3-10 acres) for rezoning. Larger sites will be more attractive for development and provide more flexibility for site design.

In addition, any rezoning of land would also need to be accompanied by amendments to Cornelius's Comprehensive Plan map (which applies two residential land use designations: Low Density Residential and Medium Density Residential).

Remove R-10 Zone

The R-10 Single-Family Residential Zone is on the books in the CMC but has never been applied. The minimum lot size in R-10 is 10,000 sf. This low-density designation does not reflect the expected development patterns in Cornelius into the future. Therefore, we recommend that the R-10 zone be removed, and that any future areas planned for low-density residential use be zoned as R-7. City staff has indicated that removal of the R-10 is likely to move forward.

Policy and Development Code Strategies

The following set of strategies include possible amendments to Title 18 of the Cornelius Municipal Code, which the City could consider or further evaluate to help meet Cornelius's housing needs and goals. In addition to the specific strategies identified here, the City will need to ensure that it applies clear and objective standards for the development of all needed housing. That should be a component or consideration in considering any future development code amendments.

3. Increase Allowed Density in Existing Zones

Initial Priority: High for high density zones; Low for low density zones

The HNA found that the City of Cornelius has a sufficient overall supply of residential land to accommodate future housing needs, assuming land is built at or near the planned density levels, based on existing zoning. Increasing allowed density in existing zones is not strictly necessary to meet projected housing needs within the existing UGB; however, the City's allowed densities in its medium- and high-density zones are relatively low for a city in the Portland Metro area and may limit financial feasibility of this form of housing.

There are two key benefits to allowing higher densities to be considered in selected locations:

- **Housing affordability**. Smaller lot sizes and higher densities allow for some of the major costs of development—such as acquiring land and building infrastructure—to be divided among more units. This decreases the per-unit cost of development and can enable lower sale prices or rental rates.
- **Efficiency of land use and infrastructure provision**. Higher densities also help to ensure that residential land is used efficiently. If growth rates accelerate more quickly than projected, then it will be more important for the City to efficiently use land within the existing UGB. It is also more efficient for the City to provide roads, sewer, and water systems (on a per-unit basis) to higher density development.

Additionally, because there is a projected deficit of land zoned for single-family detached housing (despite the overall surplus of residential land), it is important that the City use land zoned for single-family detached housing efficiently to meet the projected need.

The City regulates density in residential zones through a combination of minimum and maximum units per acre and minimum lot size requirements. In addition to considering increased density allowances, the City should address potential inconsistencies between allowable lot sizes and densities in residential zones. One opportunity to address these inconsistencies is to remove the per-unit minimum lot area standards for multi-family housing, and instead regulate density by units per acre only. This approach also has the benefit of promoting more efficient use of land for larger multi-family projects.

Potential amendments to maximum density and minimum lot size standards are presented in Table 4. These amendments are intended to allow for higher density development while considering the existing character and stated purpose of the zone. In addition, minimum lot sizes for middle housing

will need to be amended and/or added to comply with HB 2001 administrative rules. (See Strategy 4 for additional discussion of middle housing standards.) Minimum lot width, lot depth, or setback standards may also need to be modified to ensure they are consistent with any changes to minimum lot size standards (and also for compliance with HB 2001).

In updating density requirements, the City should be mindful of the potential impacts of displacement and gentrification (e.g., existing lower cost housing being replaced by denser but potentially more expensive newer housing). A number of other strategies described in this report can help reduce or mitigate impacts of displacement.

Table 4. Potential Minimum Lot Size/Density Amendments

Zone	**Existing Min. Lot Size** (square feet) **/ Max. Density Standard** (units per net acre)	**Proposed Standard**	***Commentary***
R-7 – Single-Family Residential	SFD: 6,000 sf DUP, CWSF: 4,500 sf/du	SFD, CWSF: no change DUP, TRI: 6,000 sf/lot QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du	*Middle Housing: The City will need to develop minimum lot sizes for middle housing types consistent with the OAR. Proposed standards reflect minimum OAR compliance. Per OAR, maximum density cannot apply to middle housing (except townhouses/SFA). This will need to be reflected in the code.*
	5 du/na	No change	
R-10 – Single-Family Residential	SFD: 10,000 sf	SFD: No change DUP, TRI, QUAD, CC: 10,000 sf/lot SFA: 1,500 sf/du	*As noted under Strategy 2, we recommend removing R-10 from the code. However, we are including it here in case that recommendation is not implemented.* *SFA: For minimum OAR compliance, average minimum lot size for townhouses cannot exceed 1,500 sf. However, cities can limit density for a townhouse project to four times the allowed density for SFD. If the City limits density in this way, the townhouse lots themselves would be allowed to be as small as 1,500 sf (on average), but no more than 4 townhouse lots could be created from a 10,000-sf parent parcel. Any remainder could be placed in a shared open space tract.* *Other types: Same comments as for R-7.*
	No max. density	SFA: limit density to 4 units per 10,000 sf (or the equivalent)	
MHP – Manufactured Home Park	4 acres per manufactured home park	No change	*N/A*
	10 units per gross acre		
A-2 – Multi-Family Residential	SFD, DUP, CWSF: 3,100 sf/du SFA: 3,000 sf/du	SFD, CWSF: no change DUP: 3,100 sf/lot TRI: 5,000 sf/lot	*Middle Housing: Because SFD is not permitted in the A-2 zone, the City is not required to permit middle housing or to*

Zone	**Existing Min. Lot Size** (square feet) **/ Max. Density Standard** (units per net acre)	**Proposed Standard**	***Commentary***
	MF: 2,330 sf/du	QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du MF: no minimum per unit	*meet minimum OAR standards. However, all middle housing types are already permitted. For the sake of consistency, we recommend applying the same min. lot sizes for middle housing that will be required in the CR zone.* *MF: Recommend increasing maximum density and removing per-unit lot area standards. This allows more efficient development for larger multi-family projects.*
	14 du/na	18 – 20 du/na	
CR – Core Residential	SFD, DUP: 3,100 sf CWSF, SFA, MF: 2,000 sf/du	SFD, DUP, CWSF: no change TRI: 5,000 sf/lot QUAD, CC: 7,000 sf/lot SFA: 1,500 sf/du MF: no minimum per unit	*Middle Housing: Proposed standards reflect minimum OAR compliance.* *MF: Same comments as for A-2.*
	(Effective max density for MF and SFA: ~16.3 du/na)	24 du/na	
SFD: Single-Family Detached SFA: Single-Family Attached CWSF: Common Wall Single-Family DUP: Duplex		TRI: Triplex QUAD: Quadplex CC: Cottage Cluster MF: Multi-Family	

Cornelius could look to other small cities within the Portland metro area for examples of density standards that might be appropriate. Standards for medium- and high-density zones in the Cities of Forest Grove, Gladstone, Milwaukie, Sherwood, and Troutdale are presented in Table 5.

Table 5. Density Examples from Other Small Cities in Metro Area

City	Zone	Min. Lot Size	**Max. Density** (units per net acre)
Forest Grove[1]	Residential RML	None	12
	Residential RMH	None	20.28
Gladstone	Multi-family residential MR	MF: 3,000 sf + 1,000 sf/du	Based on min. lot area – Effective density up to ~30+ du/na for larger projects
Milwaukie	Residential Zone R-3	5,000 sf	14.5

City	Zone	Min. Lot Size	Max. Density (units per net acre)
	Residential Zone R-2.5	5,000 sf	17.4
	Residential Zone R-2	5,000 sf	17.4
	Residential Zone R-1, R-1-B	5,000 sf	32
Sherwood	Medium Density Residential (MDRL)	5,000 sf	8
	Medium Density Residential High (MDRH)	SFD: 5,000 sf MF: 8,000 sf + 3,200 sf/du over 2 units	11
	High Density Residential (HDR)	SFD: 5,000 sf MF: 8,000 sf + 1,500 sf/du over 2 units	24
Troutdale	R-4 Attached Residential	SFD: 4,000 sf SFA: 3,500 sf per unit	Based on min. lot area
	A-2 Apartment Residential	Based on number of units: 2-3: 9,000 sf/du 4-14: 9,000 sf + 2,500 sf/du over 3 15-37: 41,000 sf + 2,000 sf/du over 15 38-94: 87,000 sf + 1,500 sf/du over 38 95-155: 172,500 sf + 1,000 sf/du over 95 >155: 1,500 sf/du	Based on min. lot area – Effective density ranges from ~12 – 22 du/na

[Note 1: Forest Grove's listed density standards are "target density," which are permitted outright in each zone.]

4. Facilitate "Missing Middle" Housing Types in All Residential Zones

Initial Priority: High

According to the HNA, middle housing types are expected to account for nearly 30% of the projected housing need in Cornelius over the next 20 years. As defined in the HNA, this includes attached single-family homes (i.e., townhouses or rowhouses), and lots with two to four units. In addition, pursuant to Oregon House Bill 2001 (2019) (HB 2001), Cornelius will be required to permit middle housing types (defined as duplexes, triplexes, fourplexes, townhouses, and cottage clusters) in areas zoned for residential use that allow single-family detached housing. Duplexes, specifically, must be allowed on every residentially zoned lot that allows single-family detached housing. For the other housing types, the City has a bit more flexibility to regulate middle housing within residential zones—although the Oregon Administrative Rules (OAR) set fairly strict limits on that flexibility. The City can adopt siting and design standards for middle housing, but any standards must not discourage middle housing through unreasonable cost or delay. Cornelius's code will need to be updated by June 30, 2022, or else the state's Model Code for Middle Housing will automatically apply.

Middle Housing Characteristics

Duplexes, triplexes, fourplexes, townhomes and cottage clusters are considered "middle housing" because they fall between multi-family development and single-family detached housing in terms of density and scale. Middle housing can be more difficult to develop because development code standards may not address these housing types' unique characteristics or because the standards are unnecessarily restrictive. If regulated appropriately, these housing types can fit in well in neighborhoods with mostly detached single-family houses.

Duplex

Another common characteristic of these housing types is that they are often smaller individual dwelling units. Given the demographic trends summarized in this study, and the ongoing challenge of providing enough housing options for people with moderate incomes, smaller sized, modest housing units will continue to be an important need in the City of Cornelius. However, the larger average household size in Cornelius also limits the value of smaller residential units for some families.

Triplex and Quadplex

Due to the costs of land, infrastructure, and construction, it can be difficult for builders to produce new single-family detached housing that is affordable to households at moderate or lower income levels. These middle housing types can be more feasible to provide for these income levels because they require less land per unit and can be more efficiently served with infrastructure.

Townhouses

Opportunities to Support Middle Housing

In addition to meeting state requirements, there are opportunities for the City of Cornelius to support development of a variety of housing types by reducing unnecessary barriers, providing more flexibility, and tailoring standards to fit a variety of housing types. This would result in an expanded array of housing choices across the city for a broader range of people and households. The City already allows many of these types of housing in certain zones, either outright or through discretionary review (see Table 6).

Cottage Cluster

NOTE: Because single-family detached housing is not permitted in the A-2 zone, the City is not required to allow middle housing in this zone or meet minimum standards for OAR compliance. However, as indicated in Table 6, most middle housing types are already permitted in A-2. Therefore, we recommend applying the same use allowances in A-2 as will be applied in the other residential zones as well as consistent development standards.

Table 6. Zones Where Middle Housing Types are Currently Allowed

Zone	R-7	R-10	A-2	CR
Duplex	CU	CU	✓	✓
Common Wall Single-Family	CU	x	✓	✓
Townhouse (single-family attached)	x	x	✓	✓
Triplex and Fourplex (multi-family)	x	x	✓	✓
Cottage Cluster	x	x	x	x

✓ = permitted; x = not permitted; CU = Conditional Use

Summary of Requirements and Options

Following is a summary of Cornelius's obligations and options for compliance with HB 2001 and associated OARs as well as options to further facilitate middle housing in the city:

Duplexes. The OARs give cities limited ability to regulate siting and design standards for duplexes. Cities must apply the same, or less restrictive, standards as those that apply to SFDs. Also, duplexes cannot count toward maximum density in a zone. Where the City does have options is in its ability to encourage duplexes by applying more flexible / less restrictive standards than it applies to SFDs. For example, the City could allow duplexes to be taller or have a higher lot coverage. The City also has the option of allowing two detached units on a lot, in addition to attached units. The City also may not require more than one (1) off-street parking space per dwelling unit for a duplex.

Townhouses. Single-family attached housing is currently permitted the A-2 and CR zones and will also need to be allowed in the R-7 and R-10 zones. The City's current minimum lot size standards (except perhaps in the CR zone) make attached housing impractical; they will need to be amended to be consistent with minimum OAR compliance (as recommended under Strategy 3). Under minimum compliance rules, cities are allowed to limit townhouse density to four times the density allowed for SFD or 25 units per acre, whichever is less. Development standards (setbacks, height, lot coverage, etc.) generally apply to all development within residential zones, and therefore comply with the OAR; however, a closer review for compliance will be needed. The minimum off-street parking requirement of one (1) space per unit complies with the OAR.

Establish standards specific to triplexes and fourplexes. The CMC currently defines multi-family housing as a building containing three or more units; therefore, triplexes and fourplexes are both lumped into the multi-family category. However, three- and four-unit buildings are very different in scale and design than higher-density apartment complexes. A triplex or fourplex with side-by-side units can look identical to a row of three or four townhouses. The only difference is that the land underneath the units is not divided into individual lots. As such, the City should consider defining triplexes and fourplexes as a separate housing type (but make sure they continue to be permitted where multi-family housing is permitted). Minimum lot sizes reflecting minimum OAR compliance are recommended under Strategy 3. The City will need to ensure any other development or design standards are consistent with OAR standards. Parking standards will also need to be updated for triplexes and quadplexes so as not to require more than one (1) space per unit. (The OAR further limits parking requirements on smaller lots.)

Establish standards specific to cottage clusters. Cottage clusters are groups of small, detached homes, usually oriented around a common green or courtyard. They are typically on the same lot but can also be on individual lots with shared open space and parking tracts. Cottage clusters are not currently defined or permitted by the CMC—they are not consistent with the definition of multi-family, nor would they meet minimum lot standards for SFD housing. The City will need to define cottage clusters consistent with HB 2001, which applies a maximum building footprint of 900 sf per unit. The City should also develop a specific set of siting and design standards addressing cottage clusters' unique design considerations—including shared courtyards, parking areas, and community buildings. The state's Model Code provides a useful set of design standards that the City could adopt wholesale or modify for Cornelius' needs.

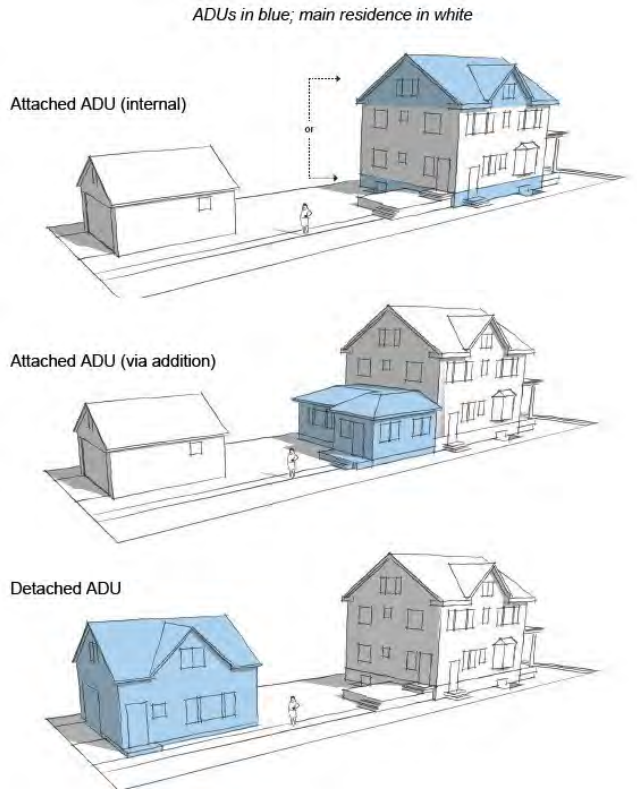
NOTE: The City can choose to not only allow, but encourage, middle housing by applying more flexible / less restrictive standards than what is required for minimum compliance. However, if the City chooses to apply any siting or design standards to middle housing that are more restrictive than (1) the OAR minimum standards, (2) the Middle Housing Model Code, or (3) the City's standards applicable to SFD, it will need to justify those standards by demonstrating that they do not cause unreasonable cost or delay.

5. Promote Accessory Dwelling Units (ADUs)

Initial Priority: High

An Accessory Dwelling Unit (ADU) is a secondary dwelling unit on the same lot as a single-family house that is typically smaller than the primary dwelling. ADUs can come in three forms: a detached structure, an attached addition, or a conversion of internal living space in the primary dwelling (Figure 2). As ADUs are often invisible from the street or may be perceived as a part of the primary dwelling, they offer a method of increasing density with minimal visual impact on the character of the neighborhood. Online survey results indicated relatively strong support for this type of housing in existing neighborhoods in Cornelius.

Figure 2. Types of ADUs



Source: City of St. Paul, MN

ADUs are a viable housing option with several benefits:

- Building and renting an ADU can raise income for a homeowner and help offset the homeowner's mortgage and housing costs.
- ADUs can add to the local supply of rental units and can provide a relatively affordable rental option for a person or household that prefers living in a detached unit rather than an apartment or other attached housing.
- ADUs offer flexibility for homeowners to either rent the unit or to host a family member. The proximity to the main house can be particularly beneficial for hosting an elderly family member that may need care and assistance.

Oregon state statute requires cities with a population of over 2,500 to allow ADUs outright on any lot where single-family housing is allowed.[2] In addition, the statute requires that cities limit the regulations that apply to ADUs to "reasonable siting and design standards." HB 2001 recently clarified that reasonable siting and design standards do not include owner occupancy requirements or requirements for additional off-street parking for ADUs. DLCD provided a guidance document to

[2] See ORS 197.312(5).

help cities help cities implement the ADU requirements.[3] The guidance document includes a model code as well as recommendations for removing barriers to ADU development.

The City recently updated its ADU standards to address state requirements. Below are recommendations for additional amendments to Cornelius's ADU standards that could further reduce Code barriers, as well as other potential strategies that the City could consider to better support development of ADUs.

Code Recommendations

Increase maximum size allowance for internal ADU conversions. In all zones, ADUs are limited to 800 sf or 60% of the size of the primary unit, whichever is greater. This is generally consistent with DLCD's guidance for ADUs. The DLCD guidelines also suggest allowing additional floor area for ADUs created by converting a level of the primary dwelling (e.g., the basement)—so that the ADU could occupy the entire level.

Allow exceptions to rear yard setbacks. ADUs must currently meet all base zone setback requirements; all residential zones require 10-foot rear yards. In most cases, ADUs will be constructed behind the primary dwelling. If the ADU must also comply with the rear yard setback requirement, that may require the ADU to be placed closer to the primary dwelling than would otherwise be desirable and may result in small, unusable yard areas. It is recommended to allow ADUs to be built up to 5 feet from the rear lot line. If there are concerns about the scale of an ADU next to an adjacent lot, a lower height limit or additional privacy standards can be applied to ADUs that are within a certain distance of the rear lot line.

Consider exceptions to lot coverage standards. Maximum lot coverage requirements have the potential to preclude ADUs from being built on smaller lots. The City could consider exempting ADUs (or a portion of their floor area) from counting toward lot coverage limits. To address storm water concerns, the City could consider limits to impermeable surfaces rather than simply coverage by structures (as suggested by the DLCD guidance).

Consider allowing two ADUs in more zones than just CR. The CR zone currently allows up to two ADUs for each single-family dwelling. The City could consider allowing two ADUs in other zones, if one of the ADUs is internal or an attached addition. In these cases, the internal ADU would not be visible from the street or adjacent properties. Also, the property would function similarly to a triplex and Cornelius will already need to allow triplexes in its residential zones, pursuant to HB 2001.

Other ADU Strategies

In addition to more supportive development code regulations, Cornelius could also consider other strategies to facilitate ADU development.

[3] https://www.oregon.gov/lcd/Publications/ADU_Guidance_updatedSept2019.pdf

SDC Reductions or Deferrals. The City could consider reducing or deferring system development charges for ADUs to make them more financially viable. S*ee Strategy 8.*

Pre-approved Site or Building Plans. Pre-approved building and site plans have been reviewed in advance for conformance with zoning and building codes, and can reduce housing development costs by reducing design and permit process times and fees.

Cities in Oregon, Washington, and elsewhere in the U.S. have used this approach to streamline the development review process, providing an incentive for certain types of housing development. Some of the plan programs also seek to promote improved residential design that fits a neighborhood context. This often works best for simpler types of development and could work well for ADU plans. Below are examples of this approach in other cities.

- **Santa Cruz, CA:** The City's ADU Development Program provides assistance for homeowners who were considering building an ADU. In the past, the program provided resources including an ADU manual and a plan set book with seven conceptual prototype designs that were available through partnerships with local architects. Although the prototypes are no longer to code and cannot be used for construction, they still offer good examples of different ADU ideas and configurations.[4]
- **Portland, OR:** In 2007, the City of Portland developed a set of housing prototype plans geared toward infill development on small sites in low- and medium-density multi-dwelling zones. Rather than a focus on streamlining the process and reducing costs, Portland's Infill Design Project objective was to improve design outcomes for smaller-scale infill development in existing neighborhoods. The housing prototypes covered development forms including cottage cluster, cottage court, rowhouses, townhouses, house-plexes, and courtyard flats.[5] Earlier in 2004, Portland also developed a catalogue of designs for "skinny houses" to suit very narrow lots through a similar competition called the Living Smart Project. The project also involved zoning code amendments to ensure that the prototype homes would meet all the code requirements, making them "permit-ready."[6]
- **Roanoke, VA:** Roanoke's Residential Plans Library is a database of professionally designed residential building plans available for purchase that complement the character of Roanoke's neighborhoods. The plans are all pre-approved for compliance with the Neighborhood Design District and building code. As such, the plans come with reduced permitting fees, since plan review requirements already have been addressed.[7] While

[4] ADU Publications, City of Santa Cruz, CA. https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/programs/accessory-dwelling-unit-development-program/ordering-information

[5] Infill Design Toolkit, City of Portland. https://www.portland.gov/sites/default/files/2020-01/toolkit1208-optimized_bkmrks.pdf

[6] Portland Catalogue of Narrow House Designs, City of Portland. https://www.oregon.gov/lcd/UP/Documents/LivingSmart-Catalogue.pdf

[7] Residential Plans Library, City of Roanoke, VA. https://www.roanokeva.gov/1297/Residential-Plans-Library

Roanoke's plans library only includes designs for single-family detached homes and duplexes, the model could potentially be applied to ADUs (or other housing types) as well.

6. Zoning Incentives for Affordable and Workforce Housing.

Initial Priority: Medium

The HNA identifies both existing and future needs for housing affordable to low-income households (defined as households earning 80% or less of area median income). In particular, the HNA identifies a shortage of rental units at the lowest pricing levels that would be affordable to the lowest-income households.[8]

As noted above, some development regulations can present obstacles or add costs to housing developments. These obstacles are particularly challenging for developments built by housing authorities, non-profit developers, or even for-profit developers that are attempting to build units affordable to people with lower or moderate incomes.[9] In order to support developments that include units affordable to moderate- or low-income households, the City can offer concessions on zoning and development code standards. The concessions should be offered in exchange for the development dedicating a minimum proportion of the units to be regulated as affordable to people with lower or moderate income. The CMC already provides certain concessions for affordable housing; for example, it allows affordable units to be located on the ground floor of buildings in the CMU and CC zones, where residential units are otherwise only permitted on upper floors or behind nonresidential uses.

Incentives typically used in other jurisdictions include relief from certain development standards such as parking, setbacks, or density. Examples include the following:

- **Parking reductions.** In general, research shows that households with lower incomes tend to have lower car ownerships and driving rates, particularly when residents have ready access to shopping and other opportunities and services. A number of jurisdictions in Oregon provide reductions in off-street parking requirements for developments that are affordable to households with low or moderate incomes. Typically, developments must commit to providing affordable units over a significant length of time (20-60 years).
- **Height or density bonuses.** Some cities allow higher density or greater height in exchange for a commitment to provide housing units that are affordable to households with low or moderate incomes. Height bonuses are typically in terms of number of stories (e.g., one story in an area with an existing height limit of 30 or 45 feet). Density bonuses are typically stated in terms of a percentage of units (e.g., 10-20% is a common threshold). The amount

[8] Spending 30% or less on housing costs is a common measure of "affordability" used by HUD and others.

[9] Housing affordable to moderate-income, working households that do not typically qualify for subsidized housing is often referred to as "workforce housing."

of the bonus can be tied to the affordability levels provided and/or to the number of affordable units. Additionally, setback and bulk standards may be allowed to vary to accommodate the added density or to reduce development costs.

- **Allow flexibility in how affordable units are provided.** In some cases, it may be advantageous to construct the affordable units on a different site than the primary development that is receiving the concession. It may also make sense for the development to purchase existing market-rate units and convert them to affordable units. Allowing flexibility in how the units are provided can also widen the appeal of the program.

We recommend that the City consult with local non-profit housing developers or other affordable housing providers to determine which zoning incentives would be most beneficial.

7. Streamline Off-Street Parking Requirements.

Initial Priority: Low

Providing off-street parking adds to the cost of a development and reduces the area of a site that can be developed with dwelling units. Some jurisdictions have revised their parking standards to reduce the barriers that off-street parking standards pose to housing development. Strategies include reducing the number of required off-street parking spaces for certain types of housing, allowing for credit for on-street spaces, and/or encouraging shared parking in mixed use developments.

The CMC currently requires a minimum of 1 space per dwelling unit for most housing types including single-family detached and attached houses, duplexes, and manufactured homes. For multi-family dwellings, the minimum requirements vary by size of units, ranging from 1 space for units with under 500 sf up to 1.75 spaces for 3-bedroom units.

As noted under Strategy 4, some changes to CMC requirements are needed for consistency with state middle housing requirements. In addition, some reductions may make sense based on typical vehicle ownership patterns associated with certain types of housing or households. Parking reductions for affordable or workforce housing are discussed under Strategy 6. Finally, the City should consider whether it is equitable to require only one space per single-family dwelling, regardless of size or number of bedrooms while requiring more than one space per unit for larger multi-family units.

While additional reductions to minimum parking requirements may be a low-priority strategy in the near-term, the City could consider undertaking a parking study to determine whether reductions may be warranted at some point. For example, the City could assess actual parking demand for existing residential development, such as multi-family dwellings. This would determine whether builders are meeting or exceeding parking minimums, and to what extent parking stalls are actually being utilized. It also would help determine how reductions in off-street parking requirements could impact the on-street parking supply and capacity. An oversupply of parking could indicate that reductions to minimum parking standards for multi-family dwellings may be warranted.

Incentives

The following incentive strategies are intended to make development of housing—particularly affordable housing—more financially viable by reducing fees or other costs.

8. System Development Charge Exemptions or Deferrals

Initial Priority: Medium

System development charges (SDCs) are one-time charges assessed on new development to pay for the costs of expanding public facilities. Cornelius assesses SDCs for water, sewer, surface water management, and parks. Fees for water, sewer, and surface water are shared with the City of Hillsboro and Clean Water Services, respectively. Washington County assesses a Transportation Development Tax which serves as a county-wide SDC, with a portion of proceeds funding projects in Cornelius.

The City could consider a number of approaches to reducing, deferring, or modifying the fees assessed by and paid to Cornelius in the future, including tying the fees to the size or type of housing developed. SDC deferral may be the most reasonable option in the shorter-term, given potential impacts of reductions or modifications on city revenues and costs. SDC exemptions or deferrals can have a sizable impact on development costs and feasibility, therefore can have real impact in terms of housing production. HB 2001 requires local governments to consider ways to increase the affordability of middle housing types through ordinances and policies, including waiving or deferring SDCs.

SDC Deferrals

SDC deferrals typically allow a development to delay payment of the fees for a specified period of time (e.g., 6, 9 or 12 months) or until the certificate of occupancy is issued, rather than at the time the building permit is issued. SDC deferral can be combined with SDC financing so that payments begin after one year and continue for a certain number of years (e.g., 10 years). The City could offer a lower interest rate (e.g., 0.25% above the Prime rate) and/or allow the lien to be in second position for affordable housing or other types of housing developments.

A financing program can be more beneficial to the property owner because fees are paid gradually, rather than in a lump sum soon after the completion of the project. However, a financing program also brings additional administrative requirements and costs to the City to track and collect payments over time.

SDC Reductions or Deferrals for ADUs

As noted above for Strategy 5, Promote Accessory Dwelling Units, SDCs can have a significant impact on the cost of ADU development. The City's SDCs for a single-family home amount to $31,010 and for an ADU with separate utility service, $27,785 (see Table 7).

Table 7. Cornelius SDCs for Single-Family Home and ADU[10]

	Single-Family Home	ADU
Hillsboro Water Connection SDC	$6,287	$6,287*
Cornelius Water Connection SDC	$3,884	$3,884*
Cornelius 5/8" Water Meter Fee	$500	$500*
CWS Sewer Connection SDC	$5,800	$5,800*
Cornelius Sewer Connection SDC	$232	$232*
Surface Water Management - Quantity	$1,067	$1,067
Parks SDC	$4,471	$4,471
Washington County Transportation Development Tax	$9,269	$5,544
Total	**$31,010**	**$27,785 ($11,082*)**

* These charges can be avoided if the ADU connects to the existing utility services of the main residence. If the service connection results in exceedance of regulatory thresholds (e.g., fixture counts for sewer SDCs), this may result in a SDC charge. New service connections for the ADU will result in full SDC fees as noted in Table 7.

The Home Builders Association of Metropolitan Portland produces an annual comparison of SDC levels in cities across the region.[11] Based on assumptions of a typical single-family development, the HBA estimates that Cornelius's SDCs are comparable to Hillsboro, but roughly 13% higher than in Forest Grove. Cornelius SDCs are somewhat lower than other Washington County communities, including Beaverton, North Plains, Tigard, and Sherwood.

Several cities around Oregon have implemented programs providing SDC exemptions for the construction of ADUs, including Portland, Tigard, Springfield, Redmond, Salem, Hubbard, and Mt. Angel. While a full exemption may not be feasible for the Cornelius, deferring SDCs (as discussed above) or reducing them may help alleviate some of the cost burden that SDCs impose upon ADUs.

SDC Methodology

As a long-term strategy the City may also consider scaling SDCs based on the type or size of housing. In 2017, the City of Newport adopted new methodology to scale SDCs to different types and sizes of housing. The new methodology was adopted as part of a larger package of four policies and strategies intended to respond to the increased need for workforce and affordable housing in the community. The methodology sets a higher price per square foot for smaller homes; however, when that is calculated against the more modest size of those homes, the result is a lower fee for smaller homes, rather than the City's previous one-size-fits-all approach.

[10] https://www.ci.cornelius.or.us/sites/default/files/fileattachments/community_development_amp_planning/page/491/sfd_development_fees_72020.pdf

[11] https://www.hbapdx.org/uploads/1/1/6/8/116808533/2020_sdc_chart_-_multi-family.pdf

9. Tax Abatements

Initial Priority: Medium

Tax abatements are reductions in property taxes for housing. Tax abatements offer a financial incentive to developers that can improve the long-term economic performance of a property and improve its viability. Abatements may include full or partial tax exemptions or freezes on the assessed value of properties. Abatements are often provided to non-profit corporations or to private developers in exchange for developing affordable housing. Property tax exemptions or freezes can also be applied to housing in distressed areas, or for rehabilitated housing. Abatements can be a substantial incentive to developers, but the City will forego taxes on the property, generally for ten years, or in some cases for the life of the development. Other taxing jurisdictions are not included unless they agree to participate.

The state currently authorizes tax abatements for various types of housing and affordable housing through several programs outlined in the Oregon Revised Statutes (ORS). These include:

- Nonprofit Corporation Low-Income Housing (ORS 307.540 to 307.548)
- Low-Income Rental Housing (ORS 307.515 – 307.537)
- Vertical Housing (ORS 307.841 to 307.867)
- Transit-Oriented Multi-Unit Development (ORS 307.600 – 307.637)
- Homebuyer Opportunity Limited Tax Exemption (ORS 307.651 to 307.687)
- Residential Rehabilitation Tax Freeze (ORS 308.450 to 308.481)

The City already has made significant progress in implementing this strategy and the need for additional actions may be relatively limited as a result beyond continuing to implement the City's current program. The City of Cornelius adopted a modified version of the Nonprofit Corporation Low-Income Housing Tax Exemption in 2015, which enables the City to exempt affordable housing developed by non-profit agencies from City taxes (CMC Chapter 3.35). The exemption is currently limited to projects that house residents aged 55 and over; however, the City is now in the process of removing this limitation from the code, with amendments scheduled for adoption on January 4, 2021. Another limitation on this exemption is also likely to be removed: Because the City of Cornelius makes up less than 51% of the taxing district, per state law only City taxes can be exempted unless the developer receives approval from Washington County and the school district to exempt their portions of property taxes as well. However, the City has solicited and is likely to receive approval from the school districts for the tax exemption, which would meet the 51% threshold that would allow a full property tax exemption for qualifying housing projects.

Other Examples:

- The City of Beaverton has an Affordable Housing Tax Exemption Program designed to promote construction of affordable rental housing for low-income households (focusing on 60 percent area median income and below). The program allows an exemption of up to 100 percent of property taxes.

- The City of Tigard administers a tax abatement program within the City's designated "Vertical Housing Development Zones" (VHDZ), which is intended to incentivize multi-story mixed-use development and affordable housing in targeted areas. This program allows a partial property tax exemption of 20% per floor (and up to 80% total) for mixed-use developments within the designated VHDZ, and provides an additional exemption if the project includes low-income housing.
- The City of Newberg has a Multiple Unit Housing Property Tax Exemption (MUPTE) that aims to encourage private development of multi-unit housing in transit-oriented areas by providing a ten-year property tax exemption on the residential portion of improvements. Newberg also has a property tax exemption of properties owned by low-income persons or held for the purposes of developing low-income housing.

Cornelius could consider similar tax abatements that target the types of housing that are most desired and the geographic areas in which housing is most needed. The HNA indicates that multi-family housing with five or more units represents 13.3% of the total future housing units needed. The greatest need for rental units is found at the lowest price points (as well as some in higher price ranges). There is insufficient rental housing for the lowest income households making $25,000 or less. Therefore, additional tax abatements that target low-income rental housing and/or multi-family housing may be beneficial to Cornelius.

10. Land Use Permit Fee Reductions

Initial Priority: Medium

The Cornelius Community Development department collects permit fees for planning and engineering services (and contracts with the City of Forest Grove for building services). By reducing or waiving permit fees for affordable housing or other desired types of housing (e.g., ADUs or other potentially more affordable housing types), the City could reduce the upfront cost of development. This could be administered as a complete fee waiver or a reduced fee based on a set metric (e.g. reduced fee is 50% of original permit fee). Permit fees generally represent a lower share of overall cost to the developer than SDCs, sometimes by a factor of five or more, and therefore fee reductions will tend to have a proportionately lower impact than SDC reductions. The City's schedule of estimated fees and charges for an example single family home estimates that permit fees make up roughly 10% of the total combined cost of development and permit fees.

11. Expedited Development Review

Initial Priority: Low

Expedited development review includes a variety of strategies to reduce review and processing times for regulated affordable housing development, such as formally adopting shortened review timelines for applications or giving priority in scheduling hearings and meetings with staff. This strategy allows regulated affordable housing projects to get more quickly from design to building permit, reducing carrying / financing costs, and delivering affordable units sooner.

Streamlining the review and permitting process is usually administratively feasible, though the greatest obstacle is often staff resources to expedite some projects when staff is already busy and/or limited in size. The value of certitude (a clear process with explicit requirements and a predictable timeline) is likely an even greater enticement to developers than the saving of fees. Further, review timelines for the City of Cornelius are already very short in comparison to many other jurisdictions and compared to minimum state requirements. Because there is limited ability to further streamline review processes and timelines, this is a low-priority strategy.

Funding Sources and Uses

The following funding sources could create revenues and opportunities for Cornelius to increase its supply of needed housing, particularly affordable housing. HB 2001 will require the City to consider ways to increase the affordability of middle housing by considering funding sources such a construction tax (Strategy 14—low priority), and incentives such as property tax abatements (Strategy 9—medium priority) and deferring system development charges (Strategy 8—medium priority).

12. Tax Increment Financing

Initial Priority: High

Tax Increment Financing (TIF) is the mechanism through which Urban Renewal Areas (URAs) or TIF districts grow revenue. At the time of adoption, the tax revenues flowing to each taxing jurisdiction from the TIF district is frozen at its current level. Any growth in tax revenues in future years, due to annual tax increase plus new development, is the "tax increment" that goes to the district itself to fund projects in the area. Small cities (50,000 people or less) are allowed to have up to 25% of their land area and assessed value in TIF districts.

TIF is a good tool to use in areas where new development or redevelopment is anticipated. The growth of TIF revenue depends on this development actually occurring; if a TIF district remains stagnant, then tax revenues will not grow to fund the planned projects. Therefore, it is advisable that the Urban Renewal agency waits for some sign of growth in the TIF district, before undertaking the expense of projects dependent on TIF.

While many different types of projects are eligible for TIF funds, for the most part, TIF funds go to physical improvements in the area itself. These projects can include participating in public/private partnerships with developers or can be used to complete off-site public improvements that benefit and encourage new development in the area, or to acquire key sites. TIF funds can also be used to pay for development fees.

In terms of housing, TIF funding can be used to provide incentives to achieve housing types that may not be otherwise market feasible to develop. Examples include mixed use, transit-oriented, or affordable housing in areas where it may not otherwise occur. If the Urban Renewal Agency prioritizes these projects, TIF funds might be used to contribute to public-private partnerships in which a developer builds this type of housing in return from incentives from the agency. Often the

agency controls one or more key parcels in the district and may offer them to developers at reduced cost. Another approach is to waive SDCs to the developer, and have the agency compensate the other jurisdictions from TIF funding.

The City of John Day has recently created an innovative TIF district to help provide incentives for both new housing and renovated housing. The incentives are designed to rebate some of the newly created assessed value directly to the property owner, to make the project more attractive. The URA was created in such a way to include much of the city's vacant developable land for housing, to encourage build-out and ensure that the value of new development is captured by the TIF.

The City of Cornelius recently adopted an Urban Renewal Plan in 2019, which includes potential opportunities for mixed use and residential development. The primary incentives supporting low income and/or mixed-use housing in the adopted Urban Renewal Plan include property acquisition (Strategy 13) and development assistance/cost sharing. Therefore, there may be opportunities to allocate future TIF funds to support other strategies outlined elsewhere in this report.

13. Land Acquisition and Banking

Initial Priority: High

Land acquisition is a tool to secure sites for prioritized housing types such as affordable housing or mixed-use housing. Public agencies can identify locations where prices are going up and acquire land before the market becomes too competitive, with the intention to use the land for affordable housing. The ability to identify promising sites within these locations and act quickly and efficiently in acquiring them can tip the scales to make an affordable housing development financially feasible. Planning ahead ensures that there will be housing opportunities in neighborhoods where the rest of the properties may appreciate quickly. Access to a ready funding source such as TIF funding is important to take advantage of these opportunities.

Land banking is the acquisition and holding of properties for extended periods without immediate plans for development, but with the intent that properties eventually be developed for affordable housing. Land banks are often quasi-governmental entities created by municipalities to effectively manage and repurpose an inventory of underused, abandoned, or foreclosed property. Public agencies or larger nonprofits may be better equipped than small community development corporations to do both land acquisition and banking.

Key challenges for **land acquisition** include reliably identifying future areas where land value will climb before prices go up, developing the resources necessary to purchase the land, creating mechanisms for easy land transfer and removing the liability associated with holding land. **Land banking** requires significant up-front investment to acquire land, which typically requires grants, and funding partnerships—with non-profits, public entities, and private financing—to reach necessary funding levels. In addition, while this technique can help address the long-term need for affordable housing, it will not address the current need in the short-term.

A full land banking or acquisition program may not be practical for a jurisdiction the size of Cornelius. However, a potentially feasible way to implement this strategy in Cornelius would be to assess the potential for any existing City-owned properties to be used for affordable or workforce housing development and then seek non-profit or other affordable housing developers to lead the actual development efforts. In exchange for donating or selling City-owned land at a nominal price, the City would require a commitment to long-term affordability of any housing units developed. This strategy would be implemented in conjunction with the City's Urban Renewal Program (Strategy 12).

14. Construction Excise Tax

Initial Priority: Low

A construction excise tax (CET) is a tax on construction projects. In 2016, the Oregon Legislature passed Senate Bill 1533 authorizing Oregon cities and counties to establish a CET for affordable housing. According to state statutes, the tax may be imposed on improvements to real property that result in a new structure or additional square footage in an existing structure. Cities and counties may levy a CET on residential construction for up to 1% of the permit value; or on commercial and industrial construction, with no cap on the rate of the CET.

The allowed uses for CET funding are defined by the state statutes. For a residential CET, uses include funding incentives (e.g. fee and SDC waivers, tax abatements, etc.) and affordable housing programs. A portion must also flow to the Oregon Housing and Community Services (OHCS) for homeowner programs. For a commercial or industrial CET, a portion of funds must be used for allowed developer incentives and the rest is unrestricted.

To date, at least eight jurisdictions (Portland, Corvallis, Cannon Beach, Hood River County, Hood River City, Newport, Eugene, and Tigard) have passed local CETs for affordable housing, and many others are considering adopting the tool. Jurisdictions can exempt certain types of development from the CET, such as public facilities and improvements, as well as development under a specified value.

The City of Cornelius has already adopted a CET of 0.75% for all construction in the city and dedicates those revenues for specific purposes—including public safety and administration. As such, an additional CET is likely not feasible in the near term; therefore, this is a low-priority strategy and could be considered in the longer term. Long-term implementation should be based on a future assessment of the relative success and benefits of the existing CET in meeting its goals and the potential support for increasing the CET amount to provide revenues to support affordable housing development.

15. Public-Private Partnerships (PPPs) and Community Land Trusts

Initial Priority: Medium

Public-private partnerships (PPPS) are arrangements between public and private entities, which can be implemented to create more housing and/or affordable housing. PPPs can promote a variety

of affordable housing programs or projects and include partnerships from multiple from multiple entities (public, private, and non-profit). These efforts typically involve utilization of a variety of other housing measures or strategies, including those described in this report.

Supporting a **Community Land Trust (CLT)** is one example of a PPP to support housing. With the CLT model, a community organization owns land and provides long-term ground leases to low-income households to purchase the homes on the land, agreeing to purchase prices, resale prices, equity capture, and other terms. This model allows low-income households to become homeowners and capture some equity as the home appreciates, but ensures that the home remains affordable for future homebuyers. CLTs may also lease land to affordable housing developers for the development of rental housing or may develop and manage rental housing themselves. Land trusts are typically run as non-profits, with support from the public sector and philanthropy, and could be linked to a land bank. Land trusts can be focused on homeownership or rental units.

At this time, the City of Cornelius has limited capacity to implement these types of programs directly. However, the City would be receptive to partnering under the right circumstances should they be approached by an established organization. The City could also consider supporting existing CLTs through incentives such as tax abatements. Implementation of this opportunistic approach is identified as a medium priority.

16. Financial Assistance Programs

Initial Priority: Low

A range of tools that can be used to maintain housing affordability or to help keep residents in their homes. Possible tools include rent assistance, loans for homeowners, or assistance to low-cost apartment owners for repairs and upgrades.

A range of financial assistance programs can be used to maintain housing affordability, help keep residents in their homes, or assist in the acquisition of land for housing. Possible tools include rent assistance, loans for new homeowners, assistance to low-income homeowners for repairs and upgrades, and land acquisition. Partner agencies like the Washington County Department of Housing Services, and non-profit housing organizations such as Bienestar and Community Partners for Affordable Housing make these types of programs available across the region.

The City of Cornelius has limited capacity to implement these types of programs but supports their implementation by other organizations in Cornelius. Therefore, this identified as a low-priority strategy. However, the City can support efforts by other organizations to implement this strategy, including housing rehabilitation loans provided by Washington County, including rehabilitation of housing for people with disabilities.

V. CONSISTENCY WITH METRO AREA REQUIREMENTS

Cities within the Portland Metropolitan region must comply with two requirements related to the capacity of buildable land. Both requirements are found in Oregon Administrative Rule (OAR) 660-007. The two rules state that:

> *Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances. (OAR 660-007-0030 (1))*
>
> *The Cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood must provide for an overall density of six or more dwelling units per net buildable acre. These are relatively small cities with some growth potential (i.e. with a regionally coordinated population projection of less than 8,000 persons for the active planning area). (OAR 660-007-0035 (1))*

The City of Cornelius is in compliance with both of these requirements as described below.

50/50 Housing Split

The Multi-Family Residential (A-2) zone alone accounts for 51% of the unconstrained capacity for the city. The A-2 zone permits duplex and multi-family dwelling types. Multi-family dwellings are allowed as permitted uses in the CMU (1%), CR (4%), and GMU (12%) zones. Duplex dwellings are allowed as permitted uses in the CR (4%) zone. The R-7 (32%) zone currently permits duplexes as a conditional use. As a result, well over 50% of the city's residential capacity currently is within zones that allow and are intended for multi-family and other attached forms of housing. In addition, within the next 18 months, the City of Cornelius will be required to allow for middle housing (duplexes, triplexes, quadplexes, townhomes, and cottage cluster housing) in the majority of the city's residential areas. This will further increase the proportion of the city's residential land supply where multi-family and other attached forms of housing are allowed.

Density Requirement

The overall average density of buildable land across all residential and mixed use zones in Cornelius is approximately 9 units per acre. This is based on a total capacity of 2,668 units across 282 unconstrained weighted acres of buildable lands that account for street dedications. The following table describes these calculations in more detail. The table shows capacity in terms of dwelling units and density in terms of dwelling units per net acre.

Zoning Designation	*Vacant capacity*	*Infill capacity*	*Redev. capacity*	*Total capacity*
R7				
Capacity	139	421		560
Density	8	5	0	6

Zoning Designation	*Vacant capacity*	*Infill capacity*	*Redev. capacity*	*Total capacity*
MHP				
Capacity	11			11
Density	10	0	0	10
A2				
Capacity	1,041		413	1,454
Density	10	0	13	11
CMU				
Capacity	16		14	30
Density	11	0	11	11
CR				
Capacity	5	66		71
Density	11	6	0	6
GMU				
Capacity	122		420	542
Density	16	0	16	16
Total Average Capacity	**1,334**	**487**	**847**	**2,668**
Overall Average Density	**10**	**5**	**14**	**9**

EXHIBIT "C"

From:	DLCD Plan Amendments
To:	Ryan Wells
Subject:	DLCD - Notice of Land Use Action
Date:	Friday, February 12, 2021 7:00:41 PM

You are receiving this email because you subscribed to the Oregon Department of Land Conservation and Development's Post-Acknowledgment Plan Amendment Notification System. This email provides notice of amendments to comprehensive plans or land use regulations for the local jurisdictions you selected through the online notification subscription service.

DLCD has received notice of the following proposed and adopted comprehensive plan or land use regulation changes:

Proposals Received:

Cornelius **Local File#:** CPA-01-21 **DLCD File#:** 001-21

Proposal Summary:

Housing Needs Analysis and Amendment of Chapter IV (Housing) of the Cornelius Comprehensive Plan

First Hearing Date: 03/23/2021

Final Hearing Date: 04/05/2021

Local Contact: Ryan Wells 503-992-5370
RWells@ci.cornelius.or.us

If you would like to unsubscribe to this notification service or change your local jurisdiction selections, please visit the PAPA Notification System web site here: https://db.lcd.state.or.us/PAPA_Subscription

The amendment summary text is provided by the local jurisdictions. DLCD does not modify this information.

** Please note this is from a new Cornelius email domain (@corneliusor.gov) - add this email to your Contacts or update your existing contact email address. The old email address with @ci.cornelius.or.us will stop working on 10/10/2020 ** If you believe you have received this email by mistake, please inform us by an email reply and then delete the message. Also, the integrity and security of this email cannot be guaranteed over the Internet.

EXHIBIT "D"

Pamplin MediaGroup

-Ad Proof-

This is the proof of your ad, scheduled to run on the dates
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please contact Charlotte Allsop prior to deadline at (971) 204-7706 or callsop@pamplinmedia.com.

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Account #:	117756
Reference #:	
Company Name:	CORNELIUS, CITY OF
Contact:	
Address:	1355 N BARLOW ST CORNELIUS
Telephone:	(503) 357-9112
Fax:	(503) 357-7775

Ad ID:	193673
Start:	02/24/21
Stop:	02/25/21
Total Cost:	$110.78
Ad Size:	5.681
Column Width:	1
Column Height:	5.681
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News Times02/25/21

NOTICE OF PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that Public Hearings will be held before the Cornelius Planning Commission on Tuesday, March 23, 2021 at 7:00 PM and the Cornelius City Council on Monday April 5, 2021 at 7:00 PM **via a Zoom online meeting platform (meeting link will be provided on the published hearing agendas)**, to consider the following: **Request:** Adoption of 2021 Cornelius Housing Needs Analysis and Amendment of Chapter IV (Housing) of the Cornelius Comprehensive Plan. **Applicant:** City of Cornelius. **Applicable Criteria:** Chapter 18.130 (Comprehensive Plan). At the time and place listed above all persons will be given a reasonable opportunity to give testimony either for or the proposal. Testimony may be either in oral or written form and must be relevant to the criteria listed above on which the proposal will be evaluated. At the public hearing, the Planning Commission Chair will open the public hearing, a staff report will be presented, interested persons will be allowed to speak for or against the proposal or to ask questions, Commissioner may ask any general questions, and the public hearing will be closed. In order for an issue to be considered for appeal, it must be raised before the close of the record of the public hearing. Such issues must be raised with sufficient specificity so as to afford the hearing body and the parties an adequate opportunity to respond to each issue. If there is no continuance granted at the hearing, any participant in the hearing might request that the record remain open for at least seven days after the hearing. A copy of the application, all documents and evidence relied upon by the applicant and applicable criteria are available for review at the Community Development Department, 1300 S. Kodiak Circle during regular business hours, at least seven days prior to the scheduled public hearings. Copies may also be purchased at a reasonable cost of 25 cents per page. If you have questions regarding the application or would like to submit written comments you may contact Ryan Wells, Community Development Director, at (503) 357-3011 or ryan.wells@corneliusor.gov. **(Please note: Due to current events, the date, time and format of the hearing(s) are subject to change. Please visit the City of Cornelius web site at www.ci.cornelius.or.us for current changes/schedules.)**

Publish Feb. 25, 2021 NT193673